# Structured Cabling Solutions

**CANOVATE**®

## About Us

Canovate provides IT and Telecom infrastructure technology offerings that span from complete data centers, data center green cooling technologies to fiber optic connectivity based FTTX and fiber optic transmission and access solutions. Canovate designs and manufactures a wide range of innovative standard and customized products, technologies and solutions:

- Fiber optic connectivity based FTTX
- Fiber optic transmission and access
- Complete data centers
- Data center cooling, PDU, remote monitoring and access

- Outdoor racks and cabinets
- Wall-mount 19" enclosures
- Industrial 19" racks, cabinets and enclosures
- IT 19" network and server racks



## Milestones

| | |
|---|---|
| 1965 | Established as ''PTT-ARLA'' state owned Research Laboratory |
| 1982 | Became a private company, TELETAŞ |
| 1984 | Alcatel Telecom Exchange System 12 production |
| 1991 | ISO 9001 Certification |
| 1993 | Merger with ALCATEL |
| 1996 | Integration of ERP System |
| 1999 | Over 10 Million Subscriber line System 12 Exchange Systems developed, manufactured and delivered worldwide |
| 2003 | Relocation to brand new purpose built state-of-the-art manufacturing facilities in İstanbul |
| 2004 | Establishment of structural cabling and fiber optic business unit |
| 2005 | Multiple PCT Patent filings, 3rd Party Compliance Statement for Date and Telecom Products; development of fully integrated high density Optical Distribution Frame (ODF) Systems. |
| 2006 | Launch of Basic Outdoor Cabinet, Seismic 19" Rack Systems, Announcement of RoHS conformity, Gost-R Certication, IP41 up to IP65 approvals for cabinets and enclosures, UL approvals and renewals |
| 2009 | Launch of Data Center business unit including patented green cooling technology, Establishment of Canovate Russia and Establishment of Canovate Greece |
| 2010 | Launch of advanced high-density, industry first, Troy Fiber Optic ODF System, Establishment of Canovate Netherlands |
| 2011 | Establishment of fiber optic cable termination manufacturing lines and devoloment IP PDU, Establishment of Canovate Iran |
| 2012 | Establishment of Canovate Middle East Office in UAE |
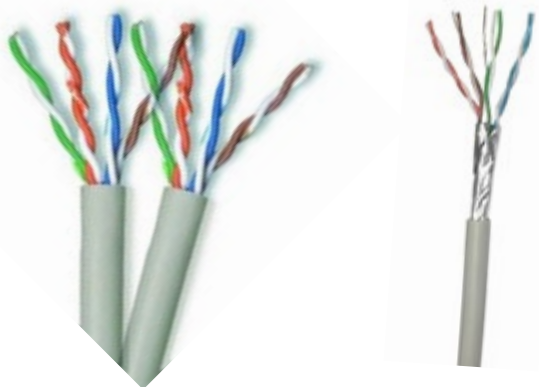
# UTP LAN CABLES

## Category 5e U/UTP 100MHz  LAN Cables

Canovate category 5e cable series consists of 100 Ohm impedance, 4-pair U/UTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide a substantial margin above all Category 5e requirements of TIA/EIA-568-C.2 and IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, Ø 0,5 mm 24AWG |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |

| Part No | Type |
|---|---|
| KU0-L-KK-C5e-0-1 | Cat.5e UTP Cable LSZH FR (Grey), 305m Reel |
| KU0-P-KK-C5e-0-1 | Cat.5e UTP Cable PVC (Grey), 305m Reel |

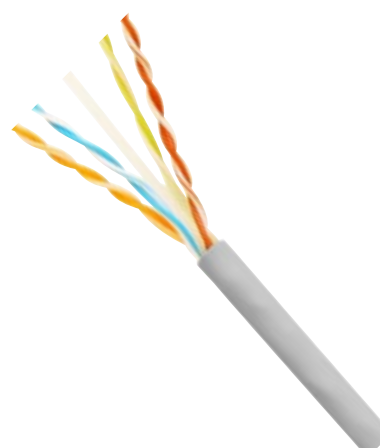## Category 6 U/UTP 250MHz LAN Cables

Canovate category 6 cable series consists of 100 Ohm impedance, 4-pair U/UTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide a substantial margin above all Category 6 requirements of  TIA/EIA-568-C.2 and IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, Ø 0,57 mm 23AWG |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |

| Part No | Type |
|---|---|
| KU0-L-KK-C6-0-1 | Cat.6 UTP Cable LSZH FR (Grey), 305m Reel |
| KU0-P-KK-C6-0-1 | Cat.6 UTP Cable PVC (Grey), 305m Reel |

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## Category 6A MR/UTP 500MHz LAN Cables

Canovate category 6A cable series consists of 100 Ohm impedance, 4-pair MR/UTP (Metal Reflector) cables for horizontal installations in local area networks (LANs). All cables fully conform to all Category 6A requirements of TIA/EIA-568-C.2 and Category 6A IEC 61156-5( Second Version)
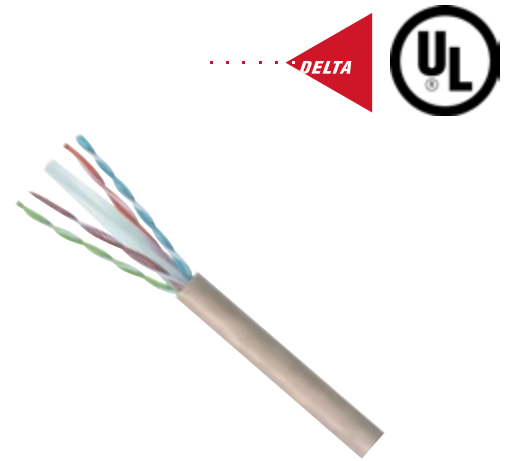
### Construction

| Connector | Bare annealed copper, Ø 0,57 mm 23AWG |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |

| Part No | Type |
|---|---|
| KU0-L-KK-C6a-0-1 | Cat.6A UTP Cable LSZH FR (Grey), 305m Reel |
| KU0-P-KK-C6a-0-1 | Cat.6A UTP Cable PVC (Grey), 305m Reel |

# FTP LAN CABLES

## Category 5e F/UTP 100MHz LAN Cables

Canovate category 5e cable series consists of 100 Ohm impedance, 4-pair F/UTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide headroom above all Category 5e requirements of TIA/EIA-568-C.2 and IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, Ø 0,5 mm 24AWG |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |
| Overall shield | Laminated aluminum foil %100 coverage |

| Part No | Type |
|---|---|
| KFU-L-KK-C5e-0-1 | Cat.5e F/UTP Cable LSZH FR (Grey), 305m Reel |
| KFU-P-KK-C5e-0-1 | Cat.5e F/UTP Cable PVC (Grey), 305m Reel |

## Category 6 U/FTP 250MHz LAN Cables

Canovate category 6 cable series consists of 100 Ohm impedance, 4-pair U/FTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide headroom above all Category 6 requirements of TIA/EIA-568-C.2 and IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, Ø 0,57 mm 23AWG |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |
| Overall shield | Laminated aluminum foil %100 coverage |

| Part No | Type |
|---|---|
| KUF-L-KK-C6-0-1 | Cat.6 F/UTP Cable LSZH FR (Grey), 305m Reel |
| KUF-P-KK-C6-0-1 | Cat.6 F/UTP Cable PVC (Grey), 305m Reel |

## Category 6A U/FTP 500MHz LAN Cables

Canovate category 6A cable series consists of 100 Ohm impedance, 4-pair U/FTP cables for horizontal installations in local area networks (LANs). All cables fully conform to all Category 6A requirements of TIA/EIA-568-C.2 and Category 6A IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, Ø 0,57 mm 23AWG |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |
| Overall shield | Laminated aluminum foil %100 coverage |

| Part No | Type |
|---|---|
| KUF-L-KK-C6a-0-1 | Cat.6A U/FTP Cable LSZH FR (Grey), 305m Reel |
| KUF-P-KK-C6a-0-1 | Cat.6A U/FTP Cable PVC (Grey), 305m Reel |

## Category 7 S/FTP 600MHz LAN Cables

Canovate category 7 cable series consists of 100 Ohm impedance, 4-pair S/FTP cables for horizontal installations in local area networks (LANs). All cables fully conform to all Category 7 requirements of TIA/EIA-568-C.2 and Category 7 IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, 23AWG, 600 MHz |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |
| Overall shield | Polyester-aluminum foil %100 coverage |

| Part No | Type |
|---|---|
| KSF-L-KK-C7-0-1 | Cat.7 S/FTP Cable LSZH FR (Grey), 500m Reel |
| KSF-P-KK-C7-0-1 | Cat.7 S/FTP Cable PVC (Grey), 500m Reel |

## Category 7A S/FTP 1000MHz LAN Cables

Canovate category 7 cable series consists of 100 Ohm impedance, 4-pair S/FTP cables for horizontal installations in local area networks (LANs). All cables fully conform to all Category 7 requirements of TIA/EIA-568-C.2 and Category 7 IEC 61156-5( Second Version)

### Construction

| Connector | Bare annealed copper, 22AWG, 1000 MHz |
|---|---|
| Insulation | Polyolefin |
| Stranding | 4 twisted pairs |
| Pair shielding | LSZH FR (Flame Retardant) or PVC |
| Overall shield | Polyester-aluminum foil %100 coverage |

| Part No | Type |
|---|---|
| KSF-L-KK-C7a-0-1 | Cat.7A S/FTP Cable, LSOH, (Grey), 500m Reel |
| KSF-P-KK-C7a-0-1 | Cat.7A S/FTP Cable, PVC, (Grey), 500m Reel |

# UTP PATCH CORDS

## Category 5e UTP Patch Cords

- 2 x Cat.5e RJ45 plug, LSZH or PVC
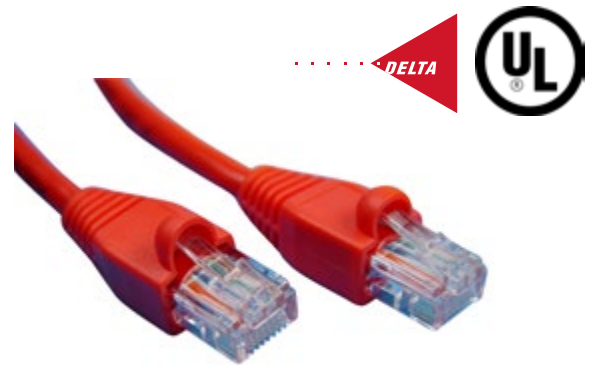- Unshielded
- TIA/EIA 568B coded

| Part No | Type |
|---------|------|
| KU0-L-PC0x-C5e-R45-y | x meter Cat.5e UTP LSZH Patch Cord, y |
| KU0-P-PC0x-C5e-R45-y | x meter Cat.5e UTP PVC Patch Cord, y |

X : Avaliable lenghts in meter 1,2,3,5 and 10
Y : Avaliable colors
(0: White, 1:Grey, 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)

## Category 6 UTP Patch Cords

- 2 x Cat.6 RJ45 plug, LSZH or PVC
- Unshielded
- TIA/EIA 568B coded

| Part No | Type |
|---------|------|
| KU0-L-PC0x-C6-R45-y | x meter Cat.6 UTP LSZH Patch Cord, y |
| KU0-P-PC0x-C6-R45-y | x meter Cat.6 UTP PVC Patch Cord y |

X : Avaliable lenghts in meter 1,2,3,5 and 10
Y : Avaliable colors
(0: White, 1:Grey, 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)

## Category 6A UTP Patch Cords

- 2 x Cat.6A RJ45 plug, LSZH or PVC
- 10 Gbit 500MHz
- Unshielded
- TIA/EIA 568B coded

| Part No | Type |
|---------|------|
| KU0-L-PC0x-C6a-R45-y | x meter Cat.6A UTP LSZH Patch Cord, y |
| KU0-P-PC0x-C6a-R45-y | x meter Cat.6A UTP PVC Patch Cord, y |

X : Avaliable lenghts in meter 1,2,3,5 and 10
Y : Avaliable colors
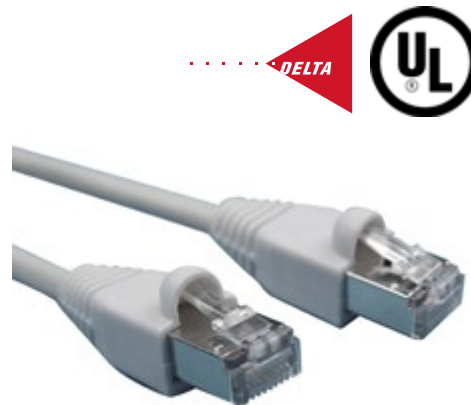(0: White, 1:Grey, 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)

# FTP PATCH CORDS

## Category 5e FTP Patch Cords

- ↰ 2 x Cat.5e RJ45 plug, LSZH or PVC
- ↰ Foil shielded
- ↰ TIA/EIA 568B coded

| Part No | Type |
|---------|------|
| KF0-L-PC0x-C5e-R45-y | x meter Cat.5e FTP LSZH Patch Cord, y |
| KF0-P-PC0x-C5e-R45-y | x meter Cat.5e FTP PVC Patch Cord, y |

X : Avaliable lenghts in meter 1,2,3,5 and 10
Y : Avaliable colors
(0: White, 1:Grey, 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)

## Category 6 FTP Patch Cords

- ↰ 2 x Cat.6 RJ45 plug, LSZH or PVC
- ↰ Foil shielded
- ↰ TIA/EIA 568B coded

| Part No | Type |
|---------|------|
| KF0-L-PC0x-C6-R45-y | x meter Cat.6 FTP LSZH Patch Cord, y |
| KF0-P-PC0x-C6-R45-y | x meter Cat.6 FTP PVC Patch Cord, y |

X : Avaliable lenghts in meter 1,2,3,5 and 10
Y : Avaliable colors
(0: White, 1:Grey, 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)

## Category 6A FTP Patch Cords

- ↰ 2 x Cat.6 RJ45 plug, LSZH or PVC
- ↰ 10 Gbit 500MHz
- ↰ Foil shielded
- ↰ TIA/EIA 568B coded

| Part No | Type |
|---------|------|
| KF0-L-PC0x-C6a-R45-y | x meter Cat.6A FTP LSZH Patch Cord, y |
| KF0-P-PC0x-C6a-R45-y | x meter Cat.6A FTP PVC Patch Cord, y |

X : Avaliable lenghts in meter 1,2,3,5 and 10
Y :Avaliable colors (0: White, 1:Grey, 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)

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# UTP PATCH PANELS

## 24 Port UTP Category 5e Patch Panel 1U

- 24 Port unshielded RJ45 jacks
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- Class D (100MHz) acc. to ISO/IEC 11801 and EN50173
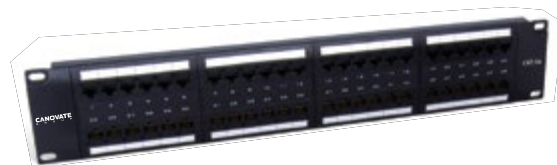- Printed with color code TIA 568A/B, 8 pole LSA terminals
- 19" steel sheet housing

| Part No | Type |
|---|---|
| KU0-0-PP1U24-C5e-R45-2 | 24 Port Cat.5e UTP Patch Panel, 1U ,Black |

## 48 Port UTP Category 5e Patch Panel 2U

- 48 port unshielded RJ45 jacks
- Class D (100MHz) acc. to ISO/IEC 11801 and EN50173
- Printed with color code TIA 568A/B, 8 pole LSA terminals
- 19" steel sheet housing

| Part No | Type |
|---|---|
| KU0-0-PP2U48-C5e-R45-2 | 48 Port Cat.5e UTP Patch Panel, 2U ,Black |

## 24 Port UTP Category 6 Patch Panel 1U

- 24 port unshielded RJ45 jacks
- Class E (250MHz) acc. to ISO/IEC 11801 and EN50173
- Printed with color code TIA 568A/B, 8 pole LSA terminals
- 19" steel sheet housing

| Part No | Type |
|---|---|
| KU0-0-PP1U24-C6-R45-2 | 24 Port Cat.6 UTP Patch Panel, 1U ,Black |

## 48 Port UTP Category 6 Patch Panel 2U

- 48 port unshielded RJ45 jacks
- Class E (250MHz) acc. to ISO/IEC 11801 and EN50173
- Printed with color code TIA 568A/B, 8 pole LSA terminals
- 19" steel sheet housing

| Part No | Type |
|---|---|
| KU0-0-PP2U48-C6-R45-2 | 48 Port Cat.6 UTP Patch Panel, 2U ,Black |

# PREMIUM SERIES UTP PATCH PANEL

**Branded by Canovate/Telegärtner**

## 24 Port UTP Category 6A Patch Panel 1U

- 24 port unshielded RJ45 jacks
- Class EA (500MHz) acc. to ISO/IEC 11801 and EN50173
- Printed with color code TIA 568A/B
- 8 pole LSA terminals
- 19" steel sheet housing
- Real time re-embedded by Telegartner

| Part No | Type |
|---|---|
| KU0-0-PP1U24-C6a-R45-2 | 24 Port Cat.6A UTP Patch Panel, 1U ,Black |

**Made in Germany**

GHM
Aktiengesellschaft

CAT6 A

**REAL TIME**
Re-Embedded

# STP FTP PATCH PANELS

## 24 Port STP (Shielded) Category 5e Patch Panel 1U

- 24 port shielded RJ45 jacks
- Class D (100MHz) acc. to ISO/IEC 11801 and EN50173
- Printed with color code TIA 568A/B
- 8 pole LSA terminals
- 19" fully shielded steel plate housing

| Part No | Type |
|---|---|
| KF0-0-PP1U24-C5e-R45-2 | 24 Port Cat.5e STP Patch Panel, 1U ,Black |

## 24 Port STP (Shielded) Category 6 Patch Panel 1U

- 24 port shielded RJ45 jacks
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- KRONE/110 universal IDC connector provides vertical termination for 23-26 AWG solid wires
- Dual T568A/T568B wiring
- Polycarbonate, 94V0 rated
- UL, cUL and DELTA EC listed

| Part No | Type |
|---|---|
| KF0-0-PP1U24-C6-R45-2 | 24 Port Cat.6 STP Patch Panel, 1U ,Black |
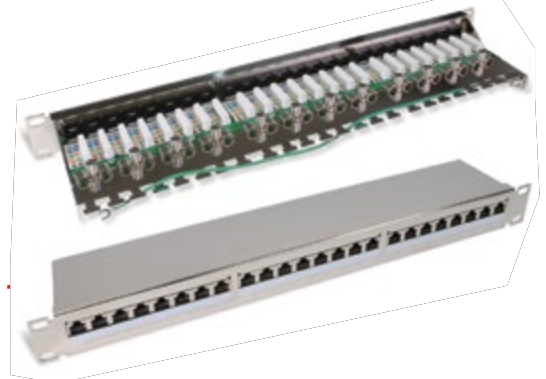
## 12 Port STP (Shielded) Category 6 Patch Panel

- 12 ports patch panel, Cat.6 STP type.
- According to the standard of ISO/IEC 11801:2000 CLASS E and ANSI/TIA/EIA/568B.2-1 Cat.6 standard. T568A punching sequence and T568B punching sequence are both compatible. Fitting for horizontal distribution in the equipments room and equipments connecting.
- FCC port for Cat.6 STP patch cord and IDC for horizontal distribution cables.
- Compatible for STP Cat.6 or Cat.5e Cat.5 general cable distribution systems.
- 110 IDC type or LSA type for your choice.

| Part No | Type |
|---|---|
| KF0-0-PP1U12-C6-R45-2 | 12 Port Cat.6 FTP Patch Panel, Black |

# PREMIUM SERIES STP PATCH PANEL

**Branded by Canovate/Telegärtner**

## 24 Port STP Category 6A Patch Panel

- 24 port shielded RJ45 jacks
- Class $E_A$ (500MHz) acc. to ISO/IEC 11801 and EN50173
- Printed with color code TIA 568A/B
- 8 pole LSA terminals
- 19" fully shielded steel plate housing
- Real time re-embedded by Telegartner

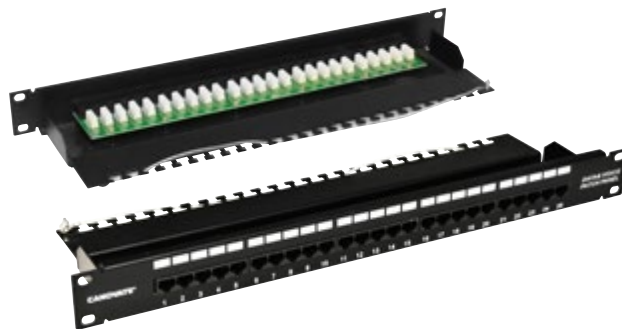| Part No | Type |
|---|---|
| KF0-0-PP1U24-C6a-R45-2 | 24 Port Cat.6A STP Patch Panel, 1U ,Black |

