

# About Telebox



- **What can we do** Design and manufacture of data and voice connectors, cable assembly, video balun, and OEM projects.
- **We focus on** Customers satisfaction in product quality, on time delivery, and service.
- **Our principles** Long term partnership and cooperation with customers and suppliers.
- **Our people** 60 experienced and professional staffs and coworkers mostly . engineering background.
- **Quality Policy** Improve our quality and skills.  
Strengthen our efficiency and service.



TÜV ISO 14001:2004 Certificate



TÜV ISO 9001:2008 Certificate

## Factory Inspection

The quality assurance and production facilities of the Telebox Industries Corp. have been approved by 3P yearly inspection visit since 2005. It is concluded by 3P that generally quality assurance, working procedures, capabilities, production facilities and extent of end product testing should be acceptable to secure a continuous production of a high quality Screened Category 6 Connecting Hardware.

## Quality Assurance

Telebox has quality assurance approved according to ISO 9001:2008. Approval was granted by TÜV CERT Certification Body of TÜV Rheinland Group, Certificate No. 01 100 822 043836 dated 15th January 2010. Next update of approval is scheduled before 4th January 2012.



**THIRD PARTY TESTING  
3P**

### Compliance Statement

**Screened Category 6  
ISO/IEC, EN & TIA/EIA Connecting Hardware**

**Telebox Identification P/N LP2461Sx**  
Category 6, Screened, Patch Panel  
Electrical Transmission Performance

**Telebox Industries Corp.**  
4F, No. 306, Tatung Road, Sec. 1  
Hsichih-Taipai 221, Taiwan, R.O.C.

*Compliance Statement No. 110487*

This screened RJ45 Patch Panel with board identification "601-6011 CS 1190" has been tested by 3P Third Party Testing and complies with the Category 6 transmission requirements of 2nd edition ISO/IEC Generic Cabling Standard 11801, amendment 2, 2nd edition ISO/IEC Generic Cabling Standard 11801 (supp 21 N 144), IEC Generic Cabling Standard EN 50173-1:2007, ANSI/TIA/EIA Generic Cabling Standard 568-B.2.1, 2nd edition IEC Connecting Hardware Standard 60603-7-4 (supp 402:2008 CD) and IEC 60321-26-100. The qualification activity includes factory and assembly line inspection and passing of initial pair inspection using the complete specified Category 6 de-embedded NEXT range of RJ45 plugs. The Compliance Statement may be suspended or withdrawn if the modular jack fails to pass a Maintenance Testing performed at 12 month intervals.

Hsichih, 27<sup>th</sup> January 2010      Hsichih, 27<sup>th</sup> January 2010

Ole Lamberten      Paul Villen  
Test Responsible      Coordinating Manager

Independent Testing - For End User Confidence

**THIRD PARTY TESTING  
3P**

### Compliance Statement

**Unscreened Category 6  
ISO/IEC, EN & TIA/EIA Connecting Hardware**

**Telebox Identification P/N TA8761Ux**  
Category 6, Unscreened, Keystone Jack  
Electrical Transmission Performance

**Telebox Industries Corp.**  
4F, No. 306, Tatung Road, Sec. 1  
Hsichih-Taipai 221, Taiwan, R.O.C.

*Compliance Statement No. 10731B*

This unscreened RJ45 Keystone Jack with board identification "601-6764 Cat. 6 402 1190" has been tested by 3P Third Party Testing and complies with the Category 6 transmission requirements of 2nd edition ISO/IEC Generic Cabling Standard 11801, amendment 2, 2nd edition ISO/IEC Generic Cabling Standard 11801 (supp 21 N 144), IEC Generic Cabling Standard EN 50173-1:2007, ANSI/TIA/EIA Generic Cabling Standard 568-B.2.1, 2nd edition IEC Connecting Hardware Standard 60603-7-4 (supp 402:2008 CD) and IEC 60321-26-100. The qualification activity includes factory and assembly line inspection and passing of initial pair inspection using the complete specified Category 6 de-embedded NEXT range of RJ45 plugs. The Compliance Statement may be suspended or withdrawn if the modular jack fails to pass a Maintenance Testing performed at 12 month intervals.

Hsichih, 5<sup>th</sup> February 2010      Hsichih, 5<sup>th</sup> February 2010

Ole Lamberten      Paul Villen  
Test Responsible      Coordinating Manager

Independent Testing - For End User Confidence

**THIRD PARTY TESTING  
3P**

### Compliance Statement

**Screened Category 6  
ISO/IEC, EN & TIA/EIA Connecting Hardware**

**Telebox Identification P/N TA8661Sx**  
Category 6, Screened, Keystone Jack  
Electrical Transmission Performance

**Telebox Industries Corp.**  
4F, No. 306, Tatung Road, Sec. 1  
Hsichih-Taipai 221, Taiwan, R.O.C.

*Compliance Statement No. 110584*

This screened RJ45 Keystone Jack with board identification "601-6671 1191" has been tested by 3P Third Party Testing and complies with the Category 6 transmission requirements of 2nd edition ISO/IEC Generic Cabling Standard 11801, IEC Generic Cabling Standard EN 50173-1:2007, ANSI/TIA/EIA Generic Cabling Standard 568-B.2.1, 2nd edition IEC Connecting Hardware Standard 60603-7-4 and IEC 60321-26-100. The qualification activity includes factory and assembly line inspection and passing of initial pair inspection using the complete specified Category 6 de-embedded NEXT range of RJ45 plugs. The Compliance Statement may be suspended or withdrawn if the modular jack fails to pass a Maintenance Testing performed at 12 month intervals.

Hsichih, 23<sup>rd</sup> September 2010      Hsichih, 23<sup>rd</sup> September 2010

Ole Lamberten      Paul Villen  
Test Responsible      Coordinating Manager

Independent Testing - For End User Confidence

**THIRD PARTY TESTING  
3P**

### Attestation of Conformity

**ISO/IEC, EN & TIA/EIA Screened  
Class E<sub>A</sub> / Category 6A  
Two Connector Permanent Link**

**Telebox Industries Corp.**  
4F, No. 306, Tatung Road, Sec 1  
Hsichih-Taipai 221, Taiwan, R.O.C.

*Attestation of Conformity No. 110728A*

This pair of Class E<sub>A</sub> / Category 6A screened two connector permanent link has been tested by 3P Third Party Testing and complies with the 10 Gigabit Ethernet requirements of IEEE 802.3-2008, Class E<sub>A</sub> requirements of amendment 2 to 2nd edition ISO/IEC 11801, amendment 2 to IEC 60321-26-100 (supp 21 N 144) July 2010, and Category 6A requirements of ANSI/TIA-568-C.2. The Compliance Statement is valid for the permanent link in T568A configuration connected with RJ45 plugs from Telebox, P/N TA1600R, and consisting of the following components:

Cable: Horizontal Cable from Delta Communications, P/N Silverline Gold 1000  
Manufacturer verified  
Cat. No: 601-7199-010  
Keystone Jack from Telebox, P/N 2250010  
Patch Panel from Telebox, P/N 2250010  
Keystone Patch Panel from Telebox, P/N 2250010  
Keystone Patch Panel from Telebox, P/N 2250010  
Keystone Patch Panel from Telebox, P/N 2250010  
Manufacturer Verified

Hsichih, 22<sup>nd</sup> August 2010      Hsichih, 22<sup>nd</sup> August 2010

Ole Lamberten      Paul Villen  
Test Responsible      Coordinating Manager

Independent Testing - For End User Confidence

**THIRD PARTY TESTING  
3P**

### Attestation of Conformity

**ISO/IEC, EN & TIA/EIA Screen Continuity  
Class E<sub>A</sub> / Category 6A  
Two Connector Permanent Link**

**Telebox Industries Corp.**  
4F, No. 306, Tatung Road, Sec 1  
Hsichih-Taipai 221, Taiwan, R.O.C.

*Attestation of Conformity No. 110721A*

This pair of Class E<sub>A</sub> / Category 6A screen Continuity two connector permanent link has been tested by 3P Third Party Testing and complies with the 10 Gigabit Ethernet requirements of IEEE 802.3-2008, Class E<sub>A</sub> requirements of amendment 2 to 2nd edition ISO/IEC 11801, amendment 2 to IEC 60321-26-100 (supp 21 N 144) July 2010, and Category 6A requirements of ANSI/TIA-568-C.2. The permanent link is only specified for screen continuity, and screening performance has therefore not been verified. The Compliance Statement is valid for the permanent link in T568B configuration connected with RJ45 plugs from Telebox, P/N TA1600R, and consisting of the following components:

Cable: Horizontal Cable from Delta Communications, P/N Silverline Gold 1000  
Manufacturer verified  
Cat. No: 601-7199-010  
Keystone Jack from Telebox, P/N 2250010  
Patch Panel from Telebox, P/N 2250010  
Keystone Patch Panel from Telebox, P/N 2250010  
Keystone Patch Panel from Telebox, P/N 2250010  
Manufacturer Verified

Hsichih, 22<sup>nd</sup> August 2010      Hsichih, 22<sup>nd</sup> August 2010

Ole Lamberten      Paul Villen  
Test Responsible      Coordinating Manager

Independent Testing - For End User Confidence

**Matrix**

## Certificate of Test

**WE HEREBY CERTIFY THAT:**  
Certificate No.: B0812491E  
TELEBOX INDUSTRIES CORP.  
4F, No.306, Tatung Road, Sec. 1, Hsichih-Taipai 22148 Taiwan  
BAUN  
BLJ295  
BLJ295, BLJ295, BLJ295

**CE**

AND KEEPS ALL REQUIREMENTS ACCORDING TO THE FOLLOWING REGULATIONS  
Test Standards:  
EN 61000-6-2:2007  
EN 61000-6-1:2007  
IEC 61000-4-2:2001 IEC 61000-4-3:2007

**IS IN COMPLIANCE TO THE EUROPEAN COUNCIL DIRECTIVE 2004/108/EC WITHINCE MARKING REQUIREMENT.**

Name of Laboratory : Matrix Test Laboratory  
Site Location : 3F, No.146, Jian Yi Rd, Chung-Ho City, Taipei Hsichih, Taiwan, R.O.C.  
Issue Date : Nov. 28, 2008  
Approved by :

Paul Villen / Managing Director

This certificate shall not be reproduced without the written approval of the Laboratory  
The certificate is valid only in accordance with the test report No. B0812491E. The compliance is valid only if the product is manufactured in accordance with the test report.

# Our Competence

## ■ Manufacturing Capabilities

Our production control staffs and industrial engineers possess a superb skills and flexibility for quick integration, capacity expansion, and jigs and tools design. They formulated different processes to cope with customers' demand in different quantity, in extended items, and in fast delivery. All made it possible by the APEX Enterprise Resources Planning (ERP) system. Telebox therefore owns a total production process capability starting from tooling development, Die-casting molding & plating, Plastic injection, Metal Stamping, Automatic Machine, manual assembly, testing and packaging, to final shipping... etc.

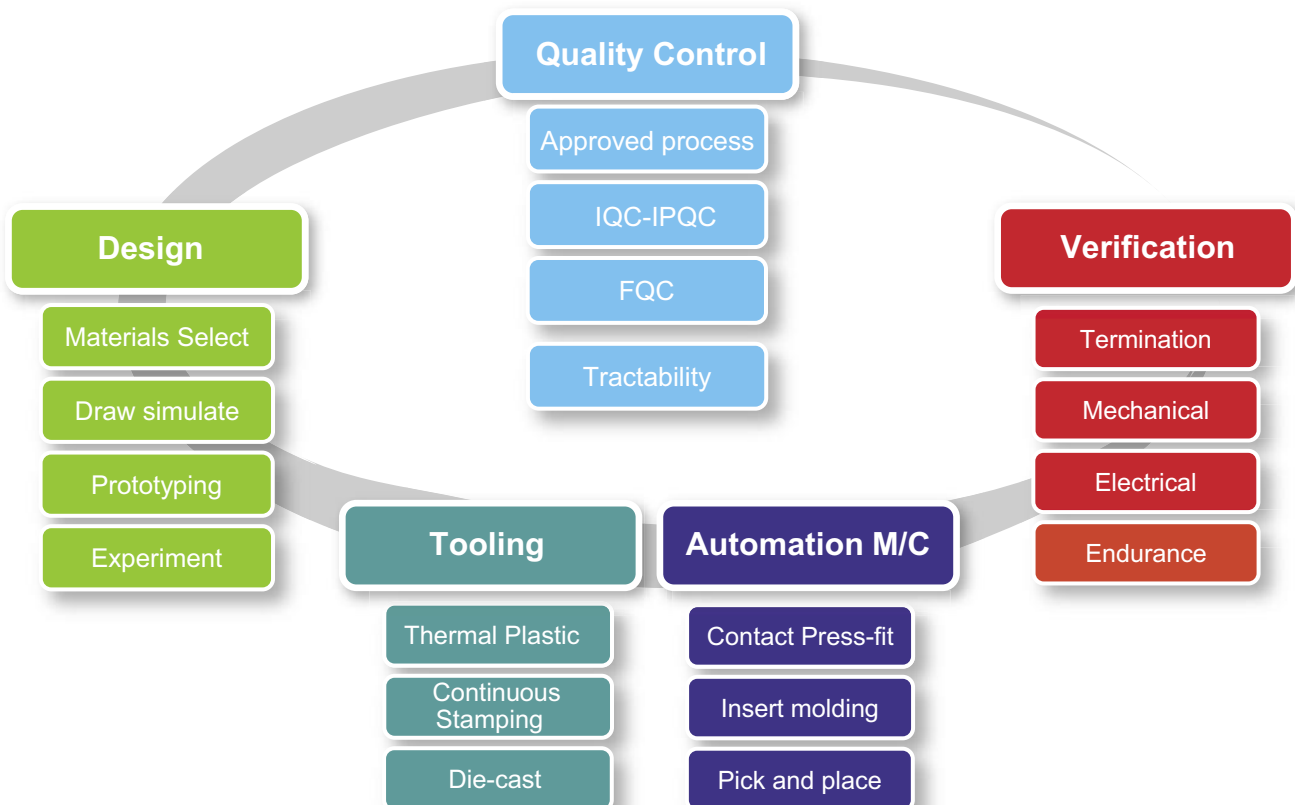
A 100 % control for visual appearance, for shorts and interrupted connections, and for near end crosstalk in forward direction is carried out after the assembly operation.

Telebox has long history of friendly touch and speedy manner to our customers. We hope you can choose Telebox as your partner in product development. You will like our services and enjoy our quality products.

### Manufacturing Process

- A sequence of mounting, soldering and visual inspection of each individual type of contact and connector part is applied.
- 100% dc resistance testing of each port of all finished connectors is applied.
- A lead free soldering process is applied.
- Implement pressure fit mounting of components as well as soldering.
- A 100 % control for visual appearance, for shorts and interrupted connections, and for near end.
- Crosstalk in forward direction is carried out after the assembly operation during connecting hardware assembly.

## ■ Telebox Core Capabilities



## Engineering/R&D Capabilities

Telebox has very extensive electrical high frequency testing of produced connecting hardware, which is documented as either pass/fail result or with recording of tested electrical parameters in the full specified frequency range. Failing components are offered to the customer with documented performance data.

### High Frequency Components testing:

- Re-embedded testing fixture (4 units) per TIA568-C.2 IEC60603-7-X, IEC60512-27-100
- Transfer impedance test equipment, type 3P construction per IEC60603-7-x
- Coupling attenuation test equipment including R&S EZ-24 ferrite clamp according to EN50289-1-6
- HP Network Analyzer, type HP8753E (2 units)
- BH Electronics/North Hill/3P Baluns
- Fluke DTX-1800 Lab Adapter for cable and patch cord

### Permanent Link and Channel Testing:

- Fluke DTX-1800 (2 units) with 10Gb Kit
- Fluke DTX-PLA002.Cat 6A Adapter

### Balun Testing:

- Tektronix 1765 Waveform/Vector Monitor
- Tektronix TSG95 PAL/NTSC signal generator
- Color monitor and CCD-DVR

### DC Resistance and Short Circuit Testing:

- Microtest dc test equipment, type CT-8768
- Microtest dc test equipment, type CT-8687
- Wayne Kerr LCR Meter, type 4237
- Chen Hwa Milliohmmeter, type 502AC
- Instek AC/DC Withstand Voltage / Insulation Tester, type GPI-735

### Visual measurement system:

- CNC video measuring system, type KAM-3020

### Mechanical Testing:

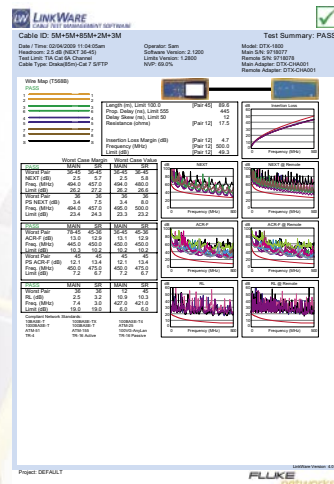
- Push-pull gauge, type AK5
- Mating cycle tester, type UX-51
- Thermal shock tester, type AM3

### Rapid Prototyping

- OBJET 260 Rapid Prototyping

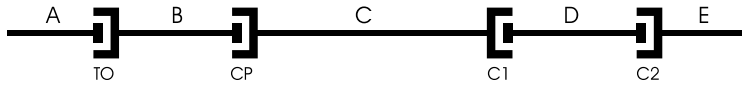
### Materials Analysis:

- X-ray metal analyser, type OXFORD X-MET 3000TXR



# Cat.6A Channel Configuration

Tradition:

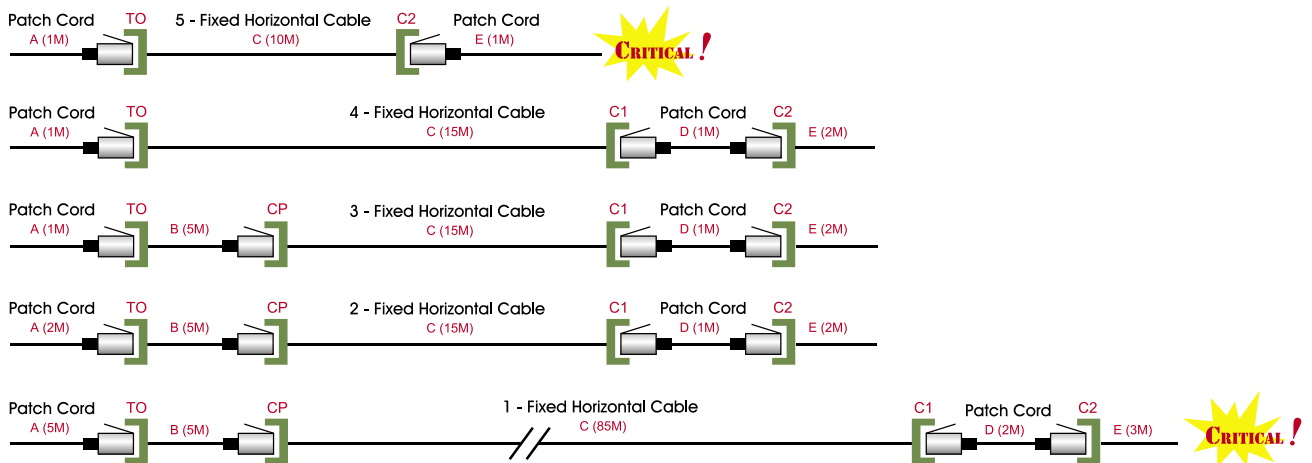



ANNEX J

TIA-568-B.2-XX			TIA-568-B.2-10 Annex J				
channel configuration	ID	Description	Channel configuration				
			1	2	3	4	5
<b>Maximum length</b> B+C..... 90 m (295 ft) A+D+E..... 10 m (32.8 ft)	A	Work area cord	5M	2M	1M	1M	1M
	TO	Telecommunication outlet/Connector	P	P	P	P	P
	B	Consolidation point cabling	5M	5M	5M	NP	NP
	CP	Consolidation point connector	P	P	P	NP	NP
	C	Horizontal cabling	85M	15M	15M	15M	10M
	C1	Horizontal cross-connect or interconnect	P	P	P	P	P
D	Patch cord or jumper cable	2M	1M	1M	1M	1M	
C2	Horizontal cross-connect or interconnect	P	P	P	P	NP	
E	Telecom equipment cord	3M	2M	2M	2M	NP	

NP=Not present in this channel model.  
P=Present in this channel model.

## Telebox products complied with TIA-568-B.2-10 ANNEX J Five Configurations





**Attestation of Conformity**  
 ISO/IEC, EN & TIA/EIA Screen Continuity  
 Class E<sub>A</sub> / Category 6A  
 Four Connector Channel

Telebox Industries Corp.  
 4F, No. 306 Tatung Road, Sec. 1  
 Hsichih-Taipai 22146, Taiwan, R.O.C.

Attestation of Conformity No. 189395  
 This type of Class E<sub>A</sub> / Category 6A screen continuity four connector channel has been tested by 3P Third Party Testing and complies with the 3P Copyright statement requirements of IEEE 802.3ab, Class E<sub>A</sub> requirements of amendment 1 to EN 50173-2-1:2007, EN 50173-2-1:2007 Amendment 1:2008, EN 50173-2-1:2007 Amendment 2:2008 and amendment 1 to ANSI/TIA-568-B.2-10. The channel has only been specified for screen continuity and shielded impedance of components that have been verified. The Attestation of Conformity is only valid for the actually tested channel samples in TIA568 configuration and consisting of the following components:

Cable:	Horizontal Cable from Delta Communications	P/N 771000
Consolidation Point:	Horizontal Cable from Delta, Inc.	02-24-01000
Class Header:	Horizontal Cable from Delta, Inc.	P/N 771000-15 and P/N 771000-16
Patch Cord:	Class Category 6A	8P/8C/250MHz/1000V/23.87dB
Manufacturer Verified:	Class Category 6A	02-24-01000
Manufacturer Verified:	Class Category 6A	02-24-01000

Hsinshui, 27<sup>th</sup> May 2009  
 Ode Lamberton  
 Test Responsible

Hsinshui, 27<sup>th</sup> May 2009  
 Paul Villars  
 Coordinating Manager

Independent Testing - For Your Confidence



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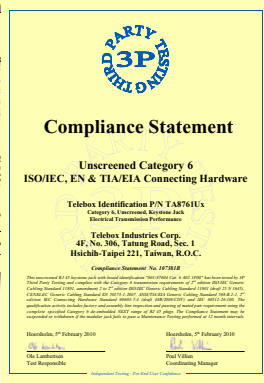
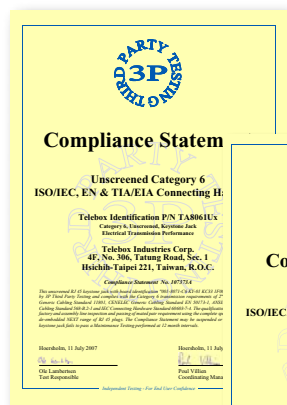
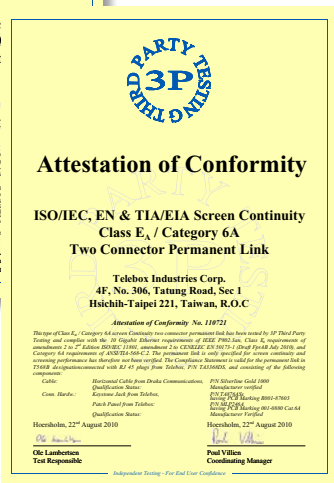
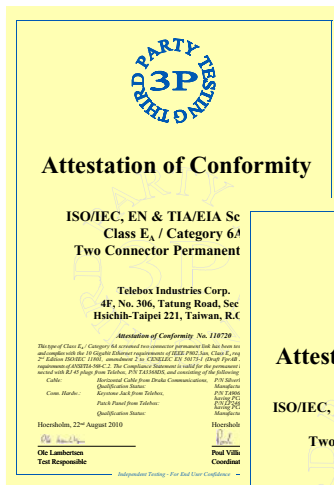
# Outlets



The keystone jacks are designed to snap easily in and out of the wall outlets, surface mount boxes, and patch panels, including 6, 8 and 10-way modular configurations. The horizontal cable (solid wire) is individually terminated by IDC (Insulation Displacement Connectors) using a punchdown tool. The front of the jack (RJ45) is connected to the equipment by patch cord (stranded wire).

The keystone jacks come with T568A or T568B wiring and fully comply with ANSI/TIA568-C-2 specifications for Insertion Loss (Attenuation), Near-End Crosstalk (NEXT), Return Loss, and Far-End Crosstalk (FEXT) for data transmissions of any pair combination with frequencies up to 500MHz.

- STP 180° Keystone Jack 4
- STP 90° Keystone Jack 6
- UTP 180° Keystone Jack 8
- UTP 90° Keystone Jack 9
- Toolless Keystone Jack 10
- STP 45° German Type Outlet 11
- Keystone Jack Module 12



Cat.6<sub>A</sub> Permanent Link Compliance !

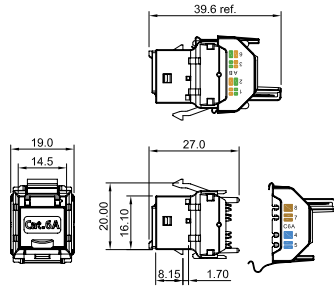
Connecting Hardware Factory Full Compliance !

## Outlets Technical Data

	Die-Casting	STP	UTP
<b>Transmission Characteristics</b>			
Cat.6A	Qualified screened Class E <sub>A</sub> /Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-51 ISO/IEC 11801 AMD2 CENELEC EN 50173-1	Qualified screened Class E <sub>A</sub> /Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-51 ISO/IEC 11801 AMD2 CENELEC EN 50173-1	Qualified unscreened Class E <sub>A</sub> /Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-41 ISO/IEC 11801 AMD2 CENELEC EN 50173-1
Cat.6 Connecting Hardware		Screened Cat.6 Connecting Hardware TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6 Connecting Hardware TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.6	Screened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Screened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Screened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
<b>Electrical Characteristics</b>			
Current Rating	1.5 Amps	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>			
Plug Insertion Life	750 Cycles Min.	750 Cycles Min.	750 Cycles Min.
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F
<b>Physicals Characteristics</b>			
Shielding Housing	Zinc alloy Die-Casting	SPTE 0.30mm thickness	
Material	High impact flame retardant plastic	High impact flame retardant plastic	High impact flame retardant plastic
PCB	FR4	FR4	FR4
Jack Wiring	Square wire	Round wire / Flat wire	Round / Square / Flat wire
IDC Accept (Solid wire)	#23~25 AWG	#23~25 AWG	#23~25 AWG
IDC Accept (Stranded wire)	#24/7~26/7 AWG	#24/7~26/7 AWG	#24/7~26/7 AWG
IDC Type	Toolless	Toolless, Krone, Krone/110, 110 IDC	Toolless, Krone, Krone/110, 110 IDC

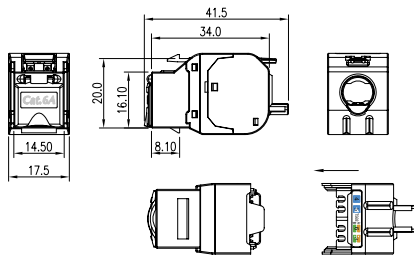


## STP 180° Die-Casting Keystone Jack



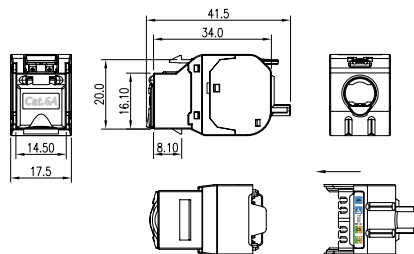
TA806ASD-WH	Cat.6A STP 180° keystone jack with door
TA806AST-WH	Cat.6A STP 180° keystone jack without door
TA8068SD-WH	Cat.6 STP 180° keystone jack with door
TA8068ST-WH	Cat.6 STP 180° keystone jack without door
TA8058SD-WH	Cat.5e STP 180° keystone jack with door
TA8058ST-WH	Cat.5e STP 180° keystone jack without door

## STP Slim Type 180° Die-Casting Keystone Jack



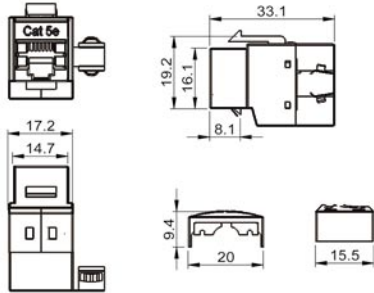
TA906ADD-BK	Cat.6A STP 180° keystone jack with door
TA906ADT-BK	Cat.6A STP 180° keystone jack without door

## STP Slim Type 180° Die-Casting Keystone Jack



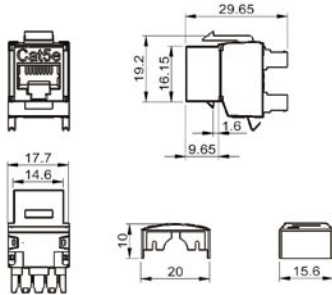
TA9068DD-BK	Cat.6 STP 180° keystone jack with door
TA9068DT-BK	Cat.6 STP 180° keystone jack without door
TA9058DD-BK	Cat.5e STP 180° keystone jack with door
TA9058DT-BK	Cat.5e STP 180° keystone jack without door

### STP 180° Fully Shielded Keystone Jack



TA3668F2-WH	Cat.6 STP 180° fully shielded keystone jack
TA3658F2-WH	Cat.5e STP 180° fully shielded keystone jack

### STP 180° Keystone Jack

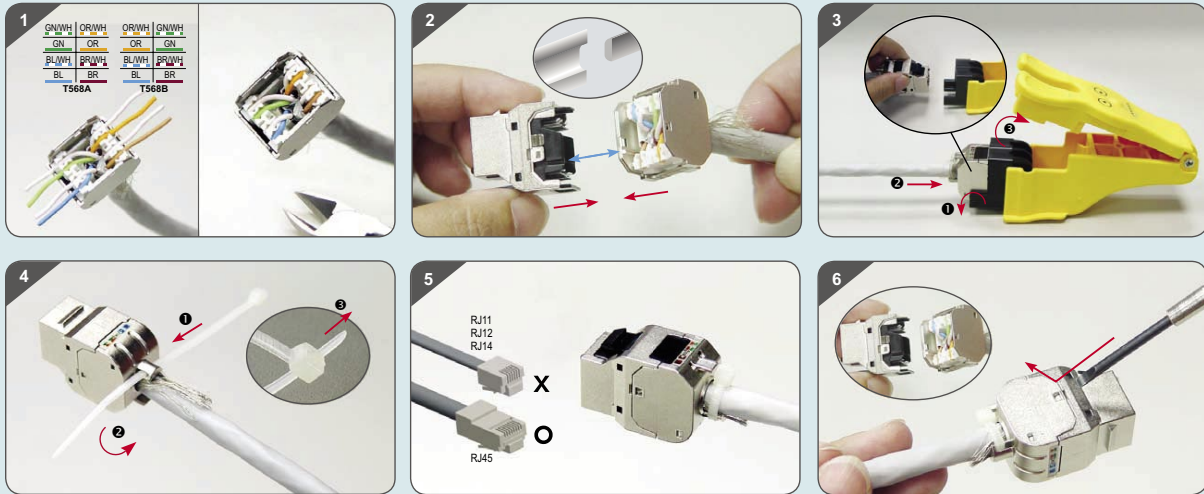


TA3668S2-WH	Cat.6 STP 180° keystone jack
TA3658S2-WH	Cat.5e STP 180° keystone jack

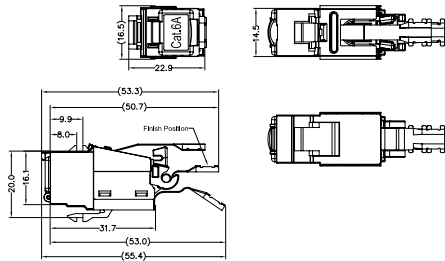


Tip

### STP Slim Type 180° Die-Casting Keystone Jack Installation

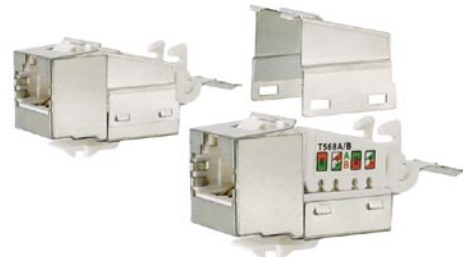
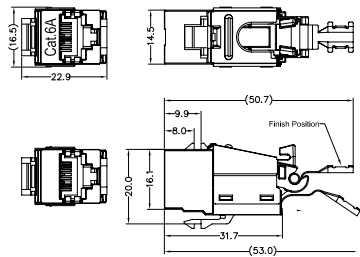


## STP 90° Keystone Jack



TA876ASD-WH	Cat.6A STP 90° keystone jack with door
TA876AST-WH	Cat.6A STP 90° keystone jack without door

## STP 90° Keystone Jack



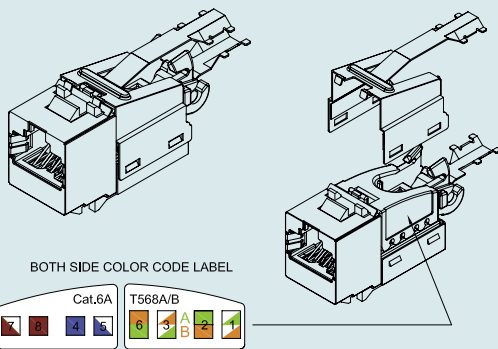
TA8768SD-WH	Cat.6 STP 90° keystone jack with door
TA8768ST-WH	Cat.6 STP 90° keystone jack without door
TA8758SD-WH	Cat.5e STP 90° keystone jack with door
TA8758ST-WH	Cat.5e STP 90° keystone jack without door



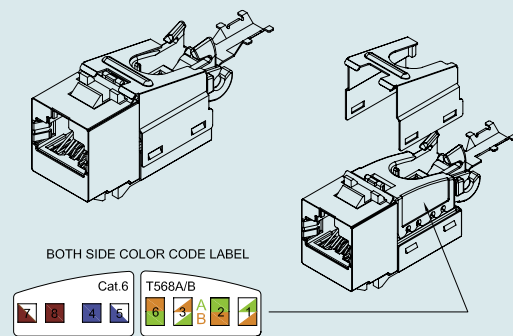
Tip

### STP 90° Keystone Jack Color Code Label

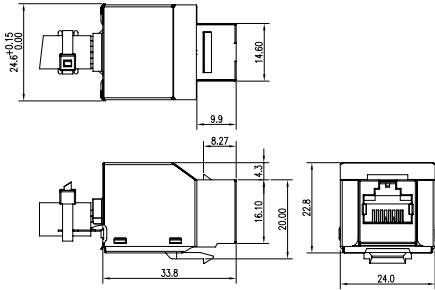
P/N: TA876AST



P/N: TA8768ST



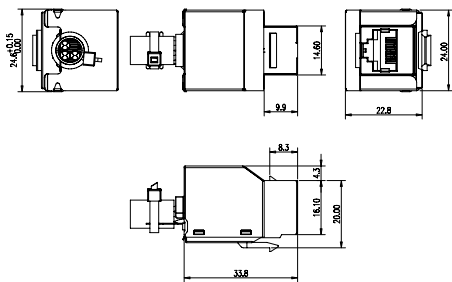
## STP 90° Connecting Hardware Punch Down Keystone Jack



TA8661SK-WH	Cat.6 STP Connecting Hardware keystone jack Krone IDC type
TA8661SC-WH	Cat.6 STP Connecting Hardware keystone jack Krone/110 IDC type
TA8661SI-WH	Cat.6 STP Connecting Hardware keystone jack 110 IDC type

\* Krone is a trademark of ADC-Krone.

## STP 90° Punch Down Keystone Jack



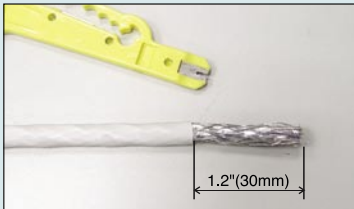
TA8668SK-WH	Cat.6 STP keystone jack Krone IDC type
TA8668SC-WH	Cat.6 STP keystone jack Krone/110 IDC type
TA8668SI-WH	Cat.6 STP keystone jack 110 IDC type
TA8658SK-WH	Cat.5e STP keystone jack Krone IDC type
TA8658SC-WH	Cat.5e STP keystone jack Krone/110 IDC type
TA8658SI-WH	Cat.5e STP keystone jack 110 IDC type

\* Krone is a trademark of ADC-Krone.



Tip

### STP 90° Punch Down Keystone Jack Installation



1. Bend back the copper braid over sheath.



2. Pierce bayonet between braid and aluminum foil all the way down and hit the shoulder. Place the cable tie-holder over the braid as photo illustrates.



3. Place cable tie at assigned place. Squeeze the cable tie and cut the cable tie tail.



4. Arrange the wires according to the color and use punch down tool terminate each pair.)

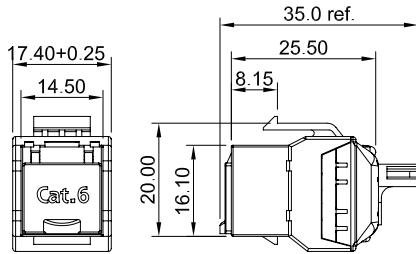


5. After termination completed, make sure the aluminum foil fully covers the wires all the way down to the punch block.



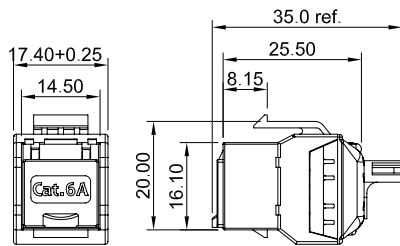
6. Complete view.

