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Communication Markets Division

# 3M™ Category 5e Copper Structured Cabling System

3M™ RJ45 Category 5e Jacks UTP

3M™ Copper Patch Cords

3M™ Copper Patch Panels

3M™ Faceplates & Wall Outlets

3M™ Copper Cable

# 3M™ RJ45 Category 5e Jacks

3M Category 5e copper interconnect products work together to provide an easy-to-use solution for deploying high-speed connections throughout a building. The 3M™ RJ45 Jack is a key component in this system.

The jack's two cable entry points help make installation simple. The traditional one-click design enables an easy, tool-less termination on cables, meeting industry performance standards.



Feature	Benefit
<b>Tool-less jack</b>	Easy and quick to install. Fast, reliable connection. All 8 copper conductors are wired in a single operation. Quality of connection by design: just listen for the click.
<b>Two cable entry points</b>	Easier cable management. More space and flexibility to ensure the cable minimum bend radius is not compromised. Enables a cable routing options. Easy to use in tight spaces. Just one product for many applications
<b>Reusable</b>	If a wiring mistake is made, there is no need to use a new jack, which means virtually no wasted inventory.
<b>Clip-in mounting</b>	RJ45 modular jack design can fit many other accessories on the market using the standard clip-in mounting.
<b>Accepts solid and stranded conductors</b>	Compatible with many cables on the market and enables "jack to plug" cables to be manufactured using stranded conductors (for use in open office architectures).
<b>Integral shutter</b>	Increased dust protection, especially during installation or in a dirty environment. No additional shuttering required on faceplates.

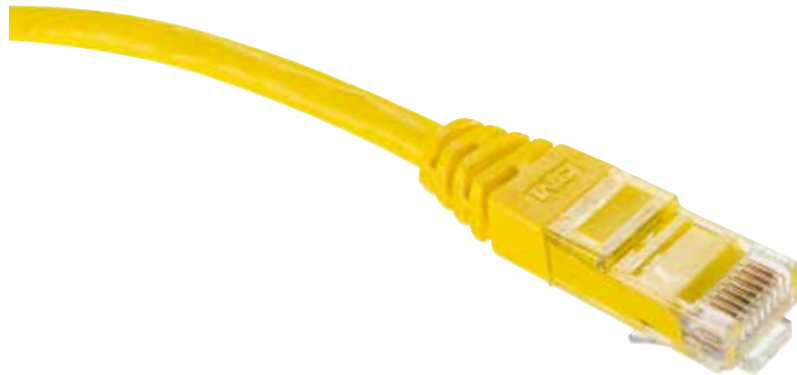
Specifications	
<b>Standards compliance</b>	Use in permanent links with dedicated cable types results in compliance to Category 5e requirements for ISO 11801:2011 or EN 50173-1:2011 and TIA 568-C.2:2009
<b>Electrical performance</b> Operating voltage Lead through resistance Insulation resistance	< 75 VDC < 200 mΩ > 500 MΩ
<b>Environmental compliance</b> Operating temperature	-10° C to 60° C (14° F to 140° F)
<b>Mechanical specifications</b> Conductor diameter  Max. diameter of wire insulation Protection contacts	Solid wires: 0.50 to 0.65 mm (AWG 22-24) Stranded wires: 7 × 0.15 to 2.0 mm  1.6 mm 0.5 μm in contact zone

### 3M™ RJ45 Jack Ordering Information

Product Number	Description	3M ID	Min. Order
VOL-OCK5E-UV	3M RJ45 Cat. 5e UTP Jack, UTP, white	FQ-1000-2072-3	6 bags of 8 each
VOL-OCK5E-U8	3M RJ45 Cat. 5e UTP Jack, UTP, white	FQ-1000-2930-2	1 bulk pack of 480
VOL-OCK5E-U-BL	3M RJ45 Cat. 5e UTP Jack, UTP, blue	FQ-1000-2713-2	6 bags of 8 each
VOL-OCK5E-U-R	3M RJ45 Cat. 5e UTP Jack, UTP, red	FQ-1000-2715-7	6 bags of 8 each
VOL-OCK5E-U-Y	3M RJ45 Cat. 5e UTP Jack, UTP, yellow	FQ-1000-2716-5	6 bags of 8 each
VOL-OCK5E-U-BK	3M RJ45 Cat. 5e UTP Jack, UTP, black	FQ-1000-2717-3	6 bags of 8 each

# 3M™ Category 5e Copper Patch Cords

Hardware compliant 3M Copper Patch Cords help enable you to complete your network to Category 5e according to Category 5e requirements. They are constructed with UTP stranded cable, LSZH rated or PVC jacket and protected latch to ensure durability. These patch cords are available in a variety of lengths and colors for easy cable management and administration.