Made in Germany

CAT6A
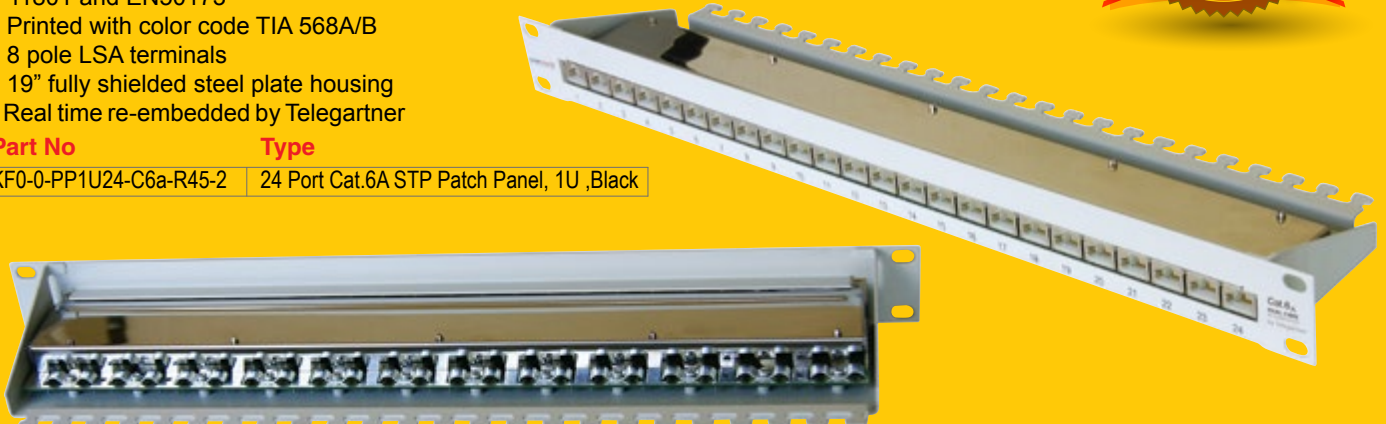
**REAL TIME**
Re-Embedded

# TELEPHONE PATCH PANELS

## 25 Port Cat 3 Telephone Patch Panel 1U

- 1U size 25 port Cat.3 ISDN patch panel, can be used in standard 19" cabinet.
- The cable manager is combined in this patch panel. All kinds of cables with different dimensions can be fixed on the patch panel.
- FCC port for RJ45 Cat.3 patch cord and IDC for horizontal distribution cables.

| Part No | Type |
|---------|------|
| K00-0-PP1U25-C3-R45-2 | 25 Port Cat.3 Telephone Patch Panel, 1U ,Black |

## 50 Port Cat 3 Telephone Patch Panel 1U

- 1U size 50 port Cat.3 ISDN patch panel, can be used in standard 19" cabinet.
- The cable manager is combined in this patch panel. All kinds of cables with different dimensions can be fixed on the patch panel.
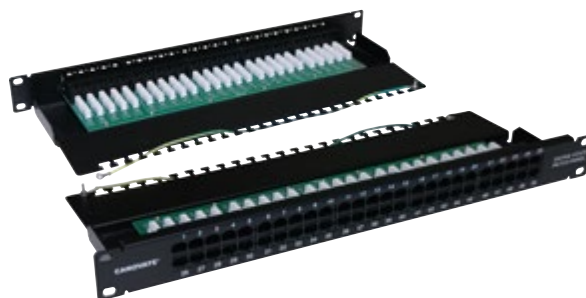- FCC port for RJ45 Cat.3 patch cord and IDC for horizontal distribution cables.

| Part No | Type |
|---------|------|
| K00-0-PP1U50-C3-R45-2 | 50 Port Cat.3 Telephone Patch Panel, 1U ,Black |

# KEYSTONE BLANK PATCH PANELS

## 24 Port Blank Patch Panel 1U

- 1U size 24 port blank patch panel, can be used in standard 19" cabinet.
- Compatible with all ICC shielded Connectors.
- Provides 24 open ports in 1RMS for high density applications.
- Includes rear cable management to facilitate proper bend radius of cable

| Part No | Type |
|---------|------|
| K00-0-PPBL24-0-R45-2 | 24 Port Blank Patch Panel, 1U ,Black |
| K00-0-PPBL48-0-R45-2 | 48 Port Blank Patch Panel, 1U ,Black |

**24 Port**

**48 Port**

## 24 Port Eco Blank Patch Panel 1U

- 1U size 24 port blank patch panel, can be used in standard 19" cabinet.
- Compatible with all ICC shielded Connectors.
- Includes rear cable management to facilitate proper bend radius of cable

| Part No | Type |
|---------|------|
| K00-0-PPBL24-0-R45-3 | 24 Port Blank Patch Panel, 1U ,Black |

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# KEYSTONE ANGLED BLANK PATCH PANEL

The angled patch panel is designed to support high-density applications without the need for horizontal cable management.
- Combines modular design with high density
- Capable of supporting multiple media types using a variety of MAX modules
- Available in 1U 24 port version
- Includes panel designation area for identifying multiple patch panels
- Bold port ID's provide ready identification
- Lightweight, high strength brushed aluminum with black anodized protective finish



| Part No | Type |
|---|---|
| KF0-0-PP1U24-SPC-R45-2 | 24 Port Angled Blank Patch Panel, 1U ,Black |

## High Density Angled Blank Panel
## For Pre-Termination Solution

In today's workplace, where network downtime is costly and detrimental to any business or organization, bringing a new data center online must be completed as quickly as possible. Quick and easy installations that guarantee reliable performance are more critical than ever.

Canovate Pre-Terminated Copper Cabling System offers the best standarts in a custom terminated cable assembly system that's ready to plug and go. Its innovative modular design combines high performance and installer friendly features with the quick deployment and reliability of a factory terminated and tested cabling system. Lengths are customized to your specific needs and every termination is housed in our robust, protective cassettes to make installation in a snap-in way.  Each cassette snaps easily into the modular panel panel,  which fits into a standard 19" rack
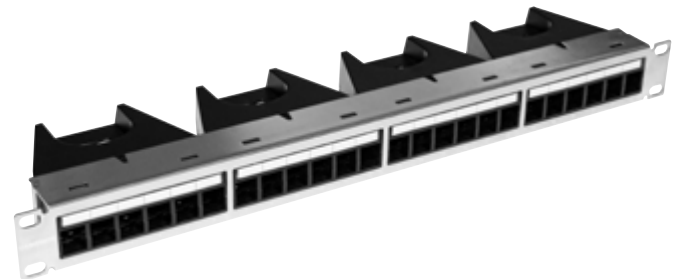


| Part No | Type |
|---|---|
| KU0-0-PPAT-0RJ45-2 | UTP Patch Panel for Data Center,24 Port |



**Snap-in Module**

**CANOVATE**® GROUP

## CATEGORY 6A SHIELDED KEYSTONE JACK (Patch Panel Use)

Category 6a shielded keystone jack supports the 10/100/1G BASE-T Ethernet, as well as advanced new 10G BASE-T Ethernet. The shielded jack with industrial leading transmission performance and provide exceptional levels of headroom. Zinc-alloy metal shell balances/ eliminates the Alien crosstalk while the data is at high speed transmission. Narrow width design fits 24 ports in one unit panel for most efficient use of 1U panel.
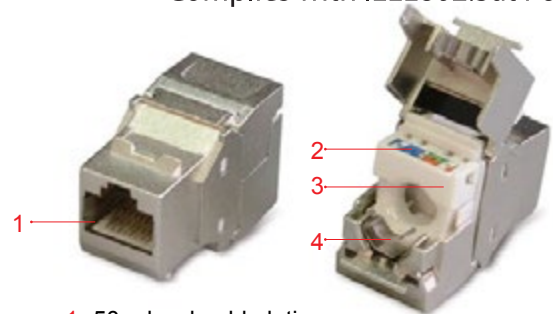
### Highlights

- Zinc-alloy metal shell
- Available in both tool-free version and 110 punch down version
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- Dual T568A & T568B wiring
- Complies with FCC Part 68
- Polycarbonate 94V0 rated
- Delta EC listed and complies with IEEE802.3at PoE+

**Complies with IEEE802.3at PoE+**

1- 50 µ hard gold plating
2- Dual T568A/B wiring label
3- Cable Guide
4- Grounding Clip



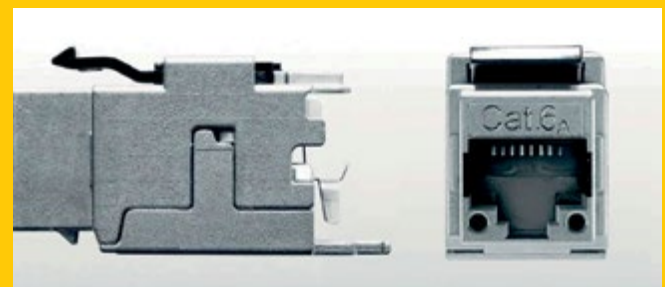| Part No | Type |
|---|---|
| KU0-JM-S-C6A-180-1 | RJ-45 8-Conductor Cat 6a, Tool-Free, Shielded, 180 degree, H.D. version |
| KU0-JM-S-C6A-180-2 | RJ-45 8-Conductor Cat 6a, 110 IDC, Shielded, 180 degree, H.D. version |

KU0-JM-S-C6A-180-1

KU0-JM-S-C6A-180-2

## PREMIUM SERIES CAT6a KEYSTONE TOOL-LESS JACK

**Branded by Canovate/Telegärtner**

### AMJ Module K Cat.6$_A$

- Re-embedded Cat.6A (500 MHz) tested
- 10 Gigabit-Ethernet compliant (IEEE 802.3an)
- Class EA: 90 m 2-Connector Permanent Link acc. to ISO/IEC 11801 AMD2 (2010-04)
- 6 dB typ. Permanent Link Class EA under real installation conditions
- Universally, worldwide available installation dimension for mounting cut-outs 19,3 x 14,7 mm
- Fully-automated production of real Cat.6A RJ45 jack/core to guarantee a uniformly high quality standard (transmission characteristics) mating face: EN 60603-7-51
- Suitable for PoE+ (High Power over Ethernet) acc. to IEEE 802.3at
- Manufacture of all piece parts and all assembly steps monitored by the independent test laboratory 3P

**Made in Germany**

Cat.6$_A$ | 10 GBE | 500 MHz | fully shielded | PoE+

| Part No | Type |
|---|---|
| KU0-JM-S-C6A-180-2 | Cat.6A Telegartner FTP Keystone Jack, Metallic |

## CATEGORY 6A SHIELDED KEYSTONE JACK (Wall-outlet Use)

**EC** VERIFIED · · · ·  **C6A**  **10G**

Complies with IEEE802.3at PoE+

### Highlights

- Zinc-alloy metal shell
- Tool-free, no additional tool required for termination
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- T568A wiring
- Complies with FCC Part 68
- Polycarbonate 94V0 rated

| Part No | Type |
|---|---|
| KU0-JM-S-C6A-90-1 | RJ-45 8-Conductor Cat 6a, Tool-Free, Shielded, 90 degree, H.D. version |

## CATEGORY 6A UNSHIELDED KEYSTONE JACK (Patch Panel Use)

Category 6a unshielded keystone jack supports the 10/100/1G BASE-T Ethernet, as well as advanced new 10G BASE-T Ethernet. By Special designed housing and installation the jacks on a staggered 24-port 1U patch panel, it minimizes additional AXT from neighboring connectors and provide transmission performance beyond 500MHz and Alien crosstalk requirements.

### Highlights

- Tool-free, no addditional tool required for termination
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- Dual T568A & T568B wiring
- Complies with FCC Part 68
- Polycarbonate 94V0 rated
- Complies with IEEE802.3at PoE+

| Part No | Type |
|---|---|
| KU0-JM-U-C6A-180-1 | RJ-45 8-Conductor Cat 6a, Tool-Free, Unshielded, 180 degree, H.D. version |

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## CATEGORY 6 SHIELDED KEYSTONE JACK (Patch Panel Use)

Category 6 shielded keystone jack designed for superior performance and easy assembly, meets and exceeds ANSI/TIA 568-C2 and ISO/IEC 11801 2nd eddition Category 6 standards, supoorting Gigabit Ethernet application and beyond. Narrow width design fits 24 ports in one unit panel for most efficient use of 1U panel

Complies with IEEE802.3at PoE+

### Highlights

- One-piece shielded metal cover for quick installation
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- Adjustable starain relief provides most flexibillity of isntallation
- Dual T568A & T568B wiring
- Complies with FCC Part 68
- Polycarbonate 94V0 rated
- UL, cUL, Delta EC listed and complies with IEEE802.3at PoE+

| Part No | Type |
|---|---|
| KU0-JM-S-C6-180-1 | RJ-45 8-Conductor Cat 6, 110/KRONE IDC, Shielded, 180 degree, H.D. version |

## CATEGORY 6 SHIELDED KEYSTONE JACK (Wall-outlet Use)

### Highlights

- One-piece shielded metal cover for quick installation
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- Polycarbonate 94V0
- 110/KRONE Universal IDC
- Dual T568A & T568B wiring
- Complies with FCC Part 68
- UL, cUL and DELTA EC listed

| Part No | Type |
|---|---|
| KU0-JM-S-C6-90-1 | RJ-45 8-Conductor Cat 6, 110/KREONE IDC, Shielded, 90 degree, H.D. version |

## CATEGORY 6 SHIELDED TOOL-FREE KEYSTONE JACK (Wall-outlet Use)

Category 6 shielded keystone jack designed for superior performance and easy assembly, meets and exceeds ANSI/TIA 568-C2 and ISO/IEC 11801 2nd eddition Category 6 standards, supoorting Gigabit Ethernet application and beyond.

### Highlights

- Zinc-alloy metal shell
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- Short depth design, fit easily into back box of desk, floor and wall outlets
- Dual T568A & T568B wiring
- Complies with FCC Part 68
- Polycarbonate 94V0 rated
- Delta EC&EN41003 listed

| Part No | Type |
|---|---|
| KU0-JM-S-C6-90-2 | RJ-45 8-Conductor Cat 6, 110/KREONE IDC, Shielded, 90 degree, Short depth design |

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G R O U P

## CATEGORY 6 UNSHIELDED KEYSTONE JACK
## (Patch Panel Use)

Category 6 unshielded keystone jack designed for superior performance and easy assembly, meets and exceeds ANSI/TIA 568-C2 and ISO/IEC 11801 2nd eddition Category 6 standards, supporting Gigabit Ethernet application and beyond. Narrow width design fits 24 ports in one unit panel for most efficient use of 1U panel

### Highlights

- Contacts are phosphor bronze plated with 50 micro inches hard gold
- 110/ KRONE Universal IDC connector porvides vertical termination for 23-26 AWG solid wires
- Dual T568A & T568B wiring
- Supplied with plastic strain relief cap for IDC connectors
- Large selection of colors, provides many options of color coded designation port
- Complies with FCC Part 68
- Polycarbonate, 94V0 rated
- ETL, UL, cUL and DELTA EC listed

Complies with IEEE802.3at PoE+



| Part No | Type |
|---|---|
| KU0-JM-U-C6-180-1 | RJ-45 8-Conductor Cat 6, KRONE/110 IDC, Unshielded, 180 degree, H.D. version |

## CATEGORY 6 UNSHIELDED KEYSTONE JACK TOOL-FREE
## (Wall-outlet Use)

### Highlights

- Tool-free, no additional tool required for termination
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- T568B wiring
- Large selection of colors, provides many options of color coded designation port
- Complies with FCC Part 68
- Polycarbonate, 94V0 rated
- UL, cUL and DELTA EC listed.



| Part No | Description |
|---|---|
| KU0-JM-U-C6-90-1 | RJ-45, 8-Conductor Cat 6, 110/ KRONE IDC, Unshielded, 90 degree, H.D. version |

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G R O U P

## CATEGORY 5e SHIELDED KEYSTONE JACK (Patch Panel Use)

Category 5e keystone metal-shielded keystone jack is designed for superior performance and easy assembly. Meets ANSI/TIA 568-C.2 and ISO/IEC 11801 2nd edition. Category 5e standard.

### Highlights

- Contacts are phosphor bronze plated with 50 micro inches hard gold
- 110/ KRONE Universal IDC connector porvides vertical termination for 24-26 AWG solid wires
- One-piece shilded metal cover for quick installation
- Dual T568A & T568B wiring
- Complies with FCC Part 68
- Polycarbonate, 94V0 rated
- UL, cUL and DELTA EC listed



| Part No | Description |
|---|---|
| KU0-JM-S-C5E-180-1 | RJ-45, 8-Conductor Cat 5e, 110/ KRONE IDC, Shielded,180 degree, H.D. version |

## CATEGORY 5e SHIELDED KEYSTONE JACK (Wall-outlet Use)

### Highlights

- One-piece shilded metal cover for quick installation
- Tool-free, no additional tool required for termination
- Contacts are phosphor bronze plated with 50 micro inches hard gold
- 110/ KRONE Universal IDC connector porvides vertical termination for 24-26 AWG solid wires
- T568A wiring
- Complies with FCC Part 68
- Polycarbonate, 94V0 rated
- UL, cUL and DELTA EC listed



| Part No | Description |
|---|---|
| KU0-JM-S-C5E-90-1 | RJ-45, 8-Conductor Cat 5e, 110/ KRONE IDC, Tool-Free, Shielded, 90 degree, H.D. version |

## CATEGORY 5e UNSHIELDED KEYSTONE JACK (Patch Panel Use)

### Highlights

- Contacts are phosphor bronze plated with 50 micro inches hard gold
- 110/ KRONE Universal IDC connector porvides vertical termination for 23-26 AWG solid wires
- Dual T568A & T568B wiring compatible with Category 5 enhanced requirement
- Supplied with cap for IDC connectors
- Large selection of colors, provides many options of color coded designation port
- Complies with FCC Part 68
- Polycarbonate, 94V0 rated

| Part No | Description |
|---|---|
| KU0-JM-U-C5E-180-1 | RJ-45, 8-Conductor Cat 5e, KRONE/110 IDC, Unshielded, 180 degree, H.D. version |

## CATEGORY 5e UNSHIELDED KEYSTONE JACK (Wall-outlet Use)

Category 5e keystone jack is designed for superior performance that meets or exceeds industrial Standard ANSI/TIA 568-C.2 and ISO/IEC 11801 2nd edition requirements. The keystone jack will balance signal transmission of insertion loss and crosstalk from 1 to 100Mhz.

### Highlights

- Contacts are phosphor bronze plated with 50 micro inches hard gold
- 110/ KRONE Universal IDC connector porvides vertical termination for 23-26 AWG solid wires
- Dual T568A & T568B wiring
- Supplied with cap for IDC connectors
- Large selection of colors, provides many options of color coded designation port
- Complies with FCC Part 68
- Polycarbonate, 94V0 rated
- ETL, UL, cUL and DELTA EC listed

| Part No | Description |
|---|---|
| KU0-JM-U-C5E-90-1 | RJ-45, 8-Conductor Cat 6, 110/ KRONE IDC, Unshielded, 90 degree, H.D. version |

# Face plates&Wall outlets

## European Type Wall Plate & Module

The European type wall plate is made of 94V0 with outside dimension 80x80 mm. The clip on assembly design of wall plate frame and modules is easy for installation and maintenance. 1-,2&3- port wall plate moudles are with angled opening, this advantage the cable bending after Keystone Jack installation.

| Part No | Description |
|---|---|
| KU0-WP-BL-1 | European wall plate, single gang |

| Part No | Description |
|---|---|
| KU0-WP-SP-1 | 50x50mm single port module |
| KU0-WP-DP-1 | 50x50mm dual port module |
| KU0-WP-TP-1 | 50x50mm triple port module, H.D. version |

## Category 5e European Dual port Shielded Wall Plate

| Part No | Description |
|---|---|
| KU0-WP-C5E-FM-1 | European type dual port Cat. 5e shielded wall plate flush mount |
| KU0-WP-C5E-SM-1 | European type dual port Cat. 5e shielded wall plate surface mount |

## European Type Flush Mount Wall Plate

European type wall plates are comply with standard size(80x80mm) for use with series II angled snap-in modules for different configuration of jack and connectors. can be use with shielded keystone jack for maximum radius nouise protection. Write-on designation label with clear holder for different system or station identification.
Snap-in modules can be easily snapped out of the front of wall plate, so that changes can be made without removing the wall plate after installation.

| Part No | Description |
|---|---|
| KU0-WP-BLM-1 | European wall plate with metal gasket. |

## European Type Square Wall Box

The wall box is for surface mounting on wall, cabinet or other flat surface. Wall box provides breakouts on four sides and bottom for cable entry.