## UTP 180° Connecting Hardware Keystone Jack



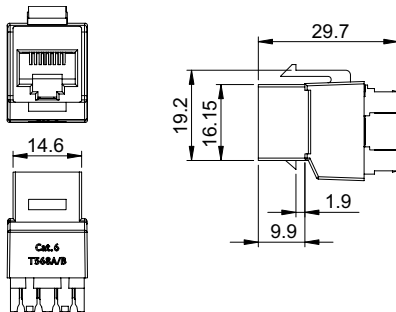
TA8061UD-WH	Cat.6 UTP 180° Connecting Hardware keystone jack with door
TA8061UT-WH	Cat.6 UTP 180° Connecting Hardware keystone jack without door

## UTP 180° Keystone Jack



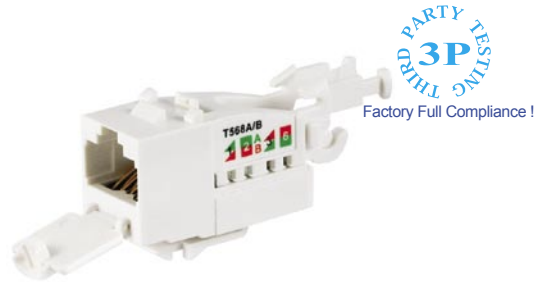
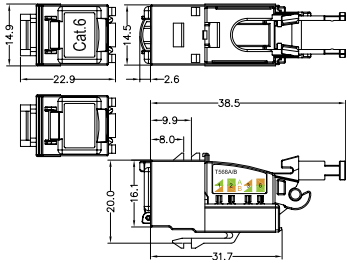
TA806AUD-WH	Cat.6A UTP 180° keystone jack with door
TA806AUT-WH	Cat.6A UTP 180° keystone jack without door
TA8068UD-WH	Cat.6 UTP 180° keystone jack with door
TA8068UT-WH	Cat.6 UTP 180° keystone jack without door
TA8058UD-WH	Cat.5e UTP 180° keystone jack with door
TA8058UT-WH	Cat.5e UTP 180° keystone jack without door

## UTP 180° Keystone Jack



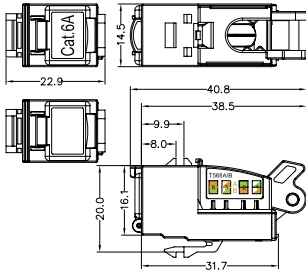
TA3668U2-WH	Cat.6 UTP 180° keystone jack
TA3658U2-WH	Cat.5e UTP 180° keystone jack

### UTP 90° Connecting Hardware Keystone Jack



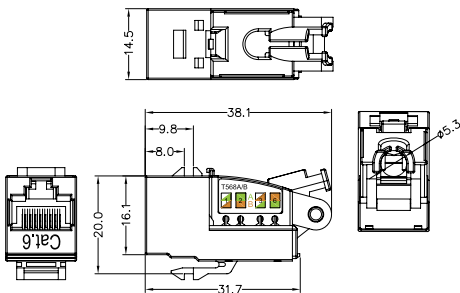
TA8761UD-WH	Cat.6 UTP 180° Connecting Hardware keystone jack with door
TA8761UT-WH	Cat.6 UTP 180° Connecting Hardware keystone jack without door

### UTP 90° Keystone Jack



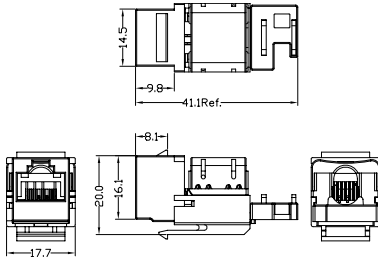
TA876AUD-WH	Cat.6A UTP 90° keystone jack with door
TA876AUT-WH	Cat.6A UTP 90° keystone jack without door
TA8768UD-WH	Cat.6 UTP 90° keystone jack with door
TA8768UT-WH	Cat.6 UTP 90° keystone jack without door
TA8758UD-WH	Cat.5e UTP 90° keystone jack with door
TA8758UT-WH	Cat.5e UTP 90° keystone jack without door

### UTP 90° Keystone Jack (for ø5.0~5.4mm cable)



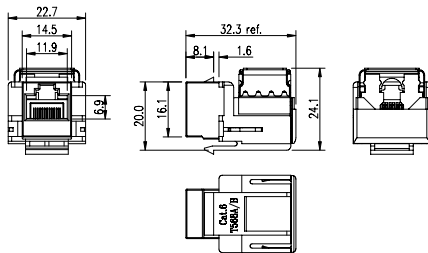
TA8768UD-WH	Cat.6 UTP 90° keystone jack with door
TA8768UT-WH	Cat.6 UTP 90° keystone jack without door
TA8758UD-WH	Cat.5e UTP 90° keystone jack with door
TA8758UT-WH	Cat.5e UTP 90° keystone jack without door

## UTP Mini 90° Punch Down Keystone Jack



TA896AUC-1WH	Cat.6A UTP mini keystone jack without cable holder
TA896AUC-2WH	Cat.6A UTP mini keystone jack with cable holder
TA8968UC-1WH	Cat.6 UTP mini keystone jack without cable holder
TA8968UC-2WH	Cat.6 UTP mini keystone jack with cable holder
TA8958UC-1WH	Cat.5e UTP mini keystone jack without cable holder
TA8958UC-2WH	Cat.5e UTP mini keystone jack with cable holder

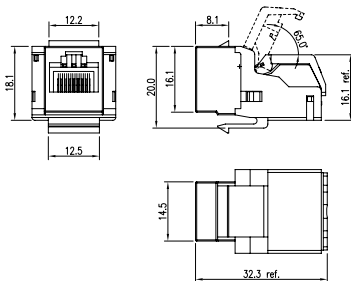
## UTP 90° Punch Down Keystone Jack



TA8668UK-BK	Cat.6 UTP keystone jack Krone IDC type
TA8668UC-BK	Cat.6 UTP keystone jack Krone/110 IDC type
TA8668UI-BK	Cat.6 UTP keystone jack 110 IDC type
TA8658UK-BK	Cat.5e UTP keystone jack Krone IDC type
TA8658UC-BK	Cat.5e UTP keystone jack Krone/110 IDC type
TA8658UI-BK	Cat.5e UTP keystone jack 110 IDC type

\* Krone is a trademark of ADC-Krone.

## UTP 90° Toolless Keystone Jack

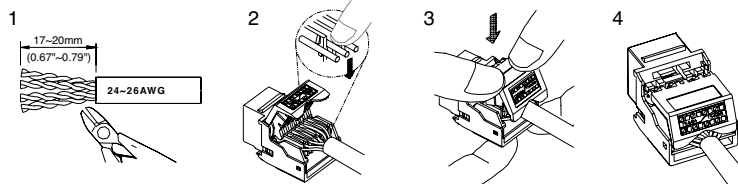


TA8856UT-BL	RJ12 (6P6C) UTP keystone jack toolless type
TA8868UT-BL	RJ45 (8P8C) UTP keystone jack toolless type

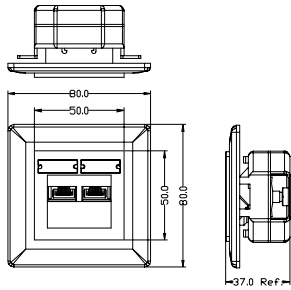


Tip

**Toolless Termination Speeds Installation**



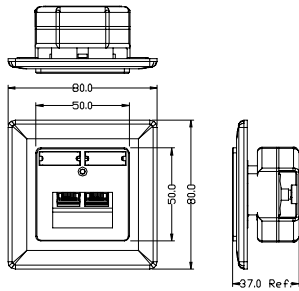
**Cat.6 STP 45° German Type Outlet**



TA25112

Cat.6 STP 45° German type outlet (Se type)

**Cat.6 STP 45° German Type Outlet**

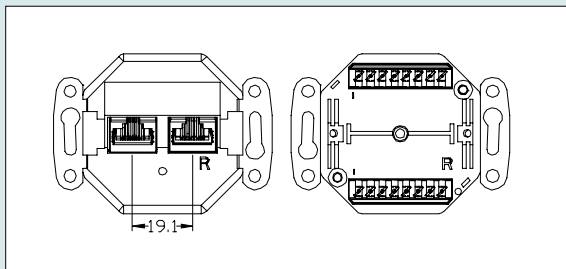


TA25212

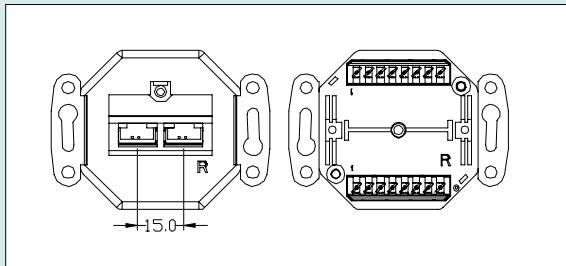
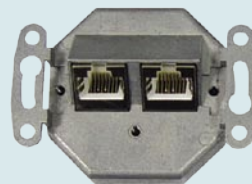
Cat.6 STP 45° German type outlet (Ru type)



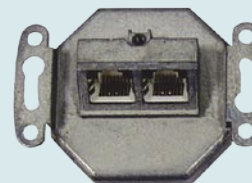
Tip



TA25112 Center Plate

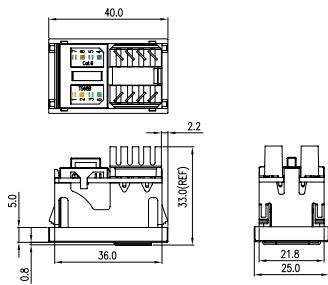


TA25212 Center Plate



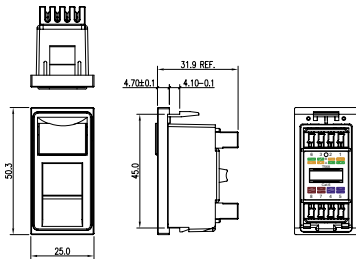


## British Type 6C Module (25x40mm)



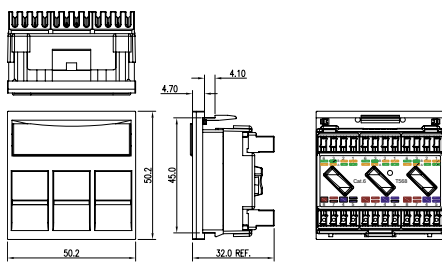
TA221-WH	Cat.6 British type 6C module (25x40mm)
TA222-WH	Cat.5e British type 6C module (25x40mm)

## British Type Module (25x50mm)



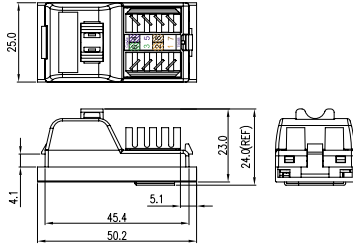
TA231A-WH	Cat.6 British type module (25x50mm)
TA232A-WH	Cat.5e British type module (25x50mm)

## British Type 50x50mm Module



TA231B-WH	Cat.6 British type module (50x50mm)
TA232B-WH	Cat.5e British type module (50x50mm)

## British Type Low Profile Keystone Jack Module

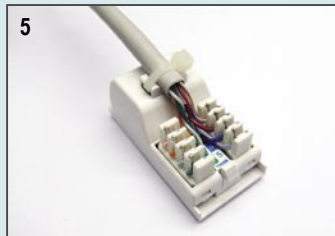
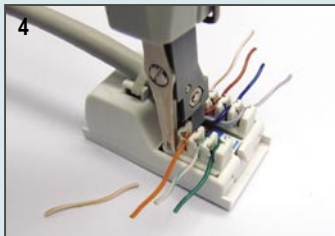
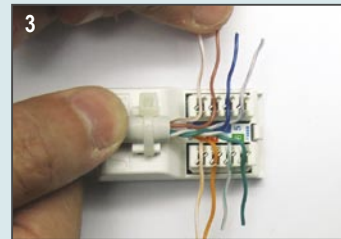
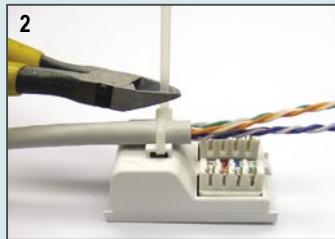
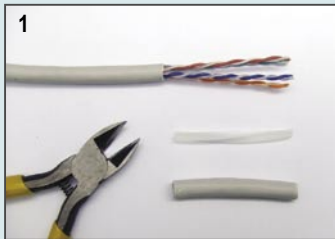


TA231C-WH	Cat.6 low profile module (25x50mm)
TA232C-WH	Cat.5e low profile module (25x50mm)



Tip

### Low Profile RJ45 PCB Outlet Installation



# Patch Panels




A patch panel is a panel, typically rackmounted, that houses cable connections. One normally shorter patch cable will be plugged into the front side, while the back will hold the connection of a much longer and more permanent cable. The assembly of hardware is arranged so that a number of circuits, usually of the same or similar type, appear on jacks for monitoring, interconnecting, and testing circuits in a convenient, flexible manner.

The Patch Panels come T568A and T568B wiring and fully comply with ANSI/TIA/EIA-568-C.2 specifications for Insertion loss (Attenuation), Near-End Crosstalk (NEXT), Return Loss, and Far-End Crosstalk (FEXT) for data transmissions of any pair combination with frequencies up to 500MHz.

High density patch panels are most commonly used at the cross-connect area for switches to the distribution side of the network, and can be mounted on 19" EIA racks or cabinets.

19" STP L-type Patch Panel	16
19" 48P STP Patch Panel	17
19" UTP L-type Patch Panel	18
19" 48P UTP Patch Panel	18
19" 180° UTP Patch Panel	19
10" 180° UTP Patch Panel	20
19" Keystone Type Patch Panel	22
Cable Management	24



## Compliance Statement

Screened Category 6  
ISO/IEC, EN & TIA/EIA Connecting Hardware

Telebox Identification P/N LP2461Sx  
Category 6, Screened, Patch Panel  
Electrical Transmission Performance

Telebox Industries Corp.  
4F, No. 306, Tatung Road, Sec. 1  
Hsichih-Taipei 221, Taiwan, R.O.C.

Compliance Statement No. 118487

This Screened RJ45 Patch Panel with board identification "Cat 6 100/100/100/100" has been tested by 3P Third Party Testing and complies with the Category 6 transmission requirements of TIA 568-C.2, Category 6 Shielded Standard 11801, Amendment 2 to 2nd Edition, ISO/IEC Generic Cabling Standard 11801 Amendment 2 to 19431, CENELEC Generic Cabling Standard EN 50173-1:2007, ISO/IEC JTC1 Generic Cabling Standard ISO/IEC 11801-2:2007, IEC Generic Cabling Hardware Standard 60603-2-3 (also 408-2009 CDV) and IEC 60332-20-100. The qualification activity includes factory and assembly line inspection and passing of final pass requirement using the complete specified Category 6 shielded NEXT range of RJ45 plugs. The Compliance Statement may be suspended or withdrawn if the modular patch fails to pass a Maintenance Testing performed at 12 month intervals.

Hörsbölen, 27<sup>th</sup> January 2010

Ole Lambertsen  
Test Responsible

Hörsbölen, 27<sup>th</sup> January 2010

Pool Villén  
Coordinating Manager

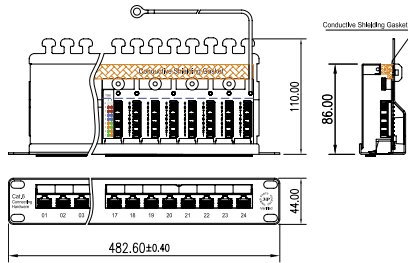
Independent Testing - For End User Confidence

## Patch Panels Technical Data

	90° Patch Panel		180° Patch Panel	"J" Patch Panel
	STP	UTP	UTP	UTP
<b>Transmission Characteristics</b>				
Cat.6A	Qualified screened Class E <sub>A</sub> /Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-51 ISO/IEC 11801 AMD2 CENELEC EN 50173-1	Qualified unscreened Class E <sub>A</sub> /Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-41 ISO/IEC 11801 AMD2 CENELEC EN 50173-1		
Cat.6 Connecting Hardware	Screened Cat.6 Connecting Hardware TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition			
Cat.6	Screened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition		Unscreened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition		Unscreened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
<b>Electrical Characteristics</b>				
Current Rating	1.5 Amps	1.5 Amps	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>				
Plug Insertion Life	750 Cycles Min.	750 Cycles Min.	750 Cycles Min.	750 Cycles Min.
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F
<b>Physicals Characteristics</b>				
Shielding Housing	SPCC nickel plating			
Material	High impact flame retardant plastic	High impact flame retardant plastic	High impact flame retardant plastic	High impact flame retardant plastic
PCB	FR4	FR4	FR4	FR4
Jack Wiring	Round wire / Flat wire	Round wire / Flat wire	Round wire	Round wire
IDC Accept (Solid wire)	#23~25 AWG	#23~25 AWG	#23~25 AWG	#23~25 AWG
IDC Type	Krone, Krone/110, 110 IDC	Krone, Krone/110, 110 IDC	Krone/110, 110 IDC	Krone IDC

# Patch Panels

## 24P STP L-type Connecting Hardware Patch Panel

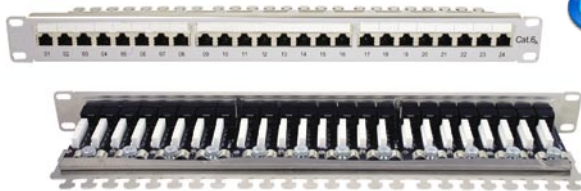
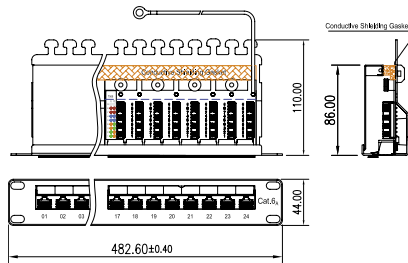


Factory Full Compliance!

LP2461SX

Cat.6 24P STP Connecting Hardware patch panel

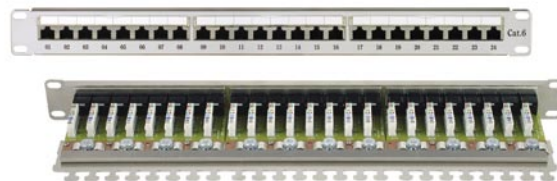
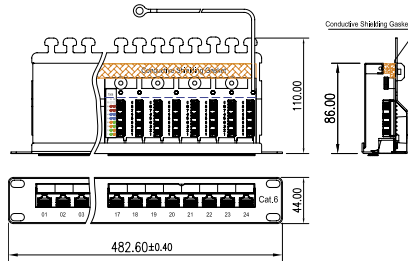
## 24P STP L-type 10G Patch Panel



LP246ASX

Cat.6A 24P STP patch panel

## 24P STP L-type Patch Panel



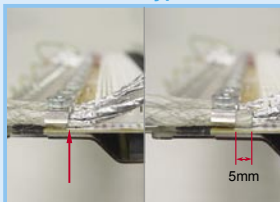
LP246SK	Cat.6 24P STP patch panel Krone IDC type
LP246SC	Cat.6 24P STP patch panel Krone/110 IDC type
LP246SI	Cat.6 24P STP patch panel 110 IDC type
LP248SK	Cat.5e 24P STP patch panel Krone IDC type
LP248SC	Cat.5e 24P STP patch panel Krone/110 IDC type
LP248SI	Cat.5e 24P STP patch panel 110 IDC type

\* Krone is a trademark of ADC-Krone.

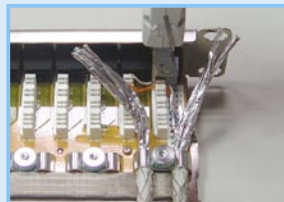


Tip

### STP L-type Patch Panel Installation



The cut of cable jacket to be fixed with metal clamp. If the jut out of the cable jacket can't over 5mm.



Arrange the wires according to the color and use punch down tool to terminate each pairs.

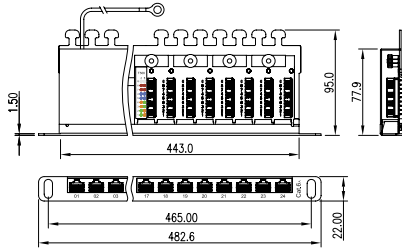


Thread the cable tie and cut the cable tie. Please do not use too much force to deform the cable.



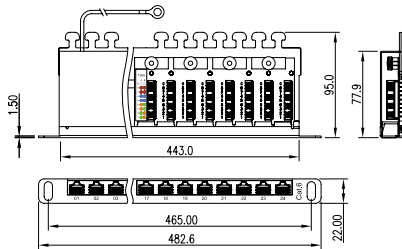
Push down the cover and snap into knob on each side.

### 24P STP 0.5U 10G L-type Patch Panel



MLP246ASK	Cat.6A 24P STP 0.5U patch panel Krone IDC type
MLP246ASC	Cat.6A 24P STP 0.5U patch panel Krone/110 IDC type
MLP246ASI	Cat.6A 24P STP 0.5U patch panel 110 IDC type

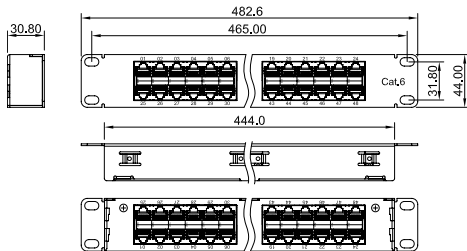
### 24P STP 0.5U L-type Patch Panel



MLP2468SK	Cat.6 24P STP 0.5U patch panel Krone IDC type
MLP2468SC	Cat.6 24P STP 0.5U patch panel Krone/110 IDC type
MLP2468SI	Cat.6 24P STP 0.5U patch panel 110 IDC type
MLP2458SK	Cat.5e 24P STP 0.5U patch panel Krone IDC type
MLP2458SC	Cat.5e 24P STP 0.5U patch panel Krone/110 IDC type
MLP2458SI	Cat.5e 24P STP 0.5U patch panel 110 IDC type

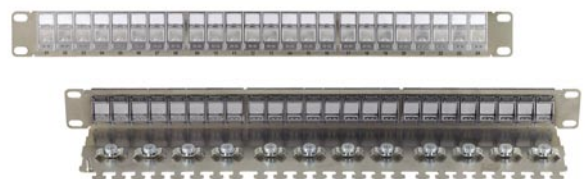
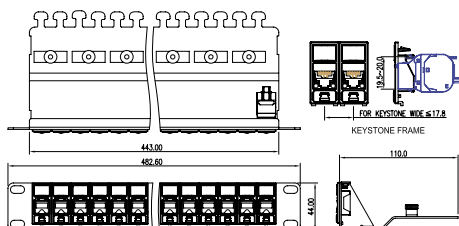
\* Krone is a trademark of ADC-Krone.

### 48P STP 1U RJ45 Loaded Coupler Panel



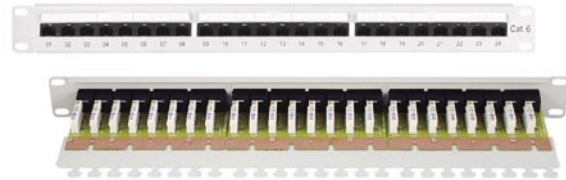
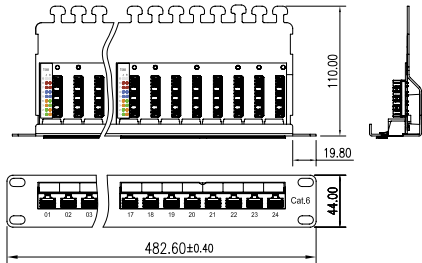
CP486SX	Cat.6 48P STP RJ45 loaded coupler panel
CP488SX	Cat.5e 48P STP RJ45 loaded coupler panel

### 24P STP Keystone Frame Panel



FP24SD	24P STP frame panel with door
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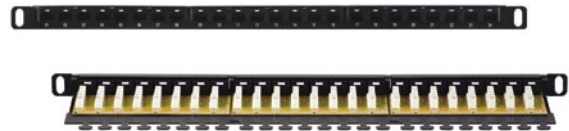
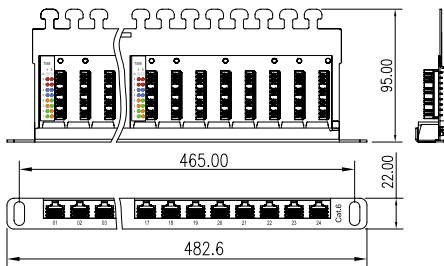
## 24P UTP L-type Patch Panel



LP246UK	Cat.6 UTP patch panel Krone IDC type
LP246UC	Cat.6 UTP patch panel Krone/110 IDC type
LP246UI	Cat.6 UTP patch panel 110 IDC type
LP248UK	Cat.5e UTP patch panel Krone IDC type
LP248UC	Cat.5e UTP patch panel Krone/110 IDC type
LP248UI	Cat.5e UTP patch panel 110 IDC type

\* Krone is a trademark of ADC-Krone.

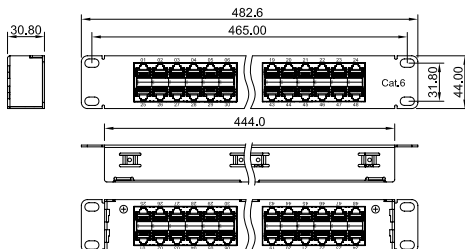
## 24P UTP 0.5U L-type Patch Panel



MLP2468UK	Cat.6 24P UTP 0.5U patch panel Krone IDC type
MLP2468UC	Cat.6 24P UTP 0.5U patch panel Krone/110 IDC type
MLP2468UI	Cat.6 24P UTP 0.5U patch panel 110 IDC type
MLP2458UK	Cat.5e 24P UTP 0.5U patch panel Krone IDC type
MLP2458UC	Cat.5e 24P UTP 0.5U patch panel Krone/110 IDC type
MLP2458UI	Cat.5e 24P UTP 0.5U patch panel 110 IDC type

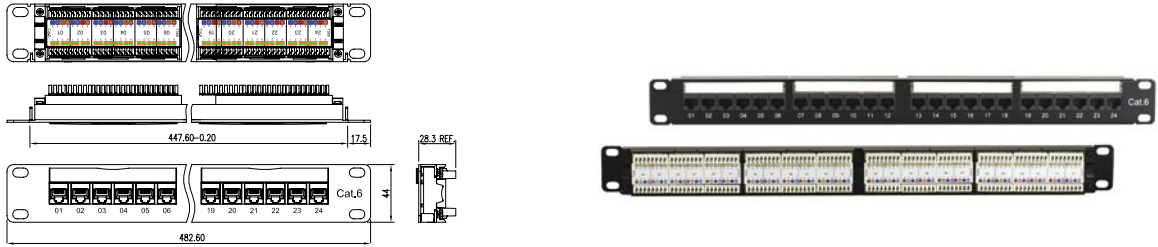
\* Krone is a trademark of ADC-Krone.

## 48P UTP 1U RJ45 Loaded Coupler Panel



CP486UX	Cat.6 48P UTP RJ45 loaded coupler panel
CP488UX	Cat.5e 48P UTP RJ45 loaded coupler panel

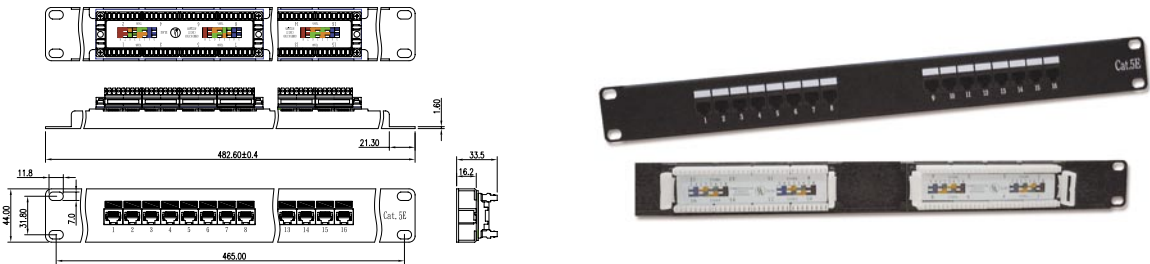
### 24P UTP 180° Patch Panel



JP246EKX	Cat.6 24P UTP 180° patch panel Krone IDC type
JP246ECX	Cat.6 24P UTP 180° patch panel Krone/110 IDC type

\* Cable management see page 24

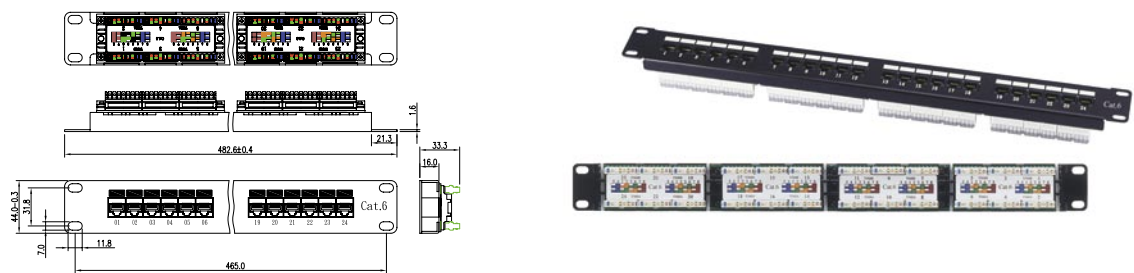
### 16P UTP 180° Patch Panel



EP166UC	Cat.6 UTP 180° patch panel Krone/110 IDC type
EP166UI	Cat.6 UTP 180° patch panel 110 IDC type
EP168UC	Cat.5e UTP 180° patch panel Krone/110 IDC type
EP168UI	Cat.5e UTP 180° patch panel 110 IDC type

\* Krone is a trademark of ADC-Krone.

### 24P UTP 180° Patch Panel



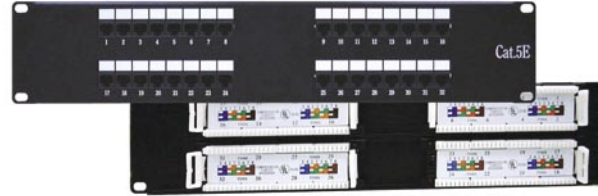
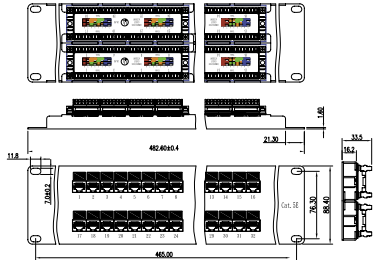
EP246UC	Cat.6 UTP 180° patch panel Krone/110 IDC type
EP246UI	Cat.6 UTP 180° patch panel 110 IDC type
EP248UC	Cat.5e UTP 180° patch panel Krone/110 IDC type
EP248UI	Cat.5e UTP 180° patch panel 110 IDC type

\* Krone is a trademark of ADC-Krone.



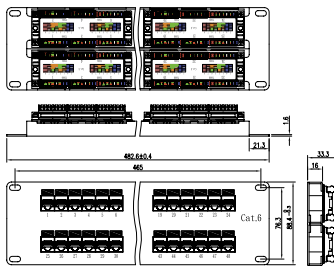
# Patch Panels

## 32P UTP 180° 2U Patch Panel



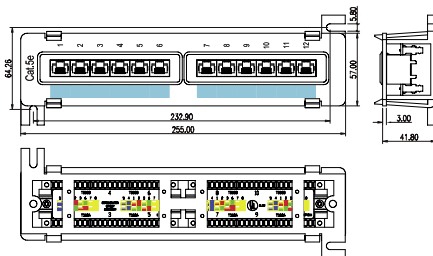
EP326UC	Cat.6 UTP 180° patch panel Krone/110 IDC type
EP326UI	Cat.6 UTP 180° patch panel 110 IDC type
EP328UC	Cat.5e UTP 180° patch panel Krone/110 IDC type
EP328UI	Cat.5e UTP 180° patch panel 110 IDC type

## 48P UTP 180° 2U Patch Panel



EP486UC	Cat.6 UTP 180° patch panel Krone/110 IDC type
EP486UI	Cat.6 UTP 180° patch panel 110 IDC type
EP488UC	Cat.5e UTP 180° patch panel Krone/110 IDC type
EP488UI	Cat.5e UTP 180° patch panel 110 IDC type

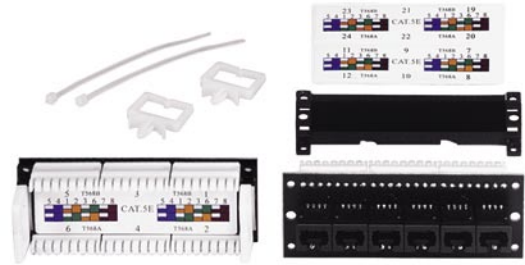
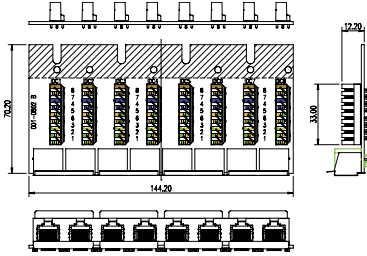
## 10" UTP Wall Mount Blade RJ45 Patch Panel



EP128UX	Cat.5e 10" 12P UTP RJ45 patch panel
EP088UX	Cat.5e 10" 8P UTP RJ45 patch panel
EP068UX	Cat.5e 10" 6P UTP RJ45 patch panel

\* Krone is a trademark of ADC-Krone.