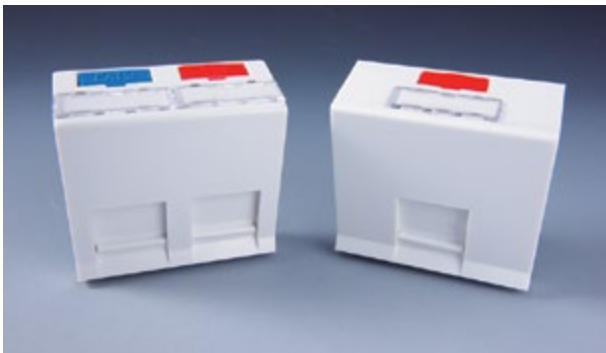| Part No | Description |
|---|---|
| KU0-WP-SWB-1 | 80x80 mm European type, Height 35 mm |

## French Type Wall Plate&Module

The flush mount wall plate is made of UL 94V0 with 45x45 mm inside opening. Modules are in size 45x45 mm or 22.5x45mm to provide single port or dual port loading ability for all Canovate Keystone Jack.



| Part No | Description |
| --- | --- |
| KU0-WP-FBL-1 | French wall plate, Single gang |



| Part No | Description |
| --- | --- |
| KU0-WP-FASM-2 | 22.5x45 mm Angled single port module |
| KU0-WP-FFSM-2 | 22.5x45 mm Flat single port module |
| KU0-WP-FBM-2 | 22.5x45 mm Flat blank module |



| Part No | Description |
| --- | --- |
| KU0-WP-FASM-1 | 45x45 mm Angled single port module |
| KU0-WP-FADM-1 | 45x45 mm Angled dual port module |



| Part No | Description |
| --- | --- |
| KU0-WP-FSM-1 | 45x45 mm Flat single port module |
| KU0-WP-FDM-1 | 45x45 mm Flat dual port module |

## Keystone Jack Surface Mount Box

The keystone jack wall mount boxes are perfect for surface mount application. Boxes come with mounting screws and adhesive tape, cable tie for strain relief. Snap on cover for easy closure or access which will accommodate keystone jack. Write-on label with holder for easy designation of different system or station

| Part No | Description |
|---|---|
| KU0-SM-OJ-1 | One jack, 36x58x26mm( LxWxH) |
| KU0-SM-TJ-1 | Two jacks, 62x58x26mm( LxWxH) |

Suitable Jacks 90º keystone jack
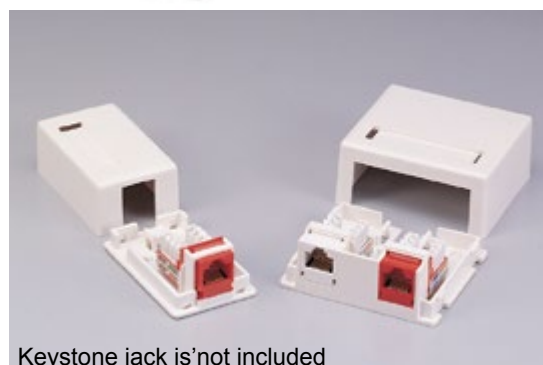




Keystone jack is'not included

## Jack Built-in Surface Mount Box

The surface mount box comes in one two ports. Boxes supplied with mounting screws and adhesive table. Boxes meet ANSI/ TIA 568-C. Category 5e specifications, both shielded and unshielded version are available.

### Highlights

- Contacts are phospor plated with 50 micro inches hard gold.
- 110/KRONE Universal IDC connector provides vertical termination for 24-26 AWG solid wires.
- Dual T568A&T568B wiring compatible with Category 5 enhanced requirement.
- 3 snap-in icons with-voice, data and Cat.5e icons.

| Part No | Description |
|---|---|
| KU0-SM-OJ-U-C5E-1 | One port RJ45, 8-Conductor Cat 5e Unshielded, 40x70x27 mm (LxWxH) |
| KU0-SM-TJ-U-C5E-1 | Two port RJ45, 8-Conductor Cat 5e Unshielded, 65x70x27 mm (LxWxH) |
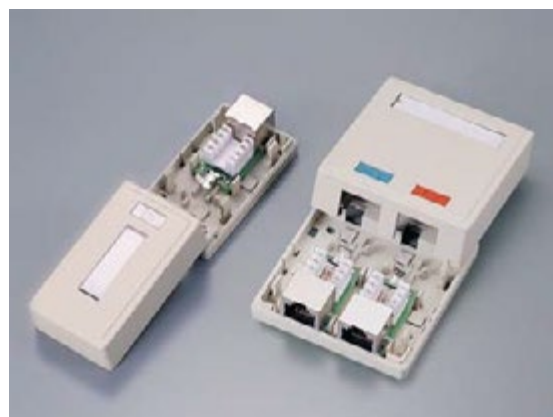
## Direct Buried Type Single Sheathed Fiber Optic Cables

- Loose tube designed.
- Direct buried and/or duct type installation for highly reliable industrial applications.
- Designed for outside applications, also it's designed to protect optical fiber for the unexpected mechanical and environmental conditions.
- Qualification and acceptance testing are performed to assure the optical cable's performance and durability in several environments.

### Highlights

- Fiber counts up to 216
- High tensile strength design
- Fibers per loose tube 1-12
- Gel filled cable core for the water resistance
- Dry core design is also possible for water resistance in customer request
- Suitable for duct application
- Colored fiber for the quick identification
- UV resistance for the outer Sheath
- High fiber count to diameter ratio
- Fully complied with Telcordia GR-20 and TIA/EIA standards
- Colored fiber for the quick identification
- Ripcord for easy strip outer sheath

### Applications

- Telecommunication applications
- Video applications
- Distribution
- Long Haul Communication
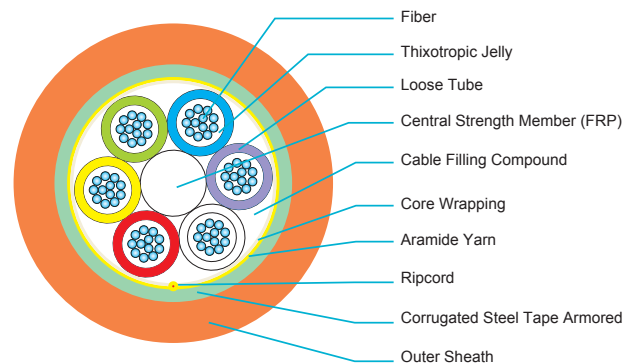- Metropolitan Communication Systems

### Cable Weight & Diameter

| Item | Number of Fiber | Fiber Per Tube | Number of Tube | Number of Dummy Tube | Nom Outer Diameter mm | Nom Cable Weight Kg/km | Reel Lenghth Km* | Part No |
|---|---|---|---|---|---|---|---|---|
| Direct Buried Type Single Sheathed Fiber Optic Cables | 4 | 2 | 2 | 4 | 12,5 | 160 | 4 | CAN-DB-SS-004 |
| | 6 | 2 | 3 | 3 | 12,5 | 160 | 4 | CAN-DB-SS-006 |
| | 12 | 2 | 6 | 0 | 12,5 | 160 | 4 | CAN-DB-SS-012 |
| | 24 | 4 | 6 | 0 | 12,5 | 160 | 4 | CAN-DB-SS-024 |
| | 36 | 6 | 6 | 0 | 12,5 | 160 | 4 | CAN-DB-SS-036 |
| | 48 | 8 | 6 | 0 | 12,5 | 160 | 4 | CAN-DB-SS-048 |
| | 60 | 12 | 5 | 1 | 12,5 | 160 | 4 | CAN-DB-SS-060 |
| | 72 | 12 | 6 | 0 | 12,5 | 160 | 4 | CAN-DB-SS-072 |
| | 96 | 12 | 8 | 0 | 13,5 | 200 | 4 | CAN-DB-SS-096 |
| | 144 | 12 | 12 | 0 | 16,0 | 275 | 4 | CAN-DB-SS-144 |
| | 192 | 12 | 16 | 2 | 20,0 | 420 | 4 | CAN-DB-SS-192 |
| | 216 | 12 | 18 | 0 | 20,0 | 420 | 4 | CAN-DB-SS-216 |

*Note:Central Stength member is FRP (Fiber Reinforced Plastic), but steel wire is also available on customer request.*
*(*) Other delivery length is available*

### Mechanical & Environmental Characteristics

#### Parameters

| | | |
|---|---|---|
| Tensili Strength IEC 60794-1-2-E1 | Max Opr. | 3.000 N 1.000 N |
| Bending Radius(mm) IEC 60794-1-2-E11 | Dynamic Static | 20xD 10xD |
| Crush Resistance IEC 60794-1-2-E3 | | 4.000 N |
| Impact Resistance IEC-60794-1-2-E4 | | 50 N |
| Operation Temperature IEC 60794-1-2-F1 | Installing Operating | -30 +60 (°C) -40 +80 (°C) |
| Water Penetration IEC 60794-1-2 F5 | 24 hour, 1 meter | No leakage |

Fiber
Thixotropic Jelly
Loose Tube
Central Strength Member (FRP)
Cable Filling Compound
Core Wrapping
Aramide Yarn
Ripcord
Corrugated Steel Tape Armored
Outer Sheath

### Identification of Optical Fiber and Loose Tube

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiber | Yelow | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |
| Tubes | Yelow | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |

## Duct Type Single Sheathed Fiber Optic Cables

- Loose tube designed.
- Duct type installation for highly reliable industrial applications.
- Applicable for outdoor and indoor applications, also it's designed to protect optical fiber for the unexpectedmechanical and environmental conditions.
- Qualification and acceptance testing are performed to assure the optical cable's performance and durability in several environments.

### Highlights

- Fiber counts up to 216
- High tensile strength design
- Fibers per loose tube 1-12
- Gel filled cable core for the water resistance
- Dry core design is also possible for water resistance in customer request
- Suitable for duct applications
- Colored fiber for the quick identification
- UV resistance for the outer Sheath
- High fiber count to diameter ratio
- Fully complied with Telcordia GR-20 and TIA/EIA standards
- Custom designs are available on request

### Applications

- Telecommunication applications
- Video applications
- Distribution
- Long Haul Communication Systems
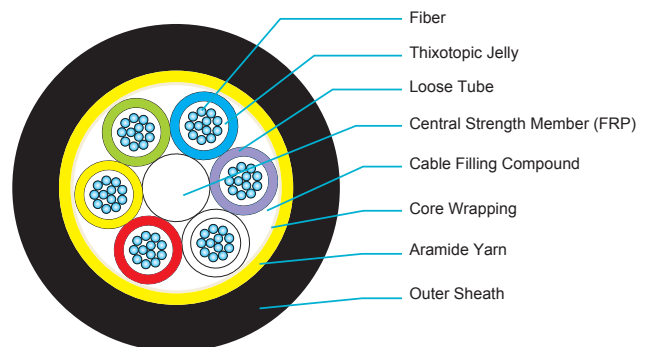- Metropolitan Communication Systems

### Cable Weight & Diameter

| Item | Number of Fiber | Fiber Per Tube | Number of Tube | Number of Dummy Tube | Nom Outer Diameter mm | Nom Cable Weight Kg/km | Reel Lenghth Km* | Part No |
|---|---|---|---|---|---|---|---|---|
| Duct Type Single Sheathed Optical Cables | 4 | 2 | 2 | 4 | 11,0 | 100 | 6 | CAN-DU-SS-004 |
| | 6 | 2 | 3 | 3 | 11,0 | 100 | 6 | CAN-DU-SS-006 |
| | 12 | 2 | 6 | 0 | 11,0 | 100 | 6 | CAN-DU-SS-012 |
| | 24 | 4 | 6 | 0 | 11,0 | 100 | 6 | CAN-DU-SS-024 |
| | 36 | 6 | 6 | 0 | 11,0 | 100 | 6 | CAN-DU-SS-036 |
| | 48 | 8 | 6 | 0 | 11,0 | 100 | 6 | CAN-DU-SS-048 |
| | 60 | 12 | 5 | 1 | 11,0 | 100 | 6 | CAN-DU-SS-060 |
| | 72 | 12 | 6 | 0 | 11,0 | 100 | 6 | CAN-DU-SS-072 |
| | 96 | 12 | 8 | 0 | 12,5 | 140 | 4 | CAN-DU-SS-096 |
| | 144 | 12 | 12 | 0 | 15,5 | 195 | 4 | CAN-DU-SS-144 |
| | 192 | 12 | 16 | 2 | 15,5 | 210 | 4 | CAN-DU-SS-192 |
| | 216 | 12 | 18 | 0 | 15,5 | 210 | 4 | CAN-DU-SS-216 |

*Note:Central Stength member is FRP (Fiber Reinforced Plastic), but steel wire is also available on customer request.*
*(\*) Other delivery length is available*

### Mechanical & Environmental Characteristics

#### Parameters

| | | |
|---|---|---|
| Tensile Strength IEC 60794-1-2-E1 | Max Opr. | 2.000 N 1.000 N |
| Bending Radius(mm) IEC 60794-1-2-E11 | Dynamic Static | 20xD 10xD |
| Crush Resistance IEC 60794-1-2-E3 | | 2.000 N |
| Impact Resistance IEC-60794-1-2-E4 | | 50 N |
| Operation Temperature IEC 60794-1-2-F1 | Installing Operating | -30 +60 (°C) -40 +80 (°C) |
| Water Penetration IEC 60794-1-2 F5 | 24 hour, 1 meter | No leakage |

Fiber
Thixotopic Jelly
Loose Tube
Central Strength Member (FRP)
Cable Filling Compound
Core Wrapping
Aramide Yarn
Outer Sheath

### Identification of Optical Fiber and Loose Tube

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiber | Blue | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |
| Tubes | Blue | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |

## Central Tube Armored Double Sheathed Optical Cables

⟡ Applied to outdoor and directly buried installation
⟡ Designed for outdoor and direct buried type application and
  also to protect optical fiber for the unexpected mechanical and
  environmental conditions.
⟡ Qualification and acceptance testing are performed to assure the
  optical cable's performance and durability in several environments.

### Highlights
⟡ Fiber counts up to 12
⟡ Light weight
⟡ High tensile strength design
⟡ Dry core design
⟡ Small diameter
⟡ Colored fiber for the quick identification
⟡ UV resistance for the outer sheath
⟡ Fully complies with international standards, TIA/EIA
⟡ Customer designs are available on request

### Applications
⟡ Building interconnection
⟡ Campus and Local Area Network
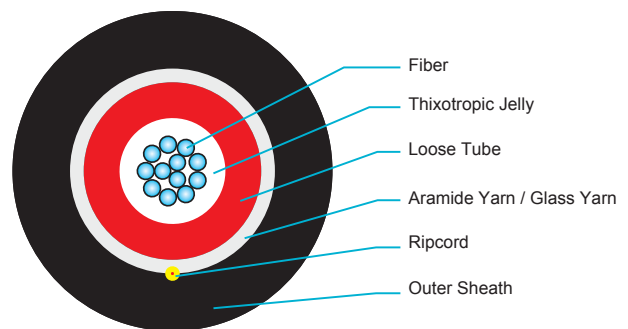
### Cable Weight & Diameter

| Item | Number of Tube | Nom Outer Diameter mm | Nom Cable Weight Kg/km | Reel Lenghth Km* | Part No |
|---|---|---|---|---|---|
| Central Tube Armored Double Sheathed Optical Cables | 2 | 10,5 | 110 | 2 | CAN-CA-DS-002 |
| | 4 | 10,5 | 110 | 2 | CAN-CA-DS-004 |
| | 6 | 10,5 | 110 | 2 | CAN-CA-DS-006 |
| | 8 | 10,5 | 110 | 2 | CAN-CA-DS-008 |
| | 10 | 10,5 | 110 | 2 | CAN-CA-DS-010 |
| | 12 | 10,5 | 110 | 2 | CAN-CA-DS-012 |

*(*) Other delivery length is available*

### Mechanical & Environmental Characteristics

**Parameters**

| Tensile Strength IEC 60794-1-2-E1 | Max Opr. | 3.000 N 600 N |
|---|---|---|
| Bending Radius(mm) IEC 60794-1-2-E11 | Dynamic Static | 20xD 10xD |
| Crush Resistance IEC 60794-1-2-E3 | | 4.000 N |
| Impact Resistance IEC-60794-1-2-E4 | | 50 N |
| Operation Temperature IEC 60794-1-2-F1 | Installing Operating | -30 +60 (°C) -40 +80 (°C) |
| Water Penetration IEC 60794-1-2 F5 | 24 hour, 1 meter | No leakage |

Fiber
Thixotropic Jelly
Loose Tube
Aramide Yarn
Inner Sheath
Ripcord
Corrugated Steel Tape
Outer Sheath
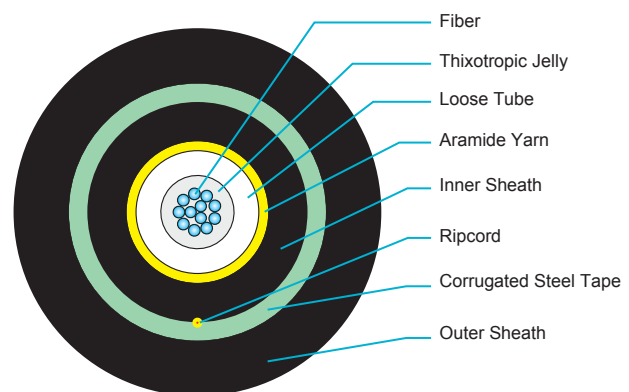
### Identification of Optical Fiber and Loose Tube

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiber | Blue | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |
| Tubes | Blue | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |

Color of Louse tube is natural

## Central Tube Unarmored Optical Cables

- Indoor/Outdoor type installation
- Designed for indoor/outdoor application to protect optical fiber for the unexpected mechanical and environmental conditions.
- Qualification and acceptance testing are performed to assure the optical cable's performance and durability in several environments.

**Highlights**
- Fiber counts up to 12
- Lightweight
- High tensile strength design
- Dry core design
- Small diameter
- Colored fiber for the quick identification
- UV resistance for the outer sheath
- Fully complies with international standards, TIA/EIA
- Customer designs are available on request

**Applications**
- Building interconnection
- Campus and Local Area network
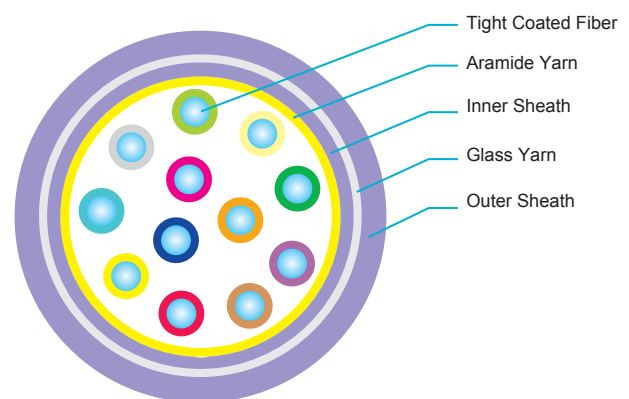
### Cable Weight & Diameter

| Item | Number of Tube | Nom Outer Diameter mm | Nom Cable Weight Kg/km | Reel Lenghth Km* | Part No |
|---|---|---|---|---|---|
| Outdoor Central Tube Cables | 2 | 8,0 | 60 | 4 | CAN-CT-UA-002 |
| Outdoor Central Tube Cables | 4 | 8,0 | 60 | 4 | CAN-CT-UA-004 |
| Outdoor Central Tube Cables | 6 | 8,0 | 60 | 4 | CAN-CT-UA-006 |
| Outdoor Central Tube Cables | 8 | 8,0 | 60 | 4 | CAN-CT-UA-008 |
| Outdoor Central Tube Cables | 10 | 8,0 | 60 | 4 | CAN-CT-UA-010 |
| Outdoor Central Tube Cables | 12 | 8,0 | 60 | 4 | CAN-CT-UA-012 |

*(*) Other delivery length is available*

### Mechanical & Environmental Characteristics

**Parameters**

| | | |
|---|---|---|
| Tensile Strength IEC 60794-1-2-E1 | Max Opr. | 1.000 N 600 N |
| Bending Radius(mm) IEC 60794-1-2-E11 | Dynamic Static | 20xD 10xD |
| Crush Resistance IEC 60794-1-2-E3 | | 00 N |
| Impact Resistance IEC-60794-1-2-E4 | | 50 N |
| Operation Temperature IEC 60794-1-2-F1 | Installing Operating | -30 +60 (°C) -40 +80 (°C) |
| Water Penetration IEC 60794-1-2 F5 | 24 hour, 1 meter | No leakage |

Fiber
Thixotropic Jelly
Loose Tube
Aramide Yarn / Glass Yarn
Ripcord
Outer Sheath

### Identification of Optical Fiber and Loose Tube

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiber | Blue | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |

Color of Louse tube is natural

## Tigth Tube Non-Metalic Optical Cables

Indoor/Outdoor type tight coated type optical cables are applied to indoor/outdoor installation. These types of cables are designed for indoor/outdoor application and also to protect optical fiber for the unexpected mechanical, environmental and rodent protection conditions. Qualification and acceptance testing are performed to assure the optical cable's performance and durability in several environments..

### Highlights
- Fiber counts up to 12
- Light weight
- High tensile strength design
- Completely dry core design
- Small diameter
- Colored fiber for the quick identification
- UV resistance for the outer sheath
- Fully complies with international standards, TIA/EIA
- Customer designs are available on request

### Applications
- Building interconnection
- Campus and Local Area Network

### Cable Weight & Diameter

| Item | Number of Tube | Nom Outer Diameter mm | Nom Cable Weight Kg/km | Reel Lenghth Km* | Part No |
|---|---|---|---|---|---|
| Tight Coated Optical Cables | 2 | 9,5 | 110 | 4 | CAN-TT-NM-002 |
| | 4 | 9,5 | 110 | 4 | CAN-TT-NM-004 |
| | 6 | 10,5 | 120 | 4 | CAN-TT-NM-006 |
| | 8 | 11,0 | 135 | 4 | CAN-TT-NM-008 |
| | 10 | 12,0 | 140 | 4 | CAN-TT-NM-010 |
| | 12 | 12,5 | 150 | 4 | CAN-TT-NM-012 |

*(*) Other delivery length is available*

### Mechanical & Environmental Characteristics

**Parameters**

| | | |
|---|---|---|
| Tensile Strength IEC 60794-1-2-E1 | Max Opr. | 1.000 N 600 N |
| Bending Radius(mm) IEC 60794-1-2-E11 | Dynamic Static | 20xD 10xD |
| Crush Resistance IEC 60794-1-2-E3 | | 500 N |
| Impact Resistance IEC-60794-1-2-E4 | | 50 N |
| Operation Temperature IEC 60794-1-2-F1 | Installing Operating | -30 +60 (°C) -40 +80 (°C) |
| Water Penetration IEC 60794-1-2 F5 | 24 hour, 1 meter | No leakage |

Tight Coated Fiber
Aramide Yarn
Inner Sheath
Glass Yarn
Outer Sheath

### Identification of Optical Fiber and Loose Tube

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiber | Blue | Orange | Green | Red | Yelow | Violet | Brown | Black | White | Grey | Turquoise | Pink |

Color of Louse tube is natural

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# FTTH CABLES INDOOR USE

## Bend Insensitive Drop Cables

This cable is made wiith G657 bend insensitive single mode optical fiber, using tight buffered structure fiber; Diameter is 0,87 ±0,05mm, wall thickness is 0,31 ±0,02mm

### Highlights

- Tight buffered fibre of 900 μm diameter (Easy to strip)
- Non-metallic strenght members (Aramide yarn)
- Completely dry core design
- Small diameter 2.0-3.0 [mm]
- All dielectric non-metallic construction, hence no ground loop problems

**Part No** CAN-BI-DC-1

PVC sheath
Aramide yarn
900 mic. LSZH tight
250 mic.acrylic fibre
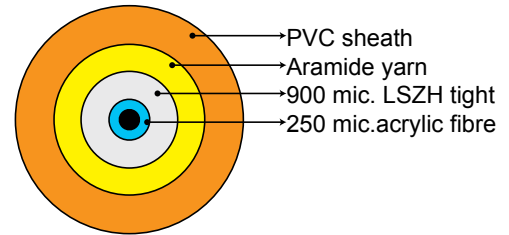
## FTTH Patch Cables

### Highlights

- Tight buffered fibre of 900 μm diameter (Easy to strip)
- Non-metallic strenght members (Aramide yarn)
- Completely dry core design
- Halogen Free Flame Retardant / Flame Retardant Non-Corrosive / Low Smoke Zero Halogen
- Small diameter 2.0 [mm]
- All dielectric non-metallic construction, hence no ground loop problems

### Standards

IEC 61034 (low Smoke, zero halogen) , IEC 60 332-3 (flame retardant), IEC 60754-2 (FRNC), DIN VDE0472 part 813 (FRNC)
ITU-T G.651 (Multi Mode Fiber), ITU-T G.652; ITU-T G.657 (Single Mode Fiber), ITU-T G.655 & G.656 (NZDS Fiber)
EN 187000:IEC 60794- 1&2, EN 188000:IEC 60793- 1&2 (Generic cable specifications)

### Applications

Indoor interconnect and patch-cord installations

**Dublex Zip Cable**

**Splex Zip Cable**

| Product | Part No |
|---|---|
| Simplex Zipcable | CAN-PC-SZ-1 |
| Dublex Zipcable | CAN-PC-DZ-1 |

Outer Jacket
Aramid Strength Member
250 μm Acrylate Fiber Coating
900 μm Diameter Tight-Buffer
Optical Fiber
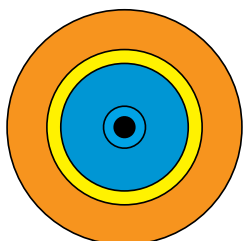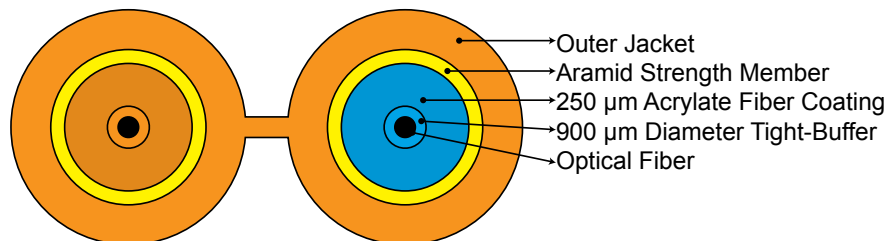
Simplex Zipcord              Duplex Zipcord

## 1U/2U 19'' & ETSI Fiber Optic Patch Panel with Telescopic Rails CAN-FPP-100

### Overview

Provides professional cable management and fiber termination with smooth telescopic pull-out rail system

### Highlights

- 1U and 2U versions (12,24, 36 and 48 port capacity)
- Smooth and convenient mechanical sliding system
- Manages small & large quantities of fiber with a high packing density
- Cable glands to secure the incoming fiber, allows min movement
- Fiber guide tubes to protect and direct the fibers to the cassettes in a professional way
- Easy to maintain and extend
- Minimum bend radius of fibers and strain relief for all entry cables
- Fiber bend radius control of 35mm
- Capacity of up to 48 ports
- All known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible)

### Technical Details

| | |
|---|---|
| **Dimensions** | (19") 465 mm (W) x 265 mm (D) x 1U (H) |
| **Material** | Mild Steel |
| **Color** | Powder coat RAL7035 or RAL9005 |
| **Weight** | 2 kg |
| **Maximum Port Capacity** | 48 Ports |

### Applications

FTTX applications, Datacenter and LAN & WAN projects



**Various Adapter Types**



**Incoming Cable Protection Tube**

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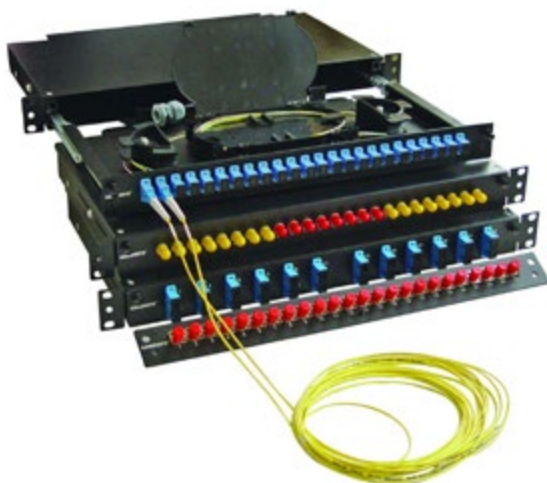
## 1U/2U 19" & ETSI Angled Patch Panels with Telescopic Rails CAN-FPP-200

### Overview

Ensures professional cable management and limits the risk of health problems due to laser contact to eyes. Side facing fiber position for high laser safety.

### Highlights

- 1U and 2U versions (12,24, 36 and 48 port capacity)
- Confirms 19" or ETSI
- Professional and advanced cable management with 45 degree adaptor interface
- Angled adaptor interface protects your eyes from undesired contact with laser beam coming from the adaptors-Laser safety!
- Quick-stud system ensures easy closing /opening of the front cover
- Easy access with Telescopic rail pull-out system
- Special Protection tubes and bend radien for protecting the incoming fiber from bending and guiding the fibers to the special designed splice cassettes in a professional way
- Special splice cassettes of 12 or 24 port capacity with professional cable storage and protection
- 100% Compatible to Bellcore GR-326 standards
- Confirmity to every type of connectors (ST, SC, FC, LC, MTRJ, E2000, etc.)

### Technical Details

**Dimensions** 465(W) x 238(D) x 88,15(H) 2U, 44,45 mm 1U
**Material** Mild Steel
**Color** Powder coat RAL7035 or RAL9005
**Weight** 6 kg (2U), 4 kg (1U)

### Applications

FTTX applications, Datacenter and LAN & WAN projects

**1U Version**



**2U Version**







**Secured cable entry**



**Telescopic Rail System**

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## 1U 19" & ETSI Telescopic Fiber Optic Patch Panel with Cable Manager CAN-FPP-500

### Overview

Ensures professional cable management and ease of fiber termination with front cable manager for patchcords

### Highlights

- 1U version (12 and 24 port capacity)
- Telescopic rail system with front cable management for patchcords
- Manages small & large quantities of fiber with a high packing density
- Cable glands to secure the incoming fiber, allows min movement
- Fiber guide tubes to protect and direct the fibers to the cassettes in a professional way
- Minimum bend radius of fibers and strain relief for all entry cables
- Fiber bend radius control - < 35mm
- All known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible.

### Technical Details

| | |
|---|---|
| **Dimensions** | (19") 465 mm (W) x 280 mm (D) x 1U (H) |
| **Material** | Mild Steel |
| **Color** | Powder coat RAL7035 or RAL9005 |
| **Weight** | 2 kg |
| **Maximum Port Capacity** | 48 Ports |

### Applications

FTTX applications, Datacenter and LAN & WAN projects

**Inside view**

## 1U/2U 19" & ETSI Fiber Optic Patch Panel with Mechanical Sliding Mechanism CAN-FPP-300

### Overview

Provides professional cable management and ease of fiber termination with a cost effective mechanical pull-out mechanism

### Highlights

- 1U and 2U versions (12,24, 36 and 48 port capacity)
- Smooth and convenient mechanical sliding system
- Manages small & large quantities of fiber with a high packing density
- Cable glands to secure the incoming fiber, allows min movement
- Fiber guide tubes to protect and direct the fibers to the cassettes in a professional way
- Minimum bend radius of fibers and strain relief for all entry cables
- Fiber bend radius control - < 35mm
- Capacity of up to 48 ports
- All known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible.

### Technical Details

| | |
|---|---|
| **Dimensions** | (19") 465 mm (W) x 280 mm (D) x 1U (H) |
| **Material** | Mild Steel |
| **Color** | Powder coat RAL7035 or RAL9005 |
| **Weight** | 2 kg |
| **Maximum Port Capacity** | 48 Ports |

### Applications

FTTX applications, Datacenter and LAN & WAN projects

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## 1U/2U 19" & ETSI Fixed Fiber Optic Patch Panel CAN-FPP-400

### Overview

Ensures professional cable management and ease of fiber termination in a cost effective way

### Highlights

- 11U and 2U versions (12,24, 36 and 48 port capacity)
- Cost effective non-pull out system for budgetary applications
- Manages small & large quantities of fiber with a high packing density
- Cable glands to secure the incoming fiber, allows min movement
- Fiber guide tubes to protect and direct the fibers to the cassettes in a professional way
- Minimum bend radius of fibers and strain relief for all entry cables
- Fiber bend radius control - < 35mm
- Capacity of up to 48 ports
- All known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible.

### Technical Details

| | |
|---|---|
| **Dimensions** | (19") 465 mm (W) x 280 mm (D) x 1U (H) |
| **Material** | Mild Steel |
| **Color** | Powder coat RAL7035 or RAL9005 |
| **Weight** | 2 kg |
| **Maximum Port Capacity** | 48 Ports |

### Applications

FTTX applications, Datacenter and LAN & WAN projects

## Miscellaneous Fiber Patch Panels

**19" 1U Fiber Patch Panel 12 Port SC Simplex with Telescopic Rail**

**19" 1U Fiber Patch Panel 24 Port SC Simplex**

**19" 1U Fiber Patch Panel 24 Port SC Duplex with Telescopic Rail**

**19" 1U Fiber Patch Panel 24 Port SC Simplex with Telescopic Rail**

**19" 1U Fi Fiber Patch Panel 24 Port SC Duplex Fixed**

**19" 1U Fiber Patch Panel 24 Port MTRJ Duplex with Sliding Rail**

**19" 1U Fiber Patch Panel 24 Port MTRJ Duplex with Sliding Rail**

**19" 1U Fiber Patch Panel 24 Port ST Simplex with Sliding Rail**

## How to order fiber patch panels?

| CAN-FPP-X00-XX-AA-BBB-CC-DD-EE | | | | | |
|---|---|---|---|---|---|
| Model Number of CAN-FPP Series Patch Panels | Port Capacity XX | Adapter/Coupler Type AA | Mode/Type BB | Pigtails CC | Splice Cassette DD |
| CAN-FPP-100: 19" 1U Fiber patch panel with telescopic rails CAN-FPP-200: 19" 1U Angled Fiber patch panel with telescopic rails CAN-FPP-300: 19" 1U Fiber patch panel with mechanical sliding mechanism CAN-FPP-400: 19" 1U Fixed Fiber patch panel CAN-FPP-500: 19" 1U Telescopic Fiber patch panelwith Cable Manager | 06: 06 Fiber 12: 12 Fiber 24: 24 Fiber 48: 48 Fiber | 01:ST 02: SC/PC 03: SC/APC 04: FC 05: LC 06: MTRJ 07: E2000 | SS: Single Mode Simplex SD: Single Mode Duplex MS: Multi Mode Simplex MD: Multi Mode Duplex | 01:ST 02: SC/PC 03: SC/APC 04: FC 05: LC/PC 06: LC/APC 07: E2000 08: DIN 09: MTRJ | 01:with splice cassette and cable management tools 00: without splice cassette and management tools |
| CAN-FPP-100-024-02-SD-02-01 | 19" 1U Fiber Patch Panel with telescopic rail including 24 port SC Duplex adapters with single mode pigtails and cassettes | | | | |

For different configurations please contact sales department…

## 1U 19" & ETSI Swing Type Fiber Optic Patch Panel CAN-PVT-50X

### Overview

Ensures professional cable management and ease of fiber termination with front cable manager for patchcords
.

### Highlights

- 1U version 24 ports capacity (up to 30 ports)
- Swing Out system with front cable management for patchcords
- Manages small & large quantities of fiber with a high packing density
- Cable glands to secure the incoming fiber, allows min movement
- Fiber guide tubes to protect and direct the fibers to the cassettes in a professional way
- Minimum bend radius of fibers and strain relief for all entry cables
- Fiber bend radius control - < 35mm
- All known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible.

### Density Information

1U 24 ports Module: 24 pieces SC/LC/FC/ST/E200/DIN/MU-PC/APC etc. simplex adapters and 24 pieces 1.5 m SC/LC/FC/ST/E200/DIN/MU-PC/APC simplex pigtail (confirms G652, G652D standards)

### Applications

Fiber Transmission Networks in Telco`s Central applications, Fiber exchange systems, Utility Networks

### Techical Details

| | |
|---|---|
| **Dimensions** | 430 mm (W) x 280 mm (D) x 1U (H) |
| **Compliance** | GR-449-core of Telcordia Specification |
| **Finish** | Powder coat RAL7032 |
| **Weight** | 1U : 2.1 kg, 2U : 2.8 kg |
| **Material** | Aluminum |
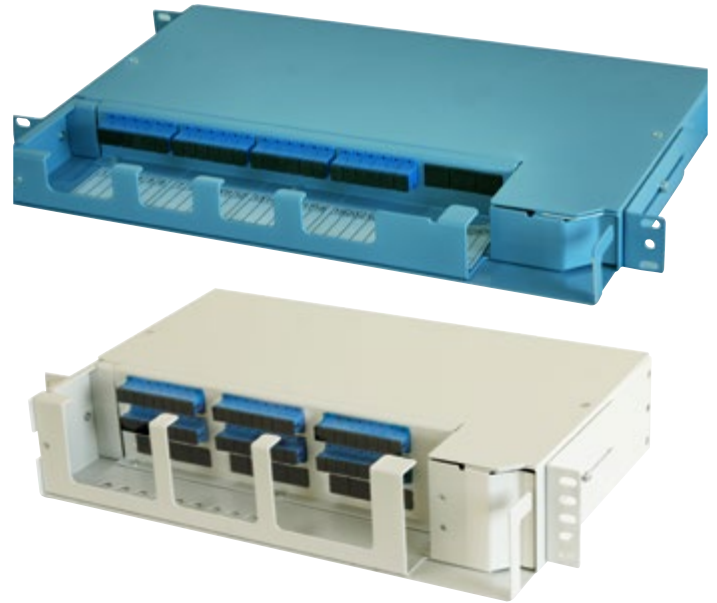
## Assos Pivot Type ODF Module CAN-ASO-100

### Overview

Ultimate new design with the most advanced splice&patch system and cable management ever developed for high density applications on carrier&transmission side.

### Highlights

- 1U option for different fiber capacities (2U option is available)
- Modular designed for 19"/ETSI optical distribution frames
- Pivot (Swing) type sliding Aluminum module system provides easy access
- Module provide max fiber termination possibility with superior cable management
- Magnetic lock system ensures easy closing/opening of the unit up to 24 port capacity
- Ensures minimal cable movement
- 24 port capacity fiber trays are used inside
- Cable glands are used to protect and fix incoming and outgoing fibers
- Incoming cable protection tube inside
- Unflammable plastic cassettes are used inside

SC, LC, FC, ST, MTRJ, E-2000 interfaces etc available

### Density Information

1U 24 port Module: 12 pieces SC/APC Dublex adapters and 24 pieces 1.5 m SC/APC simplex pigtail (confirms G652, G652D standards)

### Applications

Fiber Transmission Networks in Telco`s Central applications, Fiber exchange systems, Utility Networks

### Technical Details

| | |
|---|---|
| **Dimensions** | 485 mm (W) x 260 mm (D) x 1U (H) |
| **Compliance** | GR-449-core of Telcordia Specification |
| **Finish** | Powder coat RAL7032 |
| **Weight** | 1.5 kg |
| **Material** | Aluminum |

**1U Module**

**Inside View**
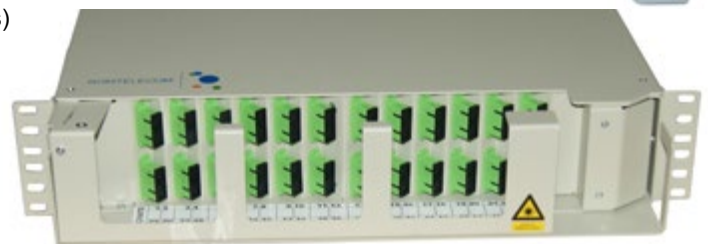
**2U Module**

## Fiber Optic Patch Panel with Front Cable Guide
## CAN-FPP-50X

### Overview

CAN-FPP-80X ensures professional cable management and splice&patch possibility for ribbon and non-ribbon fibers.



### Highlights

- 1U and 2U versions (12,24, 36 and 48 port capacity)
- Confirms 19" or ETSI installations
- Professional and advanced cable management
- Front cable management and guides for patchcords
- Proper labeling on the front and casettes
- Quick-stud system ensures easy closing /opening of the unit
- Easy access with slide-in pull-out system
- Cable entry from the rear and sides
- Special Protection tubes and bend radien for protecting the incoming fiber from bending and guiding the fibers to the special designed splice cassettes in a professional way
- Special splice cassettes of 12 or 24 port capacity with professional cable storage and protection
- Suitable for ribbon and non-ribbon cables
- 100% Compatible to Bellcore GR-326 standards
- Confirmity to every type of connectors (ST, SC, FC, LC, MTRJ, E2000, etc.)

### Technical Details

**Dimensions** 465 mm (W) x 272 mm (D) x 88,15 mm (H) 2U, 44,45 mm 1U
**Material** Mild Steel, 1.5 mm
**Color** Powder- Coated Median Grey NCS 2502B
**Weight** 4 kg (1U)



Rear and side cable entry

### Applications

FTTX applications, Datacenter and LAN &WAN projects



Inside view and cable management

| Adaptor Type | Fiber Capacity | Product code |
|---|---|---|
| FC/APC Simplex | 24 | CAN-FPP-501 |
| SC/APC Simplex | 24 | CAN-FPP-502 |
| FC/APC Simplex High Density | 44 | CAN-FPP-503 |
| SC/APC Simplex High Density | 36 | CAN-FPP-504 |
| LC/APC Simplex | 24 | CAN-FPP-505 |



Bottom view with cable storage&management

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GROUP

# PIGTAILS

Canovate pigtails are available with different buffer and jacket types and colors, including bare fibers (250 microns), tight buffers (900 microns) or jacketed minicables in simplex or duplex (zip-cord) constructions.