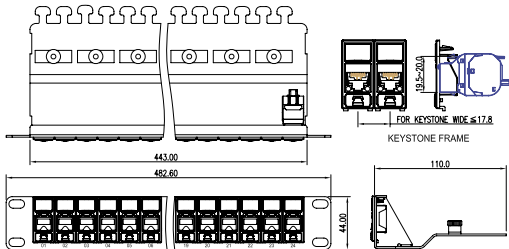
## 6-in-1 Module



S001-243BK

Cat.5e 6-in-1 module

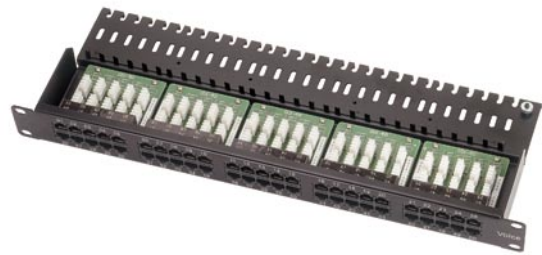
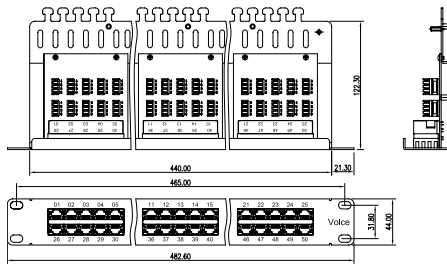
## 24P UTP Keystone Frame Panel



FP24UD

24P UTP keystone frame panel with door

## 25P/50P Voice Panel



VP254UC

25P voice panel

VP324UC

32P voice panel

VP504UC

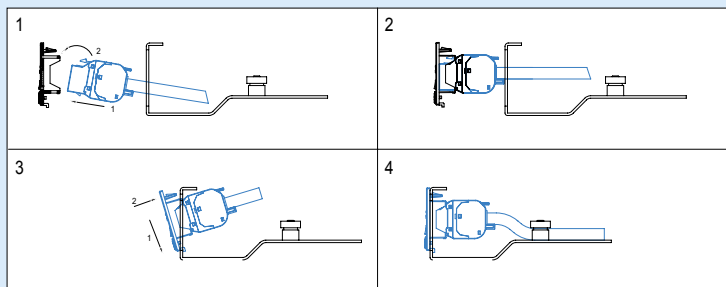
50P voice panel



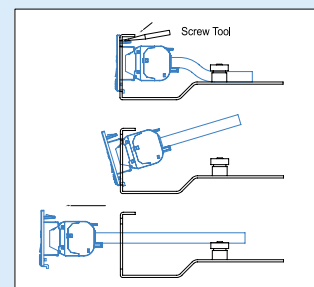
Tip

### 24P Keystone Frame Panel Installation

#### Mount

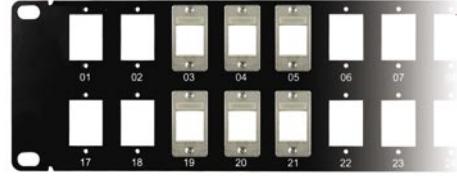
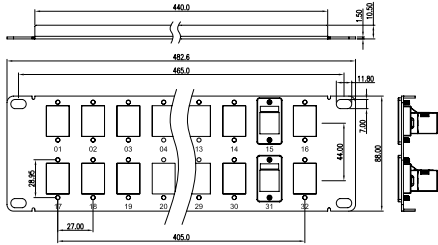


#### Dismount



# Patch Panels

## Die-Casting Flange Kits with Patch Panel



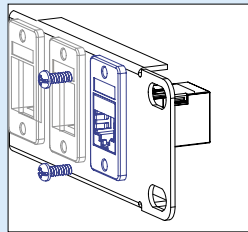
FG0401	Die-Casting flange kits with 1U 16 ports patch panel (for FG05XX series)
FG0402	Die-Casting flange kits with 2U 32 ports patch panel (for FG05XX series)
FG0501	1U Blank Panel 16 ports (for FG01XX)
FG0502	2U Blank Panel 32 ports (for FG01XX)



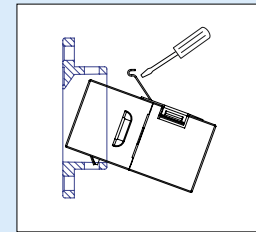
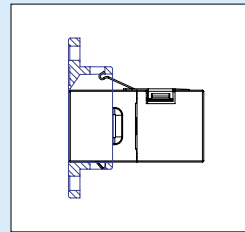
Tip

Easily Panel Mount a  
Keystone Style Connector

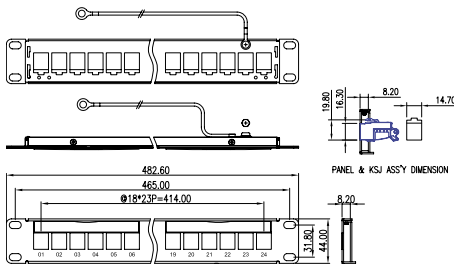
Mount



Dismount



## Keystone Type Patch Panel



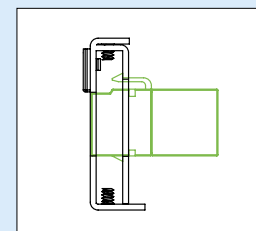
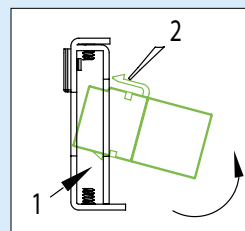
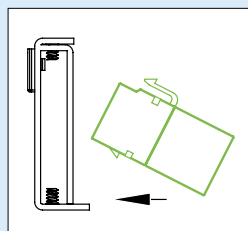
KP16XX	16P keystone type patch panel
KP24XX	24P keystone type patch panel
KP32XX	32P keystone type patch panel
KP48XX	48P keystone type patch panel

\* Cable management see page 24

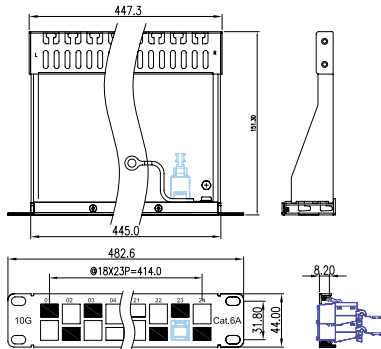


Tip

Easily Panel Mount a  
Keystone Style Connector



### Keystone Type Patch Panel for 10G Solution

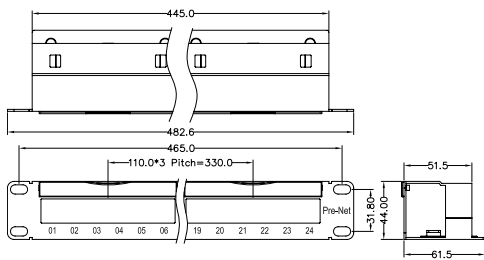


ZP24XX

Keystone panel for 10G solution (TA80XXUX:UTP / TA87 Family)

\* Cable management see page 24

### 6-in-1 Keystone Box Panel



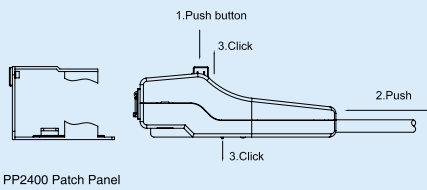
PP2400

24P panel for 6-in-1 keystone box



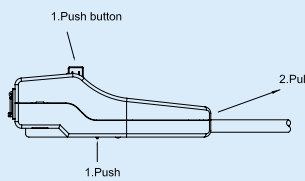
Tip

To Lock Keystone Jack Box



PP2400 Patch Panel

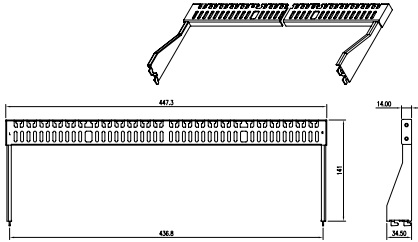
To Release Keystone Jack Box



TA6600  
for 6 Ports TA87XX Keystone Jacks

# Patch Panels

## Cable Management for KP/ZP Patch Panel

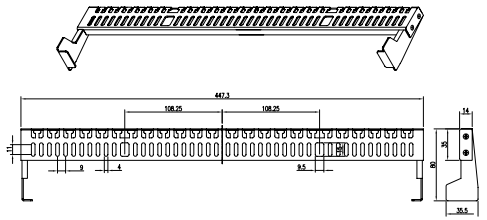


CMP9-BK

Cable management for KP/ZP patch panel

\* KPXX/ZPXX see page 22, 23

## Cable Management for JP24/48 Patch Panel



CMP8-BK

Cable management for JP24/48 patch panel

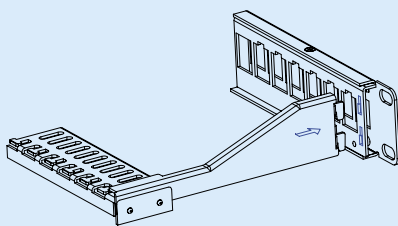
\* JPXX see page 19



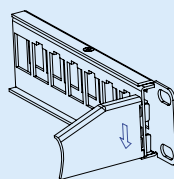
Tip

### Cable Management for KP/ZP Patch Panel Installation

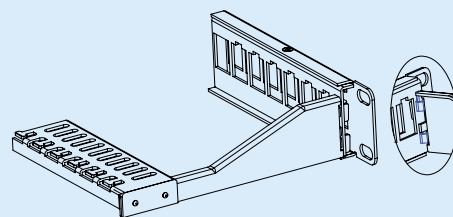
1



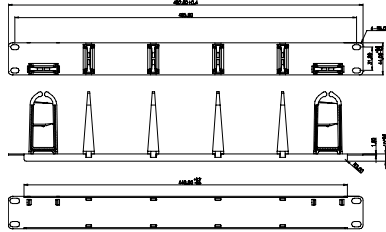
2



3.

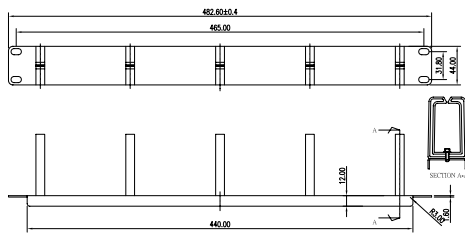


### Cable Management Panel



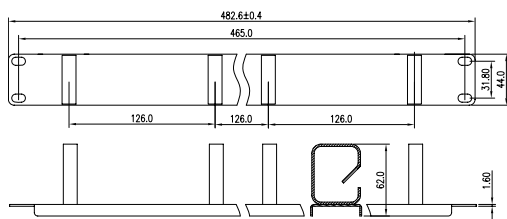
CMP7-BK 6 Snap-On A-Ring in black (4 x Vertical + 2 x Horizontal).

### Cable Management Panel



CMP4-BK 1U metal plate with plastic hanger x 5

### Cable Management Panel

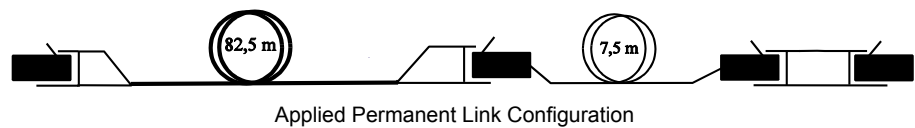


CMP3-BK 1U metal plate with metal hanger x 4

# Adapters & Couplers



Our shielded couplers could be used for cable extension purpose when used without metal clip, or panel mount purpose when used with metal clip. The metal clip is robust, moveable and easy to install. Panel mount coupler is ideal for high density 24 ports feed through patch panel and flush mount wall plates. They are available in Cat.5e, Cat.6 and Cat.6<sub>A</sub> version; and in shielded and unshielded type.



STP Die-Casting Coupler	28
STP Coupler	28
UTP 90° Coupler	30
UTP Coupler	30
D-Sub Modular Adapter	33

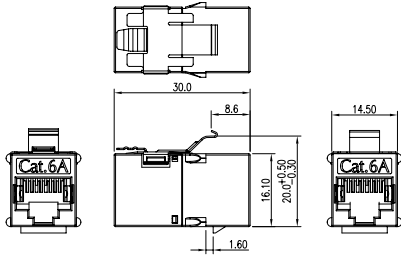
## Adapters & Couplers Technical Data

	Die-Casting	STP	UTP
<b>Transmission Characteristics</b>			
Cat.6A	Qualified screened Category 6A Channel of ANSI/TIA-568-C.2 IEC 60603-7-51 ISO/IEC 11801 AMD2 CENELEC EN 50173-1	Qualified screened Category 6A Channel of ANSI/TIA-568-C.2 IEC 60603-7-51 ISO/IEC 11801 AMD2 CENELEC EN 50173-1	
Cat.6	Screened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Screened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Screened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
<b>Electrical Characteristics</b>			
Current Rating	1.5 Amps	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>			
Plug Insertion Life	750 Cycles Min.	750 Cycles Min.	750 Cycles Min.
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F
<b>Physical Characteristics</b>			
Shielding Housing	Zinc alloy Die-Casting	Bronze 0.25mm thickness	
Material	High impact flame retardant plastic	High impact flame retardant plastic	High impact flame retardant plastic
PCB	FR4	FR4	FR4
Jack Wiring	Round wire / Flat wire	Round wire /Flat wire	Round wire



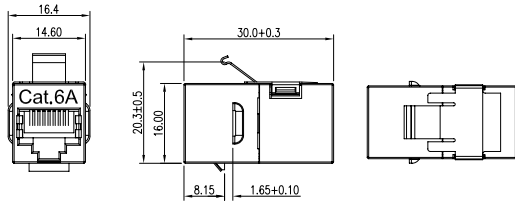
# Adapters & Couplers

## STP Die-Casting Keystone Type Coupler



TA196ADS	Cat.6A STP Die-Casting keystone type coupler
TA1968DS	Cat.6 STP Die-Casting keystone type coupler
TA1958DS	Cat.5e STP Die-Casting keystone type coupler

## STP Keystone Type Coupler

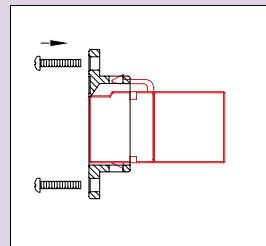
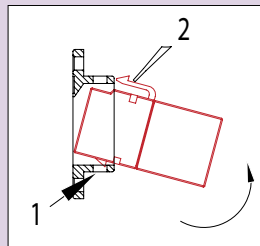
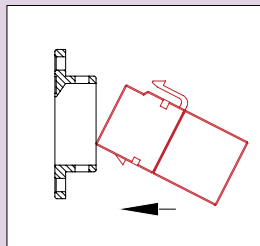
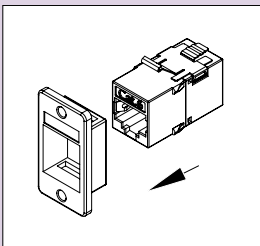


TA196ASS	Cat.6A STP keystone type coupler
TA1968SS	Cat.6 STP keystone type coupler
TA1958SS	Cat.5e STP keystone type coupler



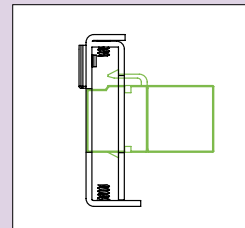
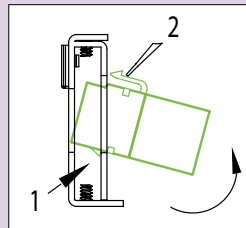
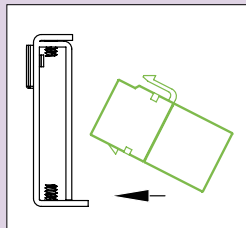
Tip

### Flange Kit Installation

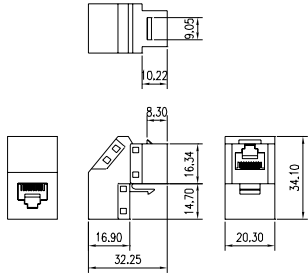


Tip

### Easily Panel Mount a Keystone Style Connector



### STP 45° Keystone Type Coupler



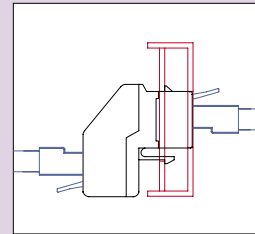
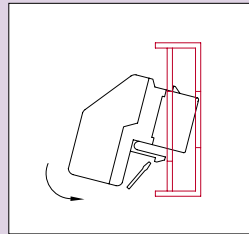
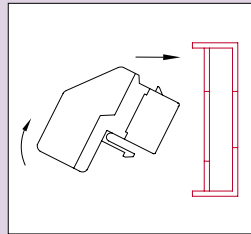
TA7908-5S

Cat.5e STP keystone type coupler

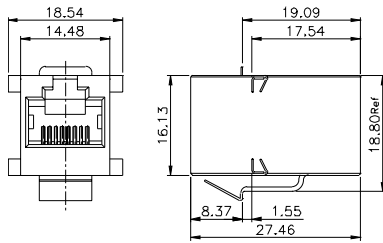


Tip

Easily panel mount a 45° keystone type coupler



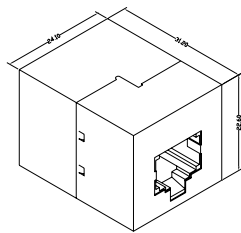
### STP Keystone Type Coupler



TA1908-3S

Cat.5 STP keystone type coupler

### STP In-line Coupler

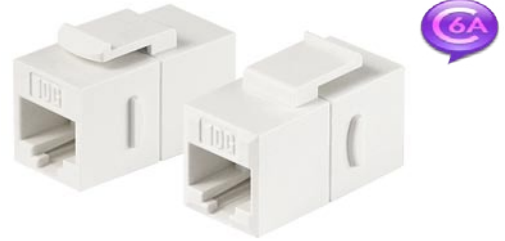
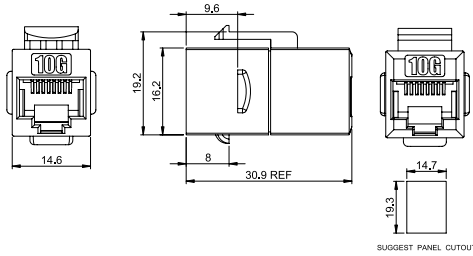


TA6908SS

Cat.5e STP in-line coupler

# Adapters & Couplers

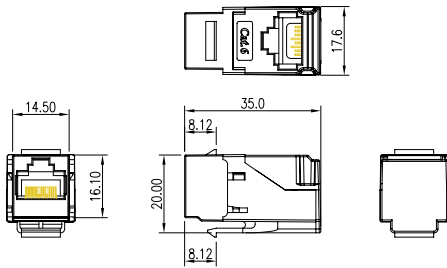
## UTP Keystone Type Coupler



TA196AUS-WH

Cat.6A UTP keystone type coupler

## UTP 90° Keystone Type Coupler



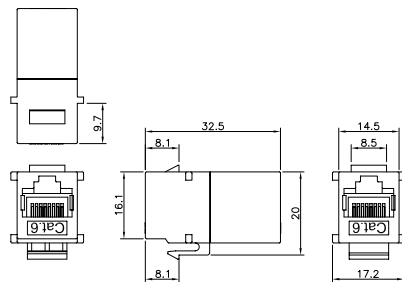
TA0968U-BK

Cat.6 UTP keystone type coupler

TA0958U-BK

Cat.5e UTP keystone type coupler

## UTP Keystone Type Coupler



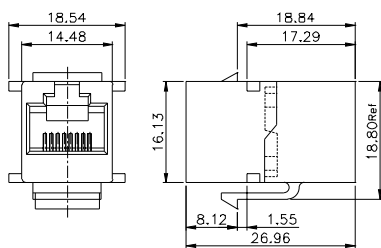
TA1968US

Cat.6 UTP keystone type coupler

TA1958US

Cat.5e UTP keystone type coupler

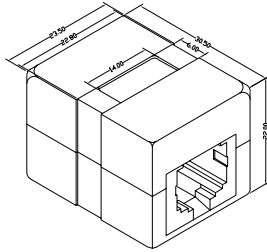
## UTP Keystone Type Coupler



TA1908-3S03

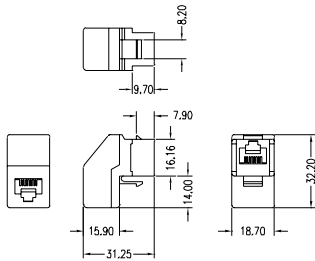
Cat.5 UTP keystone type coupler

## UTP In-line Coupler



TA6908US	Cat.5e UTP in-line coupler
TA6908GS	Cat.5e UTP grounding in-line coupler

## UTP 45° Keystone Type Coupler



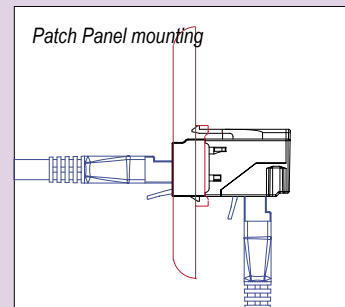
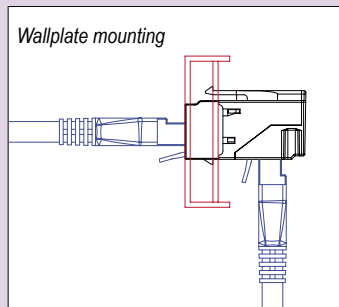
TA7908-5U	Cat.5e UTP 45° keystone type coupler
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Tip

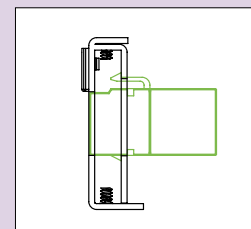
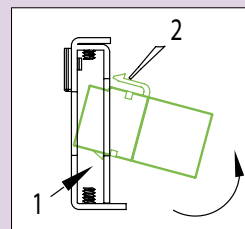
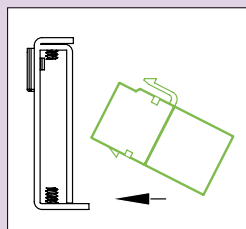
### Using 90° Coupler

This transcended general coupler 90 degree design. Product structure is standard RJ45 female to 90 degree RJ45 female adapter for easy cable connection, is suitable for the electrical box, wall surface faceplate, floor electrical box or any cramped space and so on.... Slim dimension 35mm x 17.6mm x 20mm (LxWxH), which is suitable for 1U 24 ports keystone panel.



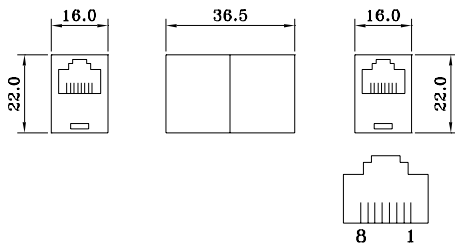
Tip

### Easily Panel Mount a Keystone Style Connector



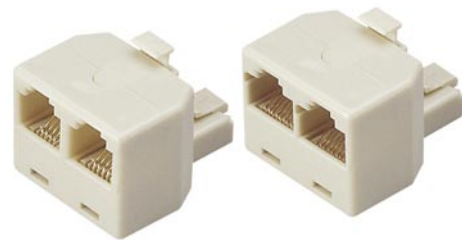
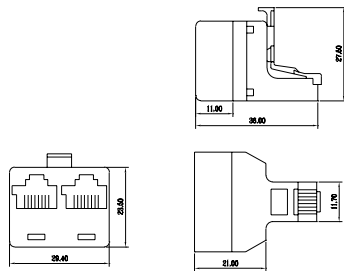
# Adapters & Couplers

## UTP In-line Coupler



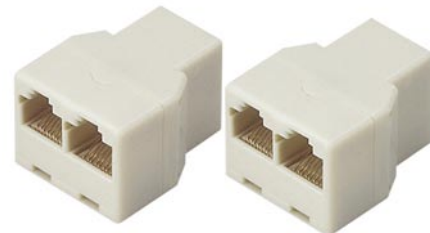
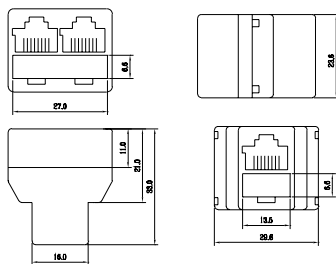
TA1904	4W x 4W
TA1906	6W x 6W
TA1906D	6W/DEC x 6W/DEC
TA1908	8W x 8W
TA1908K	8W/keyed x 8W/keyed

## T-Adapter (Plug)



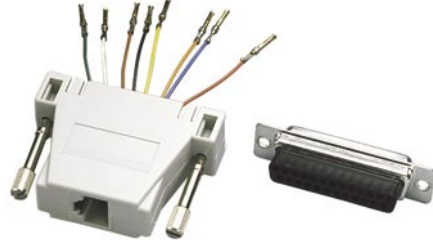
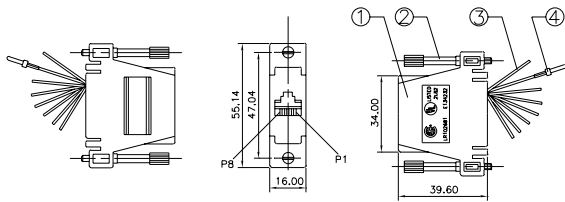
TA2004	6P4C-6P4C x 6P4C
TA2006	6P6C-6P6C x 6P6C
TA2008	8P8C-8P8C x 8P8C

## T-Adapter (Jack)



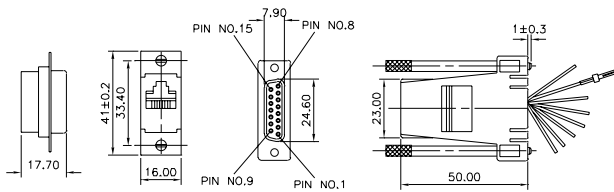
TA2104	6P4C-6P4C x 6P4C
TA2106	6P6C-6P6C x 6P6C
TA2108	8P8C-8P8C x 8P8C
TA2108K	8P8C-keyed - 8P8C-keyed x 8P8C keyed

## D-Sub 25 Modular Adapter



Part No.	Connector	M: Male / F: Female	W: # of wires / P: # of positions
DB2114	RJ45 - D-Sub 25	M	4W x 6P
DB2116		M	6W x 6P
DB2118		M	8W x 8P
DB2110		M	10W x 10P
DB2118K		M	8W x 8P Keyed
DB2116D		M	6W x 6P DEC
DB2214		F	4W x 6P
DB2216		F	6W x 6P
DB2218		F	8W x 8P
DB2210		F	10W x 10P
DB2218K		F	8W x 8P Keyed
DB2216D		F	6W x 6P DEC

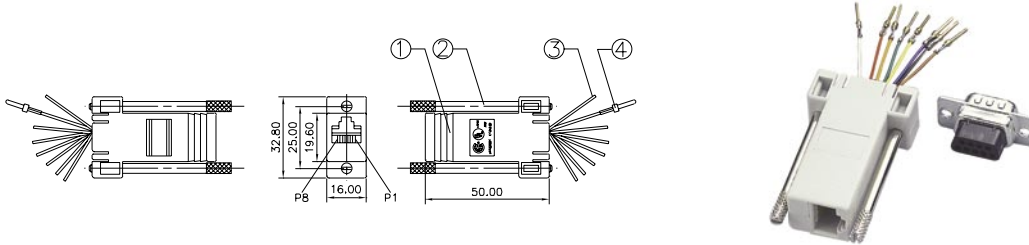
## D-Sub 15 Modular Adapter



Part No.	Connector	M: Male / F: Female	W: # of wires / P: # of positions
DB1114	RJ45 - D-Sub 15	M	4W x 6P
DB1116		M	6W x 6P
DB1118		M	8W x 8P
DB1110		M	10W x 10P
DB1118K		M	8W x 8P Keyed
DB1116D		M	6W x 6P DEC
DB1214		F	4W x 6P
DB1216		F	6W x 6P
DB1218		F	8W x 8P
DB1210		F	10W x 10P
DB1218K		F	8W x 8P Keyed
DB1216D		F	6W x 6P DEC

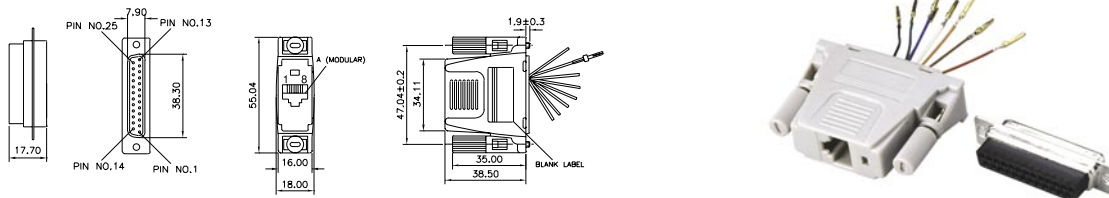
# Adapters & Couplers

## D-Sub 9 Modular Adapter



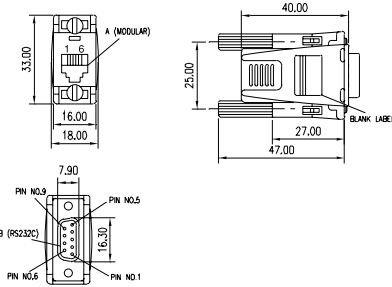
Part No.	Connector	M: Male / F: Female	W: # of wires / P: # of positions
DB9114	RJ45 - D-Sub 9	M	4W x 6P
DB9116		M	6W x 6P
DB9118		M	8W x 8P
DB9110		M	10W x 10P
DB9118K		M	8W x 8P Keyed
DB9116D		M	6W x 6P DEC
DB9214		F	4W x 6P
DB9216		F	6W x 6P
DB9218		F	8W x 8P
DB9210		F	10W x 10P
DB9218K		F	8W x 8P Keyed
DB9216D		F	6W x 6P DEC

## D-Sub 25 Modular Adapter



Part No.	Connector	M: Male / F: Female	W: # of wires / P: # of positions
DS2114	RJ45 - D-Sub 15	M	4W x 6P
DS2116		M	6W x 6P
DS2118		M	8W x 8P
DS2110		M	10W x 10P
DS2118K		M	8W x 8P Keyed
DS2116D		M	6W x 6P DEC
DS2214		F	4W x 6P
DS2216		F	6W x 6P
DS2218		F	8W x 8P
DS2210		F	10W x 10P
DS2218K		F	8W x 8P Keyed
DS2216D		F	6W x 6P DEC

## D-Sub 9 Modular Adapter

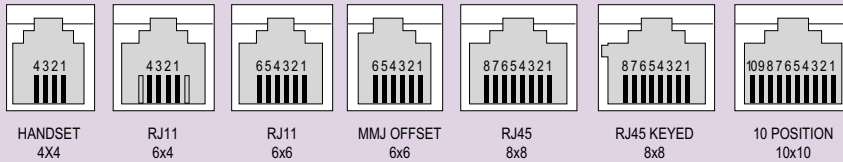


Part No.	Connector	M: Male / F: Female	W: # of wires / P: # of positions
DS9114	RJ45 - D-Sub 9	M	4W x 6P
DS9116		M	6W x 6P
DS9118		M	8W x 8P
DS9110		M	10W x 10P
DS9118K		M	8W x 8P Keyed
DS9116D		M	6W x 6P DEC
DS9214		F	4W x 6P
DS9216		F	6W x 6P
DS9218		F	8W x 8P
DS9210		F	10W x 10P
DS9218K		F	8W x 8P Keyed
DS9216D		F	6W x 6P DEC



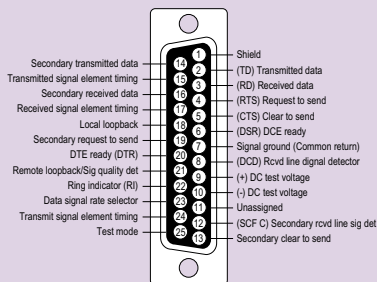
Tip

### Modular Jack Configuration

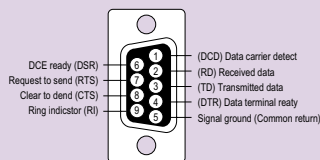


Jack  
(Female Gender)

### EIA 232 Interface DB25 Male



### EIA 232 Interface DB9 Male





# Surface Mount Boxes



Ideal for surface mount applications, especially in confined spaces. Mount for either side or base entry of cables. Boxes come with mounting screws and adhesive tape, and a cable tie for strain relief. The snap-on cover enables easy closure or access for quick installation. Each box includes a write-on label and color icon for easy designation of different system or station.

- Snap-on Cover with Designation Areas — For color-coded icons/tabs and write-on labels
- Cable/Raceway Entry — Breakouts on different side and bottom
- Cable Tie Anchor Points — Facilitates strain relief for cable
- Optional Spring-loaded Shutter Door — Shutter door offer added protection from dust and other contaminants
- Conceals screw for security if desired

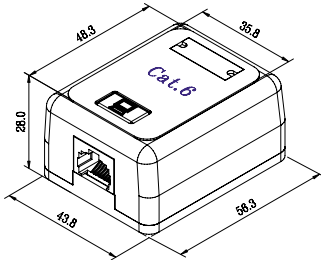
Surface Mount Box	38
IDC Box	41
Keystone Jack Surface Mount Box	42
Telephone Surface Mount Box	44

## Surface Mount Boxes Technical Data

	STP	UTP
<b>Transmission Characteristics</b>		
Cat.6	Screened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
<b>Electrical Characteristics</b>		
Current Rating	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>		
Plug Insertion Life	750 Cycles Min.	750 Cycles Min.
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F
<b>Physicals Characteristics</b>		
Shielding Housing	Stainless steel 0.25mm thickness	
Material	High impact flame retardant plastic	High impact flame retardant plastic
PCB	FR4	FR4
Jack Wiring	Round wire	Round wire
IDC Accept (Solid wire)	#23~25 AWG	#23~25 AWG
IDC Accept (Stranded wire)	#24/7~26/7 AWG	#24/7~26/7 AWG
IDC Type	Krone, Krone/110, 110 IDC	Krone, Krone/110, 110 IDC

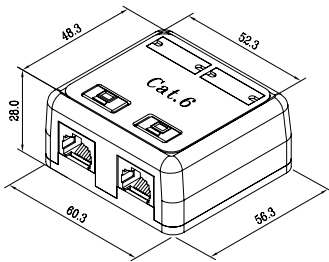
# Surface Mount Boxes

## 1 Port STP Surface Mount Box



TA6100SK-6WH	Cat.6 1 port STP 10P10C surface mount box Krone IDC type
TA6100SC-6WH	Cat.6 1 port STP 10P10C surface mount box Krone/110 IDC type
TA6100SI-6WH	Cat.6 1 port STP 10P10C surface mount box 110 IDC type
TA6108SK-6WH	Cat.6 1 port STP 8P8C surface mount box Krone IDC type
TA6108SC-6WH	Cat.6 1 port STP 8P8C surface mount box Krone/110 IDC type
TA6108SI-6WH	Cat.6 1 port STP 8P8C surface mount box 110 IDC type
TA6100SK-WH	Cat.5e 1 port STP 10P10C surface mount box Krone IDC type
TA6100SC-WH	Cat.5e 1 port STP 10P10C surface mount box Krone/110 IDC type
TA6100SI-WH	Cat.5e 1 port STP 10P10C surface mount box 110 IDC type
TA6108SK-WH	Cat.5e 1 port STP 8P8C surface mount box Krone IDC type
TA6108SC-WH	Cat.5e 1 port STP 8P8C surface mount box Krone/110 IDC type
TA6108SI-WH	Cat.5e 1 port STP 8P8C surface mount box 110 IDC type

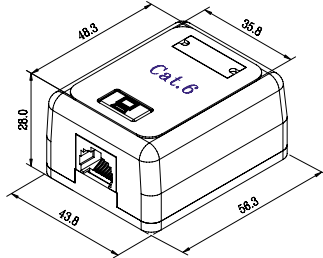
## 2 Ports STP Surface Mount Box



TA6200SK-6WH	Cat.6 2 ports STP 10P10C surface mount box Krone IDC type
TA6200SC-6WH	Cat.6 2 ports STP 10P10C surface mount box Krone/110 IDC type
TA6200SI-6WH	Cat.6 2 ports STP 10P10C surface mount box 110 IDC type
TA6288SK-6WH	Cat.6 2 ports STP 8P8C surface mount box Krone IDC type
TA6288SC-6WH	Cat.6 2 ports STP 8P8C surface mount box Krone/110 IDC type
TA6288SI-6WH	Cat.6 2 ports STP 8P8C surface mount box 110 IDC type
TA6200SK-WH	Cat.5e 2 ports STP 10P10C surface mount box Krone IDC type
TA6200SC-WH	Cat.5e 2 ports STP 10P10C surface mount box Krone/110 IDC type
TA6200SI-WH	Cat.5e 2 ports STP 10P10C surface mount box 110 IDC type
TA6288SK-WH	Cat.5e 2 ports STP 8P8C surface mount box Krone IDC type
TA6288SC-WH	Cat.5e 2 ports STP 8P8C surface mount box Krone/110 IDC type
TA6288SI-WH	Cat.5e 2 ports STP 8P8C surface mount box 110 IDC type

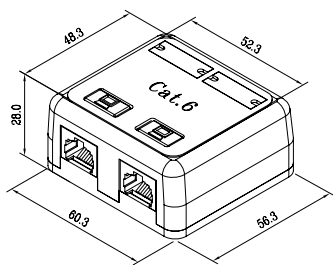
\* Krone is a trademark of ADC-Krone.

## 1 Port UTP Surface Mount Box



TA6100UK-6WH	Cat.6 1 port UTP 10P10C surface mount box Krone IDC type
TA6100UC-6WH	Cat.6 1 port UTP 10P10C surface mount box Krone/110 IDC type
TA6100UI-6WH	Cat.6 1 port UTP 10P10C surface mount box 110 IDC type
TA6108SUK-6WH	Cat.6 1 port UTP 8P8C surface mount box Krone IDC type
TA6108UC-6WH	Cat.6 1 port UTP 8P8C surface mount box Krone/110 IDC type
TA6108UI-6WH	Cat.6 1 port UTP 8P8C surface mount box 110 IDC type
TA6100UK-WH	Cat.5e 1 port UTP 10P10C surface mount box Krone IDC type
TA6100UC-WH	Cat.5e 1 port UTP 10P10C surface mount box Krone/110 IDC type
TA6100UI-WH	Cat.5e 1 port UTP 10P10C surface mount box 110 IDC type
TA6108UK-WH	Cat.5e 1 port UTP 8P8C surface mount box Krone IDC type
TA6108UC-WH	Cat.5e 1 port UTP 8P8C surface mount box Krone/110 IDC type
TA6108UI-WH	Cat.5e 1 port UTP 8P8C surface mount box 110 IDC type
TA6106UK-WH	Cat.5 1 port UTP 6P6C surface mount box Krone IDC type
TA6106UC-WH	Cat.5 1 port UTP 6P6C surface mount box Krone/110 IDC type
TA6106UI-WH	Cat.5 1 port UTP 6P6C surface mount box 110 IDC type

## 2 Ports UTP Surface Mount Box

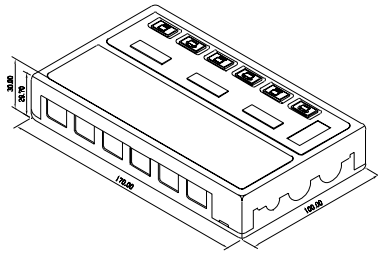


TA6200UK-6WH	Cat.6 2 ports UTP 10P10C surface mount box Krone IDC type
TA6200UC-6WH	Cat.6 1 ports UTP 10P10C surface mount box Krone/110 IDC type
TA6200UI-6WH	Cat.6 2 ports UTP 10P10C surface mount box 110 IDC type
TA6288UK-6WH	Cat.6 2 ports UTP 8P8C surface mount box Krone IDC type
TA6288UC-6WH	Cat.6 2 ports UTP 8P8C surface mount box Krone/110 IDC type
TA6288UI-6WH	Cat.6 2 ports UTP 8P8C surface mount box 110 IDC type
TA6200UK-WH	Cat.5e 2 ports UTP 10P10C surface mount box Krone IDC type
TA6200UC-WH	Cat.5e 2 ports UTP 10P10C surface mount box Krone/110 IDC type
TA6200UI-WH	Cat.5e 2 ports UTP 10P10C surface mount box 110 IDC type
TA6288UK-WH	Cat.5e 2 ports UTP 8P8C surface mount box Krone IDC type
TA6288UC-WH	Cat.5e 2 ports UTP 8P8C surface mount box Krone/110 IDC type
TA6288UI-WH	Cat.5e 2 ports UTP 8P8C surface mount box 110 IDC type

\* Krone is a trademark of ADC-Krone.

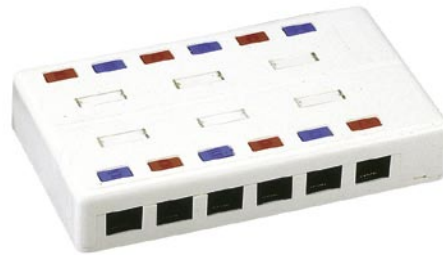
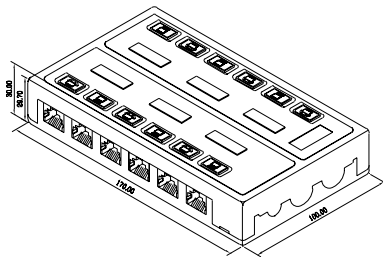
# Surface Mount Boxes

## 6 Ports UTP Surface Mount Box



TA6468I-6WH	Cat.6 6 ports UTP 8P8C surface mount box 110 IDC type
TA6468C-6WH	Cat.6 6 ports UTP 8P8C surface mount box Krone/110 IDC type
TA6460I-6WH	Cat.6 6 ports UTP 10P10C surface mount box 110 IDC type
TA6460C-6WH	Cat.6 6 ports UTP 10P10C surface mount box Krone/110 IDC type
TA6468I-WH	Cat.5e 6 ports UTP 8P8C surface mount box 110 IDC type
TA6468C-WH	Cat.5e 6 ports UTP 8P8C surface mount box Krone/110 IDC type

## 12 Ports UTP Surface Mount Box



TA6428I-6WH	Cat.6 12 ports UTP 8P8C surface mount box 110 IDC type
TA6428C-6WH	Cat.6 12 ports UTP 8P8C surface mount box Krone/110 IDC type
TA6420I-6WH	Cat.6 12 ports UTP 10P10C surface mount box 110 IDC type
TA6420C-6WH	Cat.6 12 ports UTP 10P10C surface mount box Krone/110 IDC type
TA6428I-WH	Cat.5e 12 ports UTP 8P8C surface mount box 110 IDC type
TA6428C-WH	Cat.5e 12 ports UTP 8P8C surface mount box Krone/110 IDC type



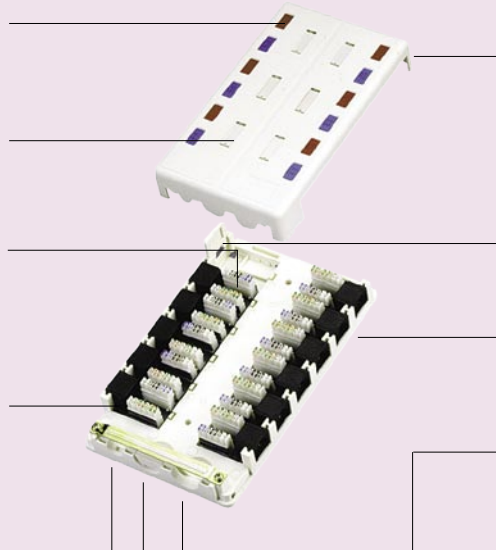
### Tip

Snap-in icons allow users quick & easy identification of their chosen media application.