## SC Pigtails

| Part No | Type |
|---|---|
| KSM-0-PGSXYYY-0-SC09uu-t | yyy meter SC/uu SM Fiber Pigtail, 0.9 mm , t |
| KMM-0-PGSXYYY-0-SC09uu-t | yyy meter SC/uu MM Fiber Pigtail, 0.9 mm , t |

*yyy : Avaliable lenghts in meter 0.5/1/1.5/2,3*
*uu: "AP" APC*
*t : Avaliable colors (0: White, 1:Beige , 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)*

## LC Pigtails

| Part No | Type |
|---|---|
| KSM-0-PGSXyyy-0-LC09uu-t | yyy meter LC/uu SM Fiber Pigtail, 0.9 mm , t |
| KMM-0-PGSXyyy-0-LC09uu-t | yyy meter LC/uu MM Fiber Pigtail, 0.9 mm , t |

*yyy : Avaliable lenghts in meter 0.5/1/1.5/2,3*
*uu: "AP" APC*
*t : Avaliable colors (0: White, 1:Beige , 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)*

## ST Pigtails

| Part No | Type |
|---|---|
| KSM-0-PGSXyyy-0-ST09uu-t | yyy meter ST/uu SM Fiber Pigtail, 0.9 mm , t |
| KMM-0-PGSXyyy-0-ST09uu-t | yyy meter ST/uu MM Fiber Pigtail, 0.9 mm , t |

*yyy : Avaliable lenghts in meter 0.5/1/1.5/2,3*
*uu: "AP" APC*
*t : Avaliable colors (0: White, 1:Beige , 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)*

## FC Pigtails

| Part No | Type |
|---|---|
| KSM-0-PGSXyyy-0-FC09uu-t | yyy meter FC/uu SM Fiber Pigtail, 0.9 mm , t |
| KMM-0-PGSXyyy-0-FC09uu-t | yyy meter FC/uu MM Fiber Pigtail, 0.9 mm , t |

*yyy : Avaliable lenghts in meter 0.5/1/1.5/2,3*
*uu: "AP" APC*
*t : Avaliable colors (0: White, 1:Beige , 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)*

## E2000 Pigtails

| Part No | Type |
|---|---|
| KSM-0-PGyyy-0-E209uu-t | yyy meter E2000/uu Single Mode Pigtail, 0.9 mm, t |
| KMM-0-PGyyy-0-E209uu-t | yyy meter E2000/uu Multi Mode Pigtail, 0.9 mm, t |

*yyy : Avaliable lenghts in meter 0.5/1/1.5/2,3*
*uu: "AP" APC*
*t : Avaliable colors (0: White, 1:Beige , 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)*

## How to order

SM: Single Mode / MM: Multi Mode
L: LSZH / P: PVC
SX150: Simplex 1,5m / DX050: Duplex 0,5m
SX100: Simplex 1,0m / DX200: Duplex 2,0m

K-- - PG----- 0 --09 -

0: White / 1: Grey / 2: Black / 3: Red
4: Green / 5: Blue / 6: Yellow / 7: Orange
SC09. SC 0,9mm / LC09. LC 0,9mm
ST09: ST 0,9mm / FC09: FC 0,9mm
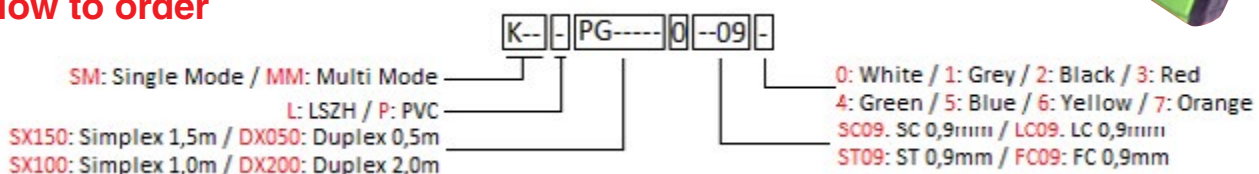
**Order Example:**
**KSM-L-PGSX100-0-SC09-6:** Single Mode 1m SC Simplex Pigtail, LSZH, Yellow, 0.9mm
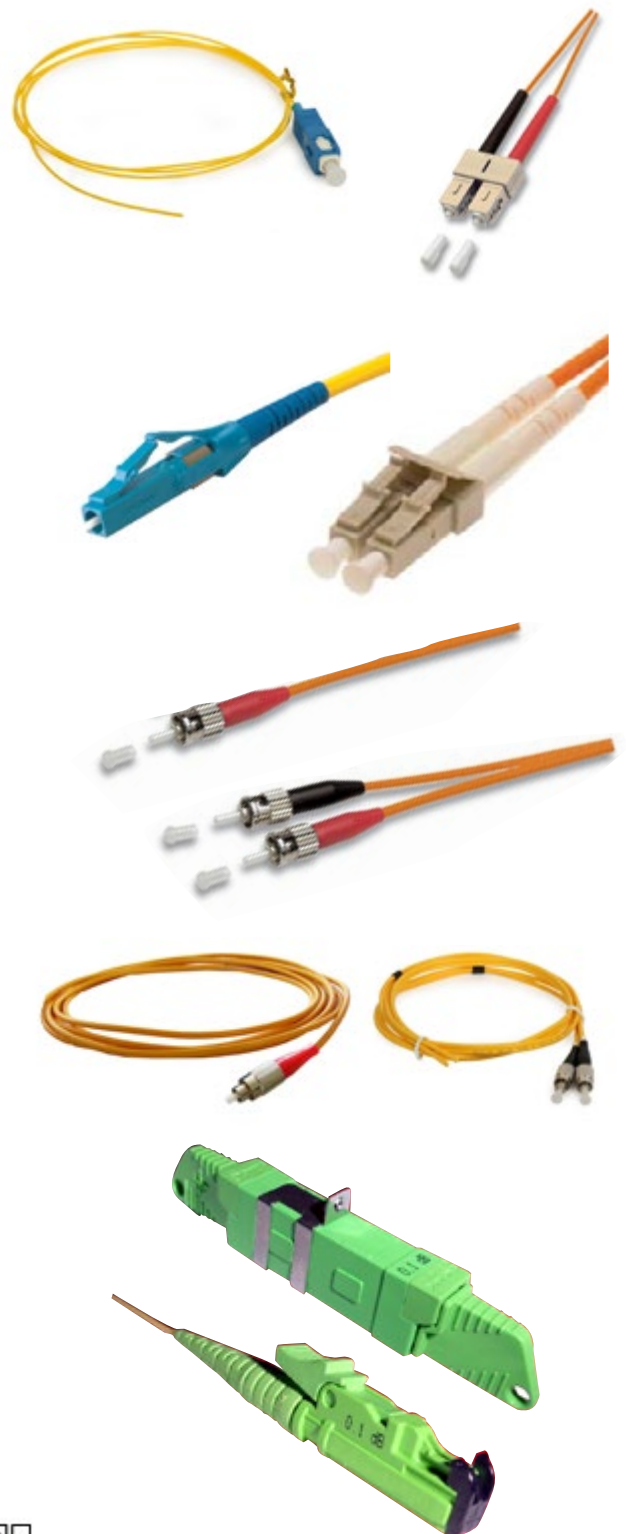
**CANOVATE®**
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# PATCH CORDS

Canovate patch cords are outstanding with different buffer and jacket types and colors, including out diamater (2-3 mm), tight buffers or jacketed minicables in simplex or duplex (zip-cord) constructions.

## SC Patch Cords

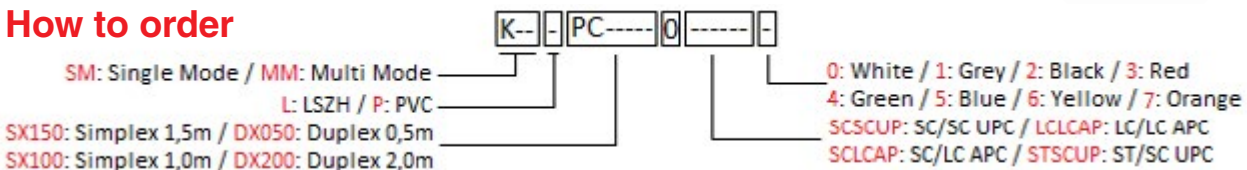| Part No | Type |
|---|---|
| KSM-x-PCSxyyy-0-SCzzuu-t | yyy meter SC-zz/uu Simplex SM Fiber Patch Cord, x, t |
| KSM-x-PCDxyyy-0-SCzzuu-t | yyy meter SC-zz/uu Duplex SM Fiber Patch Cord, x, t |
| KMM-x-PCSxyyy-0-SCzzuu-t | yyy meter SC-zz/uu Simplex MM Fiber Patch Cord, x, t |
| KMM-x-PCDxyyy-0-SCzzuu-t | yyy meter SC-zz/uu Duplex MM Fiber Patch Cord, x, t |

## LC Patch Cords

| Part No | Type |
|---|---|
| KSM-x-PCSxyyy-0-LCzzuu-t | yyy meter LC-zz/uu Simplex SM Fiber Patch cord, x, t |
| KSM-x-PCDxyyy-0-LCzzuu-t | yyy meter LC-zz/uu Duplex SM Fiber Patch cord, x, t |
| KMM-x-PCSxyyy-0-LCzzuu-t | yyy meter LC-zz/uu Simplex MM Fiber Patch cord, x, t |
| KMM-x-PCDxyyy-0-LCzzuu-t | yyy meter LC-zz/uu Duplex MM Fiber Patch cord, x, t |

## ST Patch Cords

| Part No | Type |
|---|---|
| KSM-x-PCSXyyy-0-STzzuu-t | yyy meter ST-zz/uu Simplex SM Fiber Patch cord, x, t |
| KSM-x-PCDXyyy-0-STzzuu-t | yyy meter ST-zz/uu Duplex SM Fiber Patch cord, x, t |
| KMM-x-PCSXyyy-0-STzzuu-t | yyy meter ST-zz/uu Simplex MM Fiber Patch cord, x, t |
| KMM-x-PCDXyyy-0-STzzuu-t | yyy meter ST-zz/uu Duplex MM Fiber Patch cord, x, t |

## FC Patch Cords

| Part No | Type |
|---|---|
| KSM-x-PCSXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Simplex SM Fiber Patch cord, x, t |
| KSM-x-PCDXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Duplex SM Fiber Patch cord, x, t |
| KMM-x-PCSXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Simplex MM Fiber Patch cord, x, t |
| KMM-x-PCDXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Duplex MM Fiber Patch cord, x, t |

## E2000 Patch Cords

| Part No | Type |
|---|---|
| KSM-x-PCSXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Simplex SM Fiber Patch cord, x, t |
| KSM-x-PCDXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Duplex SM Fiber Patch cord, x, t |
| KMM-x-PCSXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Simplex MM Fiber Patch cord, x, t |
| KMM-x-PCDXyyy-0-FCzzuu-t | yyy meter FC-zz/uu Duplex MM Fiber Patch cord, x, t |

*x : "L" LSZH / "P" PE*
*yyy : Avaliable lenghts in meter 0.5/1/1.5/2,3,5 and 10 (up to 70m special)*
*zz: SC:SC / LC:LC / ST:ST / MJ: MT-RJ / FC: FC*
*uu: "AP" APC / "UP" UPC*
*t: Avaliable colors (0: White, 1:Beige 2:Black, 3:Red, 4:Green, 5:Blue, 6:Yellow, 7:Orange)*

## How to order

K--|-|PC-----|0|------|-

SM: Single Mode / MM: Multi Mode
L: LSZH / P: PVC
SX150: Simplex 1,5m / DX050: Duplex 0,5m
SX100: Simplex 1,0m / DX200: Duplex 2,0m

0: White / 1: Grey / 2: Black / 3: Red
4: Green / 5: Blue / 6: Yellow / 7: Orange
SCSCUP: SC/SC UPC / LCLCAP: LC/LC APC
SCLCAP: SC/LC APC / STSCUP: ST/SC UPC

**Order Example:**
**KMM-L-PCDX150-0-SCLCUP-7:** Multi Mode 1.5m SC/LC UPC Duplex Patch Cord, LSZH, Orange, 2mm

# ADAPTERS

Canovate fiber optic adapters are compatible with all fiber types including singlemode (9/125 microns), multimode (50/125 microns) fibers. Canovate components comply with both major industry standarts, ANSI/TIA/EIA 568-B.3 and IEC 60874 providing a full range of connectors and adapters, offering a user-frendly solutions in the vertical and horizontal environments.

## SC Adapters
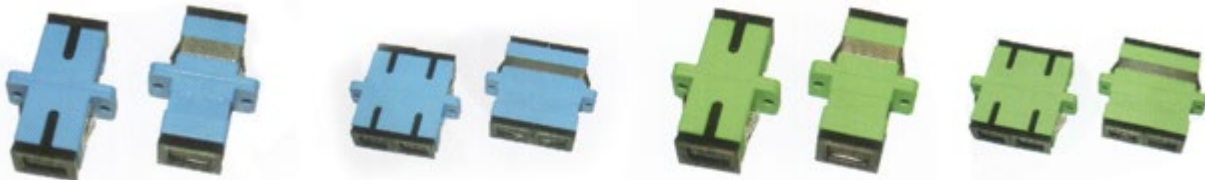


**SC Single mode simplex** — **SC Single mode duplex** — **SC/APC Single mode simplex** — **SC/APC Single mode dublex**

| Part No | Type |
|---|---|
| KSM-0-ADSX-0-SC-5 | SC type FO adapter SM Simplex, Blue |
| KSM-0-ADDX-0-SC-5 | SC type FO adapter SM Duplex, Blue |
| KSM-0-ADSX-0-SCAP-4 | SC/APC type FO adapter SM Simplex, Green |
| KSM-0-ADDX-0-SCAP-4 | SC/APC type FO adapter SM Duplex, Green |
| KMM-0-ADSX-0-SC-1 | SC type FO adapter MM Simplex, Beige |
| KMM-0-ADDX-0-SC-1 | SC type FO adapter MM Duplex, Beige |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## LC Adapters

**LC Single mode simplex** — **LC Single mode duplex** — **LC Multi mode simplex** — **LC Multi mode dublex**

| Part No | Type |
|---|---|
| KSM-0-ADSX-0-LC-5 | LC type FO adapter SM Simplex, Blue |
| KSM-0-ADDX-0-LC-5 | LC type FO adapter SM Duplex, Blue |
| KMM-0-ADSX-0-LC-1 | LC type FO adapter MM Simplex, Beige |
| KMM-0-ADDX-0-LC-1 | LC type FO adapter MM Duplex, Beige |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## ST Adapters

**ST Single mode simplex** — **ST Multi mode simplex**

| Part No | Type |
|---|---|
| KSM-0-ADSX-0-ST-2 | ST type FO adapter SM Simplex, Black |
| KSM-0-ADSX-0-ST-3 | ST type FO adapter MM Simplex, Red |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## FC Adapters

**FC Single mode simplex** — **FC Multi mode simplex**

| Part No | Type |
|---|---|
| KSM-0-ADSX-0-FC-0 | FC type FO adapter SM Simplex, White |
| KSM-0-ADSX-0-FC-0 | FC type FO adapter MM Simplex, White |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## E2000 Adapters

| Part No | Type |
|---|---|
| KSM-0-ADSX-0-E2-4 | E2000 type FO adapter SM Simplex, Green |
| KSM-0-ADSX-0-E2-1 | E2000 type FO adapter MM Simplex, Beige |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

**E2000 Single Mode Simplex** — **E2000 Multi Mode Simplex**

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# CONNECTORS

Fiber Optic Connector is an important components used in the fiber optic network. It is also the key part used in fiber optic patch cord and fiber optic pigtail. There are many kinds of fiber optic connectors.we supply one piece fiber optic connectors various types, including standard connectors and irregular types, epoxy types. we supply fiber optic types include: SC fiber optic connector,FC fiber optic connector,ST fiber optic connector,LC fiber optic connector,MU fiber optic connector,SC/APC fiber optic connector,FC/APC fiber optic connector,etc.both single mode fiber optic connector and multimode fiber optic connector available.

- Single mode, multimode available
- All connectors with dusty cap
- Compliant with RoHS requirement

## SC Connectors

**SC Single Mode, Simplex**   **SC Single Mode, Duplex**   **SC Multi Mode, Simplex**   **SC Multi Mode, Duplex**

**SC/APC Single Mode, Simplex**

| Part No | Type |
|---------|------|
| KSM-0-CNSX-0-SC-5 | SC type FO connector SM Simplex, Blue |
| KSM-0-CNDX-0-SC-5 | SC type FO connector SM Duplex, Blue |
| KSM-0-CNSX-0-SCAP-4 | SC/APC type FO connector SM Simplex, Green |
| KSM-0-CNDX-0-SCAP-4 | SC/APC type FO connector SM Duplex, Green |
| KMM-0-CNSX-0-SC-1 | SC type FO connector MM Simplex, Beige |
| KMM-0-CNDX-0-SC-1 | SC type FO connector MM Duplex, Beige |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## LC Connectors

**LC Single Mode, Simplex**   **LC Single Mode, Duplex**   **LC Multi Mode, Simplex**   **LC Multi Mode, Duplex**

| Part No | Type |
|---------|------|
| KSM-0-CNSX-0-LC-5 | LC type FO connector SM Simplex, Blue |
| KSM-0-CNDX-0-LC-5 | LC type FO connector SM Duplex, Blue |
| KMM-0-CNSX-0-LC-1 | SC type FO connector MM Simplex, Beige |
| KMM-0-CNDX-0-LC-1 | SC type FO connector MM Duplex, Beige |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## ST Connectors

**ST Single Mode, Simplex**   **ST Multi Mode, Simplex**

| Part No | Type |
|---------|------|
| KSM-0-CNSX-0-ST-6 | ST type FO connector SM Simplex, Yellow |
| KMM-0-CNSX-0-ST-2 | ST type FO connector MM Simplex, Black |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## FC Connectors

**FC Single Mode, Simplex**   **FC/APC Single Mode, Simplex**

| Part No | Type |
|---------|------|
| KSM-0-CNSX-0-FC-5 | FC type FO connector SM Simplex, Blue |
| KMM-0-CNSX-0-FC-4 | FC type FO connector MM Simplex, Green |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

## E2000 Connector

| Part No | Type |
|---------|------|
| KSM-0-CNSX-0-E2-4 | E2000 type FO connector SM Simplex, Green |
| KMM-0-CNSX-0-E2-1 | E2000 type FO connector MM Simplex, Beige |

*MT-RJ / FC / MU / DIN connectors and adapters are available*

**E2000 Single Mode Simplex**

## Field Installable Connector

Field Installable Connector (FIC) is a perfect solution for field working and FTTH connection. It is widely used for where need to quick connection, providing a quickly assembling and stable performance. When engineers work in field for installation, maintenance, repair of optical fiber, or FTTH indoor terminate, they can use it easily because it has no epoxy, no polishing.
FIC connector is designed inside ferrule with fiber stuff and pre-polishing in the factory. It provides a perfect ferrule endface quality. This has great help to protect user's equipment interface and improves the connector loss.

The Fast Connector (Field Assembly Connector or Quickly Assembly Fiber Connector) is a revolutionary field installable optical fiber connector that requires no epoxy , no polishing and no other specialized tools. The unique design of the patented mechanical splice body incorporates a factory-mounted fiber stub and a pre-polished ceramic ferrule.

- Available for 250µm, 900µm, 2.0mm and 3.0mm cables
- Complete with industry standard length Strain Relief Boot
- Cable Tensile test complies with Telcordia GR-326-CORE

### Features
- No epoxy, no polishing, no adhesive, no electricity required
- Field installable, cost effective and user friendly
- Completely mechanical splice. No electricity required
- Can be assembled in the field in less than 1 minute
- Reliable and superior optical performance
- Connector has a fibre guide to aid insertion, and reduce installation error
- Only the basic Fibre termination tools are required
- Connector has fibre already inside, and a prepolished ferrule for superior results and reliable termination
- Complete with industry standard length Strain Relief Boot
- Cable Tensile test complies with Telcordia GR-326-CORE

### Applications
- Optical Distribution Frame
- Optical Network Equipments
- FTTHs CATV

## How to install

**1 - Cutting Fiber**



**2 - Inserting Fiber**



**3 - Take Out Connector**



**4 - Add Boot and ready**



| Part No | Type |
|---|---|
| KSM-0-CNFISX-0-SC-5 | SC type FO Field Installable connector SM Simplex, Blue |
| KSM-0-CNFISX-0-SCAP-4 | SC/APC type FO Field Installable connector SM Simplex, Green |
| KMM-0-CNFISX-0-SC-0 | SC type FO Field Installable connector MM Simplex, White |
| KSM-0-CNFISX-0-LC-5 | LC type FO Field Installable connector SM Simplex, Blue |
| KSM-0-CNFISX-0-LCAP-4 | LC/APC type FO Field Installable connector SM Simplex, Green |
| KMM-0-CNFISX-0-LC-0 | LC type FO Field Installable connector MM Simplex, White |

## Single Mode Pre-Assembled Breakout (Drop Cable)

Each pre−terminated fiber assembly is delivered to the installer with the delicate fibers and connectors protected by a plastic tube. A pulling eye is attached to the strength members of the cable allowing full pulling force to be applied during installation without any rist to the optical fibers.

To assembly is ready to install, right down to the pre-fitted cable glands. Simply remove the pulling eye and protective tubes, feed the fibers into the rear of a sliding tray patch panel, tighten the cable gland to the rear of the panels and the installation is complete

### Standart Configiration

Pre-terminated Assemblies are supplied as standard with protection sleeve, pulling eye and staggered distribution.

Alternative labeling options are available. Please Contact us with your requirements.

Assemblies are identified by a serial number

Standart Construction : Staggered         Special Construction : Fan−Out

| Part No | Type |
|---------|------|
| KSM-x-KK04PR-0-SC-1 | 4 core Single Mode Pre-terminated (SC) cable (9/125), Grey |
| KSM-x-KK08PR-0-SC-1 | 8 core Single Mode Pre-terminated (SC) cable (9/125), Grey |
| KSM-x-KK12PR-0-SC-1 | 12 core Single Mode Pre-terminated (SC) cable (9/125), Grey |
| KSM-x-KK12PR-0-SC-1 | 12 core SC Fanout cable (9/125), Grey |
| KSM-x-KK12PR-0-LC-1 | 12 core LC Fanout cable (9/125), Grey |
| K00-x-PPPR96-0-LC-2 | 96 Port Pre-terminated LC Fiber Patch Panel, Black |
| K00-x-PPPRMD-0-LC-2 | Pre-terminated Modular LC Fiber Patch Panel, Black |
| KMM-x-KK12PR-0-0-2 | 12 core Multi Mode MTP Trunk cable (9/125), Black |

*x : "L" LSZH / "P" PVC*
*MT-RJ / FC / MU / E2000 / DIN connectors and special de-signs are available*
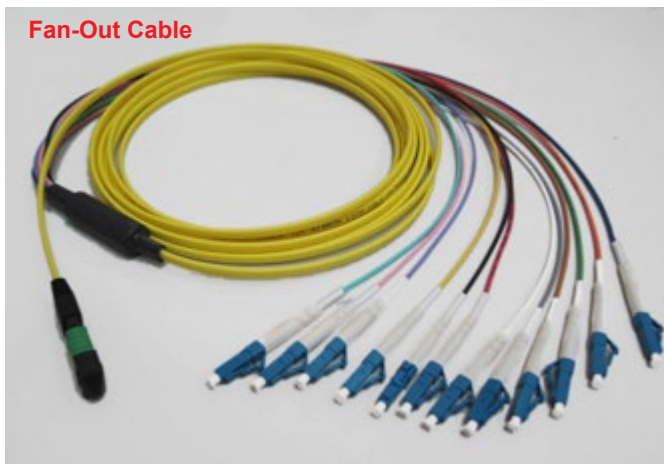
**Fan-Out Cable**
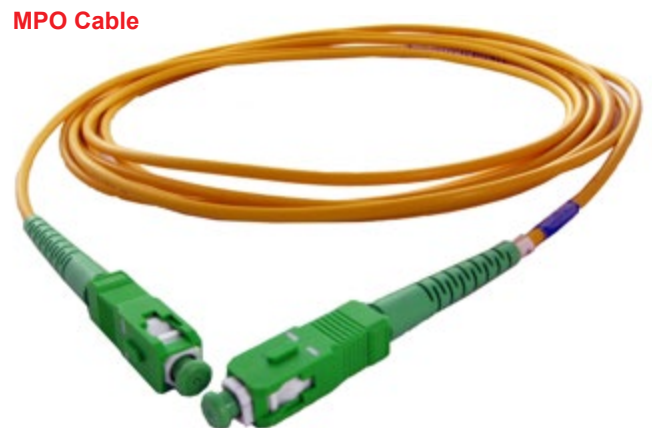
**MPO Cable**

**ODF to ODF Example**

You can connect two ODF Module with Pre-Terminated Fan Out Cable

## MTP® Pre-Terminated Fiber Patch Panel CAN-MTP-100

**MTP® 19" 1U Patchpanel Multimode OM3, 10GBit/s, 144 ports**

Canovate provides a high density 19" rack-mountable solution for next generation networks, which aims to provide and manage max number of fibers in a limited space.