Write-on label protected by clear plastic cover.

Equipped with high quality Telebox IDC also available in Krone type or 110 type terminal block.  
Note: The Telebox IDC can be punched down with the Krone LSA or AT&T tool.

Modular jack meets FCC part 68  
50µ"/1.27µmm gold plating is available for shielded or unshielded options.



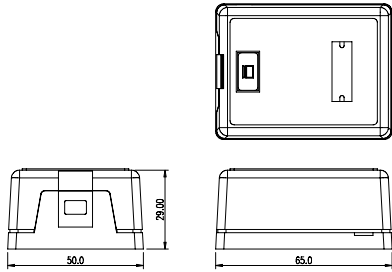
TA64 are available in white, ivory and grey.

Remove the gate to add the modular jack 8,10 and 12 ports.

Screws and double-sided adhesive tape included.  
Megnets are optional.

Cable entry  
Two available knock-out options to accommodate different cable dimensions.

## 1 Port Keystone Jack Surface Mount Box



TA810X-WH	w/o keystone jack
TA8116-WH	TA8656 keystone jack 6P6C x1
TA8118-WH	TA8658 keystone jack 8P8C x1
TA8126-WH	TA8856 toolless keystone jack 6P6C x1
TA8128-WH	TA8858 toolless keystone jack 8P8C x1



### Tip

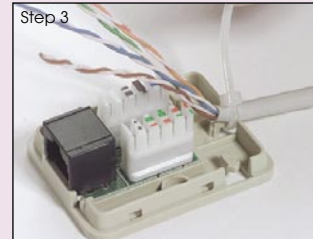
#### TA6188UC-IDC Termination



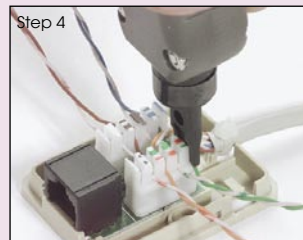
Step 1  
Remove the cover and attach the jack base assembly using the supplied screws or double stick tape.



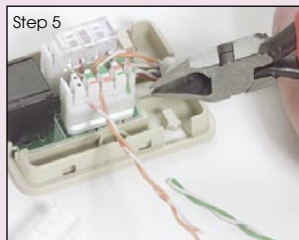
Step 2  
Remove approximately 3" of the outer jacket from the cable. Take care not to nick the wires.



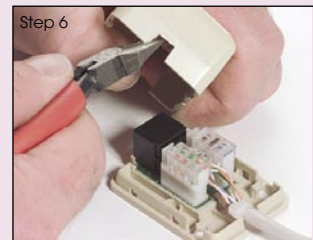
Step 3  
Secure the cable with a cable tie to the desired entry point.



Step 4  
Insert the pairs to the color coded slots taking care to maintain the twist to within .5" of IDC contact. Punch down using a 110 style tool.



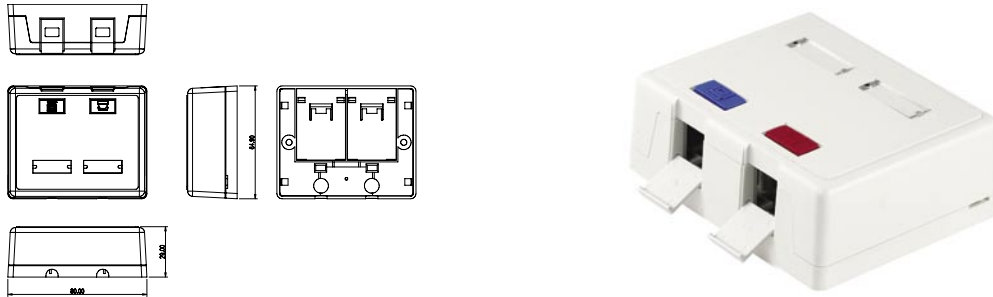
Step 5  
Trim excess wire (if your 110 tool doesn't cut) and snap on the retainer caps.



Step 6  
Notch the cover to match the cable entry and snap it in place.

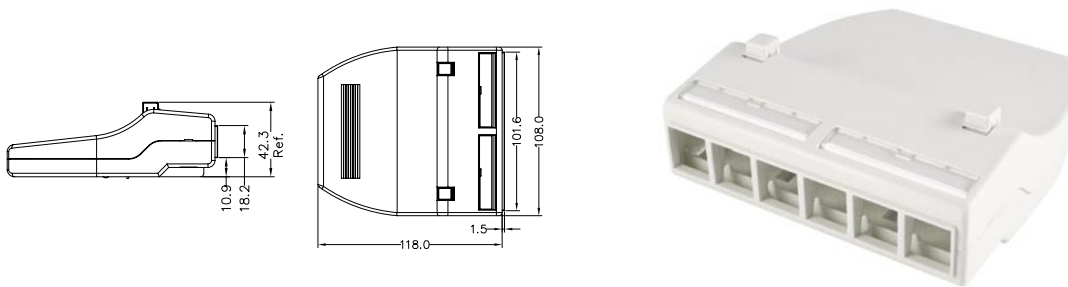
# Surface Mount Boxes

## 2 Ports Keystone Jack Surface Mount Box



TA820X-WH	w/o keystone jack
TA8216-WH	TA8656 keystone jack 6P6C x2
TA8218-WH	TA8658 keystone jack 8P8Cx2
TA8226-WH	TA8856 toolless keystone jack 6P6C x2
TA8228-WH	TA8858 toolless keystone jack 8P8C x2

## Pre-Net Cassette

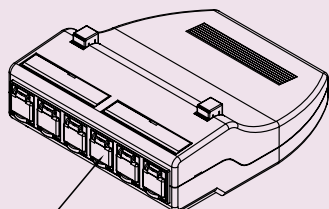


TA6600	6 ports for TA87XX keystone jack cassette
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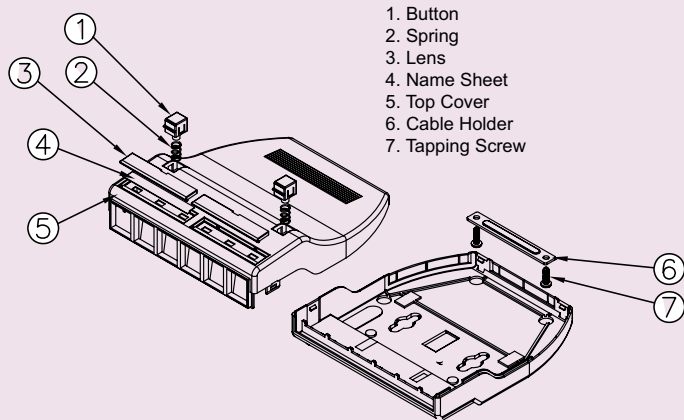


Tip

### TA6600 Pre-Net Cassette

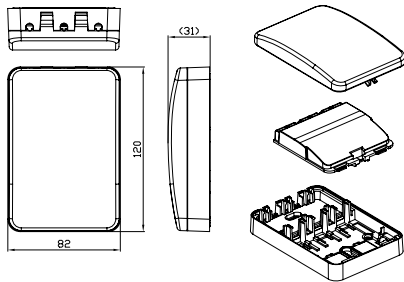


Acceptable keystone jack  
RTA87XX



1. Button
2. Spring
3. Lens
4. Name Sheet
5. Top Cover
6. Cable Holder
7. Tapping Screw

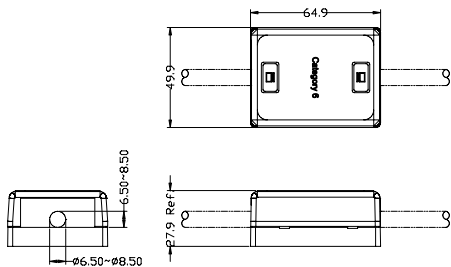
## Triple Keystone Jack Home Box



SB1300

Triple keystone jack home box

## IDC Box



TA2688

Cat.6 IDC box



### Tip

#### Triple Keystone Jack Home Box

##### Dismount Instructions:



Press two clippers together for open the top cover.



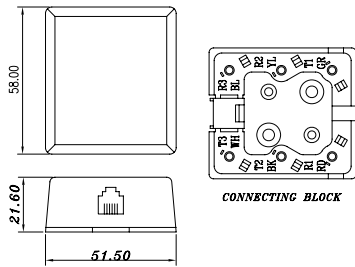
Dismount two latch holder for open the center cover.





# Telephone Surface Mount Boxes

## Telephone 1 Port Surface Mount Box



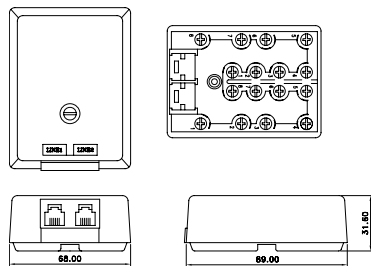
TA1502	1 port 2 wires jack
TA1504	1 port 4 wires jack
TA1506	1 port 6 wires jack
TA1508	1 port 8 wires jack
TA1506D	1 port 6 wires DEC jack

## Telephone 1 Port Surface Mount Box



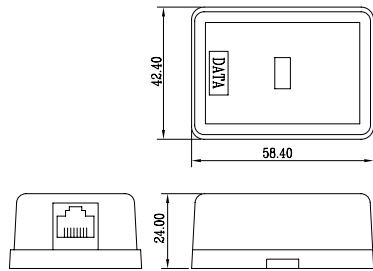
TA1606	1 port 6 wires jack
TA1606D	1 port 6 wires DEC jack
TA1608K	1 port 8 wires keyed jack
TA1608	1 port 8 wires non-keyed jack
TA1608S	1 port 8 wires non-keyed with shorting bar jack, RJ31X

## Telephone 2 Ports Surface Mount Box



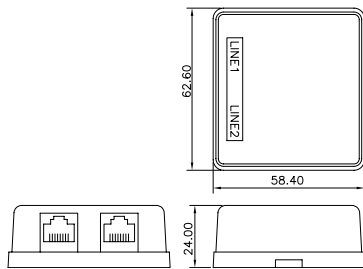
TA0644	2 ports 4 wires jacks (10 Base-T)
TA0666	2 ports 6 wires jacks identified as "LINE 1" and "LINE 2"
TA0668K	2 ports 6 wires jacks identified as "VOICE", 8 wire keyed jack identified as "DATA"
TA0628K	2 ports 8 wires both keyed jacks identified as "LINE 1" and "LINE 2"
TA0688K	2 ports 8 wires keyed jack identified as "DATA", 8 wire non-key jack identified as "VOICE"
TA0688	2 ports 8 wires both non-key jacks identified as "LINE 1" and "LINE 2"
TA0626D	2 ports 6 wires both modified modular jacks (DEC) identified as "LINE 1" and "LINE 2"
TA0668DK	2 ports 6 wires modified modular jack identified as "LINE 1", 8 wire keyed jack identified as "LINE 2"

### Telephone 1 Port Keystone Jack Surface Mount Box



TA4304	1 port 4C jack
TA4306	1 port 6C jack
TA4308	1 port 8C jack
TA4306D	1 port 6C DEC jack
TA4308K	1 port 8C keyed jack

### Telephone 2 Ports Keystone Jack Surface Mount Box



TA4466	2 ports 6CX6C jack
TA4468	2 ports 6CX8C jack
TA4488	2 ports 8CX8C jack
TA4426D	2 ports 6C DEC X 6C DEC jack
TA4428K	2 ports 8C keyed X 8C keyed jack

# Patch Cords & Plugs



The patch cables or patch cords are electrical cables, used to connect (“patch-in”) one electronic device to another for signal routing. We offer plugs in standard configurations to terminate patch cords for patching or workstation applications. Patch cords can be terminated to the exact length needed for neater, more organized installations and compliance with RoHS.

Patch cords are assemblies of 4-twisted-pair 24~26 AWG (0.51mm~0.40mm) stranded wire cables with modular plugs crimped on both ends. T568A and T568B wiring schemes are both available. A drain wire helps to complete a proper ground connection for shielded (screened) version. It allows longer runs less effect of Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI).

STP Patch Cord	48
UTP Patch Cord	51
STP Modular Plug	54
UTP Modular Plug	57
Plug Cover/SR	59

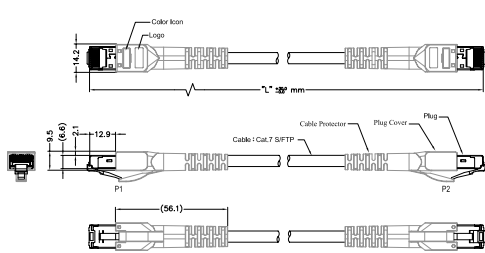
## Patch Cords Technical Data

	STP	UTP
<b>Transmission Characteristics</b>		
Cat.6A	Qualified screened Class EA/Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-51 ISO/IEC 11801 AMD2 CENELEC EN 50173-1	Qualified unscreened Class EA/Category 6A Permanent Link/Channel of ANSI/TIA-568-C.2 IEC 60603-7-41 ISO/IEC 11801 AMD2 CENELEC EN 50173-1
Cat.6	Screened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition

	Cat.6A		Cat.6		Cat.5e	
	STP	UTP	STP	UTP	STP	UTP
<b>Electrical Characteristics</b>						
Current Rating	1.5 Amps	1.5 Amps	1.5 Amps	1.5 Amps	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>						
Cable	S/FTP LSZH	U/UTP LSZH	S/FTP LSZH and PVC	U/UTP, F/UTP LSZH and PVC	SF/UTP LSZH and PVC	U/UTP, F/UTP LSZH and PVC
Outer Jacket	5.7 mm ± 0.2 mm	5.6 mm ± 0.2 mm	5.5 mm ± 0.2 mm	5.4 mm ± 0.2 mm	5.5 mm ± 0.2 mm	5.4 mm ± 0.2 mm
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.	100 Grams Min.	100 Grams Min.	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.	30 lbs Min.	30 lbs Min.	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F
<b>Physical Characteristics</b>						
Shielding Housing	0.5 mm brass		0.5 mm brass		0.5 mm brass	
Wire AWG	#23-26 AWG	#23-26 AWG	#23-26 AWG	#23-26 AWG	#23-26 AWG	#23-26 AWG

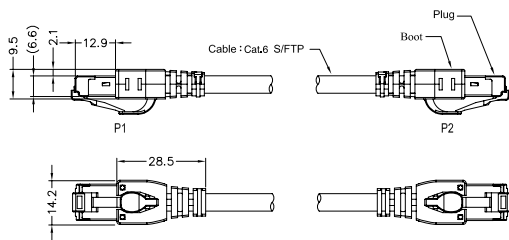
# Patch Cords & Plugs

## Cat.6A 10G STP Patch Cord



Part No.	Length	Description	Part No.	Length	Description
SF33A01-BGR	1.0M	Cat.6A STP PVC patch cord	SF33A01-BLGR	1.0M	Cat.6A STP LSZH patch cord
SF33A1.5-BGR	1.5M	Cat.6A STP PVC patch cord	SF33A1.5-BLGR	1.5M	Cat.6A STP LSZH patch cord
SF33A03-BGR	3.0M	Cat.6A STP PVC patch cord	SF33A03-BLGR	3.0M	Cat.6A STP LSZH patch cord
SF33A05-BGR	5.0M	Cat.6A STP PVC patch cord	SF33A05-BLGR	5.0M	Cat.6A STP LSZH patch cord
SF33A07-BGR	7.0M	Cat.6A STP PVC patch cord	SF33A07-BLGR	7.0M	Cat.6A STP LSZH patch cord
SF33A7.5-BGR	7.5M	Cat.6A STP PVC patch cord	SF33A7.5-BLGR	7.5M	Cat.6A STP LSZH patch cord
SF33A10-BGR	10.0M	Cat.6A STP PVC patch cord	SF33A10-BLGR	10.0M	Cat.6A STP LSZH patch cord
SF33A20-BGR	20.0M	Cat.6A STP PVC patch cord	SF33A20-BLGR	20.0M	Cat.6A STP LSZH patch cord

## Cat.6 STP Patch Cord

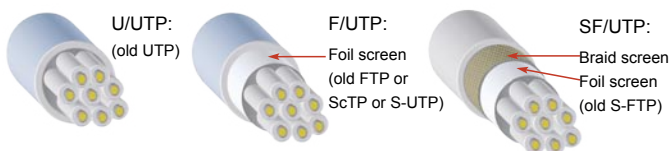


Part No.	Length	Description	Part No.	Length	Description
SF3301-BGR	1.0M	Cat.6 STP PVC patch cord	SF3301-BLGR	1.0M	Cat.6 STP LSZH patch cord
SF331.5-BGR	1.5M	Cat.6 STP PVC patch cord	SF331.5-BLGR	1.5M	Cat.6 STP LSZH patch cord
SF3303-BGR	3.0M	Cat.6 STP PVC patch cord	SF3303-BLGR	3.0M	Cat.6 STP LSZH patch cord
SF3305-BGR	5.0M	Cat.6 sSTP PVC patch cord	SF3305-BLGR	5.0M	Cat.6 STP LSZH patch cord
SF3307-BGR	7.0M	Cat.6 STP PVC patch cord	SF3307-BLGR	7.0M	Cat.6 STP LSZH patch cord
SF337.5-BGR	7.5M	Cat.6 STP PVC patch cord	SF337.5-BLGR	7.5M	Cat.6 STP LSZH patch cord
SF3310-BGR	10.0M	Cat.6 STP PVC patch cord	SF3310-BLGR	10.0M	Cat.6 STP LSZH patch cord
SF3320-BGR	20.0M	Cat.6 STP PVC patch cord	SF3320-BLGR	20.0M	Cat.6 STP LSZH patch cord



Tip

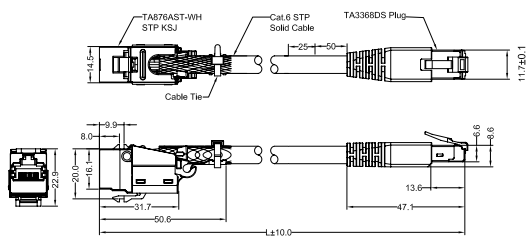
### Unshielded Cable



### Shielded Cable



## STP Consolidation Point Cable



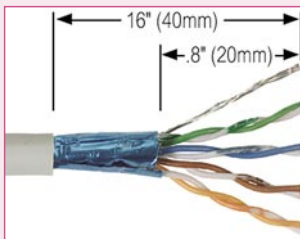
Part No.	Length	Description	Remark
CP622075-GR	7.5M	Cat.6 STP PVC patch cable	TA3368DS(plug) x TA8068SD (keystone)
CP622150-GR	15.0M	Cat.6 STP PVC patch cable	TA3368DS(plug) x TA8068SD (keystone)
CP624075-GR	7.5M	Cat.6 STP PVC patch cable	TA3368DS(plug) x TA8668ST (keystone)
CP624150-GR	15.0M	Cat.6 STP PVC patch cable	TA3368DS(plug) x TA8668ST (keystone)
CP626075-GR	7.5M	Cat.6 STP PVC patch cable	TA3368DS(plug) x TA8768ST (keystone)
CP626150-GR	15.0M	Cat.6 STP PVC patch cable	TA3368DS(plug) x TA8768ST (keystone)
CP542075-GR	7.5M	Cat.5e STP PVC patch cable	TA5708FS(plug) x TA8058SD (keystone)
CP542150-GR	15.0M	Cat.5e STP PVC patch cable	TA5708FS(plug) x TA8058SD (keystone)
CP544075-GR	7.5M	Cat.5e STP PVC patch cable	TA5708FS(plug) x TA8658ST (keystone)
CP544150-GR	15.0M	Cat.5e STP PVC patch cable	TA5708FS(plug) x TA8658ST (keystone)
CP546075-GR	7.5M	Cat.5e STP PVC patch cable	TA5708FS(plug) x TA8758ST (keystone)
CP546150-GR	15.0M	Cat.5e STP PVC patch cable	TA5708FS(plug) x TA8758ST (keystone)

\* Option: CPXXXXXX-(L)GR L=LSZH

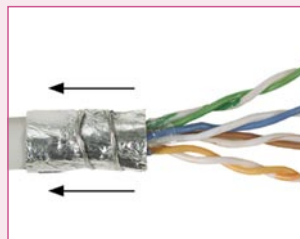


### Tip

#### Fully Shielded Plug Assembly Installation



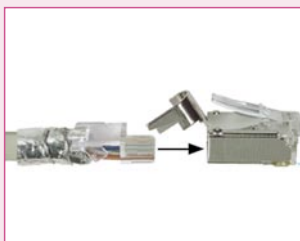
1. Strip jacket and shield to dimensions shown.



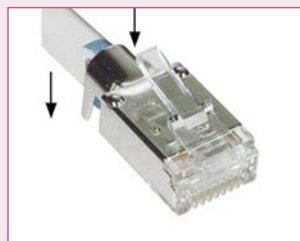
2. Fold mylar foil back onto jacket and wrap drain wire one and a half times around mylar foil and trim excess.



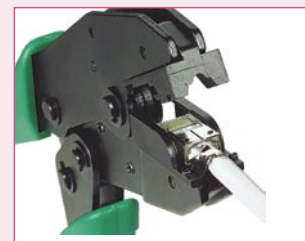
3. Put 8 wires into insert.



4. Insert prepared cable into plug.



5. Bend strain relief to lay along cable.

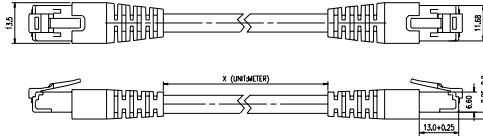


6. Crimp plug with specially designed TA2808F crimping tool.

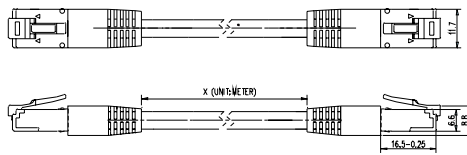
# Patch Cords & Plugs

## STP Patch Cord

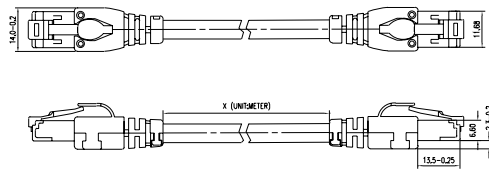
### Molded 1



### Molded 2



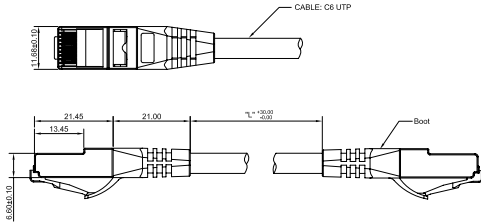
### Booted



Part No.	Length	Description	Cable	Remark
ST5800.5-GR	0.5M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5801-GR	1.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5802-GR	2.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5803-GR	3.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5804-GR	4.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5805-GR	5.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5807-GR	7.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5810-GR	10.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
ST5820-GR	20.0M	Cat.5e STP PVC patch cable	U/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5800.5-GR	0.5M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5801-GR	1.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5802-GR	2.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5803-GR	3.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5804-GR	4.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5805-GR	5.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5807-GR	7.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5810-GR	10.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)
SF5820-GR	20.0M	Cat.5e STP PVC patch cable	S/FTP	TA5708FS (plug) + TA5608 (booted type)

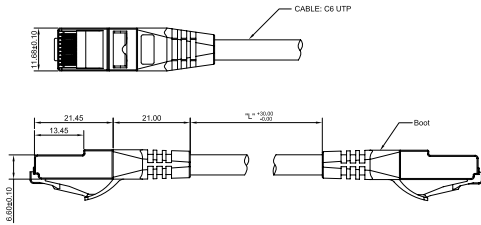
\* Option: STXXXX-(L)GR, SFXXXX-(L)GR L=LSZH

## Cat.6A 10G UTP Patch Cord



Part No.	Length	Description	Part No.	Length	Description
TP33A01-BGR	1.0M	Cat.6A UTP PVC patch cord	TP33A01-BLGR	1.0M	Cat.6A UTP LSZH patch cord
TP33A1.5-BGR	1.5M	Cat.6A UTP PVC patch cord	TP33A1.5-BLGR	1.5M	Cat.6A UTP LSZH patch cord
TP33A03-BGR	3.0M	Cat.6A UTP PVC patch cord	TP33A03-BLGR	3.0M	Cat.6A UTP LSZH patch cord
TP33A05-BGR	5.0M	Cat.6A UTP PVC patch cord	TP33A05-BLGR	5.0M	Cat.6A UTP LSZH patch cord
TP33A07-BGR	7.0M	Cat.6A UTP PVC patch cord	TP33A07-BLGR	7.0M	Cat.6A UTP LSZH patch cord
TP33A7.5-BGR	7.5M	Cat.6A UTP PVC patch cord	TP33A7.5-BLGR	7.5M	Cat.6A UTP LSZH patch cord
TP33A10-BGR	10.0M	Cat.6A UTP PVC patch cord	TP33A10-BLGR	10.0M	Cat.6A UTPLSZH patch cord
TP33A20-BGR	20.0M	Cat.6A UTP PVC patch cord	TP33A20-BLGR	20.0M	Cat.6A UTPLSZH patch cord

## UTP Patch Cord

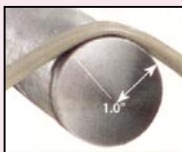


Part No.	Length	Description	Part No.	Length	Description
TP3301-BGR	1.0M	Cat.6 UTP PVC patch cord	TP3301-BLGR	1.0M	Cat.6 UTP LSZH patch cord
TP331.5-BGR	1.5M	Cat.6 UTP PVC patch cord	TP331.5-BLGR	1.5M	Cat.6 UTP LSZH patch cord
TP3303-BGR	3.0M	Cat.6 UTP PVC patch cord	TP3303-BLGR	3.0M	Cat.6 UTP LSZH patch cord
TP3305-BGR	5.0M	Cat.6 UTP PVC patch cord	TP3305-BLGR	5.0M	Cat.6 UTP LSZH patch cord
TP3307-BGR	7.0M	Cat.6 UTP PVC patch cord	TP3307-BLGR	7.0M	Cat.6 UTP LSZH patch cord
TP337.5-BGR	7.5M	Cat.6 UTP PVC patch cord	TP337.5-BLGR	7.5M	Cat.6 UTP LSZH patch cord
TP3310-BGR	10.0M	Cat.6 UTP PVC patch cord	TP3310-BLGR	10.0M	Cat.6 UTP LSZH patch cord
TP3320-BGR	20.0M	Cat.6 UTP PVC patch cord	TP3320-BLGR	20.0M	Cat.6 UTP LSZH patch cord



### Tip

#### Unshielded & Shielded Installation Guidelines



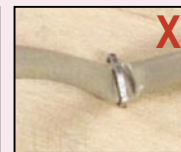
Do not twist the cable.



Do not overtighten cable tie.



Do not bend cable over than 90°.



Do not use a stapler for installation.

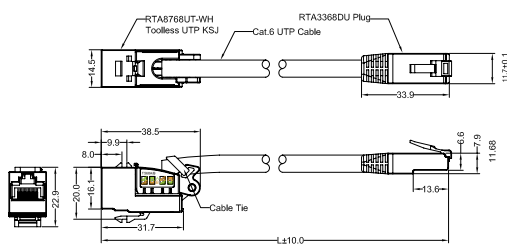


Do not stretch or apply pull force over 25lbs.



# Patch Cords & Plugs

## UTP Consolidation Point Cable



Part No.	Length	Description	Remark
CP611075-GR	7.5M	Cat.6 UTP PVC patch cable	TA3368DU(plug) x TA8068UD (keystone)
CP611150-GR	15.0M	Cat.6 UTP PVC patch cable	TA3368DU(plug) x TA8068UD (keystone)
CP613075-GR	7.5M	Cat.6 UTP PVC patch cable	TA3368DU(plug) x TA8668UT (keystone)
CP613150-GR	15.0M	Cat.6 UTP PVC patch cable	TA3368DU(plug) x TA8668UT (keystone)
CP615075-GR	7.5M	Cat.6 UTP PVC patch cable	TA3368DU(plug) x TA8768UT (keystone)
CP615150-GR	15.0M	Cat.6 UTP PVC patch cable	TA3368DU(plug) x TA8768UT (keystone)
CP511075-GR	7.5M	Cat.5e UTP PVC patch cable	TA5708AU(plug) x TA8058UD (keystone)
CP511150-GR	15.0M	Cat.5e UTP PVC patch cable	TA5708AU(plug) x TA8058UD (keystone)
CP513075-GR	7.5M	Cat.5e UTP PVC patch cable	TA5708AU(plug) x TA8658UT (keystone)
CP513150-GR	15.0M	Cat.5e UTP PVC patch cable	TA5708AU(plug) x TA8658UT (keystone)
CP515075-GR	7.5M	Cat.5e UTP PVC patch cable	TA5708AU(plug) x TA8758UT (keystone)
CP515150-GR	15.0M	Cat.5e UTP PVC patch cable	TA5708AU(plug) x TA8758UT (keystone)

\* Option: CPXXXXXX-(L)GR L=LSZH



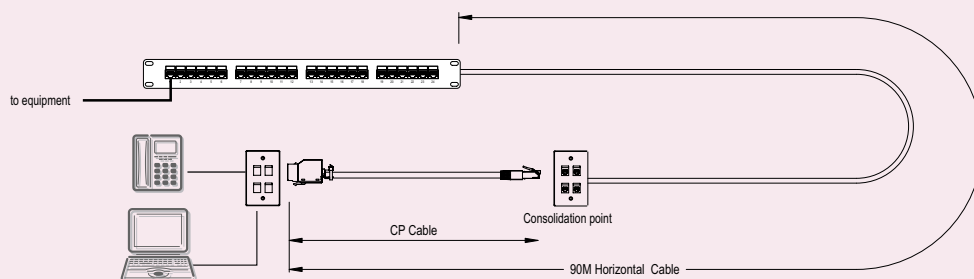
### Tip

#### What is CP Cable ?

The consolidation point functions as an interconnect between two sections of the horizontal cabling: the main cabling from the telecommunications closet and shorter distribution cables which serve outlets in the work area. Typically mounted in the ceiling or under access flooring.

#### Where do you need CP Cable ?

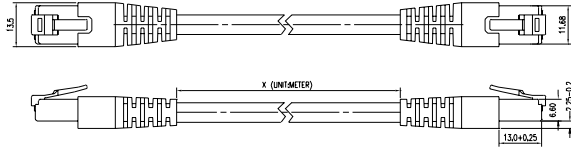
- To provide increased flexibility and economy for installations with open office work spaces that require frequent reconfiguration.
- They deliver dedicated TOs (Telecommunication Outlets) to individual work areas and do not require provisions for extended cord lengths.



Note: To reduce the effects of multiple connections in close proximity, the CP should be located at least 15 meters from the HC(FD).

## UTP Patch Cord

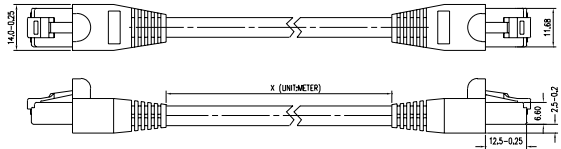
### Molded 1



### Molded 2



### Booted



Part No.	Length	Description	Cable	Remark
TP5800.5-GR	0.5M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5801-GR	1.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5802-GR	2.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5803-GR	3.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5804-GR	4.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5805-GR	5.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5807-GR	7.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5810-GR	10.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)
TP5820-GR	20.0M	Cat.5e UTP PVC patch cable	U/UTP	TA2788-AR50 (plug) + TA2788 (booted type)

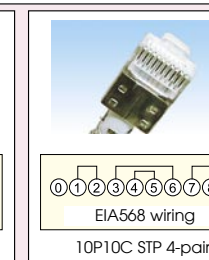
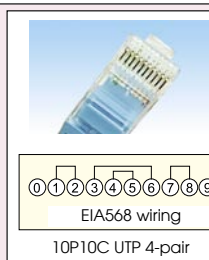
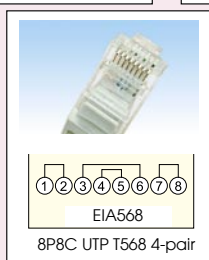
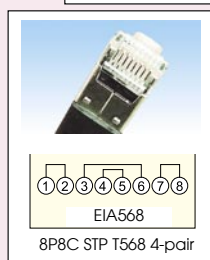
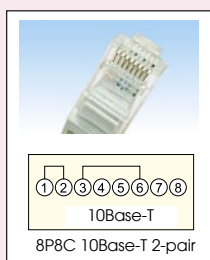
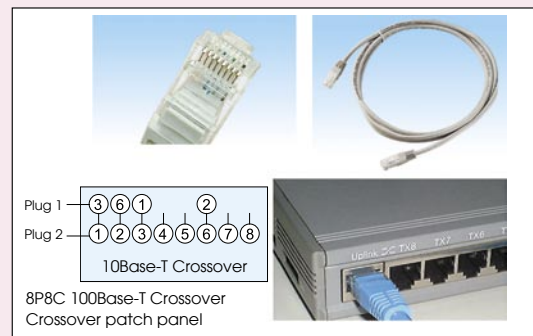
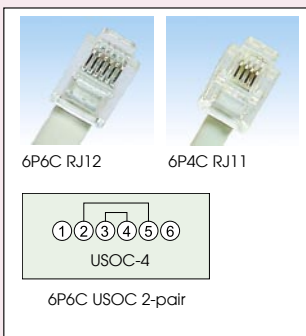
\* Option: TPXXXX-(L)GR L=LSZH



### Tip

#### How to read a modular cord ?

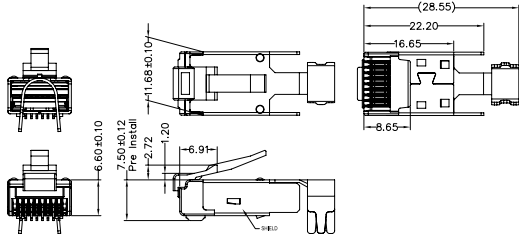
To determine whether you have a direct or reversed modular cord wiring, arrange the plugs side-by-side, with the contacts facing you. Compare the wire colors, left-to-right. If the colors are in the same order on both plugs, you've got a direct wiring. If the colors of the second plug are arranged in opposite order from the first plug, your wiring is reversed.



# Patch Cords & Plugs

Plugs Technical Data		
	STP	UTP
<b>Transmission Characteristics</b>		
Cat.6	Screened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
<b>Electrical Characteristics</b>		
Current Rating	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>		
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F
<b>Physicals Characteristics</b>		
For Stranded Wire	2-Contact blade, 3-Contact blade	2-Contact blade, 3-Contact blade
For Solid Wire	2-Contact blade, 3-Contact blade	2-Contact blade, 3-Contact blade

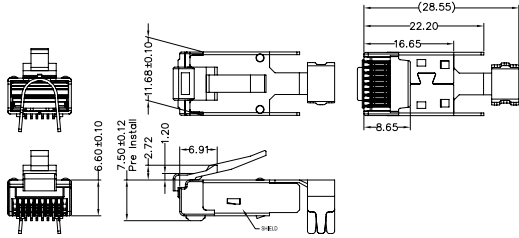
### Cat.6A STP RJ45 Plug



TA336A-DS

Cat.6A STP RJ45 plug with insert and organizer (Zinc alloy nickel plated), 3 cable hooks

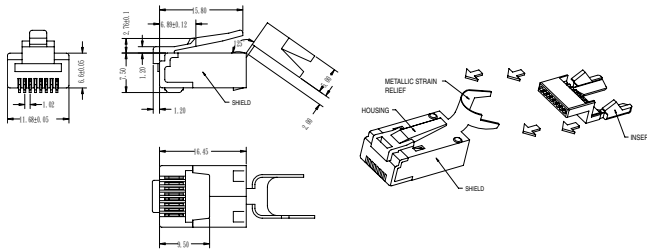
### Cat.6 STP RJ45 Plug



TA3368-DS

Cat.6 STP RJ45 plug with insert and organizer (Metallized compound), 3 cable hooks

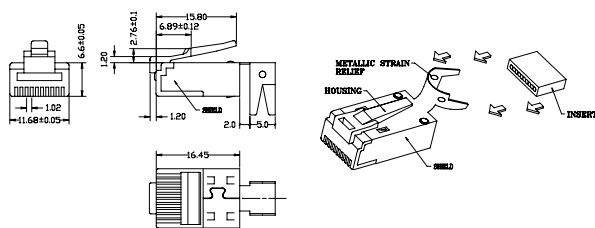
### STP RJ45 Plug



TA5708FS

STP 8P8C plug w/ insert

### STP RJ45 Plug

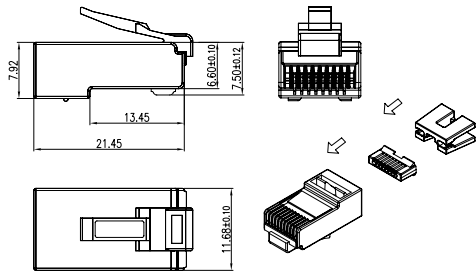


TA5710FS

STP 10P10C plug w/ insert



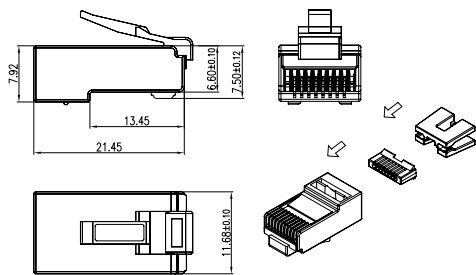
### Cat.6A UTP RJ45 Plug



TA336A-DU

Cat.6A UTP RJ45 plug with insert and organizer (Zinc alloy nickel plated)

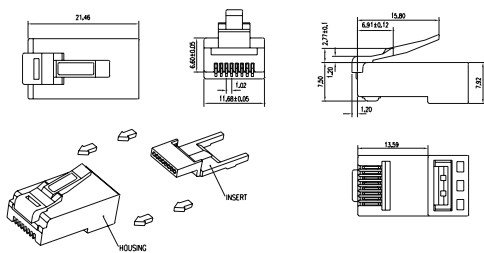
### Cat.6 UTP RJ45 Plug



TA3368-DU

Cat.6 UTP RJ45 plug with insert and organizer (Metallized compound)

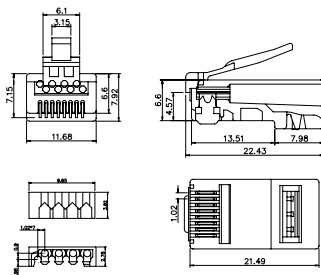
### UTP 8P8C RJ45 Plug



TA5708AU

Cat.6 UTP 8P8C RJ45 plug

### UTP 8P8C Staggered Plug



TA1788-AR5001

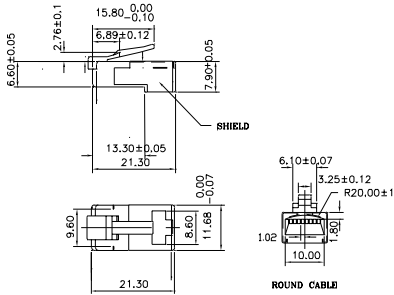
Cat.6 UTP 8P8C staggered plug w/ insert

TA1788-AR50

Cat.6 UTP 8P8C staggered plug w/o insert

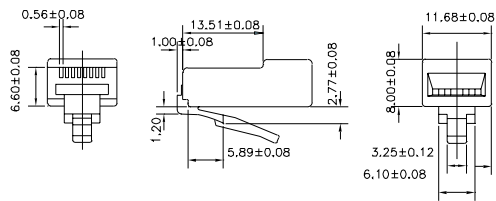
# Patch Cords & Plugs

## UTP RJ45 Metal Insert Plug



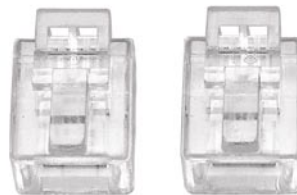
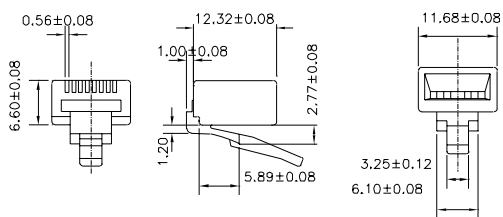
TA2788-AS	8P8C plug for round cable
TA2700-AS	10P10C plug for round cable

## UTP Modular Plug



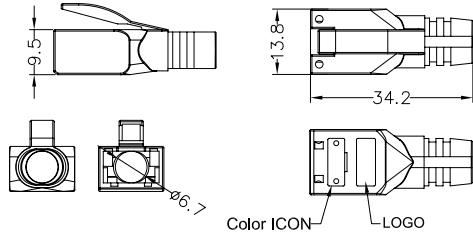
TA2788-AR	UTP 8P8C modular plug for round cable
TA1788K-AR	UTP 8P8C keyed plug for round cable

## UTP Modular Plug



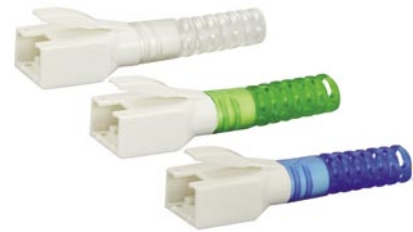
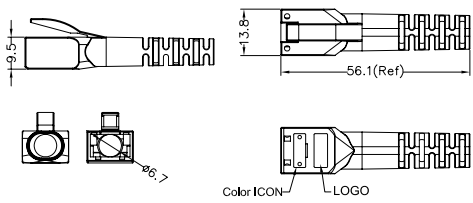
TA2788-AF	UTP 8P8C modular plug for round cable
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### Plug Cover for STP Plug



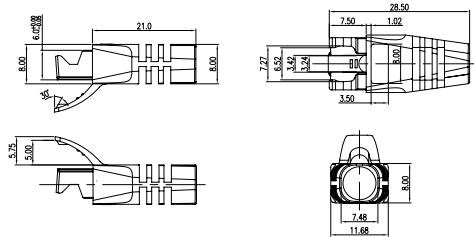
SR0100	Plug cover for STP plug, white	Cable diameter: $\varnothing$ 6.5mm Max.
SR0200	Plug cover for STP plug, black	Cable diameter: $\varnothing$ 6.5mm Max.
SR0300	Plug cover for STP plug, transparent	Cable diameter: $\varnothing$ 6.5mm Max.

### Plug Cover With Strain Relief for STP Plug



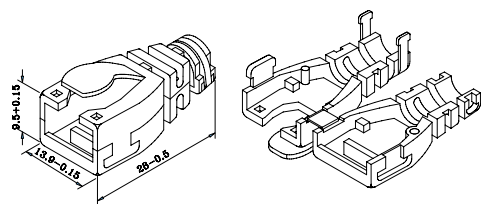
SR01XX	Plug cover with strain relief for STP plug	Cable diameter: $\varnothing$ 6.5mm Max.
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### Plug Cover for UTP Plug



R1433-8XX	Plug cover for TA33XX UTP plug	Cable diameter: $\varnothing$ 6.0mm Max.
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### Plug Cover for RJ45 Plug



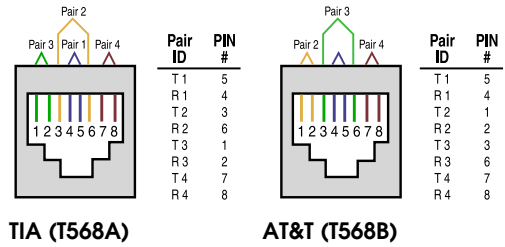
TA5608	Plug cover for RJ45	Cable diameter: $\varnothing$ 6.0mm Max.
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## Common Wiring Configurations

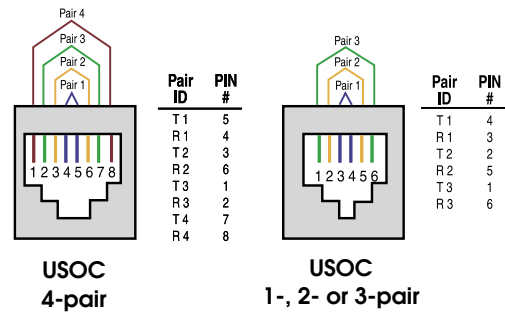
The EIA/TIA 568 has adopted the AT&T and TIA wiring schemes. These two wiring schemes are identical, except for pairs 2 and 3, which trade places. The preferable scheme is TIA (T568A), which is compatible with 1- or 2-pair USOC Systems. Either configurations under the Universal Service Ordering Codes (USOC).



TIA (T568A)

AT&T (T568B)

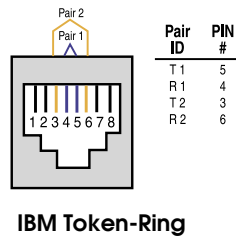
USOC wiring is available for 1-, 2-, 3- or 4-pair systems. Pair 1 occupies the center conductors, pair 2 occupies the next two contacts, etc. A major advantage of this design is that a 6-position plug configured with 1, 2 or 3 pairs can be inserted into an 8-position jack without sacrificing pair continuity. But be aware that this practice may result in damage to pins 1 and 8 on the jack. Unfortunately, this type of pairing may lead to poor transmission performance.



USOC 4-pair

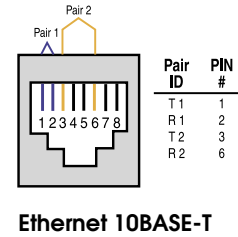
USOC 1-, 2- or 3-pair

IBM Token-Ring wiring can utilize either an 8-position jack (compatible) or 6-position jack (compatible with AT&T (T568B), TIA (T568A) and USOC wiring schemes) or 6-position jack (compatible with 2-pair or 3-pair USOC wiring).



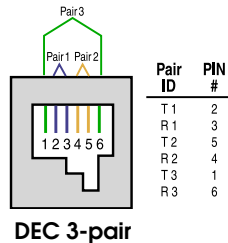
IBM Token-Ring

An 8-position jack is called for in the Ethernet 10BASE-T wiring, but only two pairs are used—these being pairs two and three of AT&T (T568B) and TIA (T568A) schemes.



Ethernet 10BASE-T

DEC has custom-designed their equipment's wiring scheme, coming up with something totally their own.



DEC 3-pair

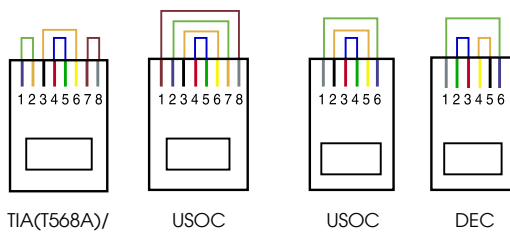
### Straight Through or Reversed?

Modular cords can serve two fundamental purposes; patching between modular patch panels; and connecting office equipment to the modular outlet. When patching between modular panels, modular cords should be wired directly (pin 1 to pin 1, pin 2 to pin 2, etc.). For workstation "networking," modular cords may either be wired directly (straight through) or reversed (pin 1 to pin 6, pin 2 to pin 5, etc.). Most voice systems rely on the reversed wiring.

### Modular Plug Pair Configurations

To avoid crossed signals, you must make sure the wire pairings in the modular plug match those in the modular jack, as well as the horizontal and backbone wirings.

The color-coding system (T568B), illustrated above is for TIA (T568A) wiring. Note: the orange and green pairs (pairs 2 & 3) are swapped for T&T wiring. Modular cords wired to the TIA (T568A) are compatible with AT&T (T568B).



TIA(T568A)/  
AT&T(T568B)

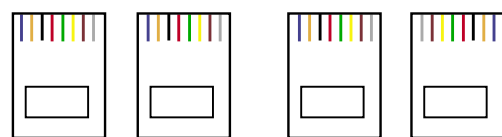
USOC

USOC

DEC

8-position

6-position



"Straight-through"

Reversed

To determine whether you have a direct or reversed modular cord wiring, arrange the plugs side-by-side, with the contacts facing you. Compare the wire colors, left-to-right. If the colors are in the same order on both plugs, you've got a direct wiring. If the colors of the second plug are arranged in opposite order from the first plug, your wiring is reversed.

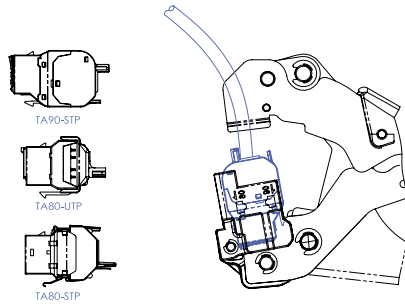
# Cabling Tools



- Using the correct termination tool can increase your productivity by enabling you to install RJ45/RJ11 jacks many times faster.
- Punchdown tools increase accuracy and reliability, resulting in fewer reworks, which increases client confidence.
- Advanced punchdown tool includes the impact mechanism with consistent handle, internal spring machinery, and slotted blade. The combination of faster, more reliable terminations and less rework can reduce almost 80% of the installation effort.

### Keystone Jack Compression Tool

- Crimp the keystone jack

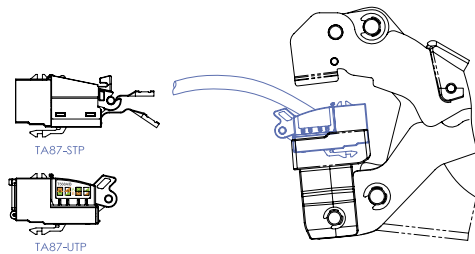


KT8002

Keystone jack compression tool for TA80XX, TA90XX series

### Keystone Jack Compression Tool

- Crimp the keystone jack

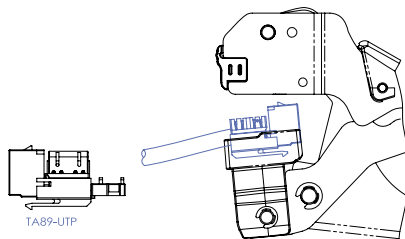


KT8702

Keystone jack compression tool for TA87XX series

### Keystone Jack Compression Tool

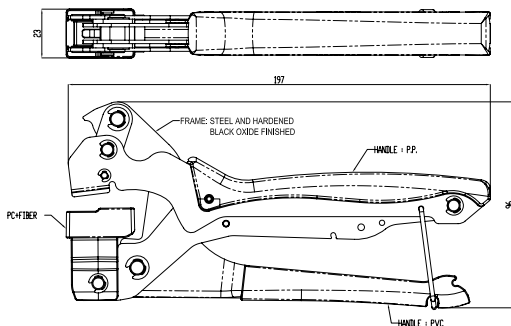
- Crimp the keystone jack
- Cutting wires



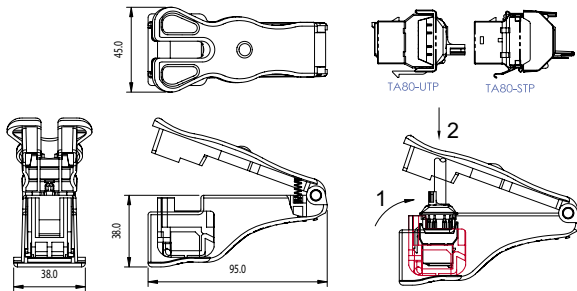
KT8902

Keystone jack compression tool for TA89XX series

\* Keystone Jack see page 8~11



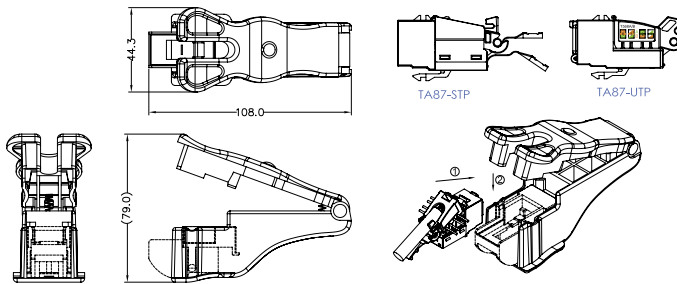
## TA80XX Hand Tool



HT80X8

Crimping tool for keystone jack TA80XX series

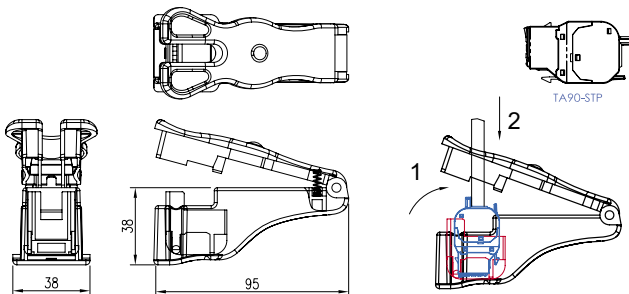
## TA87XX Hand Tool



HT87X8

Crimping tool for keystone jack TA87XX series

## TA90XX Hand Tool



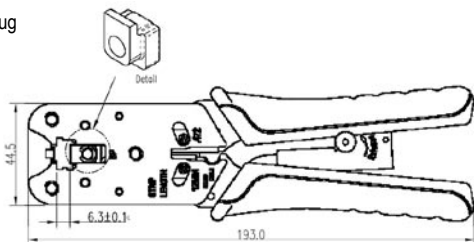
HT90X8

Crimping tool for keystone jack TA90XX series

\* Keystone Jack see page 8~11

## Unshielded Plug Crimping Tool

- Crimp the RJ45 plug
- Stripping cable
- Cutting wires



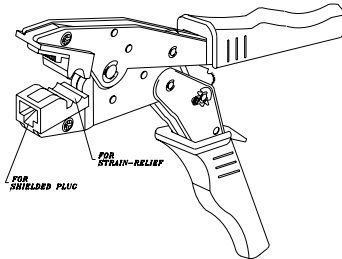
HT331

Crimping tool for TA336XDU unshielded plug

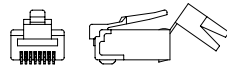
\* Plug TA336XDU see page 59

### Multi-modular Crimping Tool For Shielded Plug

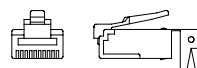
Design for Telebox fully shielded plug TA5708FS (8P), TA5788HS (8P) and TA5710FS (10P) to crimp the blades and to strap the strain-relief hook.



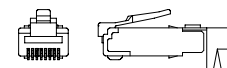
- Crimp the contact blades(RJ45)
- Crimp the strain relief



TA5708FS



TA5710FS

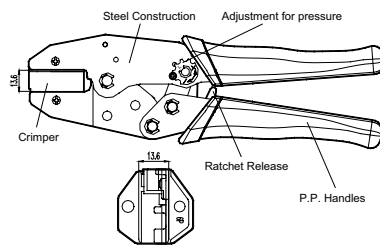


TA5788HS

TA5806	Fully shielded plug RJ11/6P for TA5706FS
TA5808	Fully shielded plug RJ45/8P for TA5708FS, TA5788HS, TA3368DS
TA5810	Fully shielded plug RJ45/10P for TA5710FS

### Multi-modular Crimping Tool For Unshielded Plug

Design for Telebox fully shielded plug TA5706FS (6P), TA5708FS (8P), TA5788HS (8P) and TA5710FS (10P) to crimp the blades and to strap the strain-relief hook.

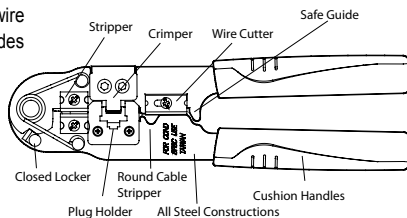


- Crimp the contact blades

TA2806N	Single, for 6P unshielded plug
TA2808N	Single, for 8P unshielded plug
TA2806DN	Single, for 6P DEC unshielded plug
TA2800N	Single, for 10P unshielded plug

### Multi-modular Crimping Tool

Telebox Modular Crimping Tools install modular 4, 6, 8, 6 DEC, and 8 keyed wire plug on cordage. The tool design includes CRIMPING, STRIPPING & CUTTING. Available in Duplex & Single type.

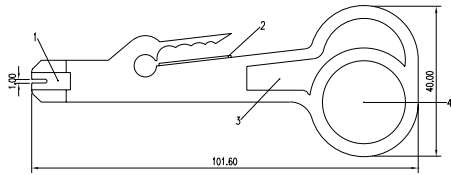


- Crimp the contact blades
- Stripping cable
- Cutting wires

TA2804	Single, for 4P plug
TA2806	Single, for 6P plug
TA2808	Single, for 8P plug
TA2806D	Single, for 6P DEC plug



### Stripper Tool

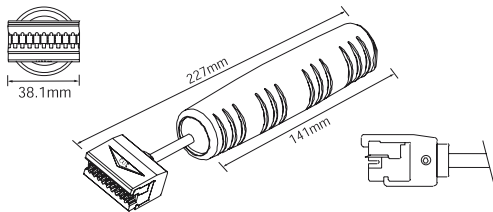


- Terminate wires
- Stripping wires

TA4801

Cable stripper and punchdown termination

### 5-pair 110 IDC Punchdown / Termination Tool

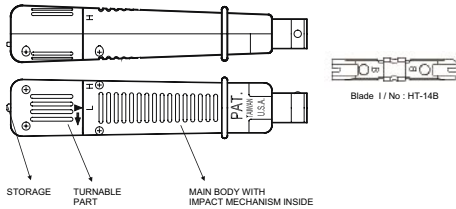


- Terminate 22-24AWG solid and stranded wires
- Cutting wires

PTD5

5-pair 110 IDC punchdown/termination tool

### 110 IDC Punchdown/Termination Tool



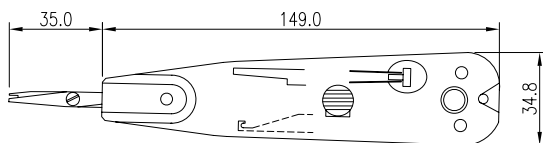
The punchdown/Termination tool allows you to make dependable connection on 110 IDC, Q66 or Krone LAS+ wire termination blocks everytime. Cutting wires can be done just as easily by pushing down on the handle. Additional blade can be locked inside compartment of handle.

- Terminate wires on 110 clips
- Cutting wires

PTD

110 IDC punchdown/termination tool

### Krone IDC Punch Down/Termination Tool



- Terminate wires on Krone IDC block
- Cutting wires

KT2100

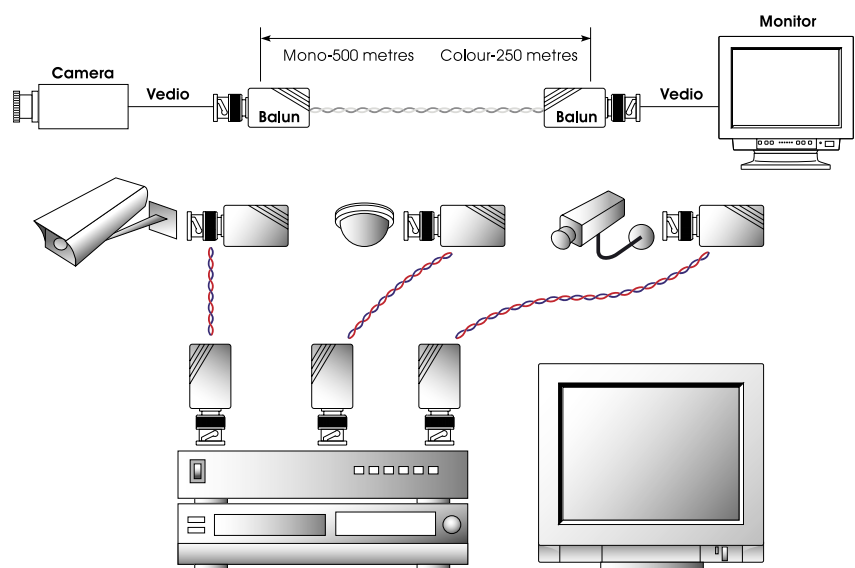
Krone IDC punchdown/termination tool



# Baluns



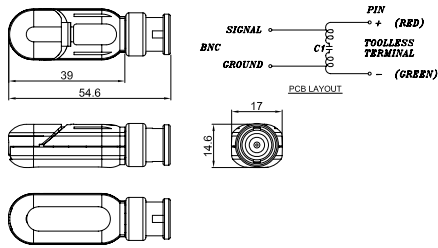
When network equipment and terminals are equipped with different type of cable and connectors. It makes the direct connection a problem. For example, using cable like coaxial, twinaxial, STP or UTP is not possible to terminate to different connectors like BNC, Twinaxial, or RJ45. Balun (Balanced-unbalanced) is created to match different cable impedance and connectors. A good Balun should be able to match the cabling system's impedance and attenuation, and minimize signal distortion.



## Baluns Technical Data

	Video Balun	Video/Power/Data	Active Video Balun
<b>Specifications</b>			
Environment	Baseband video; NTSC, PAL, SECAM	Baseband video; NTSC, PAL, SECAM	
Devices	Close-circuit TV (CCTV) cameras , monitors, switchers, sequencers, multiplexers, digital video recorders (DVR) and other CCTV equipment.	Close-circuit TV (CCTV) cameras , monitors, switchers, sequencers, multiplexers, digital video recorders (DVR) and other CCTV equipment.	Active
<b>Technical Specifications</b>			
Bandwidth	DC to 8 MHz.	DC to 8 MHz.	Gain at 0 dB:110 MHz, Gain at 12 dB:30 MHz
Impedance	Input: 75 ohms (BNC); Output: 100 ohms (Toolless Connector)	Input: 75 ohms (BNC); Output: 100 ohms (RJ45)	Coax cable: 75 ohm UTP cable: 100 ohm
Maximum Input	1.1Vp-p	1.1Vp-p	
Insertion Loss	<1 dB, Frequency range from DC to 8 MHz range from DC to 8 MHz	<1 dB, Frequency range from DC to 8 MHz	
Return Loss	-20dB, Frequency range from DC to 8 MHz from DC to 8 MHz	-20dB, Frequency range from DC to 8 MHz	
Common Mode Rejection	-50dB, Frequency range from DC to 8 MHz	-50dB, Frequency range from DC to 8 MHz	
Max. Distance - Colour	Cat.3 -1,200 ft (365m); Cat.5 - 2,200 ft (670m)	Cat.3 -1,200 ft (365m); Cat.5 - 2,200 ft (670m)	
Max. Distance - Black & White	Cat.3 -1,500 ft (457m); Cat.5 - 2,500 ft (762m)	Cat.3 -1,500 ft (457m); Cat.5 - 2,500 ft (762m)	
<b>Mechanical &amp; Environmental</b>			
Cable – UTP	24 AWG or lower solid copper twisted pair wire impedance: 100 ohms at 1 MHz Maximum capacitance: 20 pf/foot. Attenuation: 6.6 dB/1000 ft at 1 MHz	24 AWG or lower solid copper twisted pair wire impedance: 100 ohms at 1 MHz Maximum capacitance: 20 pf/foot. Attenuation: 6.6 dB/1000 ft at 1 MHz	UTP 24 AWG solid copper wire, Cat.5 or better Balanced, 100 ohm Attenuation: 75 ohm to 100 ohm about 0.4 dB
Cable – Coax	Impedance: 75 Ω at 1 MHz. (RG59/U). Max. 25 ft. of coax allowed end to end.	Impedance: 75 Ω at 1 MHz. (RG59/U). Max. 25 ft. of coax allowed end to end.	Unbalanced, 75 ohm
Connectors	(BNC) female ; Output: toolless connector	(BNC) female ; Output: RJ45	BNC Male, BNC Female
Temperature	Operating: 0° to 55°C. Storage:-20° to 85°C.	Operating: 0° to 55°C. Storage:-20° to 85°C.	Operating: 0° to 55°C. Storage:-20° to 85°C.
Enclosure	Fire retardant plastic	Fire retardant plastic,	Fire retardant plastic,

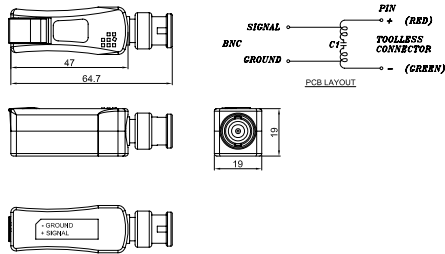
## Passive CCTV Video Balun with BNC to Flip-Top Toolless Connector (Unshielded Jack)



BL3295

Passive CCTV Video balun with BNC to flip-top toolless connector

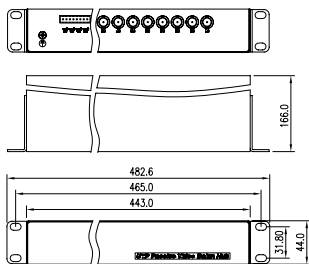
## Passive CCTV Video Balun with BNC to 45° Toolless Connector (Unshielded Jack)



BL3285

Passive CCTV Video Balun with BNC to 45° Toolless Connector

## Passive Video Transceiver Hub 16-port (Unshielded Jack)



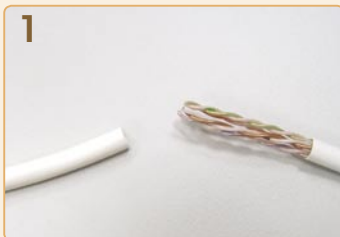
PH1621

Passive video transceiver hub includes surge protection and 2ft coax jumper cable x 16 pcs

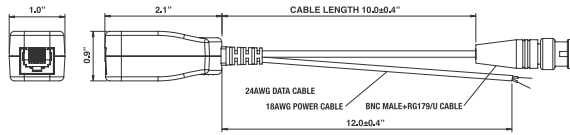


Tip

### CCTV Video Balun Flip-Top install

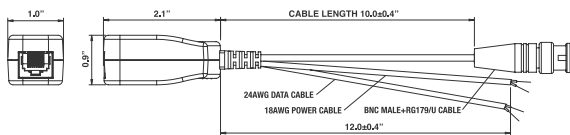


**Passive Single Channel Video/Power Transceiver, 3 Pair (Unshielded Jack)**



BL3315-4 Build-in double surge protections

**Passive Single Channel Video/Power/Data Transceiver (Unshielded Jack)**



BL3315-5 Build-in double surge protections

**Active CCTV Video Balun**



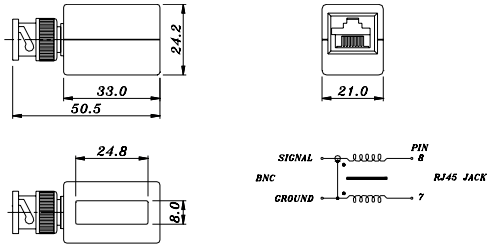
BA3862 Active CCTV video balun for BNC male, build-in surge protection

**Active CCTV Video Balun**



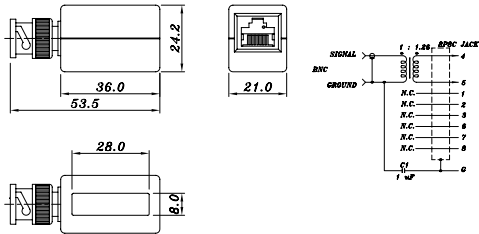
BA3863 Active CCTV video balun for BNC female, build-in surge protection

## Video Balun 75Ω to 100Ω BNC Plug to RJ45 (Unshielded Jack)



BL3215 Video Balun 75Ω to 100Ω BNC Plug to RJ45 Unshielded Jack

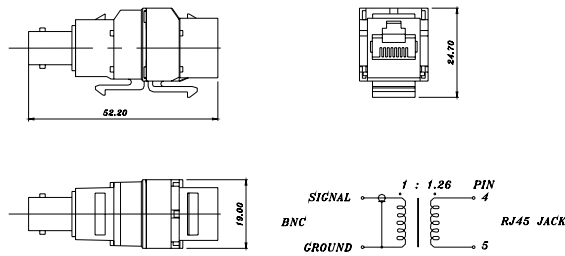
## G703 Balun 75Ω/120Ω BNC-1.6/5.6 to RJ45 (Shielded Jack)



BL7126 G703 balun BNC to RJ45 shielded jack

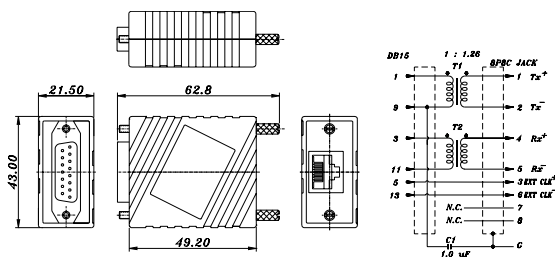
BL7526 G703 balun 1.6/5.6 to RJ45 shielded jack

## G703 Balun Panel type BNC 75Ω/120Ω Jack to RJ45 (Unshielded Jack)



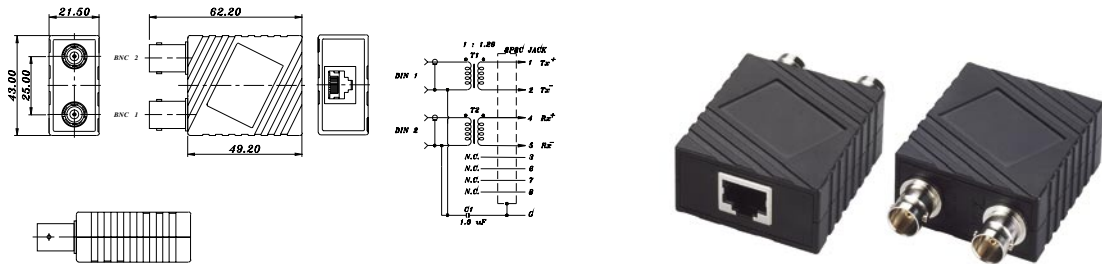
BL6116 G703 balun BNC to RJ45 unshielded jack

## G703 balun 75Ω / 120Ω DB15 male to RJ45 (Shielded Jack)



BL7426 DB15 male to RJ45 shielded jack G703 balun 75Ω to 120Ω

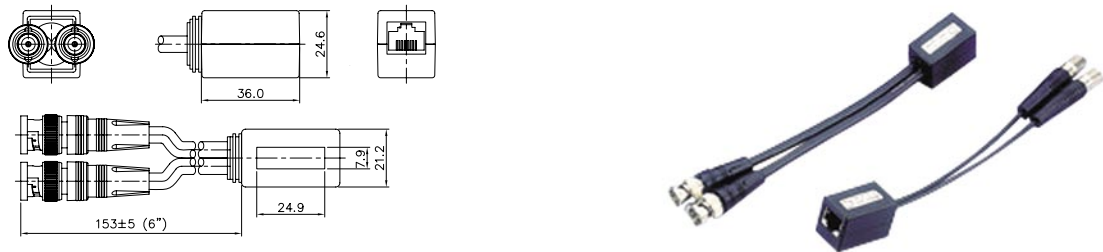
### G703 balun 75Ω/120Ω dual BNC-1.6/5.6 to RJ45 (Shielded Jack)



BL7A26

G703 balun dual BNC to RJ45 shielded jack

### G703 balun 75Ω/120Ω dual BNC-1.6/5.6 to RJ45 (Shielded Jack) with Cable



BL7B26-6

G703 balun 75Ω/120Ω dual BNC to RJ45 shielded jack with cable

BL7F26-6

G703 balun 75Ω/120Ω dual 1.6/5.6 to RJ45 shielded jack with cable

## G703 Transmission Baluns

75/100 and 75/120Ω impedance matching baluns allow users to use inexpensive STP cabling in place of expensive coax cabling. Especially useful in telecommunication application for patching the distribution frame. Units meet CCITT Recommendation G703 and are great for America or European application.

## G703 baluns in T1/E1 Communication systems

The T1 line is the most widely used switched digital communication circuit used in America today. T1 are used for connecting phone and computer networks to public switched network infrastructures. Each T1 is equivalent to 24 64Kbps communication channels. Each Channel utilizes two 100Ω shielded twisted pairs; one for transmit (TX) and one for receive (RX). Some T1 equipment uses two 75Ω coax connections for the TX and RX channels. Baluns are used to bridge the gap between 75Ω coax and 100Ω Twisted pair. An E1 Circuit is the European equivalent of the American T1. The Infrastructure use 120Ω shielded twisted pairs so 75/120 baluns would be used in European application.

T1 - E1 DIFFERENCES				
Standards	Name	#64K Channels	TWISTED Pairs Type	COAX TYPE
USA Standard	T1	24	2X100Ω STP (RJ45)	75Ω (BNC type)
European Standard	E1	32	2X120Ω STP (RJ45)	75Ω (BNC, 1.6/5.6 type)



## **ADSL**

Asymmetric Digital Subscriber Line (ADSL) is a form of DSL, a data communications technology that enables faster data transmission over copper telephone lines than a conventional modem can provide. It does this by utilizing frequencies that are normally not used by a voice telephone call, in particular, frequencies higher than normal human hearing. This signal will not travel very far over normal telephone cables, so ADSL can only be used over short distances, typically less than 2km.

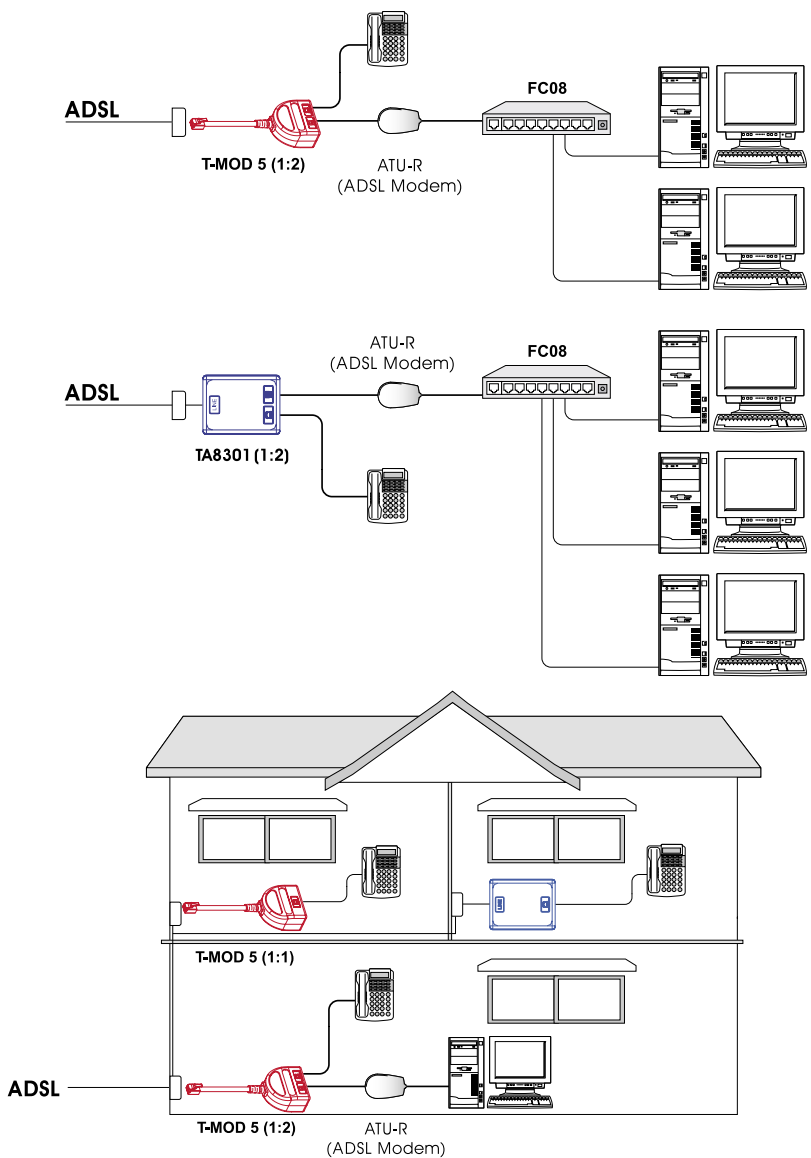
Plain Old Telephone Service (POTS) filter allows only voice signals to pass through to the subscriber's phone answering/fax machine and other analog devices while DATA signals pass onto the computer. DSL filter, "PHONE" line (pin 3&4) is conditioned and ADSL line (pin 2/5 & 3/4) is remained clear for DSL compatible devices.