MTP® patchpanel enables perfect and secured management of 144 fibers in 1U

The connection between the 12 MTP® adaptors fixed on rear side of the panel and 36 pieces of 4-port LC adaptors on the front side are managed in a very intense way in this 1U patchpanel

### Technical Details
**Dimensions** (19") (W) x 95 mm (D) x 1U (H)
**Material** Steel
**Color** Powder coat RAL7035 or RAL9005
**Adaptor Types** -Rear side: 12 X MTP®
-Front side: 36 X 4-port LC (= 144 fibers)

### Applications
Datacenter Storage area, MDU Distribution Terminal
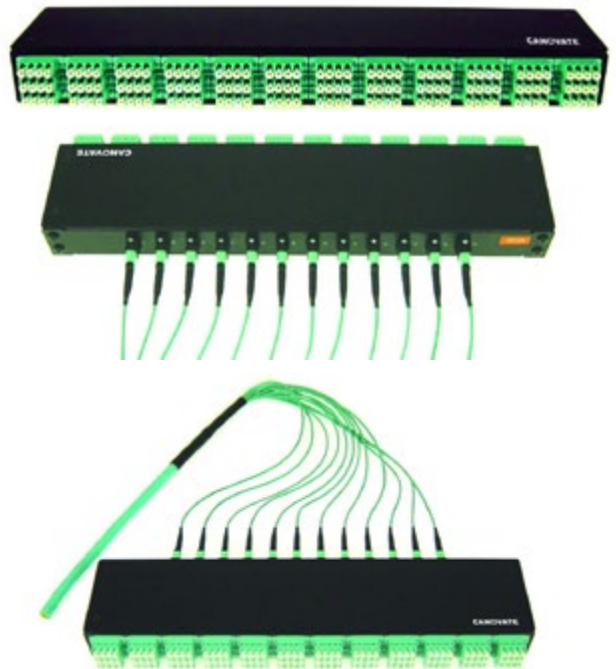
## MTP® Pre-Terminated Modular Fiber Patch Panel CAN-MTPM-100

**MTP® 3U, 8 TE Multimode OM3, 10GBit/s, 24 ports**

MTP® Snap-in-module with 24 fiber capacity, modular structure allows to fit in various type of applications

The connection between the 2 MTP® adaptors on rear side of the module and 6 pieces of 4-port LC adaptors on the front side are managed in a very intense way in this module.

The connection between the 12 MTP® adaptors fixed on rear side of the panel and 36 pieces of 4-port LC adaptors on the front side are managed in a very intense way in this 1U patchpanel

### Technical Details
**Dimensions** (19") (W) x 95 mm (D) x 1U (H)
**Material** Steel
**Color** Powder coat RAL7035 or RAL9005
**Adaptor Types** -Rear side: 2 X MTP®
-Front side: 6 X 4-port LC (= 24 fibers)
-Flexible&expandable

**Plug in Module**

## MTP® Trunk Cable Multimode OM3, 10GBit/s, up to 144 fibers

Preconfigured Trunk cable with 12 MTP® plugs for a very fast, easy and secured Plug and Play installation

### Technical Details
**Plugs** : up to 12 MTP®-plugs (with 12 fiber/each)
**Fiber type** : Multimode OM3
**Cable length** : customer specific

# RACK CONTROL UNIT (RCU)

Within the FUTURE-PATCH® system the Rack Control Unit (RCU) basically acts as a communication interface between the Panel Control Units and the Management Console. It translates the messages received from Panel Control Units in ethernet packets and forwards them to the Management Console. Furthermore, the Rack Control Unit powers up to 30 Panel Control Units via a bus cable. The display provides visual support during patching processes and informs about possible malfunctions.

## Highlights
- Contactless identification of cables using innovative RFID technology
- Planning and real-time documentation of patch connections
- Manufacturer independent retrofit
- Compatible with copper and fibre optic components
- Increased efficiency of the IT manpower
- Improved system stability and significant reduction of system downtimes

## Technical Details

| | |
|---|---|
| Dimensions | 483mm (19")(W), 260mm(D), 1U: 44,45mm(H) |
| Material | Steel |
| Color | RAL 7035 |
| Text display | 2 x 40 characters |
| Power supply | Input voltage 230V, Output voltage: 15V,Current: 4A |

**Part Number**    CAN-RCU-1

# PANEL CONTROL UNIT (PCU)

The Panel Control Units (PCUs) can be integrated into a variety of patch panels and switches in already existing networks. Several Panel Control Units are interconnected via a bus cable and attached to the Rack Control Unit. The installed PCUs permanently monitor all ports of the respective patch panels and switches. Changes of the patch state produce messages which are immediately sent to the Rack Control Unit and forwarded to the Management Console. The PCUs provide visual support using LEDs during the patch process ensuring the correct completion.

## Highlights
- Contactless identification of cables using innovative RFID technology
- Planning and real-time documentation of patch connections
- Manufacturer independent retrofit
- Compatible with copper and fibre optic components
- Increased efficiency of the IT manpower
- Improved system stability and significant reduction of system downtimes

# Order Information

| Description | | Part Number |
|---|---|---|
| 1U Copper Patch panel, 24 x RJ45/LSA, Cat.6, shielded | | CAN-PCU-1 |
| 1U Fiber Patch panel, Fixed installation 24 x LC/LC duplex | | |
| 1U Copper Patch Panel, 24 x RJ45-MOD, Cat.6, shielded | | CAN-PCU-2 |
| 1U Fiber Patch panel, drawer version 24 x SC/ST duplex | | |
| 1U Fiber Patch panel, drawer version 24 x LC/LC duplex | | CAN-PCU-3 |

## Copper Patch Cable with RFID-Transponder

The highly screened RJ45 patch and equipment cables are utilised in twisted pair data networks and meet the standards ISO/IEC 11801:2002 and DIN EN 50173-1: 2007. The patch cables fully comply with the standards Category 6 and class E. Used together with high quality tertiary cabling, the patch cable can achieve a Class Ea channel link of up to 500MHz, according to the current draft standards ISO/IEC 11801 Amendment 1 and IEEE 802.3 an (10G BaseT). The injection moulded plug includes a pocket for the RFID transponder. The colour of the cable sheath, the injection moulded plug and the retrofittable latch protection can be chosen separately from six standard colours.

An additional security feature is the security plug which can be used to inhibit the connection of non identifiable standard patch cables by blocking all non patched RJ45 ports.

### Highlights
- Contactless identification of cables using innovative RFID technology
- Planning and real-time documentation of patch connections
- Manufacturer independent retrofit
- Compatible with copper and fibre optic components
- Increased efficiency of the IT manpower
- Improved system stability and significant reduction of system downtimes

### Technical Details
- RFID-transponder according ISO 15693
- Transponder size: W: 10,2mm D: 3,0mm H: 2,6mm
- Six standard colours: Moulded plug, Cable sheath, Latch protection
- Cable: TKM PK9 Cat. 7 4P AWG 27/7, Impedance 100 Ohm

### Order Information

| Description | | Part Number |
|---|---|---|
| 1,0 m length | | CAN-RF-CPC-1 |
| 2,0 m length | | CAN-RF-CPC-2 |
| 3,0 m length | | CAN-RF-CPC-3 |
| FUTURE-PATCH Security Plug RJ45 with transponder | | CAN-RF-CPC-S |

*Other lengths available on request*

## Fiber Patch Cable with RFID-Transponder

The Fibre Optic (FO) patch cables with LC or SC connectors are utilized in structurized communications networks according to ISO/IEC 11801 and DIN EN 50173. Canovate has developed and produced colorless duplex clips (LC or SC) containing a bag with a RFID transponder (factory programmed with an unique ID) which is identified by the port readers of the Panel Control Unit (PCU). The cables with duplex LC or SC connectors are available in different colors in any length and with different fibers (Singlemode 9/125; Multimode 62.5/125,and 50/125 OM2,OM3,OM3+,OM4). Patch cables with high return loss connectors (E2000; APC 8° or 9°) complete the range.

### Highlights
- Contactless identification of cables using innovative RFID technology
- Planning and real-time documentation of patch connections
- Manufacturer independent retrofit
- Compatible with copper and fibre optic components
- Increased efficiency of the IT manpower
- Improved system stability and significant reduction of system downtimes

### Technical Details
- Transponder: Read/Write, HF 13.56MHz according to ISO 15693
- Transponder size: W: 10.2mm D: 3.0mm H: 2.6mm
- Duplex-Zipcord, halogen free

### Order Information

| Description | | Part Number |
|---|---|---|
| LC-LC 2G50/125 OM2, Length 1 m | | CAN-RF-FPC-1 |
| LC-SC 2G62.5/125 OM1,Length 1 m | | CAN-RF-FPC-2 |
| SC APC 8°-SC 2E9/125 OS2, Length 1 m | | CAN-RF-FPC-3 |
| LC APC 8°-LC 2E9/125, OS2 Length 1m | | CAN-RF-FPC-4 |
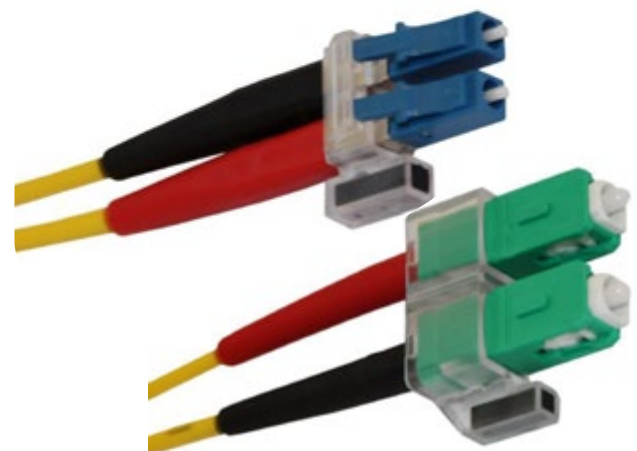
## How FUTURE-PATCH works

The Management Console is an appealing and easy-to-use graphical interface which provides access to all features of the FUTURE-PATCH system. Using the Management Console, the desired patch jobs can be created and validated. Furthermore, real time monitoring of all unintended physical changes in the network infrastructure is possible. This is achieved by equipping all hardware components including but not restricted to passive panels and switches with intelligent RFID-readers (Panel Control Units). The Panel Control Unit permanently monitors all ports by scanning the RFID transponders integrated in the patch cables. It immediately reports all detected changes to the Management Console. The intended patch jobs as well as unintended changes are indicated using LEDs on the Panel Control Unit and as a clear text message in the Rack Control Unit display. The FUTURE-PATCH system has been designed for permanent monitoring of an unlimited number of racks, each one equipped with a single Rack Control Unit and up to 42 Panel Control Units.



**DATABANK**

- ✔ **Management Consule(MC)**
- ✔ **Rack Control Unit (RCU)**
- ✔ **Panel Control Unit (PCU)**
- ✔ **Patch Cable ID (PC ID)**
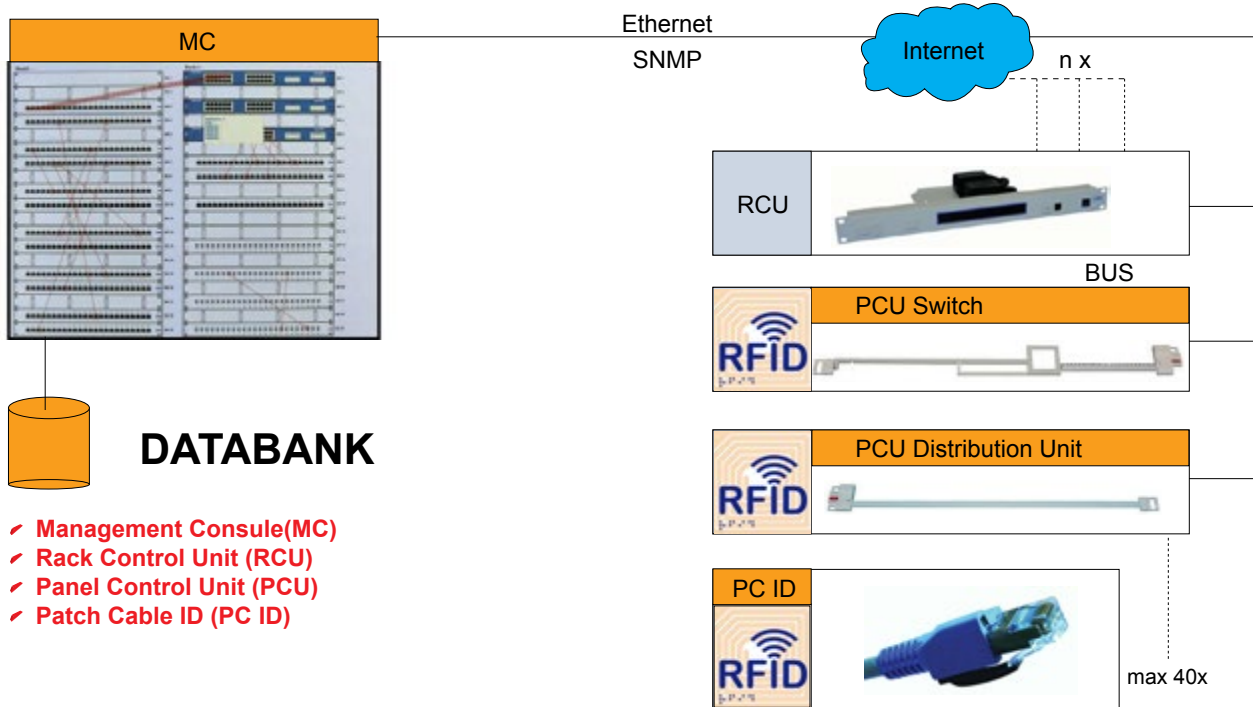
We offer our customers the possibility to install FUTURE-PATCH on a large number of various patch panels and switches from different manufacturers. Therefore, device-specific Panel Control Units for a variety of existing components have been developed. Furthermore, a modular system has been designed which allows device-independent retrofitting on devices from various manufacturers. The main advantage of this modular system is the simple configuration of Panel Control Units with different port numbers and varying port geometry. This flexible approach gives the feasibility to create adequate FUTURE-PATCH components for a large number of already existing components as well as for future devices.
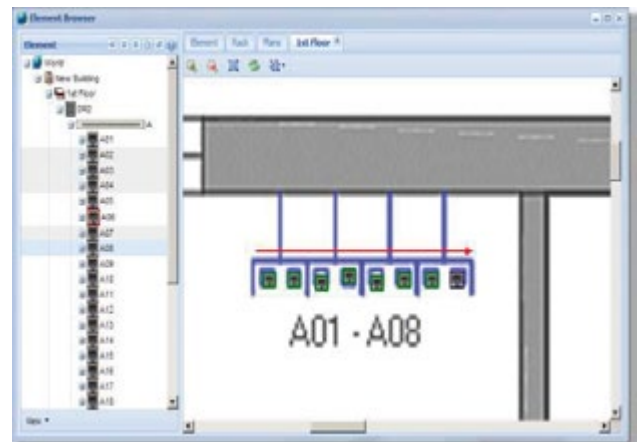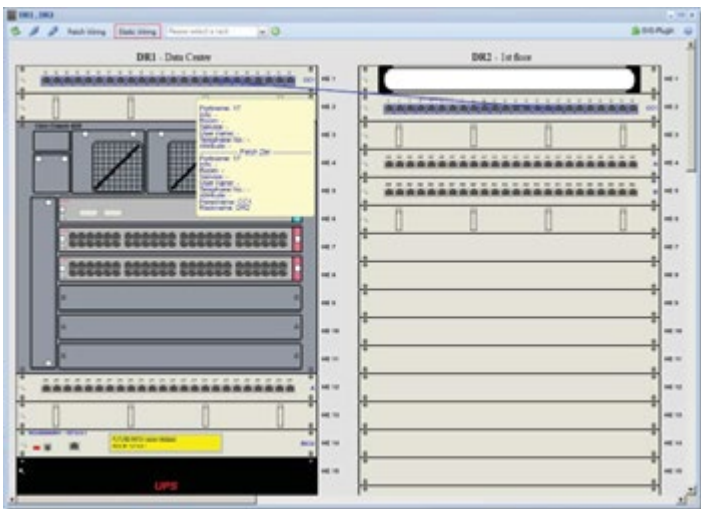


FUTURE-PATCH gives the user a detailed overview with regard to the use of resources from the installed network components. Furthermore, it establishes a sound basis for efficient optimization and IT security.
FUTURE-PATCH can be integrated in many widely spread network management tools and documentation systems using a simple interface. In conjunction with further information from other sources and databases FUTURE-PATCH marks a milestone in network management and troubleshooting.

**CANOVATE**
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## Dual Door Wall Mountable Optical Distribution Box  CAN-ODB-20X

### Overview
Canovate CAN-ODB-101 Optical Distribution box provides a flexible fiber management system for transitioning outside plant cable to insidecable and connectorized assemblies in high density applications. It provides a compact and versatile method of splicing and patching up to 24  fibers.

### Highlights
- Indoor Wallmountable fiber distribution box for high density applications
- Dual doors with separate locking options for flexibility and security
- Very suitable for new and existing interconnect, cross connect and co-location environments
- Splicing and patching at the same box
- 4 cable entry glands to secure the fiber cables
- 12 or 24 port splice cassettes inside
- Modular structure expandable up to 24 splices and patches
- Modular interchangable interfaces for all known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible (extra FC adopter plates inside)

### Technical Details
**Dimensions**      OSB (1:16 Splitter) : 250x300x100 (HXWXD)
                    OSB (1:32 Splitter) : 300x400x100 (HXWXD)
**Material** Galvanized Steel, 1.5 mm
**Color**            Powder coat RAL7035
**Weight**           3 kg (1U)

### Applications
FTTX applications as indoor building distribution unit, LAN Networks

| ORDER TABLE FOR DUAL WALLMOUNT OPTICAL DISTRIBUTION BOX |
|---|
| Part Number Breakdown: CAN-ODB-100-XX$^1$XX$^2$-XX$^3$-XX$^4$-XX$^5$ |
| XX$^1$   : Fibre capacity       06 : 6 fibre       12 : 12 fibre    24 : 24 fibre<br>48 : 48 fibre              96 : 96 fibre          144 : 144 fibre |
| XX$^2$   : Adapter/coupler type ST, LC,E2000, DIN SC, FC, etc.. |
| XX$^3$   : Cassette Type<br>          SE : Single Element          SC: Single Circuit |
| XX$^4$   : Mode<br>          SS: Single Mode Siplex          MS: Multi Mode Simplex<br>          SD: Single Mode Duplex          MD: Multi Mode Duplex |
| XX$^5$   : FE<br>          FE: Fully Equipped (pigtails, adators, splice cassettes, cable<br>                management tools are included) |

**Single Element Management Splice Tray**

**Miscellaneous easy plug-in Adapter Plates**

**Cable Glands**

**96 Port LC Dublex with Single Element Cassette**

**Cable Glands**

## Single Door Wall Mountable Optical Distribution Box
## CAN-ODB-200

### Overview
Canovate FTTH box provides a flexible fiber management system for transitioning outside plant cable to inside cable and connectorized assemblies in low density applications. It provides a compact and versatile method of splicing and patching up to 96 fibers.