## **ISDN**

Integrated Services Digital Network (ISDN) is a type of circuit switched telephone network system, designed to allow digital transmission of voice and data over ordinary telephone copper wires, resulting in better quality and higher speeds than available with analog systems. More broadly, ISDN is a set of protocols for establishing and breaking circuit switched connections, and for advanced call features for the user.

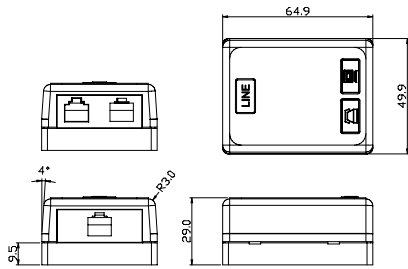
## ADSL Technical Data

Electronic Characteristics		Mechanical Characteristics	
Cutoff Point	3dB	Housing & Cover	ABS
Frequency	12KHz	Strain-relief	PVC
Attenuation	20KHz: 9.0dB 40KHz: 20.0dB	PCB	FR4
Insertion Loss	200Hz to 4KHz: 0.5dB	Jack	6P4C
Pass Band Ripple	200Hz to 4KHz: +/-0.5dB	Plug	6P4C
D.C Resistance	4.0 ohms max		
Return Loss	1KHz 600 ohms ref.: 27dB		





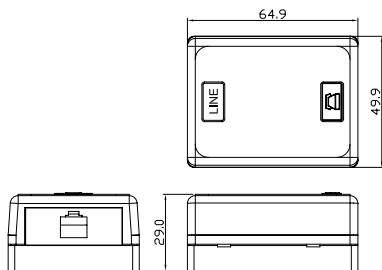
## ADSL Microfilter Splitter Box (one to two)



TA8301

ADSL microfilter splitter box one to two

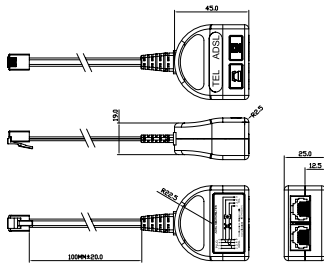
## ADSL Microfilter Splitter Box (one to one)



TA8311

ADSL microfilter splitter box one to one

## RJ11x2 to RJ11 Splitter for ADSL



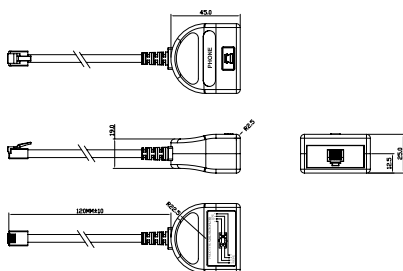
T-MOD 5-01

RJ11x2 (jack) to RJ11 (plug) splitter for ADSL

T-MOD 5-05

RJ45-RJ11 (jack) to RJ45 (plug) splitter for ADSL

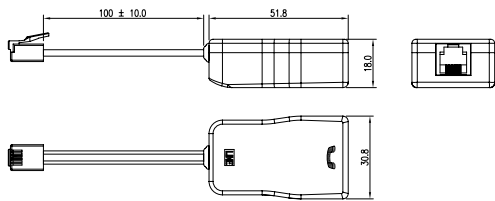
## RJ11 to RJ11 filter for DSL phone



T-MOD 5-11

RJ11 (jack) to RJ11 (plug) filter for DSL phone

## ADSL/PSTN Filter



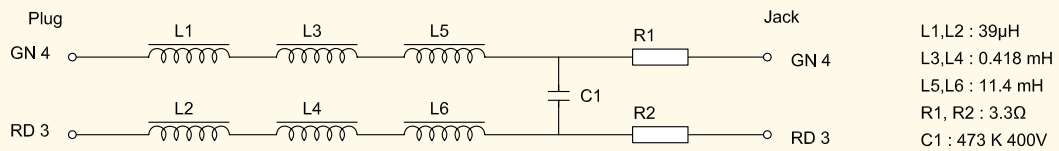
T-MOD 8-01

ADSL/PSTN filter



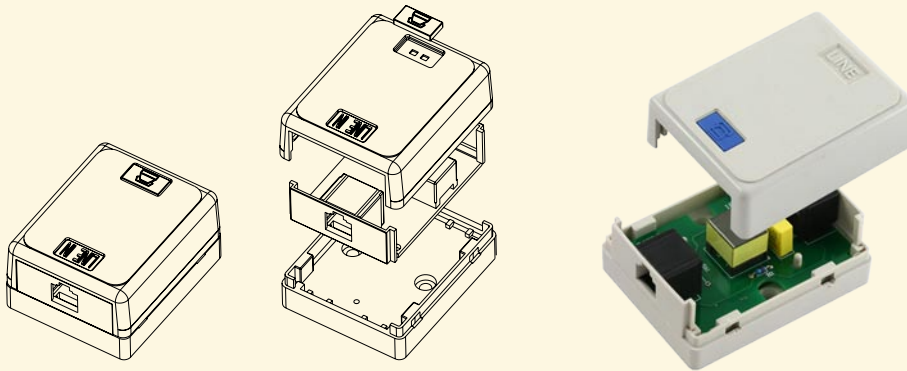
Tip

### T-MOD8-XX ADSL/PSTN Filter



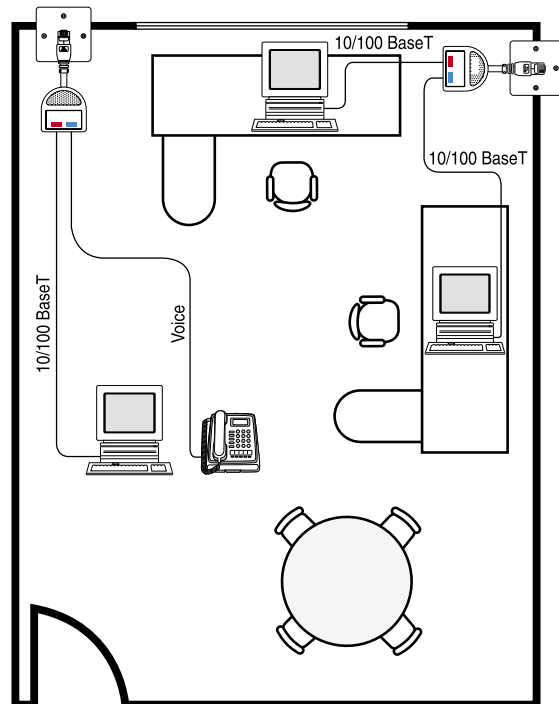
Tip

### ADSL Microfilter Splitter Box (TA8311/TA8301)

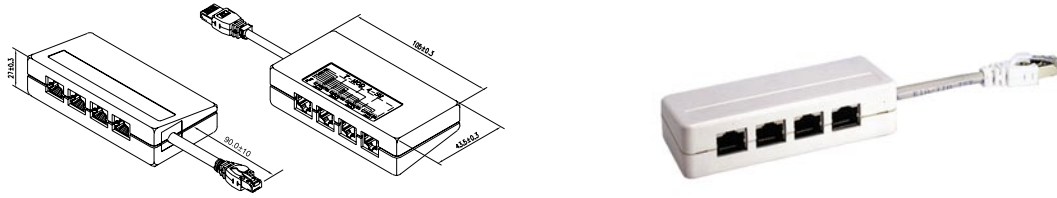


## ISDN Technical Data

	Shielded	Unshielded
<b>Electrical Characteristics</b>		
Current Rating	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ minimum	500 MΩ minimum
Contact Resistance	20 mΩ maximum	20 mΩ maximum
DC Resistance	0.1 Ω maximum	0.1 Ω maximum
<b>Mechanical Characteristics</b>		
Plug Insertion Life	750 cycles minimum	750 cycles minimum
Plug & Jack Contact Force	100 grams	100 grams
Plug Retention Force	30 lbs minimum	30 lbs minimum
Temperature	-40°F to 150°F	-40°F to 150°F
<b>Physicals Characteristics</b>		
Material	High impact flame retardant plastic	High impact flame retardant plastic
RJ45 Plug	TA5708FS	TA2788
RJ45 Plug Cover	TA5608	TA5608
RJ45 jack	MJ0543-88	MJ0543-88

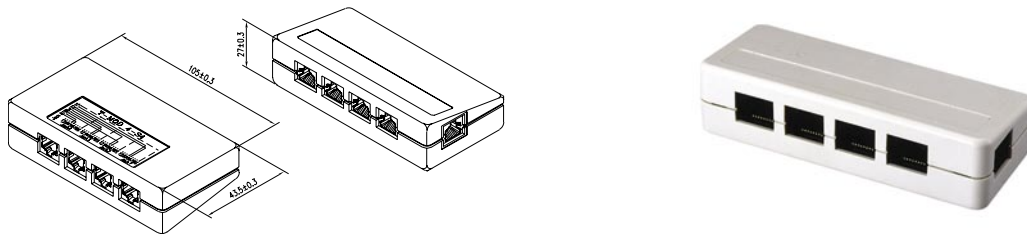


### T-MOD 4 Compact Box with Cable

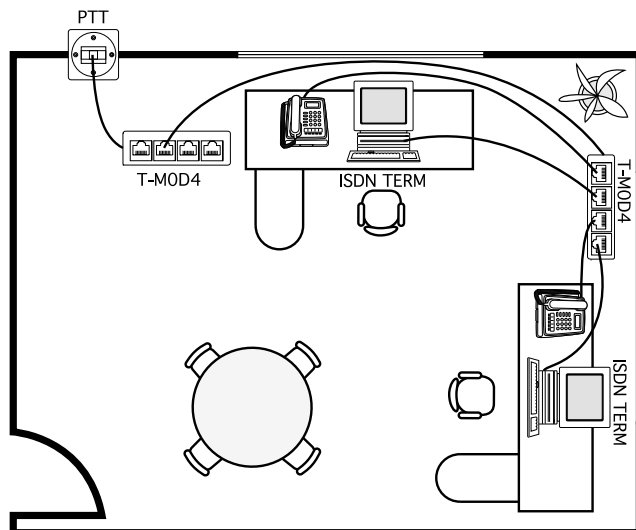
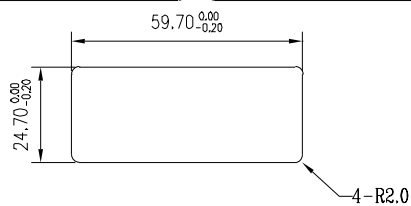
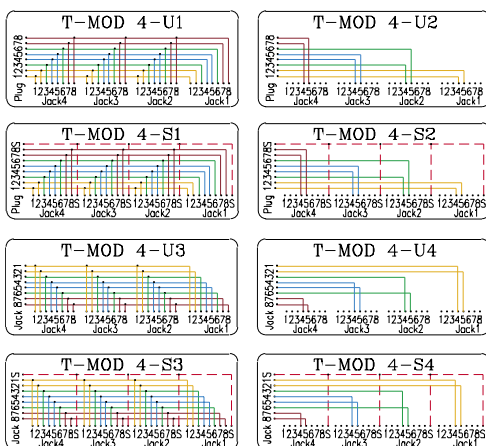


T-MOD 4-S1WH	Shielded RJ45 to RJ45 x 4 with side-entry cable
T-MOD 4-S2WH	Shielded RJ45 to 8P2C x 4 with side-entry cable
T-MOD 4-U1WH	Unshielded RJ45 to RJ45 x 4 with side-entry cable
T-MOD 4-U2WH	Unshielded RJ45 to 8P2C x 4 with side-entry cable

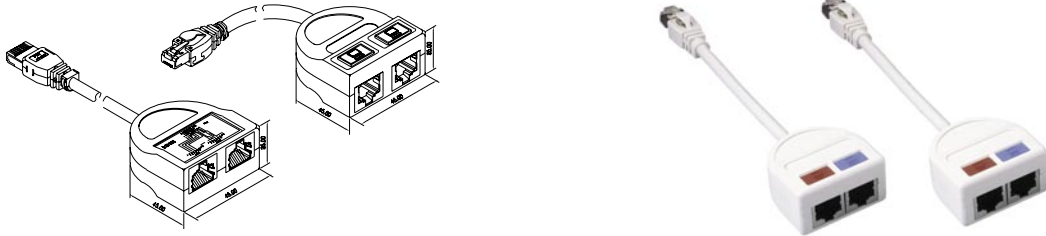
### T-MOD 4 Compact Box



T-MOD 4-S3WH	Shielded RJ45 to RJ45 x 4 compact box
T-MOD 4-S4WH	Shielded RJ45 to 8P2C x 4 compact box
T-MOD 4-U3WH	Unshielded RJ45 to RJ45 x 4 compact box
T-MOD 4-U4WH	Unshielded RJ45 to 8P2C x 4 compact box

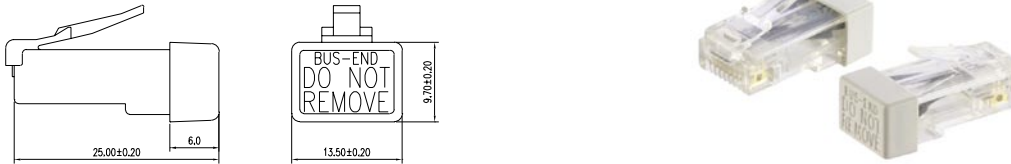


## T-MOD 3 Splitter for ISDN



T-MOD 3-SWH	Shielded RJ45 (plug) to RJ45 x 2 (jack) for ISDN
T-MOD 3-UWH	Unshielded RJ45(plug) to RJ45 x 2 (jack) for ISDN

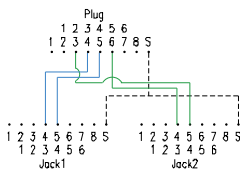
## ISDN Terminator



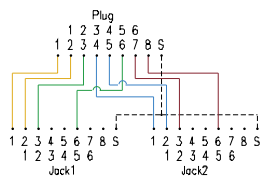
TA27T	ISDN terminator 4-pair,8-position plug:active pin 3-6 and 4-5
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## T-MOD 3 Wiring diagram and labling

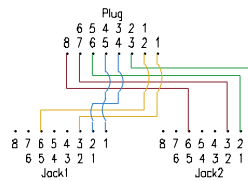
T-MOD3-U201 unshielded  
T-MOD3-S201 shielded



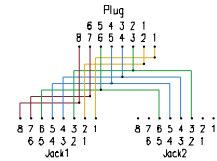
T-MOD3-U501 unshielded  
T-MOD3-S501 shielded



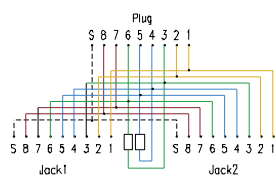
T-MOD3-U502 unshielded



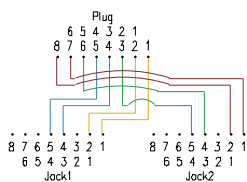
T-MOD3-U701 unshielded



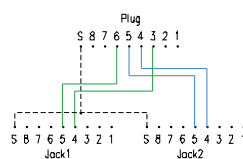
T-MOD3-S8 shielded



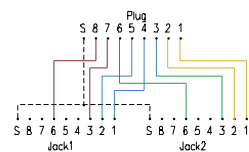
T-MOD3-U9 unshielded



T-MOD3-S9 shielded



T-MOD3-S10 shielded



## T-MOD 3 Wiring diagram and labling

### Description:

P/N: T-MOD3-U1 unshielded

P/N: T-MOD3-S1 shielded

Splites a 4-pair USOC jack, pairs 1 & 2 to jack 1 and pairs 3 & 4 to jack 2, for Token Ring or voice applications at either jack.

P/N: T-MOD3-U2 unshielded

P/N: T-MOD3-S2 shielded

Splites a 4-pair T568B jack, pairs 1 & 2 to jack 1 and pairs 3 & 4 to jack 2, for Token Ring or voice applications at either jack.

P/N: T-MOD3-U3 unshielded

P/N: T-MOD3-S3 shielded

Splites a 4-pair T568A jack, pairs 1 & 2 to jack 1 and pairs 3 & 4 to jack 2, for Token Ring or voice applications at either jack.

P/N: T-MOD3-U4 unshielded

P/N: T-MOD3-S4 shielded

Splites a 4-pair T568A/T568B jack, pairs 2 & 3 to jack 1 and pairs 1 & 4 to jack 2, for 10BASE-T (jack 1) and Token Ring or voice applications (jack 2).

P/N: T-MOD3-U5 unshielded

P/N: T-MOD3-S5 shielded

Splites a 4-pair T568A/T568B jack, pairs 2 & 3 to jack 1 and pairs 1 & 4 to jack 2, for 10BASE-T applications at either jack.

P/N: T-MOD3-U6 unshielded

P/N: T-MOD3-S6 shielded

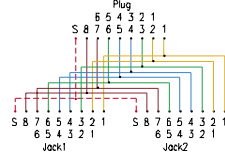
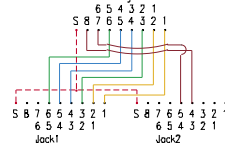
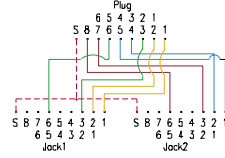
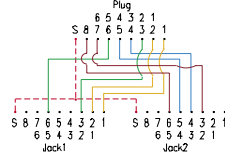
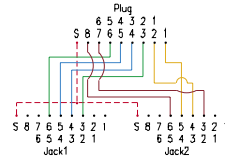
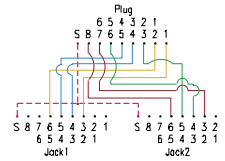
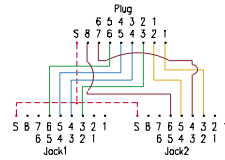
Splites a 4-pair T568B jack, pairs 1, 2 and 3 to jack 1 (356A) and pairs 4 to jack 2, for 1-2-or-3-pairs voice/modem (jack 2).

P/N: T-MOD3-U7 unshielded

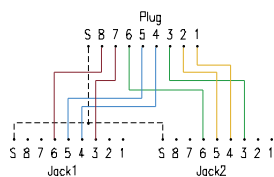
P/N: T-MOD3-S7 shielded

Bridges all jack pairs. Compatible with any jack wiring. Provides an additional 4-pair jack with the same wiring.

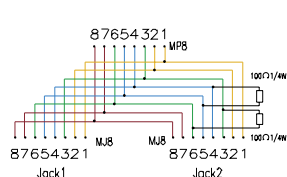
### Wiring:



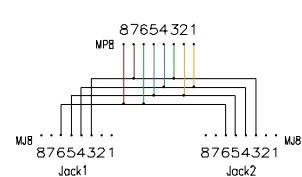
P/N: T-MOD3-S11 shielded



P/N: T-MOD3-U11 unshielded



P/N: T-MOD3-U13 unshielded



# Faceplate



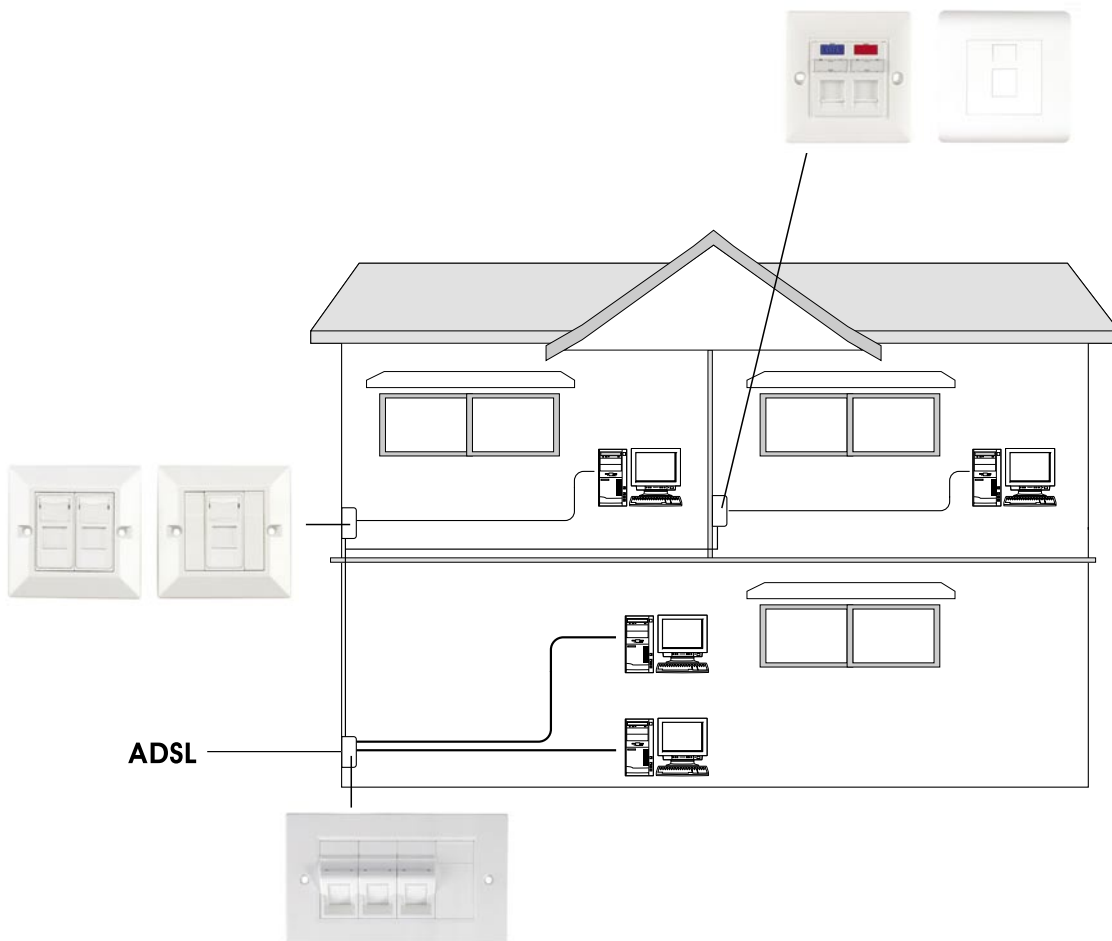
Terminate your wire runs cleanly and easily with our USA and European line of faceplate products. With our wide variety of configurations, these easy-to-install plates give you access to your computers and devices like never before. Our faceplates are made for fitting into a standard wall mount hole, similar to an outlet or light switch. Their practical design and sleek look make these plates an ideal solution for home internetworking and cable extension management.

Telebox faceplates hold many combinations of keystone type connectors in a simple, stylish interface that mounts to any wall. This solution offers a variety of connectors that snap into the plate for easy installation and a nice, clean look. The available ports are RJ45 for Ethernet CAT5e, CAT.6, and CAT.6A, RJ11 for telephones, F81 for Coaxial, and Blank Insert.

Faceplates-USA	84
Faceplates-British	87
Faceplates-French	90
Backbox	92

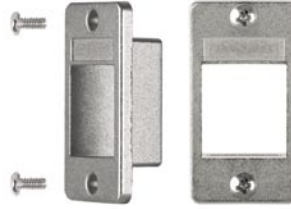
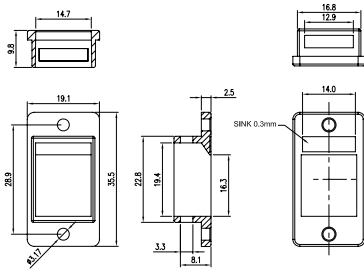
## Faceplates Technical Data

	USA	British	French
<b>Mechanical Characteristics</b>			
Dimensions: Single gang	70x114 mm	86x86 mm	81x81 mm
Dimensions: Double gang	114x114 mm	86x146mm	
Center plate: Single gang		50x50mm	45x45mm
Center plate: Double gang		100x50mm	
Material	ABS, UL90V-0 / Stainless	ABS, UL90V-0	ABS, UL90V-0
Temperature	-40°F to 150°F	-40°F to 150°F	-40°F to 150°F
Faceplate Angle	Flat	Flat / 45°	Flat / 45°





## Die-Casting Panel-Mount Flange



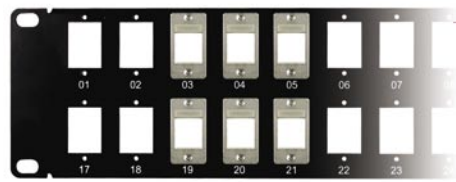
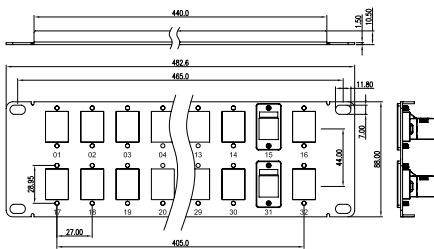
FG01 Die-Casting panel-mount flange for FG05XX Flange Panel

## Die-Casting Panel-Mount Flange For Coupler and Keystone Jack



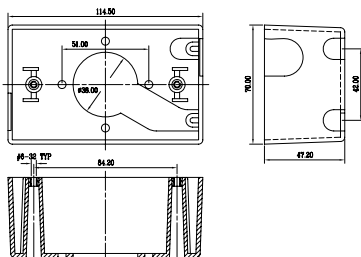
- FG0201 Die-Casting flange kits with Cat.5e coupler TA1958-XX series
- FG0202 Die-Casting flange kits with Cat.6 coupler TA1968-XX series
- FG0301 Die-Casting flange kits with Cat.5e keystone jack TA8758-XX series
- FG0302 Die-Casting flange kits with Cat.6 keystone jack TA8768-XX series
- FG0303 Die-Casting flange kits with Cat.6A keystone jack TA876A-XX series

## Die-Casting Panel-Mount Flange Kits with Patch Panel



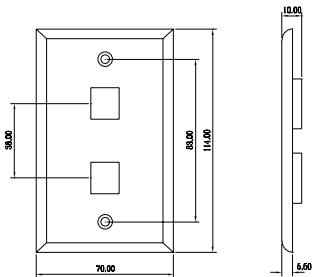
- FG0401 Die-Casting flange kits with 1U 16 ports patch panel FG05XX series
- FG0402 Die-Casting flange kits with 2U 32 ports patch panel FG05XX series

## USA Type Backbox



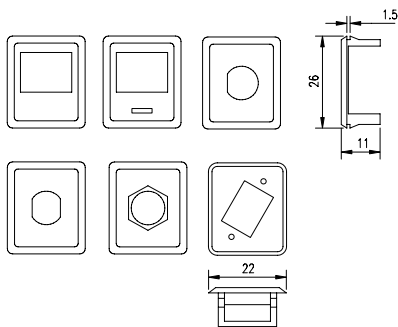
TA4709-WH USA type backbox

## USA Type Faceplate



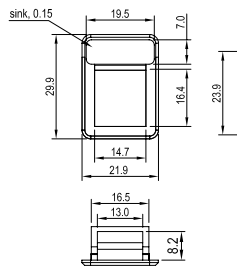
TA3700-1	USA type for 1 port keystone type faceplate
TA3700-2	USA type for 2 ports keystone type faceplate
TA3700-3	USA type for 3 ports keystone type faceplate
TA3700-4	USA type for 4 ports keystone type faceplate
TA3700-6	USA type for 6 ports keystone type faceplate
TA3700-B	Blank insert

## Color Frame (22x26mm)



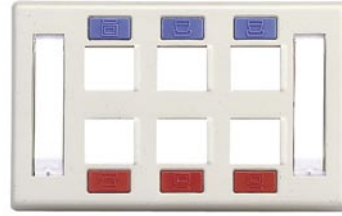
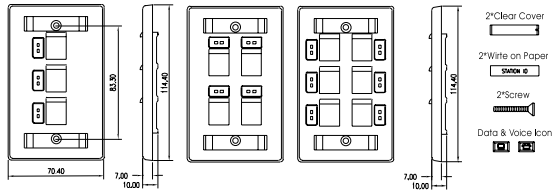
TA5500-GR	Color frame for blank insert
TA5501-BK	Color frame for keystone jack
TA5502-WH	Color frame for keystone jack w/ icon
TA5503-WH	Color frame for BNC or TNC
TA5504-WH	Color frame for ST fiber coupler
TA5505-WH	Color frame for TV coupler
TA5506-WH	Color frame for SC adapter

## Color Frame (22x30mm)



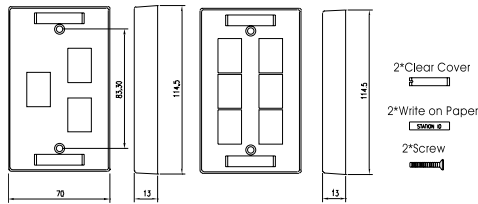
TA5507-WH	Color frame for keystone jack (22x30mm)
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## USA Type Faceplate (Double Gang)



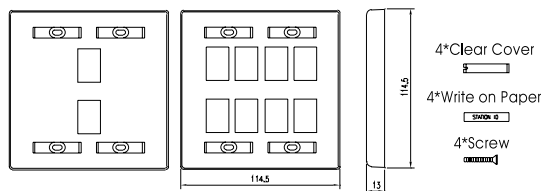
TA6810-WH	USA type for blank faceplate
TA6811-WH	USA type for 1 port keystone type faceplate
TA6812-WH	USA type for 2 ports keystone type faceplate
TA6813-WH	USA type for 3 ports keystone type faceplate
TA6814-WH	USA type for 4 ports keystone type faceplate
TA6816-WH	USA type for 6 ports keystone type faceplate

## USA Type Faceplate (Single Gang)



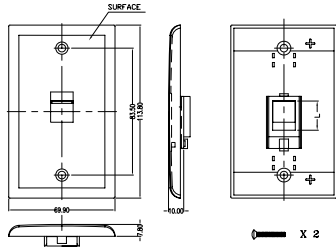
TA5510-WH	USA type for blank faceplate
TA5511-WH	USA type for 1 port keystone type faceplate with shutter
TA5512-WH	USA type for 2 ports keystone type faceplate with shutter
TA5513-WH	USA type for 3 ports keystone type faceplate with shutter
TA5514-WH	USA type for 4 ports keystone type faceplate with shutter
TA5516-WH	USA type for 6 ports keystone type faceplate with shutter

## USA Type Faceplate (Double Gangs)



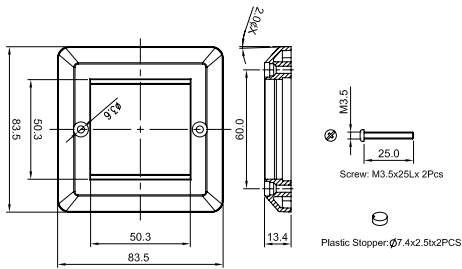
TA5520-WH	USA type for blank faceplate
TA5521-WH	USA type for 1 port keystone type faceplate with shutter
TA5522-WH	USA type for 2 ports keystone type faceplate with shutter
TA5523-WH	USA type for 3 ports keystone type faceplate with shutter
TA5524-WH	USA type for 4 ports keystone type faceplate with shutter
TA5526-WH	USA type for 6 ports keystone type faceplate with shutter
TA5528-WH	USA type for 8 ports keystone type faceplate with shutter

### USA Type Faceplate With Shutter



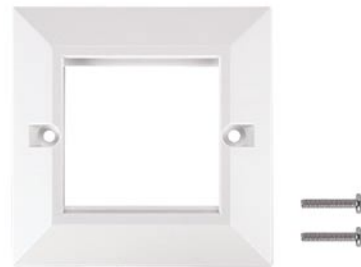
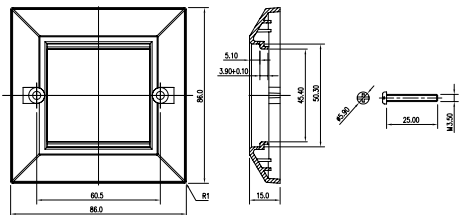
TA5181-WH	USA type for 1 port keystone type faceplate with shutter
TA5182-WH	USA type for 2 ports keystone type faceplate with shutter
TA5184-WH	USA type for 4 ports keystone type faceplate with shutter

### British Type Bevelled Faceplate Single Gang (Arc type)



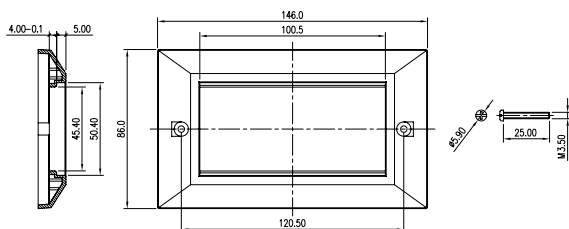
TA5105-2WH03	British type bevelled faceplate single gang (Arc type)
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### British Type Bevelled Faceplate Single Gang (86x86mm)



TA5105-2XX	British type bevelled faceplate single gang (86x86mm)
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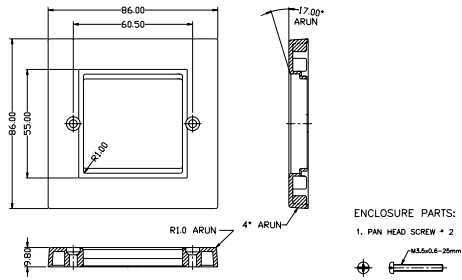
### British Type Bevelled Faceplate 2 Gangs (86x146mm)



TA5105-4XX	British type bevelled faceplate 2 gangs (86x146mm)
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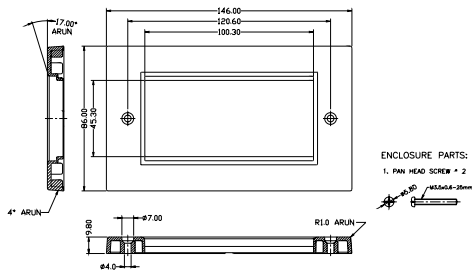
# Faceplate

## British Type Flat Faceplate Single Gang (86x86mm)



TA5162 British type flat faceplate single gang (86x86mm)

## British Type Flat Faceplate 2 Gangs (86x146mm)



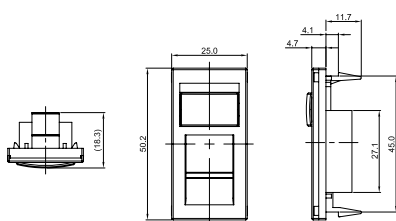
TA5164 British type flat faceplate 2 gangs (86x146mm)

## British Type 45° Frame



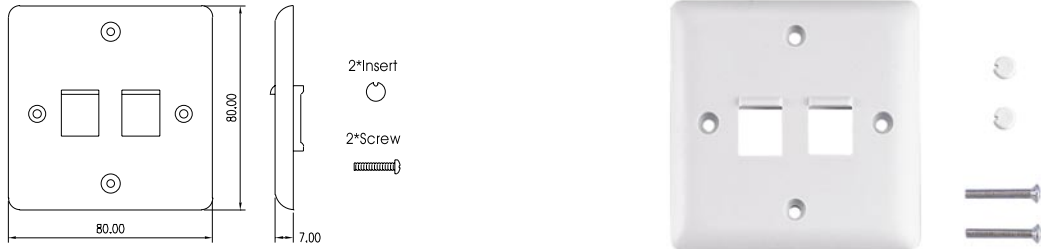
TA516A-WH	45° keystone adapter w/o icon	TA516E-WH	45° SC connector adapter w/o icon
TA516B-WH	45° keystone adapter w/ icon	TA516F-WH	45° SC connector adapter w/ icon
TA516C-WH	45° ST connector adapter w/o icon	TA516X-WH	45° blank adapter
TA516D-WH	45° ST connector adapter w/ icon		

## British Type Keystone Frame (25x50mm)



TA23XA-WH British type keystone frame  
TA516X-WH British type blank insert

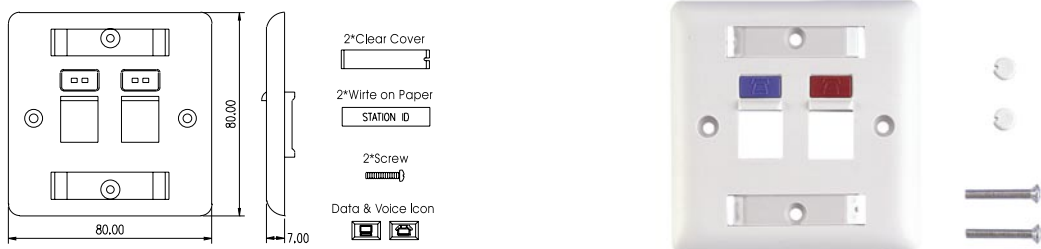
### British Type Keystone Faceplate (86X86mm)