### Highlights
- Indoor Wallmountable fiber distribution box for low density applications
- Dual doors with separate locking options for flexibility and security
- Very suitable for new and existing interconnect, crossconnect and co-location environments
- Splicing and patching at the same box
- Modular structure expandable to 96 splices and patches
- Modular interchangable interfaces for all known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible

### Technical Details
**Dimensions** 285 mm (W) x 355 mm (D) x 65 mm (H)
(up to 24 port SC Dublex)
**Material** Mild Steel
**Color** Powder coat RAL7035
**Weight** 3,20 kg / empty (24 port SC Dublex)

### Applications
FTTX applications as indoor building distribution unit, LAN Netwoks

**12 Port SC Simplex with Single Element Cassette**

| ORDER TABLE FOR SINGLE WALLMOUNT OPTICAL DISTRIBUTION BOX |
|---|
| Part Number Breakdown: CAN-ODB-200-XX$^1$XX$^2$-XX$^3$-XX$^4$-XX$^5$ |
| XX$^1$ : Fibre capacity  06 : 06 fibre  12 : 12 fibre  24 : 24 fibre  48 : 48 fibre  96 : 96 fibre |
| XX$^2$ : Adapter/coupler type ST, LC,E2000, DIN SC, FC, etc.. |
| XX$^3$ : Cassette Type  SE : Single Element  SC: Single Circuit |
| XX$^4$ : Mode  SS: Single Mode Siplex  MS: Multi Mode Simplex  SD: Single Mode Duplex  MD: Multi Mode Duplex |
| XX$^5$ : FE  FE: Fully Equipped (pigtails, adators, splice cassettes, cable management tools are included) |

Example: CAN-ODB-200-24-SC-SD; 24 fibre, SC coupling, single mode duplex wall mount optical distribution box

## CPE Indoor Fiber Distribution Terminal  CAN-ALB-10X

### Overview
Unique patch and splice box provides a compact method of splicing and patching up to 12 fibers.

### Highlights
- Indoor Wallmountable fiber distribution box for low density applications
- Single door with magnet lock for flexibility
- Splicing and patching at the same box
- Expandable up to 12 splices and patches
- Modular interchangable interfaces for all known connector types such as SC, FC, ST, E2000, LC, MU etc. are possible

### Technical Details
**Dimensions** 142 mm (W) x 50 mm (D) x 203 mm (H)
**Port Capacity** 12 Ports (6 port SC Simplex or 12 ports LC Dublex)
**Material** Aluminum
**Color** Powder coat RAL7035
**Weight** 1 kg / empty

### Applications
FTTX applications, inside of the buildings

CANOVATE®
GROUP

## Outdoor Polycarbonate Fiber Termination Boxes

### Overview
Designed for harsh environments outside of the premises and on poles for FFTX applications.

### Highlights
- IP65 protected with special gasketing
- Polycarbonate, UV-Resistant
- 4-24 port capacity
- Special Protection tubes and bend radien for protecting the incoming fiber from bending and guiding the fibers to the special designed splice cassettes in a professional way
- 100% Compatible to Bellcore GR-326 standards
- LC Dublex and SC Simplex Adaptors can be installed inside

### Technical Details
**Dimensions**    200 mm (W) x 50 mm (D) x 220 mm (H) (24 ports)
                165 mm (W) x 43 mm (D) x 180 mm (H) (4 ports)

**Material** Polycarbonate
**Color**          Powder coat RAL7035
**Weight**         0,52 kg / empty (24 ports)
                0,34 kg / empty (4 ports)

### Applications
FTTX applications, Outside of the buildings and poles

**CAN-POLY-300-4 PORTS**

**CAN-POLY-400-24 PORTS**

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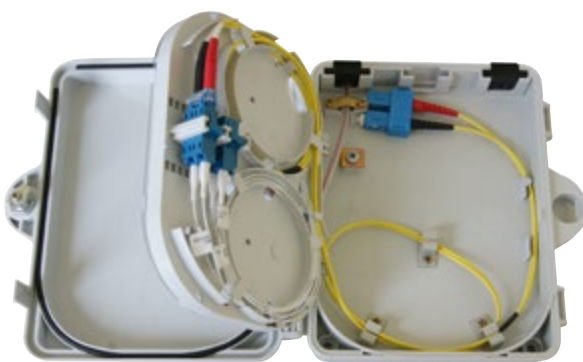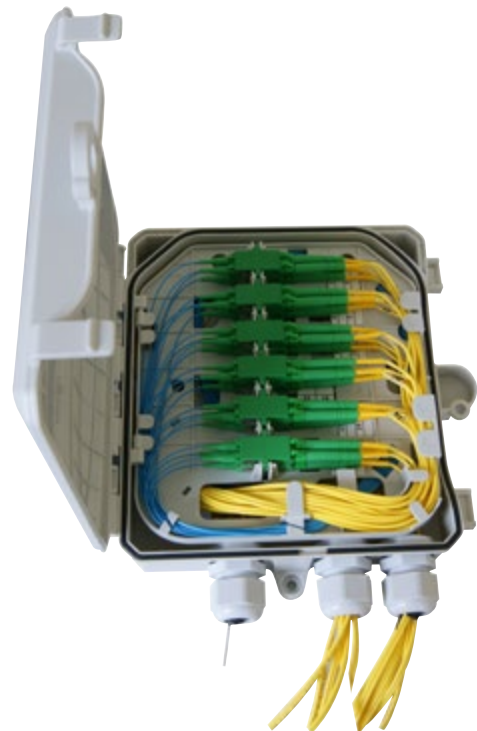
## CPE Indoor Fiber Distribution Terminal  CAN-CPE-10X

### Overview

CPE Indoor Fiber Distribution Terminal provides Customer Premises Equipment applications with a compact and secure enclosure for connecting fiber cables within building entrance locations, communications closets, and other indoor environments .CAN-CPE-10X is an injection molded design with an integral fiber retention system allowing for quick installation and a positive lock strain relief for most premise fiber cable. A compact wall-outlet providing an optical demarcation point for Fiber-to-the-X applications. Mounted on the inside or outside of a building, the optical CPE box provides physical protection for the transition between provider and customer. This device allows for the indoor and protected outdoors interconnect of up to 4 standard SC adapters in a protected white plastic enclosure to blend in most premise environments

### Highlights

- Compact size takes up less wall space for installation
- Up to 4 x adapters can be loaded
- Cover with snap mechanism and hole for lock
- Strain relief fixing options available
- Light weight and robust
- Wall mounting knockouts for easy fixation
- Can be mounted on wall or pole
- Molded inner slack storage area insures minimum bend radius preventing micro bends and unnecessary loss or fiber damage
- No additional tie wraps or clamps needed due to integral positive lock strain relief
- Inner tray retains up to two fusion or mechanical splice sleeves
- Accepts standard SC/LC connectors (UPC or APC)
- Removable cover for easy access to complete box in congested locations

### Applications

FTTX applications, at the entrance of customer premises

**2 Port Patch Only CPE Box CAN-CPE-103**
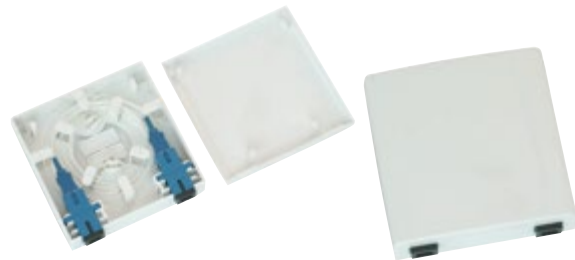
**4 Port Splice&Patch CPE Box CAN-CPE-102**

**8 Port Splice&Patch CPE Box CAN-CPE-105**

**Hybrid (1 Port Fiber Splice&2 Ports RJ 45) CAN-CPE-104**

## Fiber Termination Box CAN-POLY-500

### Overview

Designed for harsh environments outside of the premises and on poles for FFTX applications.

### Highlights

- IP65 protected with special gasketing
- Polycarbonate, UV-Resistant
- 2-8 port capacity
- Special Protection tubes and bend radien for protecting the incoming fiber from bending and guiding the fibers to the special designed splice cassettes in a professional way
- Special splice cassette of 12 port capacity with professional cable storage and protection
- 100% Compatible to Bellcore GR-326 standards
- LC Dublex and SC Simplex Adaptors can be installed inside

### Applications

FTTX applications, Outside of the buildings and poles

# Fiber Duct System - 100% Halogen Free

**Protecting your fiber to secure fiber communication**

- FiberDuct is a flexible duct system for fiber optic cables specifically produced and designed for both the European and US Market.
- The system is fully enclosed protecting the fiber from dirt and dust, the duct is strong enough to protect cables against the most rigorous conditions.
- It is manufactured from a Halogen free, flame-retardant UL94/V0 plastic. The product is designed to meet material specifications required throughout Europe.
- The system is easy to assemble. The only tools required are a drill, a screwdriver and a saw to cut the channels to length. The system is designed for speed of installation and minimum labour for the installer.
- The easy access covers allow fiber optic cables to be installed or remored at any time without the need to disconnect the whole system.
- The system is extremely adaptable and will evolve to suit this demanding market. Currently it is supplied in three sizes: 50mm x 50mm, 100mm x 100mm and 200mm x 100mm.
- Canovate offer a complete design package to assist you with the layout of your ducting system.
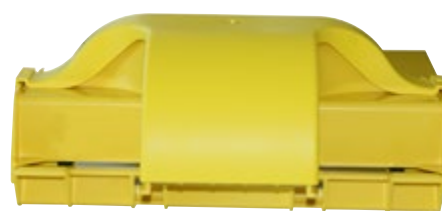
**The company is committed to delighting the customer and excelling in each of three key area's.**

**Highlights**
- *Zero-halogen material*
- *No cutting required*
- *No tools needed*
- *Meets UL94V-0*
- *Total radius control*
- *Low profile*
- *Flex-tube adapter options*

**Product**

Technically advanced communications equipment needs superb ancillary support therefore:
- We will design product that surpasses the latest standards at the lowest possible cost.
- Continuous improvement will be at the forefront of our design strategy to continually innovate in our market.

**People**

To support the ideals of the company and the future needs of the customer we will invest in:
- Relationships with our customers so we anticipate their requirements and have a solution available before it is requested.
- Our people, will be competent to meet and surpass the requirements of the customer.

**Fiber Raceway Outlet**

**90° Horizontal Elbow**

**Vertical Tee Offset**

**General Application View**

**4 Way Cross Application**

**Reducer Part**

## Fiber Raceway Outlet

**Canovate** introduces a non-intrusive fiber optic ducting outlet. The first in a series of revolutionary components, the **Fiber Raceway Outlet (FRO)** is simply and easily placed over the sidewall of any new or existing channel to create a vertical drop-off from a horizontal run. With full radius control, the fiber outlet safely routes fibers to and from equipment bays or distribution frames.

Unlike most other products, the low-profile, fiber outlet is truly installed with no tools, not even a screwdriver! With only a 50mm profile above the channel's edge, it  can be placed anywhere along the sidewall of straight channels. The differences don't stop there. The outlet and it's accessories has been created using flame-retardant engineered plastics that not only meets the Bellcore **NEBS** specification, but also meets the zero-halogen requirements of the European community. All of which makes it a true worldwide solution.

The outlet has a unique two-piece cover with a hinged rear portion that allows users to access express fibers that bypass the outlet, without having to remove the main cover. So express fibers can be added, moved or changed without ever disturbing the fibers inside the outlet.

**Fiber Raceway Outlet is Applicable to all Existing Duct Systems**

**Fiber Raceway Outlet**

### Key Features

- No cutting required
- No tools needed
- Total radius control
- Meets UL94V-0
- Zero-halogen material
- Low profile
-  Mates with 100mm, 150mm, 200mm & 300mm (4", 6", 8" & 12") channels
- Snap-on covers
- Express fiber hinged cover
- Trumpet flare option
-  50mm x 50mm (2" x 2") and 100mm x 100mm (4" x 4") vertical adapters
- Flex-tube adapter options

### ODF Application

**Product Specifications**

| | |
|---|---|
| Fibers Capacity | 200 3mm fibers |
| Flammability Rating | UL94V |
| Oxygen Index (LOI) | 36% |

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## Service
A demanding market requires fast solutions, to meet this challenge we believe that:
✔ All standard product should be available within 24 hours from order.
✔ If special solutions are required they will be available in 14 days.

## Product
Technically advanced communications equipment needs superb ancillary support therefore:
✔ We will design product that surpasses the latest standards at the lowest possible cost.
✔ Continuous improvement will be at the forefront of our design strategy to continually innovate in our market.

## People
To support the ideals of the company and the future needs of the customer we will invest in:
✔ Relationships with our customers so we anticipate their requirements and have a solution available before it is requested.
✔ Our people, will be competent to meet and surpass the requirements of the customer.

## Notes: relating all products
**Material** : UL94/V0, Zero Halogen.
**Colour**         : Standard yellow. Other colours on request.
All dimensions are for reference only.
**Finish**         : All outside surfaces have a haircell texture.
All parts have predrilled fastening holes.

**Vertical Tee Duck**
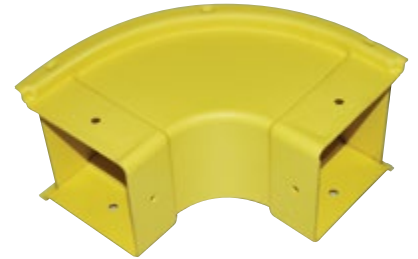
**90° Horizontal Elbow**

**4 Way Cross**

**Vertical Tee Offset**

## System Overview

**Fibre Raceway Outlet (FRO)**
*Part No.*
G-FRO-001

**90° Horizontal Elbow**
*Part Nos.*
F-90HB-55YP
F-90HB-1010YP
F-90HB-2010YP

**90° Vertical Inside (up) Elbow**
*Part Nos.*
F-90VIB-55YP
F-90VIB-1010YP
F-90VIB2010YP

**Horizontal Tee**
*Part Nos.*
F-HT-55YP
F-HT-1010YP
F-HT-2010YP

**4 Way Cross**
*Part Nos.*
F-4WC-5555YP
F-4WC-1111YP
F-4WC2121YP

**45° Vertical Outside (down) Elbow**
*Part Nos.*
F45VOB-55YP
F-45VOB-1010YP
F-45VOB-2010YP

**Vertical (Drop) Tee & Tee Reducer**
*Part Nos.*
F-VT-55YP
F-VT-1010YP
F-VTRD-1155YP
F-VTR-2111YP

**Duct and Lid 1.2m & 1.8m lengths**
*Part Nos.*
F-SD12-55YP, F-SD12-1010YP
F-SD12-2010YP
F-SD18-55YP, F-SD18-1010YP

**Fixings**
*Part Nos.*
F-CBNK-20
F-CB-20
F-N-Metal
F-FCM10-Y

**45° Vertical Inside (up) Elbow**
*Part Nos.*
F-45VIB-55YP
F-45VIB-1010YP
F-45VIB-2010YP

**Horizontal Tee & Tee Reducer**
*Part Nos.*
F-HT-55YP
F-HT-1010YP
F-HT2010YP
F-HTR-1155YP
F-HTR-2111YP

**Reducer**
*Part Nos.*
F-RE-1155YP
F-RE-2111YP

## Troy ODF System

### Side Access High Density Optical Distribution Frame CAN-ODF-700

**Overview**

The key to a successfully managed transmission network lies in the choice of the right fibre optic distribution system. CAN-ODF-700 solution provides flexible cabling access, expandable frame concept, integrated cable management and a future proof modular design with the highest termination capacity possible and superior cable management.

**Highlights**

- Standard 19"& ETSI installations
- Designed to be used together with high density side access type modules
- Maximum fiber density and superior cable management
- Special cable glands to fix the maximum number of bundle cables on the ground
- Slot type cable guide compartments to feed the modules via miniflex tubes
- No crushed or stressed fibers
- Wide range of splice, patch and cable storage options
- Bend Radius Protection 35 mm throughout entire frame and all modules
- Max Cable Protection
- Interchangeable cassettes for various cable/tube counts and connector styles
- Accepts WDM and splitter cassettes
- Integral patchcord management

**Density Information:**

- 14 Modules in 47 U Frame
- LC, FC, ST, MTRJ, E-2000 interfaces etc available
- The Frames are comliant to Telcordia Specification GR-449-core

**Technical Details**

**Dimensions**      900 mm (W) x 300 mm (D) x 2200 mm (H)
**Material** Mild Steel
**Color**     Powder coat RAL7035
**Weight**   120 kg / empty
**Maximum port capacity**   2016 Port
**Maximum High Density Side Access Modules:**
14 x 3U Module (144 ports) =2016 ports nany SFF connector/frame
**Compliance**        GR-449-core of Telcordia Specification
**Applications**

Fiber Tranmission Networks in Telco`s Central Office applications , FTTX applications, Fiber exchange systems, Utility Networks
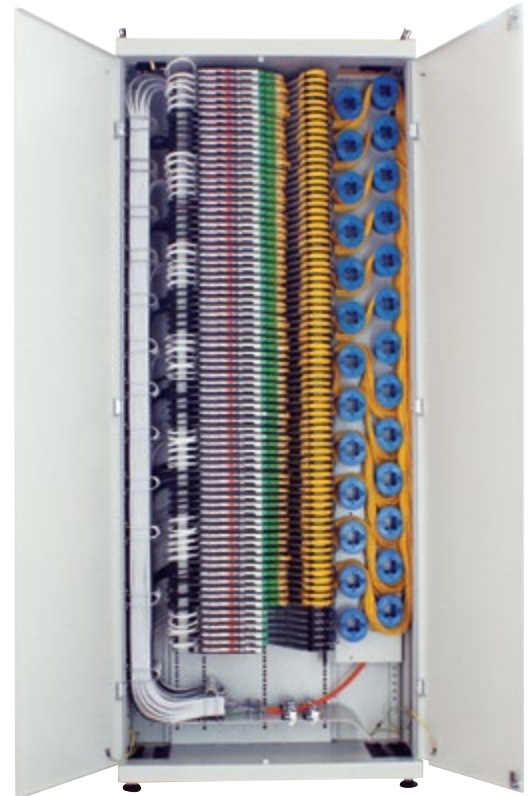
## High Density Side Access Troy Module CAN-TROY-700

**Overview**

Ultimate new design with the most advanced splice&patch system and cable management ever developed for high density applications on carrier&transmission side.

**Highlights**

- Compact 3 U module
- Each U accommodates 2 fiber trays with each max. capacity of 24 fibers
- Max capacity of the module is 144 fibers for SSF dublex adaptors
- Fiber trays and connected patchcords can slide in and out independently as a pull -out unit
- Easy side access ensures laser safety
- Special splice cassette design, which allows splicing on one side and professional cable storage on the other side- no cable congestion!
- Special incoming cable fixing unit which ensures strong, easy and quick cable fixing for miniflex tubes- no need to use time consuming plastic cable ties!
- Integrated outgoing patchcord clamps and routing guides, which ensures min bend readius criteria of 35 mm and professional cable management.

**Options**

- 1U Module with 48 fibers

**Technical Details**

**Dimensions**         486 mm (W) x 258 mm (D) x 133 mm (H)
**Material**          Mild Steel
**Color**          Powder coat RAL7035
**Maximum port capacity** 144 Ports for SSF Double Connectors
**Weight**          4 kg

Each U accommodates 2 fiber trays
Integrated patchcord mandrels
19" rear mountable

## EPHESUS ODF System

Swing Type High Density Optical Distribution Frame
CAN-ODF-600

### Overview

CAN-ODF-600 is an advanced optical distribution frame system which provides an ultimate solution of the complicated requirements of customers like highest possible fiber termination capacity and superior cable management. High density swing type of module is also designed to fit a variety of termination, splice, and storage applications.

### Highlights

- Standard 19"& ETSI installations
- Designed to be used together with high density swing type modules
- Maximum fiber density and superior cable management
- Saves a lot of valuable floor space and rack costs
- Minimal cable movement while opening and closing the modules
- No crushed or stressed fibers
- Wide range of splice, patch and cable storage options
- Bend Radius Protection 35 mm throughout entire frame and all modules
- Max Cable Protection
- Suitable for ribbon and non-ribbon optical fibers

### Density Information:

- 17 Modules in 47 U Frame
- 144 LC Dublex / Module - 2448 LC Dublex / Frame
- LC, FC, ST, MTRJ, E-2000 interfaces etc available
- The Frames are compliant to Telcordia Specification GR-449-core
- Fully front accessable

### Technical Details

| | |
|---|---|
| **Dimensions** | 900 mm (W) x 300 mm (D) x 2200 mm (H) |
| **Color** | Powder coat RAL7035 |
| **Weight** | 120 kg / empty |
| **Maximum port capacity** | 2448 Ports |
| Maximum High Density | |
| **Swing Modules** | 17 (17 x 144 = 2448 ports LC duplex / frame) |
| **Compliance** | GR-449-core of Telcordia Specification |

### Applications

Fiber Tranmission Networks in Telco`s Central Office applications, FTTX applications, Fiber exchange systems, Utility Networks
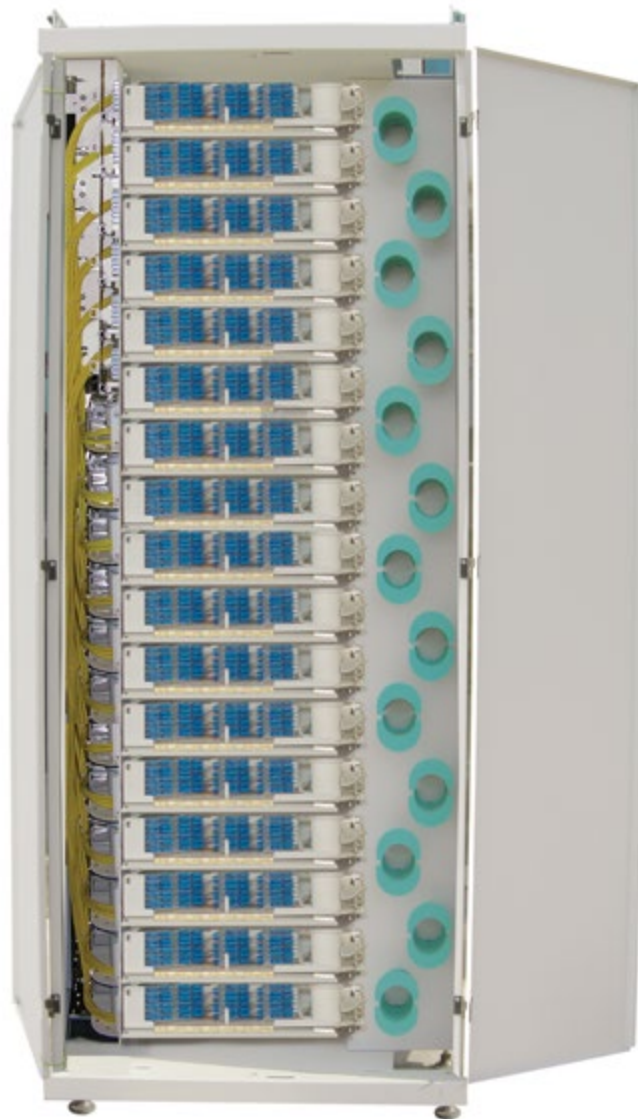


**Incoming Fiber Tubes entering from the left bottom side.**



**Mounting Bracket with cable glands**



**Cable Entry**



**Adjustable cable glands suitable for different cable diameters**



**Unloaded ODF**

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## Fiber Optic Street Cabinet CAN-FDT-10X

### Overview
Advanced fiber optic networks using Point-to-Point or Point-to-Multi point architrectures requires high density fiber distribution points to supply FFTX services to the customers. High-quality fiber optic connectivity relies on the increased protection offered by weather-proof outdoor cabinets.