TA5131 British type keystone faceplate 1 port

TA5132 British type keystone faceplate 2 ports

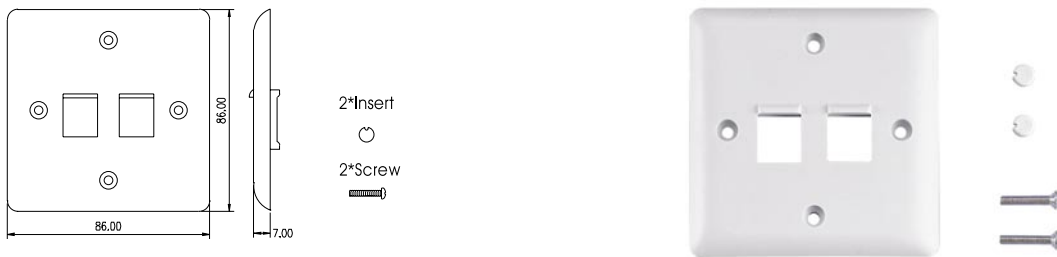
### British Type Keystone Faceplate With Icon (86X86mm)



TA5141 British type keystone faceplate 1 port with icon

TA5142 British type keystone faceplate 2 ports with icon

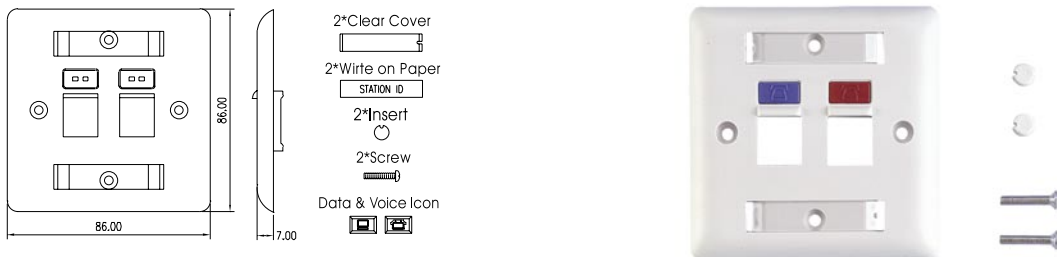
### European Type Keystone Faceplate (80x80mm)



TA5131 European type keystone faceplate 1 port

TA5132 European type keystone faceplate 2 ports

### European Type Keystone Faceplate With Icon (80x80mm)

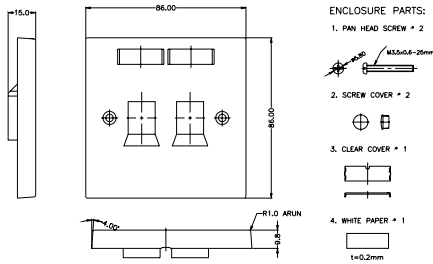


TA5141 European type keystone faceplate 1 port with icon

TA5142 European type keystone faceplate 2 ports with icon

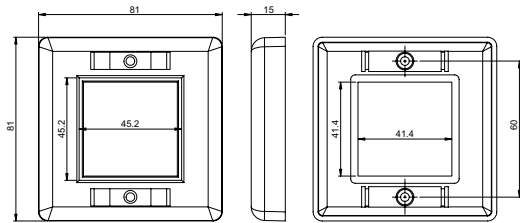
# Faceplate

## British Type Keystone Faceplate (86x86mm)



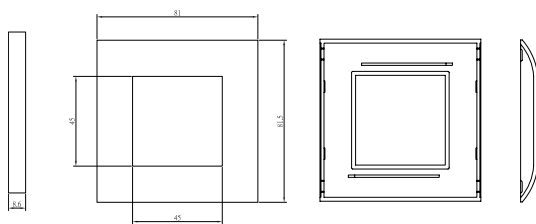
TA5151	British type keystone faceplate 1 port
TA5152	British type keystone faceplate 2 ports
TA5154	British type keystone faceplate 4 ports

## French Type Faceplate (81x81mm)



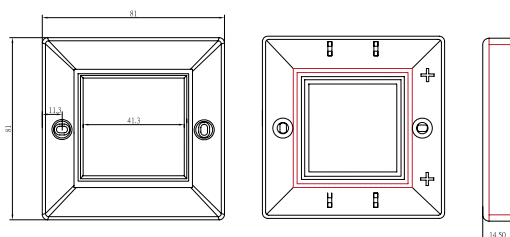
TA5171-WH	French type faceplate (81x81mm)
TA5172-WH	French type faceplate w/ station ID (81x81mm)

## French Type Faceplate (81x81mm)



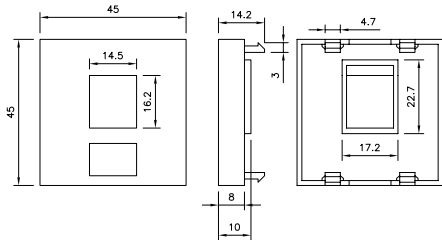
TA52201	French type faceplate (81x81mm)
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## French Type Faceplate (81x81mm)



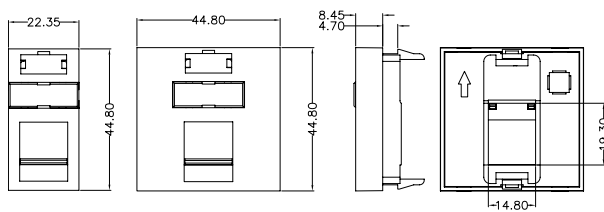
TA52202	French type faceplate (81x81mm)
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### French Type Centerplate (45x45mm)



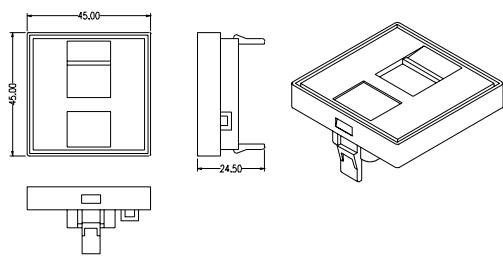
TA52301	French type centerplate 1 port 45x45mm
TA52302	French type centerplate 2 ports 45x45mm

### French Type Centerplate With Icon



TA52304	French type centerplate 1 port 22.5x45mm
TA52305	French type centerplate 1 port 45x45mm
TA52308	French type centerplate 2 ports 45x45mm

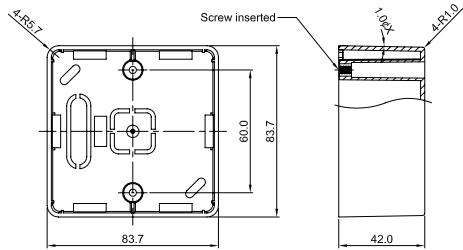
### French Type Faceplate (81x81mm) Centerplate With Color Ring



TA5173-WH	RJ45 centerplate 45x45mm
TA5174-WH	Color ring 45x45mm
TA5175-WH	Color ring 45x22.5mm
TA517A-WH	RJ45 centerplate 45x22.5mm
TA517B-WH	F TV CONN centerplate 45x22.5mm
TA517C-WH	1-BNC CONN centerplate 45x22.5mm
TA517D-WH	2-BNC CONN centerplate 45x22.5mm
TA517E-WH	1-ST CONN centerplate 45x22.5mm
TA517F-WH	2-ST CONN centerplate 45x22.5mm
TA517X-WH	Blank centerplate 45x22.5mm



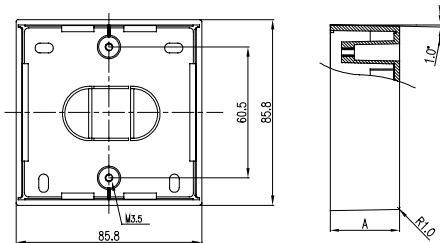
## British Type Backbox Single Gang



TA5215D-WH

British type backbox single gang

## British Type Backbox Single Gang (86x86mm)



TA5215A-WH

British type backbox single gang (86 x 86mm), A=27mm

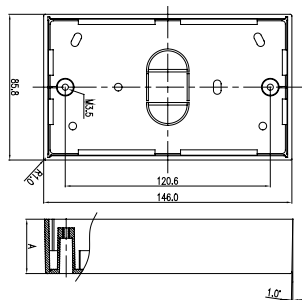
TA5215B-WH

British type backbox single gang (86 x 86mm), A=32mm

TA5215C-WH

British type backbox single gang (86 x 86mm), A=37mm

## British Type Backbox 2 Gangs (86x146mm)



TA5217A-WH

British type backbox 2 gangs (86 x 146mm), A=27mm

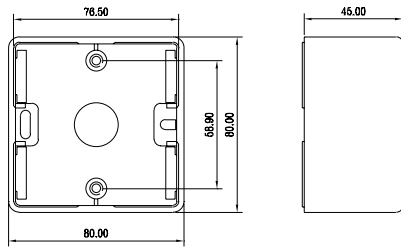
TA5217B-WH

British type backbox 2 gangs (86 x 146mm), A=32mm

TA5217C-WH

British type backbox 2 gangs (86 x 146mm), A=37mm

**European Type Backbox (80x80mm)**

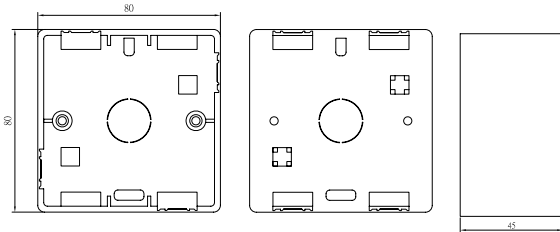


TA5203

Backbox (80x80x45mm)

\* For faceplate TA5171-WH, TA5172-WH

**European Type Backbox (80x80mm)**



TA5204

Backbox (80x80x45mm)

\* For faceplate TA52201, TA52202



**Tip**

**British Type**



**French Type**



# Modular Jack



Modular jack connectors, a cornerstone of communications technology, have been used in the telecommunications (RJ11) and Ethernet industry (RJ45) for many years. They come in four sizes: 4, 6, 8, and 10 position, where a position is a location for a contact. Not all of the positions may have contacts: when contacts are omitted, they are typically done so from the outermost two contacts inward, such that the number of contacts is always an even number. The main reasons for this are the simplicity and reliability of these products. Whether integrated in a simple telephone system, or in a networking application which can be obtained in many different versions.

Telebox provides a cost effective solution for applications requiring multiple ports. Modular jack RJ45 housings have eight contact positions for mating to EIA568 compliant cables. Jacks can be specified for Category 3/4, Category 5e, Category 6, or Category 6A transmission performance. Unshielded and Shielded modular jacks are available with panel flanges on top and on both sides for effective grounding.

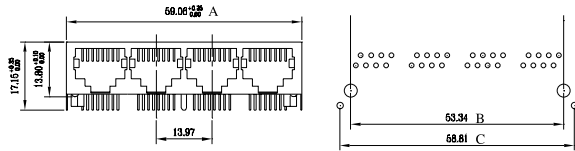
Shielded PCB Jack	96
RJ45 Shorting Jack	98
Unshielded PCB Jack	99

## Technical Data

	STP	UTP
<b>Transmission Characteristics</b>		
Cat.6	Screened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-5 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.6/Class E Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2-1 IEC 60603-7-4 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
Cat.5e	Screened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-3 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition	Unscreened Cat.5e/Class D Permanent Link and Channel performance ANSI/TIA/EIA-568-B.2 IEC 60603-7-2 ISO/IEC 11801 2nd Edition EN 50173 2nd Edition
<b>Electrical Characteristics</b>		
Current Rating	1.5 Amps	1.5 Amps
Insulation Resistance	500 MΩ Min.	500 MΩ Min.
Contact Resistance	20 mΩ Max.	20 mΩ Max.
DC Resistance	0.1 Ω Max.	0.1 Ω Max.
<b>Mechanical Characteristics</b>		
Plug Insertion Life	750 Cycles Min.	750 Cycles Min.
Plug & Jack Contact Force	100 Grams Min.	100 Grams Min.
Plug Retention Force	30 lbs Min.	30 lbs Min.
Temperature	-40°F to 150°F	-40°F to 150°F
<b>Physicals Characteristics</b>		
Shielding Housing	Stainless steel 0.25mm thickness	
Material	High impact flame retardant plastic	High impact flame retardant plastic
Jack Wiring	Round wire/Flat wire	Round wire / Flat wire
Angle	180° / 90° / 45°	180° / 90° / 45°
Type	PCB jack/SMT jack	PCB jack/SMT jack

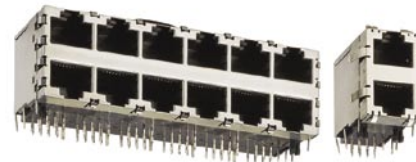
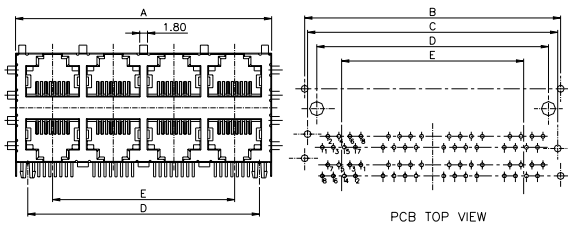
# Modular Jack

## STP RJ45 Gang Jack



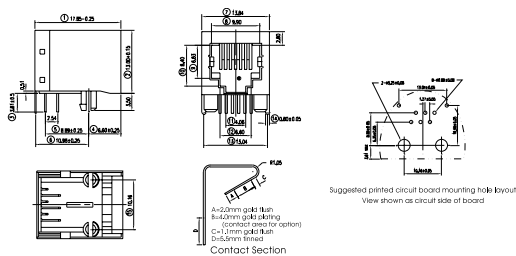
MJ0501-1S	1 port STP RJ45 gang jack
MJ0501-2S	2 ports STP RJ45 gang jack
MJ0501-4S	4 ports STP RJ45 gang jack
MJ0501-5S	5 ports STP RJ45 gang jack
MJ0501-6S	6 ports STP RJ45 gang jack
MJ0501-8S	8 ports STP RJ45 gang jack
MJ0501-10S	10 ports STP RJ45 gang jack
MJ0501-12S	12 ports STP RJ45 gang jack

## STP RJ45 Two Rows Gang Jack



MJ0502-2S	2 ports STP RJ45 two rows gang jack
MJ0502-6S	6 ports STP RJ45 two rows gang jack
MJ0502-8S	8 ports STP RJ45 two rows gang jack
MJ0502-10S	10 ports STP RJ45 two rows gang jack
MJ0502-12S	12 ports STP RJ45 two rows gang jack
MJ0502-16S	16 ports STP RJ45 two rows gang jack

## STP Low Profile Side Entry Jack

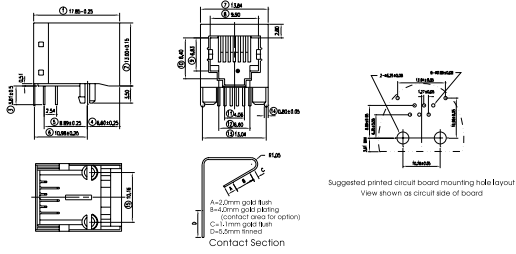


MJ0503-66S	STP low profile 6P6C side entry jack
MJ0503-88S	STP low profile 8P8C side entry jack





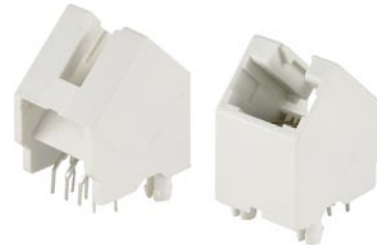
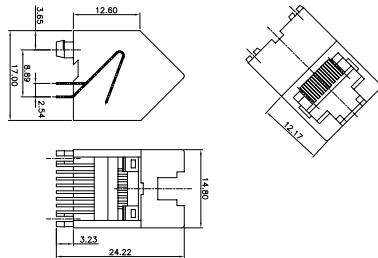
### UTP Low Profile Side Entry Jack



MJ0503-66 UTP Low Profile 6P6C side entry jack

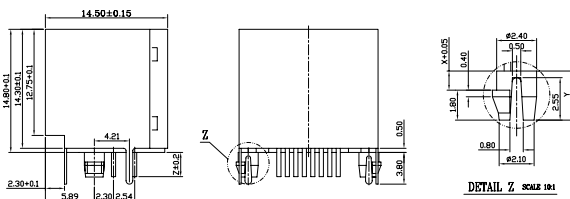
MJ0503-88 UTP Low Profile 8P8C side entry jack

### UTP Reduced 45° PCB Jack



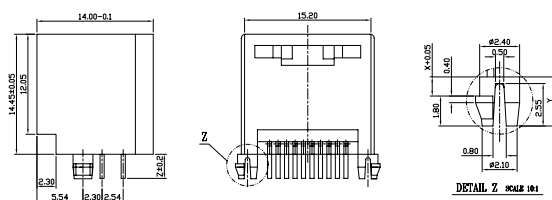
MJ0504-88 UTP reduced 8P8C 45° PCB jack

### UTP Side Entry Jack



MJ0543-88 UTP 8P8C side entry jack

### UTP Side Entry Jack

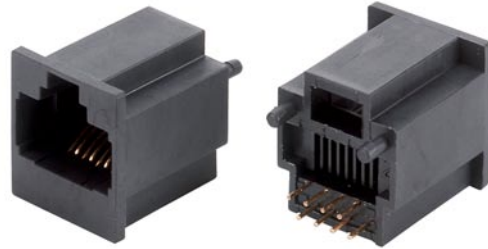
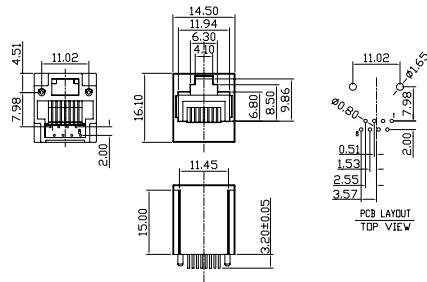


MJ0543-00 10P10C side entry jack



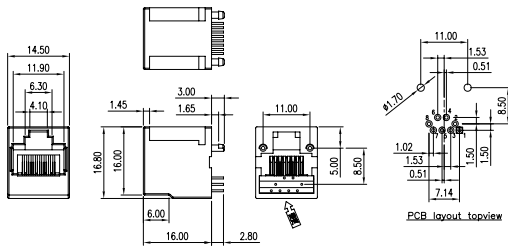


### Reduced Crosstalk 180° PCB Jack



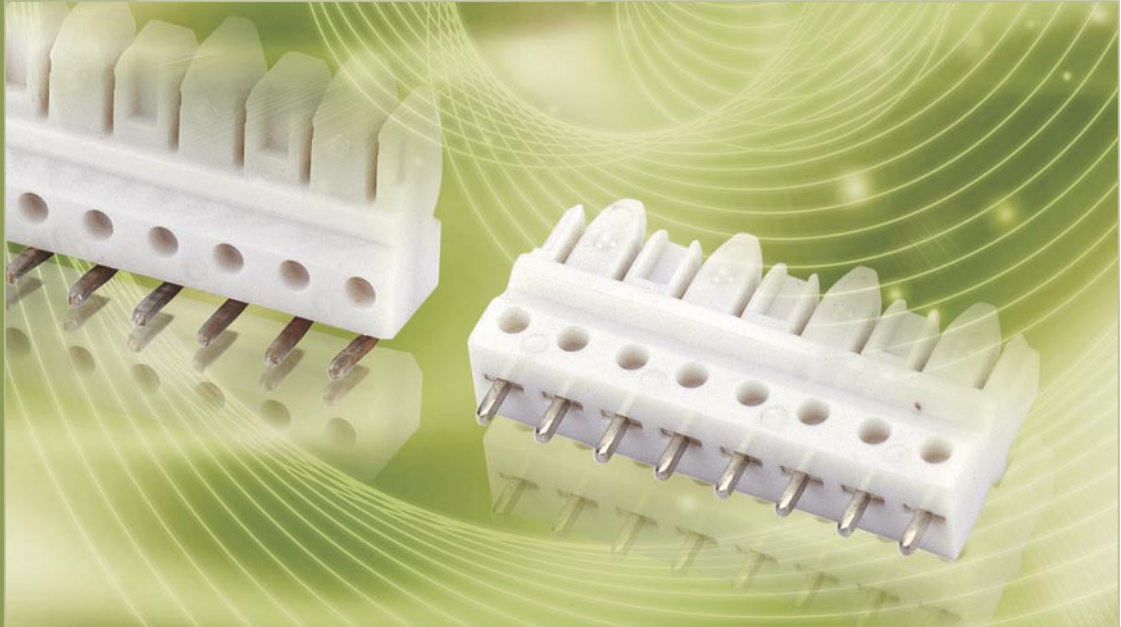
MJ6018-881	Reduced crosstalk 180° Cat.5e 8P8C PCB jack 15μ" gold over nickel plating
MJ6018-883	Reduced crosstalk 180° Cat.5e 8P8C PCB jack 30μ" gold over nickel plating
MJ6018-885	Reduced crosstalk 180° Cat.5e 8P8C PCB jack 50μ" gold over nickel plating
MJ6018-886	Reduced crosstalk 180° Cat.5e 8P8C PCB jack 6μ" gold over nickel plating

### Reduced Crosstalk 180° PCB Jack



MJ6028-881	Reduced crosstalk 180° Cat.6 8P8C PCB jack 15μ" gold over nickel plating
MJ6028-883	Reduced crosstalk 180° Cat.6 8P8C PCB jack 30μ" gold over nickel plating
MJ6028-885	Reduced crosstalk 180° Cat.6 8P8C PCB jack 50μ" gold over nickel plating
MJ6028-886	Reduced crosstalk 180° Cat.6 8P8C PCB jack 6μ" gold over nickel plating

# IDC (Krone/110 type)



For data & voice cross-connect applications, wiring blocks accommodate a range of conductor sizes from 23~26 AWG solid or stranded and are designed to exceed Category 6 specifications. They can be configured to build a cross-connect system for any application. Wiring blocks can be ordered with mounting legs for routing cable behind the block, or without legs where the space is limited.

The 110 connecting blocks (Clips) utilize double-ended insulation displacement contacts (IDC) that terminate 23~26 AWG solid conductors. The blocks are available in 3, 4 and 5-pair sizes with the appropriate color-coding for easy conductor placement.

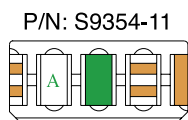
Krone type can be used throughout the local loop, in main distribution frames, cross-connection cabinets, distribution points and in-house areas. The contact security is especially noteworthy without worrying about climatic and other environmental problems. Technical contact security results in the formation of a gas-tight connection with very low transmission resistance. Connection is made through the special termination tool, which means the quality of the connection is always repeatable.

110 IDC Type	104
Krone/110 IDC Type	105
Krone IDC Type	107

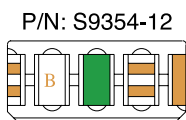
## IDC Technical Data

	110 IDC Type	110/Krone Type	Krone Type
<b>Physicals Characteristics</b>			
Housing	Polycarbonate (PC)	Polycarbonate (PC)	Polycarbonate (PC)
Contact	Phosphor bronze, Tin plating	Phosphor bronze, Tin plating	Phosphor bronze, Tin plating
Cover	Polycarbonate (PC)	Polycarbonate (PC)	ABS UL 94V-0
IDC Accept (Solid wire)	#23~25 AWG	#23~25 AWG	#23~25 AWG
IDC Accept (Stranded wire)	#24/7~26/7 AWG	#24/7~26/7 AWG	#24/7~26/7 AWG
Pin	4P / 8P	4P / 5P / 8P	8P / 9P

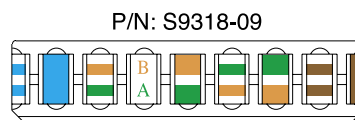
### Color Code Reference:



T568A



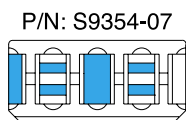
T568B



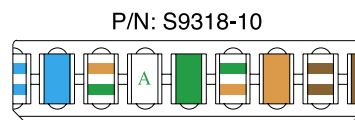
T568A/B



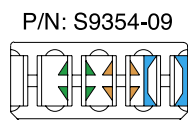
T568A/B



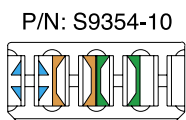
T568A/B



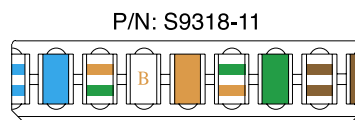
T568A



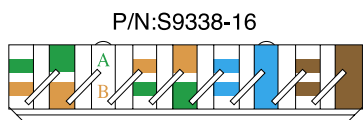
USOC



USOC



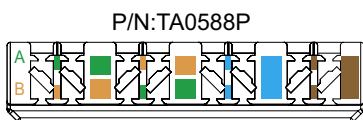
T568B



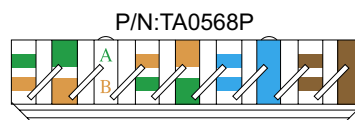
Krone IDC T568A/B



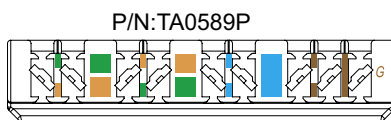
Krone IDC T568A/B



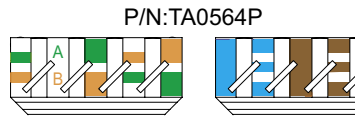
Krone/110 Type Double "V" IDC



Krone IDC T568A/B



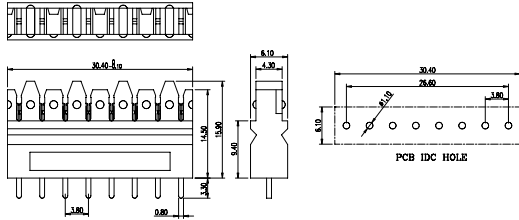
Krone/110 Type Double "V" IDC



Krone IDC T568A/B

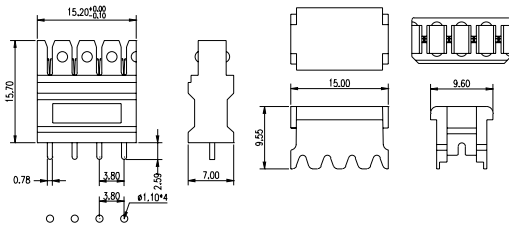
# DC (Krone/110 type)

## Hill-Valle 8-pin 110 IDC



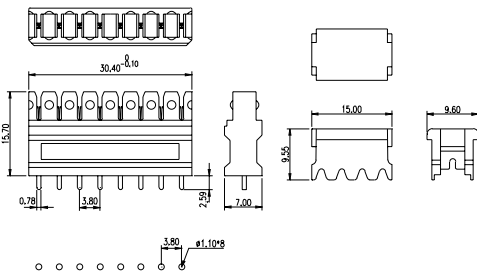
TA0538P-01	Hill-Valle 90° 8-pin 110 IDC w/o color code, w/o cap
TA0538P-02	Hill-Valle 180° 8-pin 110 IDC w/o color code, w/ 2 caps
TA0538P-03	Hill-Valle 180° 8-pin 110 IDC w/ color code, w/o cap
TA0538P-04	Hill-Valle 180° 8-pin 110 IDC w/ color code, w/ 2 caps

## 4-pin 110 IDC



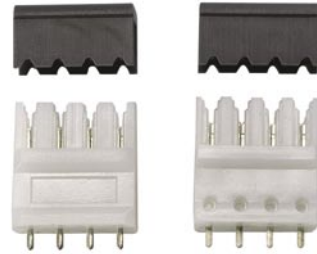
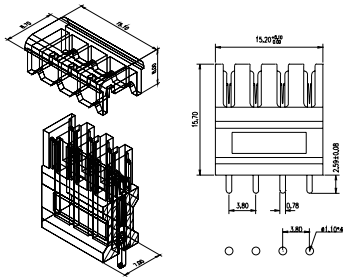
TA0524P-01	4-pin 110 IDC w/o color code, w/o cap
TA0524P-02	4-pin 110 IDC w/o color code, w/ caps
TA0524P-03	4-pin 110 IDC w/ color code, w/o cap
TA0524P-04	4-pin 110 IDC w/ color code, w/ caps

## 8-pin 110 IDC



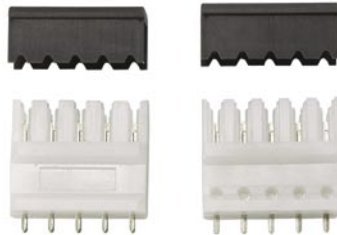
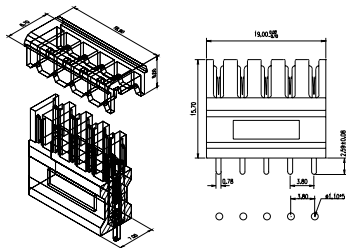
TA0528P-01	8-pin 110 IDC w/o color code, w/o cap
TA0528P-02	8-pin 110 IDC w/o color code, with 2 caps
TA0528P-03	8-pin 110 IDC w/ color code, w/o cap
TA0528P-04	8-pin 110 IDC w/ color code, with 2 caps

### 4-pin Krone/110 Type IDC



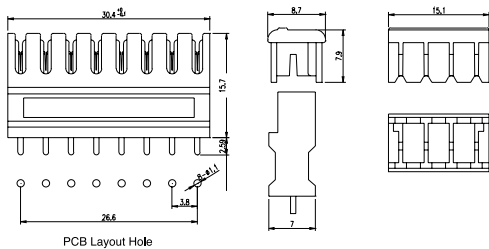
TA0514P-01	4-pin Krone/110 IDC type w/o color code, w/o cap
TA0514P-02	4-pin Krone/110 IDC type IDC w/o color code, w/ caps
TA0514P-03	4-pin Krone/110 IDC type IDC w/ color code, w/o cap
TA0514P-04	4-pin Krone/110 IDC type IDC w/ color code, w/ caps

### 5-pin Krone/110 Type IDC



TA0515P-01	5-pin Krone/110 IDC type w/o color code, w/o cap
TA0515P-02	5-pin Krone/110 IDC type w/o color code, w/ caps
TA0515P-03	5-pin Krone/110 IDC type w/ color code, w/o cap
TA0515P-04	5-pin Krone/110 IDC type w/ color code, w/ caps

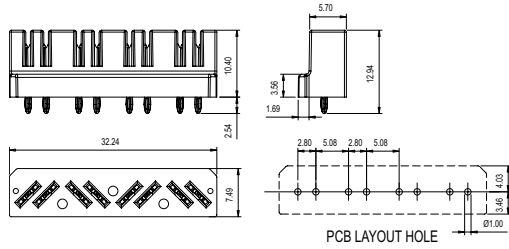
### 8-pin Krone/110 Type IDC



TA0518P-01	8-pin Krone/110 IDC type w/o color code, w/o cap
TA0518P-02	8-pin Krone/110 IDC type w/o color code, w/ 2 caps
TA0518P-03	8-pin Krone/110 IDC type w/ color code, w/o cap
TA0518P-04	8-pin Krone/110 IDC type w/ color code, w/ 2 caps

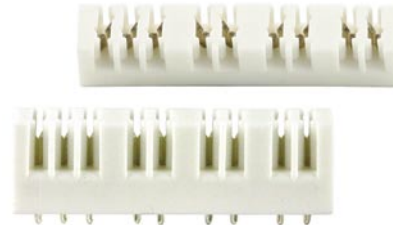
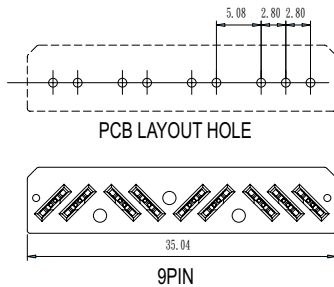
# DC (Krone/110 type)

## 8-pin Krone/110 Type Double "V" IDC



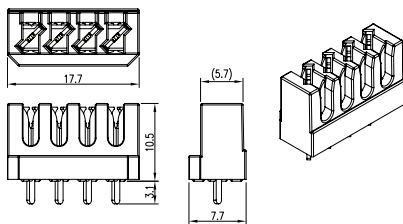
TA0588P-01	8-pin Krone/110 type IDC w/o color code
TA0588P-02	8-pin Krone/110 type IDC w/ color code

## 9-pin Krone/110 Type Double "V" IDC



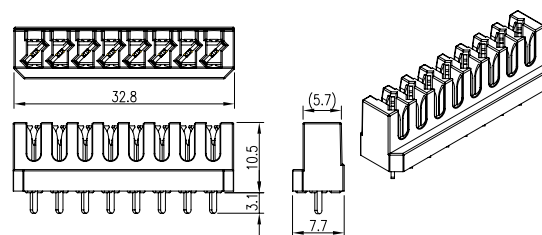
TA0589P-01	9-pin Krone/110 type IDC w/o color code
TA0589P-02	9-pin Krone/110 type IDC w/ color code

## 4-pin Krone Type IDC



TA0564P	4-pin Krone type IDC w/ color code
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## 8-pin Krone Type IDC



TA0568P	8-pin Krone type IDC w/ color code
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# Products Roadmap

	Cat.6 Link-Channel	Cat.6 Conn. HW.	Cat.6A Link-Channel	Cat.6A Conn. HW.
Keystone Jacks	TA80 STP	TA80 STP	TA90 STP	New STP KSJ
	TA80 UTP	TA80 UTP	TA87 STP	
	TA87 UTP	TA87 UTP	TA89 UTP	
	TA87 UTP			
	TA86 UTP			
	TA86 UTP			
Patch Panels	JP24 UTP	LP24 STP	LP24 STP	KP w/ KSJ
	LP24 STP		MLP 24 STP	
	LP24 UTP			
	EP24 UTP			
	MLP24 STP			
Couplers	TA19 UTP		TA19 STP	
	TA19 STP		TA09 STP	
	TA19 STP die-cast			
	TA09 UTP			
	TA09 STP			
Plug & Patch cords	TA5708FS	TA33 UTP patch cords	TA33 STP Patch cords	Field Plug STP
	TA5788FS	TA33 STP patch cords		Field Plug STP



# Media Converters

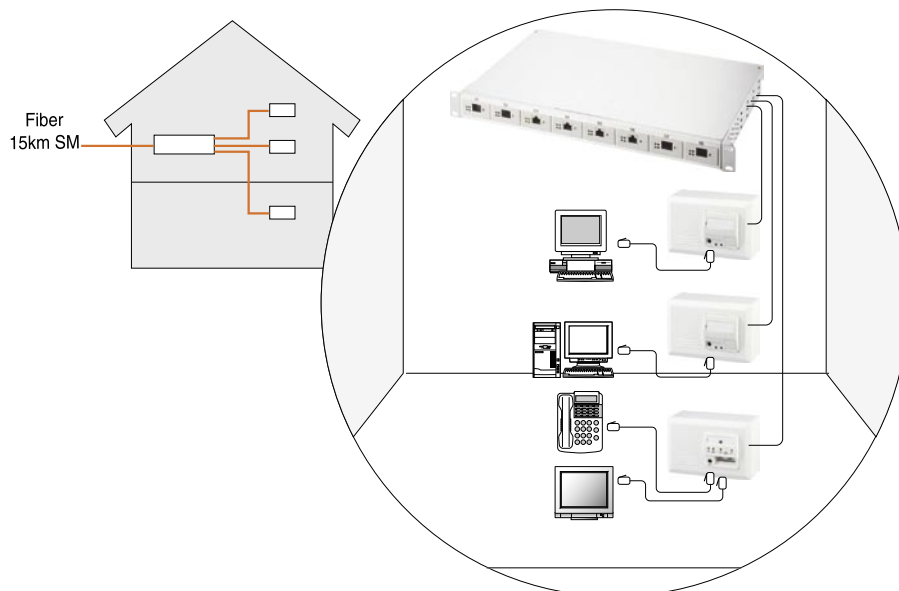


Fiber media converter is simple networking that makes it possible to connect two dissimilar media types such as twisted pair with fiber optic cabling. They were introduced to the industry nearly two decades ago, and are important in interconnecting fiber optic cabling-based systems with existing copper-based, structured cabling systems. They are also used in MAN access and data transport services to enterprise customers.

Besides, fiber media converters support many different data communication protocols that including Ethernet, Fast Ethernet, Gigabit Ethernet, T1/E1/J1, DS3/E3, as well as multiple cabling types such as coax, twisted pair, multi-mode and single-mode fiber optics. Media converter types range from small standalone devices and PC card converters to high port-density chassis systems that offer many advanced features for network management.

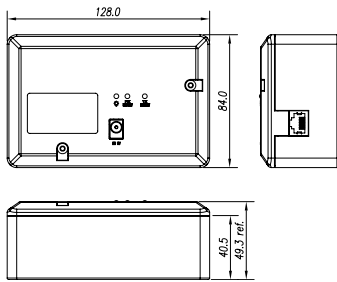
## Technical Data

Specification	
Standards Compliance	IEEE 802.3u; converts 10/100BASE-TX to 100BASE-FX
Support	10/100 Mbps Auto-negotiation for RJ45 port, store-forward switching for collision domains.
Max Forwarding Rate and Max Filtering Rate	14,880/148,800 pps per Fast Ethernet port
Connector	2x RJ45 port AUTO MDI/MDIX, One SC SM/MT-RJ/VF-45/SC MM
Network Cables	100Base-TX: UTP/STP Cat.5 cable EIA/TIA-568A 100-ohm (100m) 100Base-FX: 62.5/125µm multi-mode fiber cable (2Km) 9/125µm single-mode fiber cable (60Km)
LED Indicators	Power, FX Link/Activity, TX01 Link/Activity, TX02 Link/Activity
Dip Switch	Fiber port Full/Half Duplex
Operating Temperature	0°C to 45°C (32°F to 113°F )
Operating Humidity	Input rate: 100~240VAC, 50~60Hz, DC 5V, 2.5A
External Power Supply	4 Watt
Power Consumption	FCC Class A, CE Mark
Material	
Face Plate	ABS, UL 94V-0
RJ45 Shutter	ABS, UL 94V-0
Shell Front	SECC plated ZINC
Shield	SECC plated ZINC
PCB	FR4, 1.6m, UL 94V-0
RJ45	PCB jack
Shield	Bronze with Nickel plated
Housing	Glass filled polyester UL 94V-0
Contact	0.35mm thickness C5210, gold over nickel plated in contact area tin plated over nickel in solder area



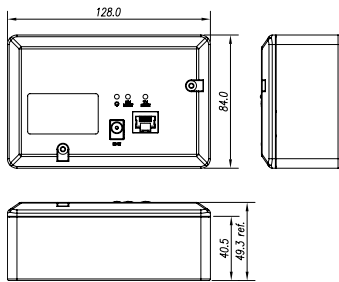
# Media Converters

## 1P Side-Entry Fiber 10/100M Converter Switch



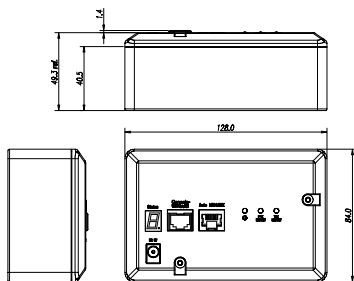
Part No.	Description	Part No.	Description
FC1332	SC SM 15Km	FC1322	SC MM 1300mm
FC1342	SC SM 30Km	FC1375	MT-RJ 850mm
FC1312	SC SM 60Km	FC1325	MT-RJ 1300mm
FC1372	SC MM 850mm		

## 1P Top-Entry Fiber 10/100M Converter Switch



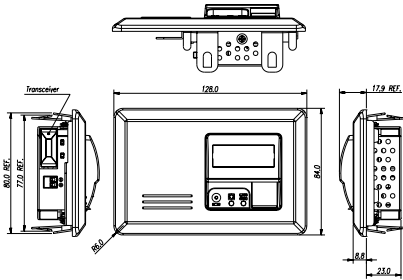
Part No.	Description	Part No.	Description
FC1532	SC SM 15Km	FC1322	SC MM 1300mm
FC1542	SC SM 30Km	FC1575	MT-RJ 850mm
FC1512	SC SM 60Km	FC1525	MT-RJ 1300mm
FC1572	SC MM 850mm		

## SNMP Converter Outlet



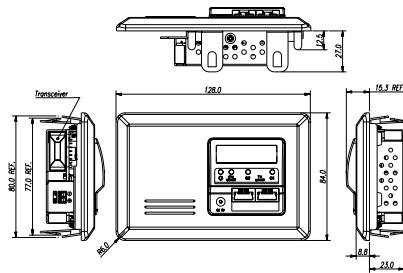
Part No.	Description	Part No.	Description
FC1732	SC SM 15Km	FC1722	SC MM 1300mm
FC1742	SC SM 30Km	FC1775	MT-RJ 850mm
FC1712	SC SM 60Km	FC1725	MT-RJ 1300mm
FC1772	SC MM 850mm		

### 1.5U 1P Fiber Converter Outlet



Part No.	Description	Part No.	Description
FC4612	SC, single mode 60Km	FC4626	VF45, multi-mode
FC4622	SC, multi-mode	FC4632	SC, single mode 15Km
FC4625	MT-RJ, multi-mode		

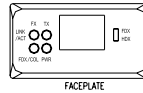
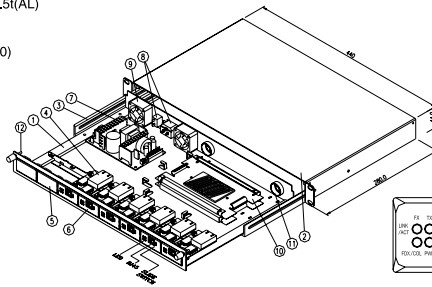
### 1.5U 2-Port 10/100 Fiber Converter Outlet



Part No.	Description	Part No.	Description
FC5612	SC, single mode 60Km	FC5626	VF45, multi-mode
FC5622	SC, multi-mode	FC5632	SC, single mode 15Km
FC5625	MT-RJ, multi-mode		

### 8 Ports Fiber Converter Panel

1. Panel housing 440W\*280D\*44H\*1.5(AL)
2. Panel cover(AL)
3. Panel slide(SUS304)
4. Fiber converter module (ABS 94V-0)
5. Blank cover (ABS 94V-0)
6. Module cover (ABS 94V-0)
7. Power supply
8. AC receptacles/switch
9. Vent fan
10. Splice tray
11. Snap bushing (Nylon 66)
12. Lock Screw



Part No.	Panel Cabinet
FC89	8P slide type fiber converter panel (w/o converter module)



P/N: FC4225



P/N: FC4226



P/N: FC4222

# Fiber Optic



An optical fiber (or fiber) is a transparent thin fiber, usually made of glass or plastic, for transmitting light. Fiber optics is the branch of science and engineering concerned with such optical fiber.

Optical fibers are commonly used in telecommunication systems, as well as in illuminations, sensors, and imaging optics.

Connectors	113
Adapters	118
Pigtail & Patch Cord	122

## Fiber Optical Connector



FO C XX - X X X X X X X X X X  
 1 2 3 4 5 6 7 8 9 10

### 1. Connector Type:

FC : FC Connector  
 SC : SC Connector  
 ST : ST Connector  
 MR : MT-RJ Connector

### 2. Mode Type:

H : Housing w/o ferrule  
 M : Multimode  
 S : Single mode

### 3. Ferrule ID:

B: 0.126mm for single mode  
 D: 0.128mm for multimode  
 0: w/o Ferrule

### 4. Cable OD:

0: 900µm buffered fiber  
 3: ø 3.0mm  
 4: ø 1.8mm  
 5: ø 1.6mm

### 5. Boot Color:

B: Blue  
 Y: Yellow  
 N: Green  
 K: Black  
 G: Grey

### 6. Ferrule End Face:

A: Angle PC  
 P: PC  
 F: Flat  
 H: Housing w/o ferrule

### 7. Boot type:

B: ribbed type boot  
 R: short Rubber boot  
 X: w/o boot  
 P: PVC boot  
 9: 900µm cable boot

### 8. 0: Multi-piece type

1: One-piece type

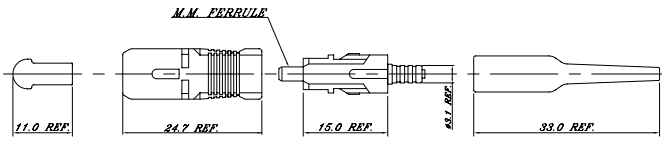
### 9. 0: Connector

1: SC Duplex Clip  
 2: SC Coupling device clip  
 3: MT-RJ Male

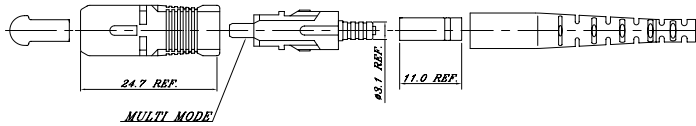
### 10. 1: Simplex type

2: Duplex type

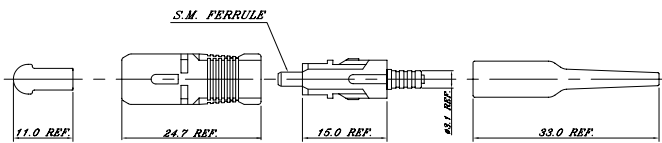
## Fiber Optical SC Connectors



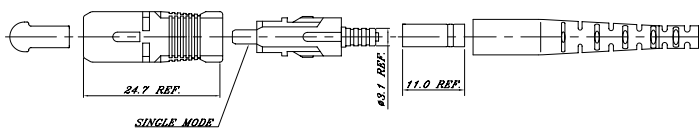
Part No.	Connector	Description
FOCSC-MD0BP9101	SC Simplex one piece type	Multi mode for 900µm buffer fiber



Part No.	Connector	Description
FOCSC-MD3BPB101	SC Simplex one piece type	Multi mode for ø3.0mm cable



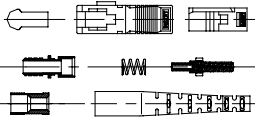
Part No.	Connector	Description
FOCSC-SB0YP9101	SC Simplex one piece type	Single mode for 900µm buffer fiber



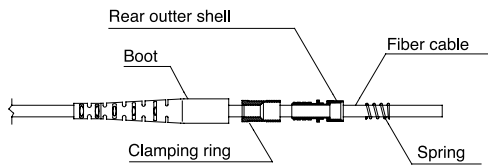
Part No.	Connector	Description
FOCSC-SB3YPB101	SC Simplex one piece type	Single mode for ø30 mm cable

## SC Connector Assembly Instruction

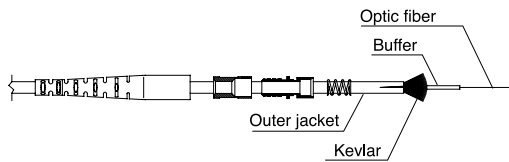
### 1. SC connector exploded parts



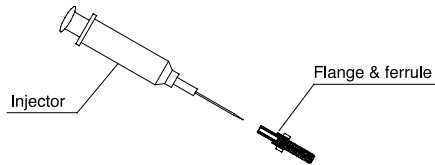
### 2. Pre-assembly



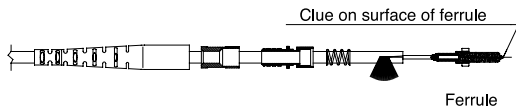
### 3. Fiber optic cable stripping



### 4. Fill flange hole with glue



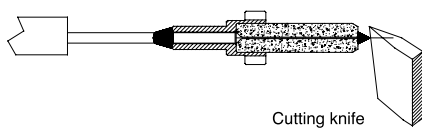
### 5. Insert the fiber into the contact



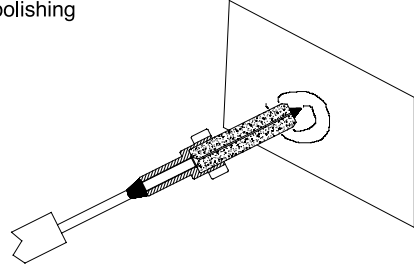
### 6. Dry the glue in over

Operating temperature: 80~100°C. 30Min

### 7. Dry the glue in over



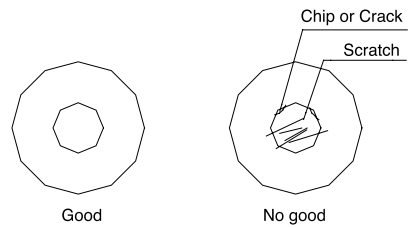
### 8. Rough polishing



### 9. Polishing

- A. Start to use polish machine
- B. Polishing steps
  - a. EPOXY removal
  - b. Coase polishing
  - c. Conver forming
  - d. Rough polishing
  - e. Midium polishing
  - f. Final polishing

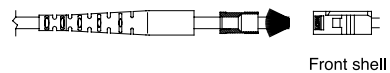
### 10. Visual inspection



### 11. Assembly step 1

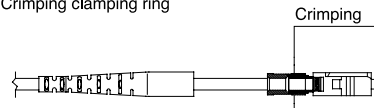


### 12. Assembly step 2



### 13. Assembly step 3

- a. Evenly distribute the Kevlar around the rear portion of the connector housing
- b. Crimping clamping ring



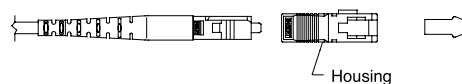
### 14. Assembly step 4

Slide the boot to the connector housing



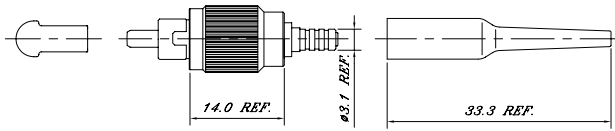
### 15. Housing assembly

Slide in the housing

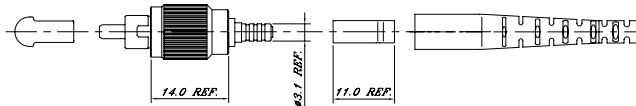




## Fiber Optical FC Connectors

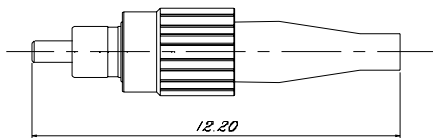


Part No.	Connector	Description
FOCFC-MD0KP9101	FC	Multi mode for 900µm buffer fiber
FOCFC-SB0NP9101	FC	Single mode for 900µm buffer fiber



Part No.	Connector	Description
FOCFC-MD3KPB101	FC	Multi mode for ø3.0mm cable
FOCFC-SB3NPB101	FC	Single mode for ø3.0mm cable

### FC CONNECTOR, 3mm boot

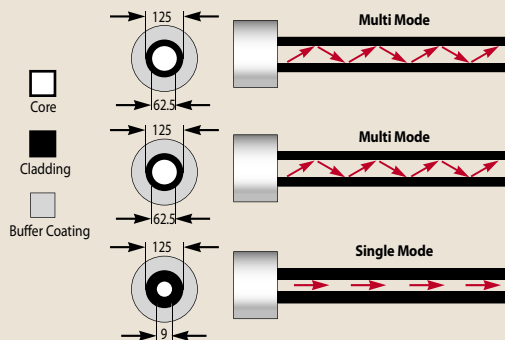


Part No.	Connector	Description
FOCFC-SA0YP9001	FC/APC	One piece type for 900µm buffer fiber
FOCFC-SA3KPR001	FC/APC	Multi-piece type for ø30mm cable



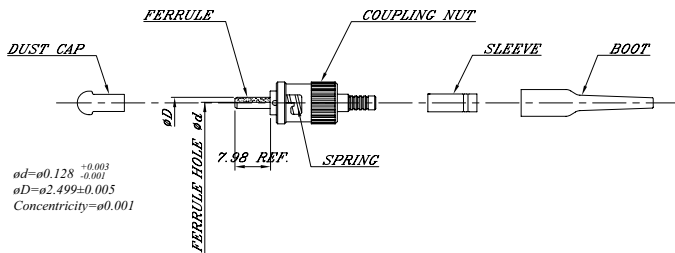
Tip

### Fiber Glass Types

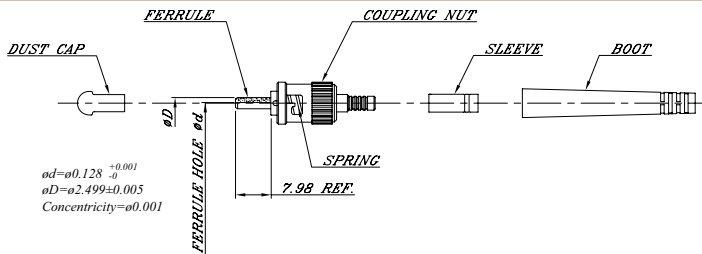


- For short distance
  - Easy to work with
  - Used in LANs
- For short distance
  - Easy to work with
  - Used in LANs
  - Provides more bandwidth than 62.5/125 at 850nm wavelengths
- For long distance
  - Difficult to work with
  - Used in phone companies, CATV companies

## Fiber Optical ST Connectors

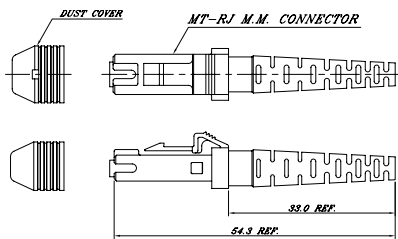


Part No.	Connector	Description
FOCST-MD0KP9101	ST	Multi mode for 900μm buffer fiber
FOCST-SB0YP9101	ST	Single mode for 900μm buffer fiber



Part No.	Connector	Description
FOCST-MD3KPP101	ST	Multi mode for $\phi 3.0$ mm cable
FOCST-SB3YPP101	ST	Single mode for $\phi 3.0$ mm cable

## Fiber Optical MT-RJ Connectors



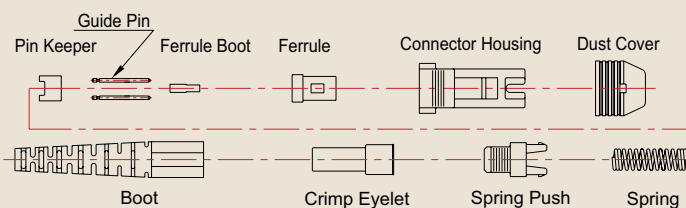
Part No.	Connector	Description	Cable
FOCMR-MD3FB001	MT-RJ	For Ribbon interconnect cable with 2-fiber multimode female type	OD= $\phi 3.0$ mm
FOCMR-MD3FB031	MT-RJ	For Ribbon interconnect cable with 2-fiber multimode male type	OD= $\phi 3.0$ mm
FOCMR-MD4FB001	MT-RJ	For Duplex zip-cord multimode female type	
FOCMR-MD4FB031	MT-RJ	For Duplex zip-cord multimode male type	



### Tip

- Dust cover
- Connector housing
- Ferrule (M.M.)
- Boot ferrule
- Pin keeper
- Spring
- Spring push
- Crimp eyelet
- Boot

PU, color black.  
 PC, color black.  
 Plastic, color black.  
 PU, color black.  
 PC, color black.  
 UNS, S30200 SST.  
 PC, color black.  
 Copper with nickel plating.  
 PVC, color black.



## Fiber Optical Adapter



FO A XX - XX X X X X X X X  
 1 2 3 4 5 6 7 8

**1. #1End Connector Type:**

- FC: FC Connector
- SC: SC Connector
- ST: ST Connector
- MR: MT-RJ Connector

**2. #2End Connector Type:** Same codes as #1End

**3. Alignment Sleeve type:**

- Z: Zirconia sleeve (Ceramic)
- L: Multimode phosphor bronze sleeve
- P: Single mode phosphor bronze

**4. shape type:**

- ST conn-- T: Threaded type F: Flange type
- SC conn-- Q: Square flange type
- R: Round flange type
- F: Metal flange type
- FC conn-- D: Standard type F: Flange type
- H: Rhombus type N: D-Shape type
- P: One-piece type
- Q: Square type (Die-casting)
- T: Threaded type
- MT-RJ conn-- Q: Simplex SC adapter cutout
- D: Mini type
- V: Simplex SC Adapter cutout with reverse key

**5. Housing Color:**

- B: Blue E: Beige K: Black Y: Yellow
- G: Grey N: Green M: Metal

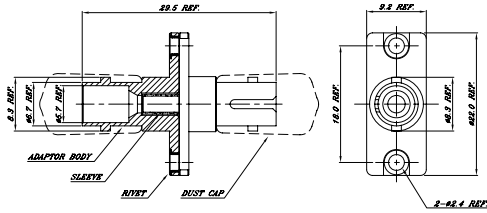
**6. 0: PC  
 1: APC**

**7. Cap Color:**

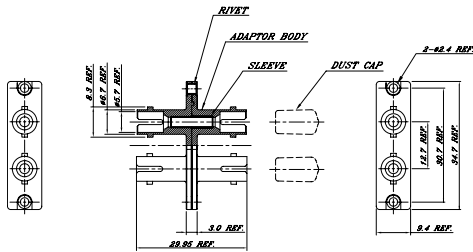
- B: Blue C Clear K: Black M: Metal
- N: Green R: Red X: w/o cap

**8. 1: Simplex type  
 2: Duplex type**

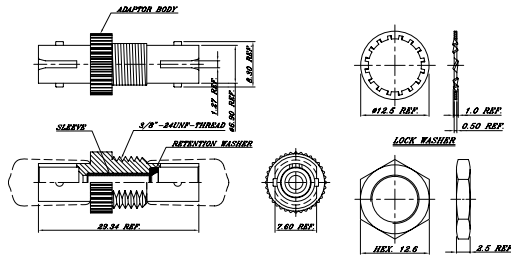
### Fiber Optical ST Adapter



Part No.	Connector	Description
FOAST-STLFM0K1	ST	Simplex, flange type metal housing

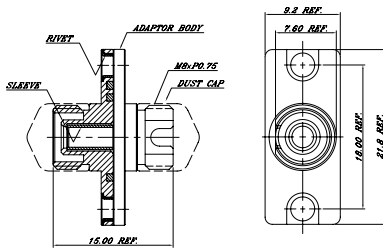


Part No.	Connector	Description
FOAST-STLFM0K2	ST	Duplex, flange type metal housing



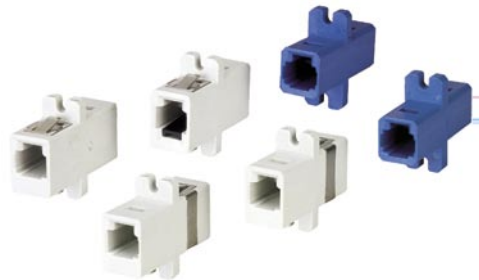
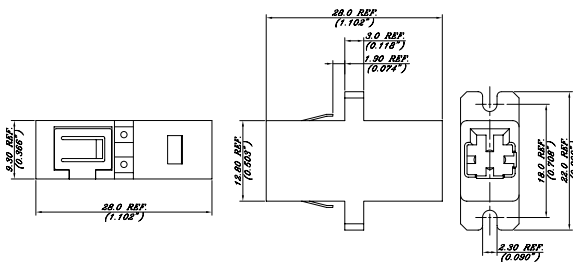
Part No.	Connector	Description
FOAST-STLTM0K1	ST	Simplex, thread type metal housing

## Fiber Optical FC Adapter



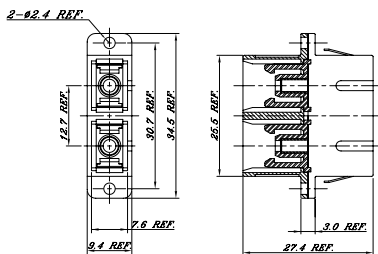
Part No.	Connector	Description
FOAFC-FCLFM0K1	FC	Flange type die-casting
FOAFC-FCLQM0K1	FC	Square type die casting metal housing
FOAFC-FCLPM0K1	FC	Square type metal housing
FOAFC-FCLNM0K1	FC	D shape type metal housing
FOAFC-FCLTM0K1	FC	Thread type metal housing

## Fiber Optical MT-RJ Adapter



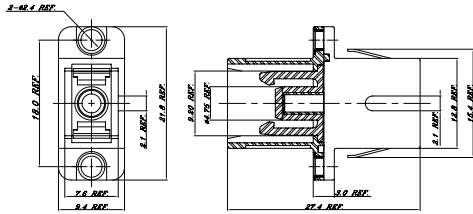
Part No.	Connector	Description
FOAMR-MRAQG0K1	MT-RJ	Simplex SC adapter cutout
FOAMR-MRAVG0K1	MT-RJ	Simplex SC adapter cutout with reverse key
FOAMR-MRADB0K1	MT-RJ	Simplex mini type cutout : 9.5mm x 10.5mm

## Fiber Optical SC Adapter

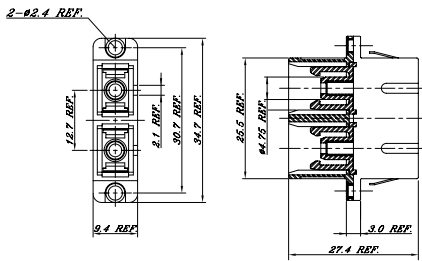


Part No.	Connector	Description
FOASC-SCLQB0K2	SC	Duplex, flange plastic housing

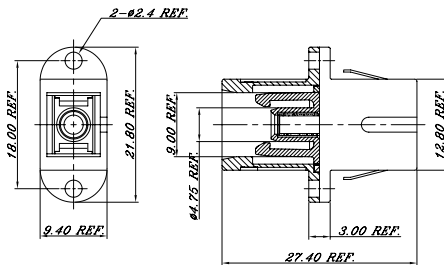
### Fiber Optical SC Adapter



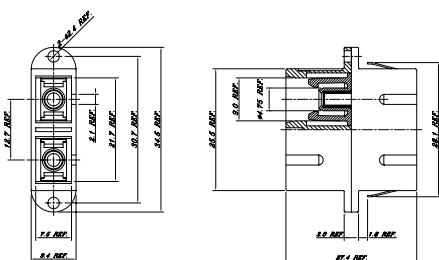
Part No.	Connector	Description
FOASC-SCLFM0K1	SC	Simplex, metal housing phosphor bronze



Part No.	Connector	Description
FOASC-SCLFM0K2	SC	Duplex, metal housing phosphor bronze



Part No.	Connector	Description
FOASC-SCLRB0K1	SC	Simplex, round flange plastic housing



Part No.	Connector	Description
FOASC-SCLRB0K2	SC	Duplex, round flange plastic housing

## Fiber Optical Patch Cord



FO J X X - X X X X XXXXX  
 1 2 3 4 5 6 7

**1. #1End Connector Type:**

- 0: Pigtail C: SC2 D: D4 F: FC I: FDDI
- L: SC Duplex cable ass'y w/ universal clip M: SMA
- R: MT-RJ S: SC T: ST
- V: SC Duplex coupling device one-piece
- P: MT-RJ Male type

**2. #2End Connector Type:** Same codes as #1End

**3. Connector polishing condition:**

- P : PC for single mode General PC jumper
- S : SPC for single mode Super PC jumper
- U : UPC for single mode Ultra PC jumper
- A : APC for single mode Angle PC jumper
- M: for all multi-mode General PC jumper

**4. cable type:**

- C : Simplex cable for single mode 9/125µm
- D : Duplex cable for single mode 9/125µm
- E : Simplex cable for multi-mode 50/125µm
- G : Simplex cable for multi-mode 62.5/125µm
- H : Duplex cable for multi-mode 62.5/125µm

**5. Cable OD:**

- 0: 900µm buffered fiber
- 3: ø3.0mm
- 4: ø1.8mm
- 5: ø1.6mm

**6. Cable Color:**

- O: Orange Y: Yellow W: White

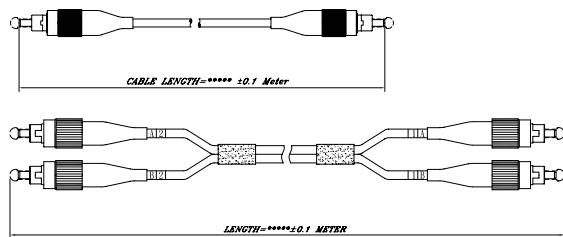
**7. Cable length = XXXX.X meter**

- for example 00005 = 0.5 m
- 00050 = 5.0 m
- 00500 = 50.0m
- 05000 = 500.0m
- 50000 = 5000.0m

## Technical Data

	Simplex	Duplex
<b>Mechanical Characteristics</b>		
Dust Cap	Polycarbonate (PVC)	Polycarbonate (PVC)
Ferrule / Flange	Ceramic (Zirconia) / Brass with nickel plating	Ceramic (Zirconia) / Brass with nickel plating
Plug Frame	Zinc alloy with nickel plating	Zinc alloy with nickel plating
Spring	Piano wire	Piano wire
Coupling Nut	Brass with nickel plating	Brass with nickel plating
Ring	Brass with nickel plating	Brass with nickel plating
Boot	Silicone rubber	Silicone rubber
Rear Outer Nut	Brass with nickel plating	Brass with nickel plating
Rear Outer Shell	Brass with nickel plating	Brass with nickel plating
Key Ring	Phosphor bronze	Phosphor bronze
<b>Optical Characteristics</b>		
Insertion Loss	Insertion Loss $\leq 0.3\text{db}$ (for S.M.) Insertion Loss $\leq 0.3\text{db}$ (for M.M.)	Insertion Loss $\leq 0.3\text{db}$ (for S.M.) Insertion Loss $\leq 0.3\text{db}$ (for M.M.)
Return Loss	Return Loss $\geq 45\text{dB}$	Return Loss $\geq 45\text{dB}$
Temperature Cycling	-40°C to 80°C 10 cycles	-40°C to 80°C 10 cycles
Tensile Strength	0 to 10kgw 1 minutes	0 to 10kgw 1 minutes
Connection Durability	Over 1000 times	Over 1000 times

### Fiber Optical FC to FC Patch Cords



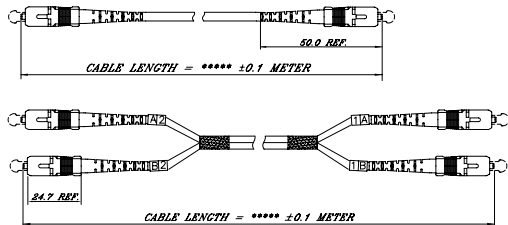
Part No.	Connector	Length	Description
FOJFF-MG3Y00001	FC-FC	1.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MG3Y00010	FC-FC	10.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MG3Y00100	FC-FC	100.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MG3Y01000	FC-FC	1000.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MH3Y00001	FC-FC	1.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MH3Y00010	FC-FC	10.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MH3Y00100	FC-FC	100.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJFF-MH3Y01000	FC-FC	1000.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable



## Technical Data

	Simplex	Duplex
<b>Mechanical Characteristics</b>		
Dust Cap	Polycarbonate (PVC)	Polycarbonate (PVC)
Ferrule / Flange	Ceramic (Zirconia) / Brass with nickel plating	Ceramic / Brass with nickel plating
Spring	Piano wire with zinc plating	Piano wire
Coupling Device	PBT	PBT + Glass fiber
Clamping Ring	Brass with nickel plating	Brass with nickel plating
Boot	PVC	PVC
Front Outer Shell	PBT	PBT + Glass fiber
Rear Outer Shell	Brass with nickel plating	
<b>Optical Characteristics</b>		
Insertion Loss	Insertion Loss $\leq 0.3\text{db}$ (for S.M.) Insertion Loss $\leq 0.3\text{db}$ (for M.M.)	Insertion Loss $\leq 0.3\text{db}$ (for S.M.) Insertion Loss $\leq 0.3\text{db}$ (for M.M.)
Return Loss	Return Loss $\geq 45\text{dB}$	Return Loss $\geq 45\text{dB}$
Temperature Cycling	-40°C to 80°C 10 cycles	-40°C to 80°C 10 cycles
Tensile Strength	0 to 10kgw 1 minutes	0 to 10kgw 1 minutes
Connection Durability	Over 1000 times	Over 1000 times

## Fiber Optical SC to SC Patch Cords

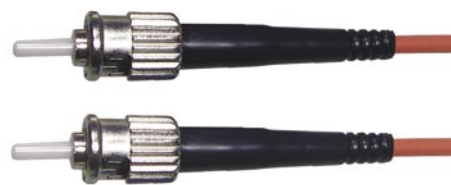
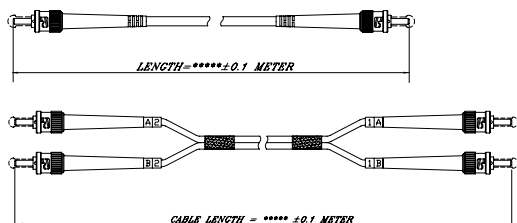


Part No.	Connector	Length	Description
FOJSS-MG3O00001	SC-SC	1.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MG3O00010	SC-SC	10.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MG3O00100	SC-SC	100.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MG3O01000	SC-SC	1000.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MH3O00001	SC-SC	1.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MH3O00010	SC-SC	10.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MH3O00100	SC-SC	100.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJSS-MH3O01000	SC-SC	1000.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable

## Technical Data

	Simplex	Duplex
<b>Mechanical Characteristics</b>		
Dust Cap	Polycarbonate (PVC)	Polycarbonate (PVC)
Ferrule / Body	Ceramic / Zinc alloy with nickel plating	Ceramic / Zinc alloy with nickel plating
Spring	Piano wire with zinc plating	Piano wire
Coupling Nut	Zinc alloy with nickel plating	Zinc alloy with nickel plating
C- Ring	Steel with nickel plating	Steel with nickel plating
Boot	PVC	PVC
<b>Optical Characteristics</b>		
Insertion Loss	Insertion Loss $\leq 0.3\text{db}$ (for S.M.) Insertion Loss $\leq 0.3\text{db}$ (for M.M.)	Insertion Loss $\leq 0.3\text{db}$ (for S.M.) Insertion Loss $\leq 0.3\text{db}$ (for M.M.)
Return Loss	Return Loss $\geq 45\text{dB}$	Return Loss $\geq 45\text{dB}$
Temperature Cycling	$-40^{\circ}\text{C}$ to $80^{\circ}\text{C}$ 10 cycles	$-40^{\circ}\text{C}$ to $80^{\circ}\text{C}$ 10 cycles
Tensile Strength	0 to 10kgw 1 minutes	0 to 10kgw 1 minutes
Connection Durability	Over 1000 times	Over 1000 times

### Fiber Optical ST to ST Patch Cords



Part No.	Connector	Length	Description
FOJTT-MG3O00001	ST-ST	1.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MG3O00010	ST-ST	10.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MG3O00100	ST-ST	100.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MG3O01000	ST-ST	1000.0 m	Simplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MH3O00001	ST-ST	1.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MH3O00010	ST-ST	10.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MH3O00100	ST-ST	100.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable
FOJTT-MH3O01000	ST-ST	1000.0 m	Duplex patch cord M.M. 62.5/125 $\mu\text{m}$ for $\varnothing 3.0\text{mm}$ cable

# HDMI



The High-Definition Multimedia Interface is provided for transmitting digital television audiovisual signals from DVD players, set-top boxes and other audiovisual sources to television sets, projectors and other video displays. HDMI is able to carry high quality Multi-channel audio data and standard and High-Definition video formats, HDMI can also transfer control and status information in both directions.

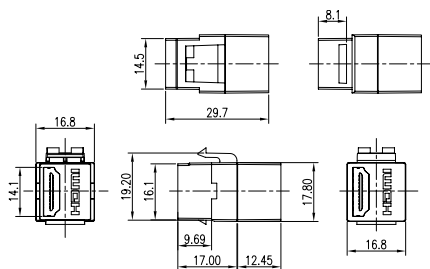
## Features

- High performance & superior durability.
- Support all HDTV formats including 1080p, 1080i, 720p, and 480p.
- Support for 8-Channel uncompressed digital audio at 192khz sample rate with 24 bit/sample as well as any compressed stream such as DTS or Dolby Digital.

## Technical Data

	HDMI Cable	HDMI Coupler
<b>Mechanical Characteristics</b>		
Housing	High impact flame retardant plastic	High impact flame retardant plastic
OD	5.5mm black	
Shell	Gold-plated	
Color	Black	Black
<b>Electrical Characteristics</b>		
Open.Short	100% test line-process	100% test line-process
Hi-Pot	300V AC/0.1sec.	300V AC/0.1sec.
Insulation Resistance	20MΩ (Min) 200V DC	20MΩ (Min) 200V DC
Conductive Resistance	3Ω (Max)	3Ω (Max)

### HDMI TYPE A-A Jack-To-Jack Coupler

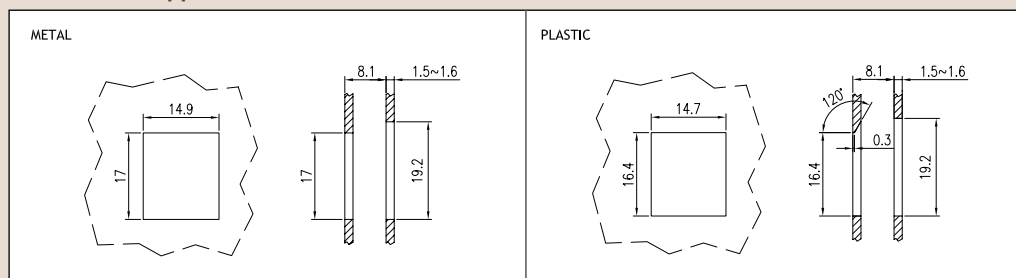


HD01-WH

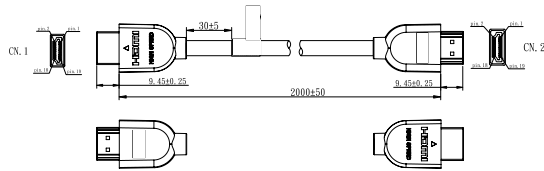
HDMI type A-A Jack-To-Jack 180° coupler, nickel-plated

#### Tip

#### Flush-Mount Application

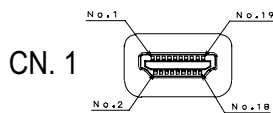


## HDMI Cable

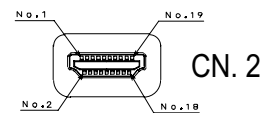


Part No.	Length	Description
HDC1010-BK	1m	HDMI type A-A cable, gold -plated
HDC1015-BK	1.5m	HDMI type A-A cable, gold -plated
HDC1020-BK	2m	HDMI type A-A cable, gold -plated
HDC1025-BK	2.5m	HDMI type A-A cable, gold -plated
HDC1030-BK	3m	HDMI type A-A cable, gold -plated
HDC1035-BK	3.5m	HDMI type A-A cable, gold -plated
HDC1040-BK	4m	HDMI type A-A cable, gold -plated
HDC1045-BK	4.5m	HDMI type A-A cable, gold -plated
HDC1050-BK	5m	HDMI type A-A cable, gold -plated
HDC2010-BK	1m	HDMI type A-A cable with amplifier, gold -plated
HDC2015-BK	1.5m	HDMI type A-A cable with amplifier, gold -plated
HDC2020-BK	2m	HDMI type A-A cable with amplifier, gold -plated
HDC2025-BK	2.5m	HDMI type A-A cable with amplifier, gold -plated
HDC2030-BK	3m	HDMI type A-A cable with amplifier, gold -plated
HDC2035-BK	3.5m	HDMI type A-A cable with amplifier, gold -plated
HDC2040-BK	4m	HDMI type A-A cable with amplifier, gold -plated
HDC2045-BK	4.5m	HDMI type A-A cable with amplifier, gold -plated
HDC2050-BK	5m	HDMI type A-A cable with amplifier, gold -plated

### Wire pin assignment and wire description.



CN. 1	PAIR#	CN. 2	COLOUR
1	PAIR1	1	ORANGE
3		3	WHITE
2	PAIR2	2	DRAIN
4		4	GREEN
6	PAIR3	6	WHITE
5		5	DRAIN
7	PAIR4	7	BROWN
9		9	WHITE
8	SIGNAL	8	DRAIN
10		10	BLUE
12	SIGNAL	12	WHITE
11		11	DRAIN
13	SIGNAL	13	RED
14		14	BLUE
15	SIGNAL	15	PURPLE
16		16	GREEN
17	SIGNAL	17	ORANGE
18		18	YELLOW
19	SIGNAL	19	WHITE
SHELL		SHELL	BRAID



# Telebox Quality Process