### Highlights
- Weather-proof outdoor cabinet for installation of optical distribution modules
- IP 65 protected
- Assembly of modular optical building blocks like splice, patch and splitter modules
- Suitable for multi fiber management
- Provides a secure anchor for incoming loose tube cables within the cabinet
- Bend Radien for excess patch cord storage
- Suitable for different cable diameters
- Easy installation and removal
- Doors are protected from external access through hidden hinges
- High resistivity against corrosion-galivanized steel
- 19 inch mounting rails
- Single or Double front door
- CNC controlled polyurethane (PUR) gasketing is available for all of the complete openable surfaces of the outdoor to provide IP65 protection degree ,which is complying with the EN6O529 standard
- Optional: Mounting brackets for wall applications

### Applications
Fiber Cross-connect applications, FTTX distribution hubs, Applications for Passive Optical Networks (PON) and Optical AccessNetworks (OAN) as a distribution point to network terminations for hybrid access technology (fiber/copper) as an Optical Node Unit (ONU)

### Technical Details
**Dimensions**       940 mm (W) x 420 mm (D) x 1530 mm (H)
**Material**          Galvanized
**Color**             Powder coat RAL7035 or RAL9005
**Maximum Port Capacity**  712 Ports

### MOQ (Minimum Order Quantity) : 25 Pcs

Swing Type Ephesus Modules

Troy ODF Module

Cable Organizer

Cable Organizer Sheet

Cable Glands 1
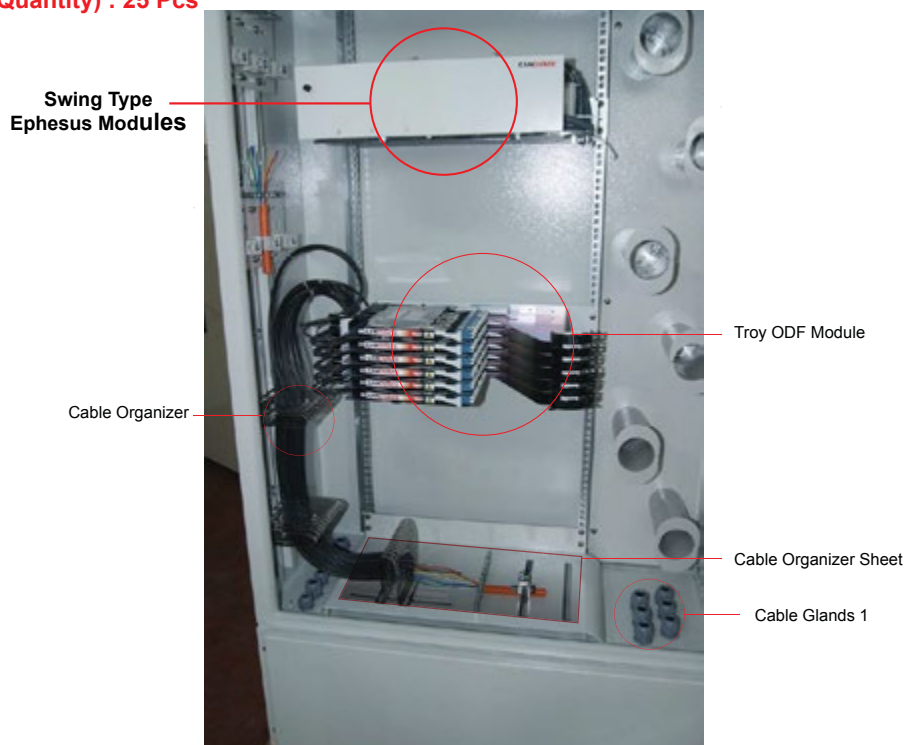
## inorax Network & Server Rack Cabinets

In today's and future datacenter trends, the most important factors to be considered are power distribution, cooling and cable management on rack level. Efficiently engineered rack mounting capabilities and capacity become most critical feature to optimize utilization of available space. Canovate offers ideal rack enclosure technologies offering innovative, flexible, stylish and cost effective form, fit and function; whether it is a datacenter, a server room or a stand-alone application.

## inorax-AL Network & Server Rack Cabinets

Its patented aluminum modular frame technology, capabilities and exceptional strength make this model unique and stand out in terms providing industry leading structural rigidity, better access, optimized available mounting space and ease of installation, not to mention range of interoperable accessory range. Available as at-pack.

- Designed according to very high structural rigidity requirements
- Industry leading static load carrying capacity exceeding 2000KG
- Lighter weight frame technology enabling ease of transport and convenient handling
- Higher corrosion resistance
- Interlocking bolt-on and heavy-duty modular frame joints, an innovative weld-free technology
- Easy to assemble and completely disassemble in a matter of minutes
- Ultimate cosmetic appearance

## inorax-ST Network & Server Rack Cabinets

High strength steel based modular or fully welded patent-pending frame technology and wide range of con guration options makes it a cost-effective reliable solution offering optimized available mounting space and ease of installation. Available as at-pack. Designed according to high structural rigidity requirements

- Designed according to high structural rigidity requirements
- Static load carrying capacity exceeding 1500KG
- Interlocking bolt-on and heavy-duty top and bottom frames
- Easy to assemble and completely disassemble in a matter of minutes
- Appealing cosmetic appearance



Flat-pack option enables savings up to 60% in the transport cost and warehouse space.

## Wallmount Cabinets

Canovate Wallmount cabinets are designed to ensure professional cable management and easy acesss inside the cabinet for installers. We are offering a wide range of wallmount enclosures for every type of application to be required in small and medium scale networks.

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## Cold & Hot Aisle Containment System

- Enables isolation of hot and cold aisles to maximize cooling system efficiency and minimize cooling energy requirement
- Highly modular, scalable, expandable, and retrofit-able
- Optimum cooling solution for big and medium scale datacenters coupled with CRAC units to increase efficiency of cooling system.
- Provides moderate efficiency, energy saving and free cooling capabilities

**Advantages:**
- More efficient than traditional central CRAC cooling technologies - up to 50% energy savings
- Modular, scalable, expandable, retrofit-able



## Front Cooler

- Front Cooler is an ultimate solution for medium to large scale datacenter applications
- A chilled-water based technology bringing cold air right to the server racks where heat dissipation is maximum, eliminating raised floor requirement in contrast to CRAC cooling systems
- Integration into Cold & Hot Aisle Containment Systems yields industry leading cooling efficiency performance

**Advantages:**
- Significantly more efficient than traditional CRAC based cooling
- Free-cooling capability is considerably higher than CRAC units (<= $14^0$ C)
- Eliminates raised floor requirement
- Water based cooling – A totally Green IT
- Industry leading cooling capacity up to 60kW

Cooling
up to
**60 kW**
Capacity
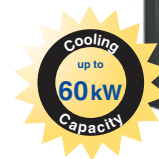
## Side Cooler

- The perfect fit to high density standalone racks where thermal load exceeds 30 kW or for small computer server rooms where infrastructure is limited for necessary expansions
- Highly efficient for small to medium size enterprises, institutions and branch offices
- Side cooling system is a chilled-water based solution that is fully integrated to one or either side of IP protected racks and provides individual or standalone rack cooling up to 30 kW
- One side cooling system can serve up to three server cabinets with 10kW thermal load each

**Advantages:**
- Ideal for high density server racks and small datacenters
- Individual and standalone rack cooling capacity up to 30kw
- Water based cooling – A totally Green IT
- Eliminates raised floor requirement
- Free-cooling capability is significantly higher than CRAC cooling systems, for ambient temperatures below $14^0$ C

Cooling
up to
**30 kW**
Capacity
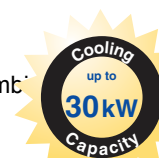
## All-in-one Compact Datacenter

**Cabinet**

**Side Cooling System**
Air or Water Cooling system

**Modular UPS**

**IP PDU**

**1U Fire Extinguisher System with Novec™1230**

**Cable Partitions**

**Environmental Monitoring System**

Outdoor Unit

Chiller

Air Flow Sensor

Liquid Sensor

Humidity Sensor

Smoke Sensor

Door Contact

Temperature

Environmental Monitoring System

Structured Cabling Cable Partitions

1U Fire Extinguisher System with Novec 1230

IP PDU

Modular UPS

CANOVATE®
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Air Flow Sensor

Humidity Sensor

Door Contact

Liquid Sensor

Smoke Sensor

Temperature

Cooler

Environmental
Monitoring System

1U Fire Extinguisher System
with Novec1230

Moduler UPS

IP PDU

## Compliance Statement No. 2012-217

EC VERIFIED

DELTA — We help ideas meet the real world

**Connecting Hardware, Category 5e**

**Company**
CANOVATE Elektronik Endüstri TIC. AS
Ekşioğlu Mah. Atabey Cad. No:12
Çekmeköy
Istanbul, TR 34794
Turkey

**Product description**
Unscreened Category 5e RJ45 Keystone Jack characterised up to 100 MHz, 100 Ω

**Product identification**
KU0-JM-U-C5E-180-1
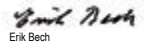
**Generic cabling and cabling components standards - Category 5e connector requirements**
- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 60603-7-2:2010 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI/TIA-568-C.2:2009

| Technical report | EC Cabling product ID | Certificate valid until |
|---|---|---|
| DELTA-T203231-01, DANAK-19/12247 | 5550, 5551 | 11 July 2013 |

This product has been tested by EC Cabling Group of DELTA and complies with the electrical requirements of the above specified standards and "Terms and conditions for use of the EC VERIFIED marking on generic cabling products", DQP231006. The testing included measurement of NEXT with a compliant test plug and calculation of all the 9 test cases in both measurement directions. The product takes part in a maintenance of certification schedule, which implies that DELTA EC Cabling performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis once a year.

Hørsholm, 11 July 2012

Erik Bech
Test Manager

Claude Videt
Project Manager

**DELTA**
Venlighedsvej 4     Tel. +45 72 19 40 00
2970 Hørsholm     Fax +45 72 19 40 01
Denmark     www.madebydelta.com/cable

TEST Reg. no. 19

## Compliance Statement No. 2012-218

EC VERIFIED

DELTA — We help ideas meet the real world

**Connecting Hardware, Category 6**

**Company**
CANOVATE Elektronik Endüstri TIC. AS
Ekşioğlu Mah. Atabey Cad. No:12
Çekmeköy
Istanbul, TR 34794
Turkey

**Product description**
Unscreened Category 6 RJ45 Panel characterised up to 250 MHz, 100 Ω

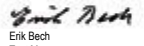**Product identification**
KU0-0-PP1U24-C6-R45-2

**Generic cabling and cabling components standards - Category 6 connector requirements**
- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 60603-7-4:2010 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI/TIA-568-C.2:2009

| Technical report | EC Cabling product ID | Certificate valid until |
|---|---|---|
| DELTA-T203231.02, DANAK-19/11248 | 5552 | 11 July 2013 |

This product has been tested by EC Cabling Group of DELTA and complies with the electrical requirements of the above specified standards and "Terms and conditions for use of the EC VERIFIED marking on generic cabling products", DQP231006. The testing included measurement of NEXT with a compliant test plug and calculation of all the 14 test cases in both measurement directions. The product takes part in a maintenance of certification schedule, which implies that DELTA EC Cabling performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis once a year.

Hørsholm, 11 July 2012

Erik Bech
Test Manager

Claude Videt
Project Manager

**DELTA**
Venlighedsvej 4     Tel. +45 72 19 40 00
2970 Hørsholm     Fax +45 72 19 40 01
Denmark     www.madebydelta.com/cable

TEST Reg. no. 19

## Compliance Statement No. 2012-219

EC VERIFIED

DELTA — We help ideas meet the real world

**Connecting Hardware, Category 6**

**Company**
CANOVATE Elektronik Endüstri TIC. AS
Ekşioğlu Mah. Atabey Cad. No:12
Çekmeköy
Istanbul, TR 34794
Turkey

**Product description**
Unscreened Category 6 RJ45 Keystone Jack characterised up to 250 MHz, 100 Ω

**Product identification**
KU0-JM-U-C6-180-1

**Generic cabling and cabling components standards - Category 6 connector requirements**
- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 60603-7-4:2010 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI/TIA-568-C.2:2009

| Technical report | EC Cabling product ID | Certificate valid until |
|---|---|---|
| DELTA-T203231-03, DANAK-19/12249 | 5553 | 11 July 2013 |

This product has been tested by EC Cabling Group of DELTA and complies with the electrical requirements of the above specified standards and "Terms and conditions for use of the EC VERIFIED marking on generic cabling products", DQP231006. The testing included measurement of NEXT with a compliant test plug and calculation of all the 14 test cases in both measurement directions. The product takes part in a maintenance of certification schedule, which implies that DELTA EC Cabling performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis once a year.

Hørsholm, 11 July 2012

Erik Bech
Test Manager

Claude Videt
Project Manager

**DELTA**
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2970 Hørsholm     Fax +45 72 19 40 01
Denmark     www.madebydelta.com/cable

TEST Reg. no. 19

## Compliance Statement No. 2012-286

EC VERIFIED

DELTA — We help ideas meet the real world

**Data communication cable, Category 6**

**Company**
CANOVATE Elektronik Endüstri TIC. AS
Ekşioğlu Mah. Atabey Cad. No:12
Çekmeköy
Istanbul, TR 34794
Turkey

**Product description**
Unscreened cable (U/UTP) characterised up to 250 MHz
Horizontal floor wiring cable, 100 Ω
4 twisted pairs
Flame retardant, halogen free

**Product identification**
Cat. 6 UTP Cable, LSZH (Grey), 305m reel

**Generic cabling and cabling components standards - Category 6 cable requirements**
- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 61156-5:2009 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- EN 50288-6-1:2003
- ANSI/TIA-568-C.2:2009

**Standards for flammability, halogen acidity, and smoke performance**
- IEC 60332-1-[1,2]:2004
- IEC 60754-[1,2]
- IEC 61034-[1,2]

| Technical report | EC Cabling product ID | Certificate valid until |
|---|---|---|
| DELTA-T203675, DANAK-19/12425 | 5569 | 17 September 2013 |

This product has been tested by EC Cabling Group of DELTA and complies with the requirements of the above specified standards and "Terms and conditions for use of the EC VERIFIED marking on generic cabling products", DQP231006. The product takes part in a maintenance of certification schedule, which implies that EC Cabling performs a quality audit of the manufacturer's production and QA sites. The maintenance testing of the product is performed on a sample basis.

Hørsholm, 17 September 2012

Erik Bech
Test Manager

Claude Videt
Project Manager

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TEST Reg. no. 19

## Intertek

3933 US ROUTE 11, CORTLAND, NEW YORK 13045
Phone Number: 1-800-345-3851    Fax Number: 607-758-3648

### REPORT OF TEST

RENDERED TO:

Canovate Elektronik
Turgut Ozal Cad. No:4
Alemdag Cekmekoy-Istanbul
Turkey

The product described in this Report was tested and examined by Intertek for compliance to the standard listed below. The products listed below are not part of an Intertek ETL SEMKO Verification Program. The results are provided to the client as a one time performance test and shall not be utilized to imply compliance to the standard as part of an on-going program.

Reference Intertek Report No.: 3154741CRT-001a          Dated: June 30, 2008

Model Number(s): H03-0251X

Description: 25 Pairs, 24 AWG, F/UTP, Non-Plenum Riser, Backbone, Telecommunications Cable

The tests, test methods, and results of tests, compiled in the referenced report are in compliance with the following specification:

Standard:

CEI/IEC 61156-4 Mulicore and symmetrical pair/quad cables for digital communications – Part 4 Riser cables, Second edition 2003-04

Conclusion:

The Category 3 Cable, as previously described and supplied by the client was tested in accordance with the procedures contained in CEI/IEC 61156-4, Mulicore and symmetrical pair/quad cables for digital communications – Part 4 Riser cables, Second edition 2003-04. The sample did comply with applicable transmission requirements. The testing was performed at Intertek located in Cortland, New York.

Approved By:

Antoine Pelletier
Engineer
Global Cabling Products Testing

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## BUREAU VERITAS Certification

### Certification

Awarded to

**CANOVATE ELEKTRONİK ENDÜSTRİ VE TİCARET A.Ş.**

ALEMDAĞ MERKEZ MAH. TURGUT ÖZAL CAD. NO: 4
ÇEKMEKÖY, İSTANBUL, TURKEY

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

### ISO 9001:2008

Scope of supply

DESIGN, MANUFACTURING, SALES AND AFTER SALES SUPPORT OF DATACENTER SOLUTIONS/SYSTEM ROOM HARDWARE, FIBER OPTIC TRANSMISSION AND ACCESS SYSTEMS, FTTX SOLUTIONS, FIBER OPTIC PATCH PANELS, OUTDOOR CABINETS, 19" FLOOR STANDING CABINETS, 19" WALL MOUNT CABINETS, 19" CABINET ACCESSORIES, SUBRACKS, SMART POWER DISTRIBUTION UNITS, COOLING SYSTEMS, ENVIRONMENTAL MONITORING SYSTEMS, SALES AND AFTER SALES SUPPORT OF IP KVM SYSTEMS, STRUCTURED CABLING PRODUCTS, UPS, RF CABLE AND ACCESSORIES

Original Approval Date: 05 JULY 2010

Certificate Number: TR31241          Date: 05 JULY 2010

MAHMUT GENÇ
Certification Manager

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## Compliance Statement

We help ideas meet the real world

### No. 2005-001 - Class E Channel

Company
Canovate Elektronik Endustri Ticaret A.S.
Turgut Ozal Bulvari No:4
Alemdar, Istanbul, TR 34794
Turkey

Channel Identification (4 connector model)

85 metres of horizontal cable:
Canovate A.S. UTP 4PR 24AWG CAT.6 Cable  ID Code: CCC-6U-1-1

2x5, 4 and 1 metres flexible cable:
Canovate A.S. UTP 4PR 24AWG CAT.6 Patch Cable  ID Code: CPC-6-(x)U-(xx)M-1

Plug:
Canovate A.S. CAT.6 UTP Plug  ID Code: CP-RJU-8P

Wall Outlet:
Canovate A.S. CAT.6 UTP Wall Outlet w/RJ45 CJ-KSU-8P Jack  ID Code: C(xx)-6U(x)1-1

Patch Panel:
Canovate A.S. CAT.6 UTP Patch Panel  ID Code: CPP(x)-HU-(xx)-6

Generic cabling standards, cabling components standard
• ISO/IEC 11801 2nd edition: 2002
• EN 50173-1:2002
• ANSI/EIA/TIA-568-B.2-1

Technical report
DELTA-E311866, DANAK-19/1366

This product has been tested by the EC (European Cabling) group of DELTA and complies with the electrical requirements of the above specified standards. Furthermore, it complies with "Terms and conditions for use of the EC VERIFIED marking on generic cabling products", DQP 231006, version 13, 26 July 2004. The product takes part in a maintenance of qualification schedule, which implies that the EC (European Cabling) group performs a sample test of the product once a year. The certificate is valid until 3 January 2006.

DELTA
Danish Electronics,
Light & Acoustics

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2970 Hørsholm
Denmark

Tel. (+45) 72 19 40 00
Fax (+45) 72 19 40 01
www.delta.dk

Hørsholm, 3 January 2005

Erik Bech
Test Manager

Ole Christensen
Project Manager

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## Certificate of Compliance

Certificate Number: 160587 - E303940          Page 1 of 2
Report Reference: E303940, May 5th, 2006
Issue Date: 2010 May 16

### Underwriters Laboratories Inc.

Issued to:   CANOVATE ELEKTRONIK ENDUSTRI TIC A S
TURGUT OZAL BULVARI 4
34794 TURKEY

This is to certify that representative samples of   **Enclosure and Racks System**
Information Technology & Communication (ITC) Equipment Cabinet.
Model CAN-FS-428X, where X can be 6, 8 or 1
See Addendum for Model Differences

Have been investigated by Underwriters Laboratories Inc.® (UL) or any authorized licensee of UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:   UL 60950-1: Safety of Information Technology Equipment – Part 1: General Requirements
CSA-C22.2 No. 60950-1-03 - Safety of Information Technology Equipment - Part 1: General Requirements

Additional Information:   Not Applicable

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes the UL in a circle symbol with "C" and "US" identifiers, the word "LISTED", a control number (may be alphanumeric) assigned by UL, and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product

Issued by:   Wondwossen Alemayehu, Project Engineer
UL International India Sel

Reviewed by:   Martin Brooks, Staff Engineer
UL International India Sel

# Structured Cabling Solutions

**CANOVATE®**