Feature	Benefit
“Snag-less” boot protects latch	Better mechanical protection helps prevent breaks so the cords last longer
Various lengths and colors	Options to complete systems to your requirements
Low smoke zero halogen cable	Meets flame requirements for low flammability and low toxicity

Specifications	
<b>Standards</b>	ANSI/TIA 568-C.2 ISO/IEC 11801 Edition 2.2 EN 50173-1
<b>Electrical performance</b> Cable impedance Insulation Resistance (500 V) Test Voltage (DC, 1 min) NPV (nominal) Current Rating Voltage Rating	100 Ω ≥ 500 M Ω/km 100-500 V 78% 1.5A (maximum) 75 V
<b>Environmental compliance</b> Fire performance Operating temperature Transport and storage temperature	IEC 60332-1, IEC 61034-2, IEC 60754-1, IEC 60754-2 20°C to 60°C 0°C to 50°C
<b>Mechanical specifications</b> Cable diameter (OD) Copper diameter Minimum bend radius	5.50 +/- 0.30 (mm) Wire gauge AWG 27 (0.36 mm) Static bending: 4xOD Dynamic bending: 8xOD

### 3M™ Category 5e Copper Patch Cords (24 AWG, UUTP)

Product number	Jacket	Colour	Length	MOQ Order Increment each	3M ID	Order ID
Cat. 5e 100 OHMS Patch Cord	LSZH	Black	1	12	FQ-1000-7308-6	7000079088
Cat. 5e 100 OHMS Patch Cord	LSZH	Black	2	12	FQ-1000-7309-4	7000079089
Cat. 5e 100 OHMS Patch Cord	LSZH	Black	3	12	FQ-1000-7310-2	7000079090
VOL5EUDLL1G	LSZH	Grey	1	12	UU-0080-7397-3	7100105113
VOL5EUDLL2G	LSZH	Grey	2	12	UU-0080-7398-1	7100105114
VOL5EUDLL3G	LSZH	Grey	3	12	UU-0080-7399-9	7100105115
VOL5EUDLL5G	LSZH	Grey	5	6	UU-0080-7400-5	7100105093
Cat. 5e 100 OHMS Patch Cord	LSZH	Grey	10	2	FQ-1000-7162-7	7000079023
VOL5EUDPL1G	PVC	grey	1	12	UU-0080-7419-5	7100105120
VOL5EUDPL2G	PVC	grey	2	12	UU-0080-7420-3	7100105034
VOL5EUDPL3G	PVC	grey	3	12	UU-0080-7441-9	7100105121
VOL5EUDPL5G	PVC	grey	5	6	UU-0080-7442-7	7100105122

# 3M™ Patch Panels

3M™ Copper Patch Panels are modular and provide an aesthetically pleasing solution for housing modular jacks. These lightweight, aluminum panels are compatible with 3M™ RJ45 Jacks as well as typical industry accepted modular jacks. The classic version include a cable strain relief tray and earth connection point. The Eco panels are a simple version, without earth connection point to use with racks with integral cable management. In the classic version the panel automatically provides earth connection to FTP or STP jacks upon insertion into patch panel. The panels include screws, cage nuts and cable ties. Port blanking and colored identification caps are available. The range includes a patch cord management panel with five management rings.



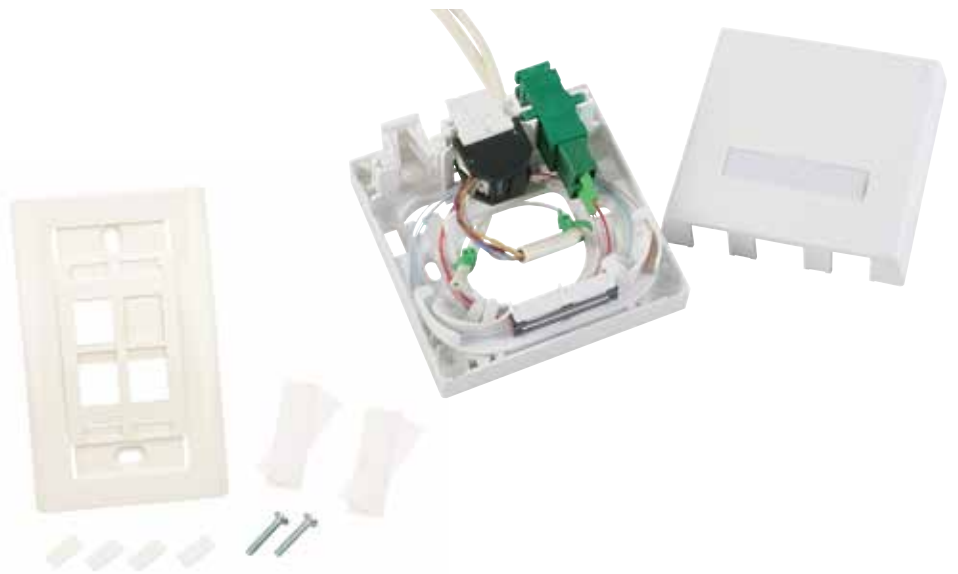


### 3M™ Copper Patch Panels Ordering Information

Product Number	Description	3M ID	Order ID
VOL-PPCB-F16-K	16 ports, 19" x 1U x 100 mm, black aluminum	UU-0016-2287-5	7100053785
VO-LPPC-BV-16K	16 ports, 19" x 1U x 100 mm, black aluminum with locking system	UU-0016-2294-1	7100053855
VO-LPPC-AF-16K	16 ports, 19" x 1U x 100 mm, brushed aluminum	UU-0016-2291-7	7100053852
VOL-PPUD-F16-K	16 ports, 19" x 1U x 11 mm, black aluminum, Eco version, UTP only	UU-0016-2285-9	7100053857
VOL-PPCB-F24-K	24 ports, 19" x 1U x 100 mm, black aluminum	UU-0016-2288-3	7100053859
VOL-PPCB-V24-K	24 ports, 19" x 1U x 100 mm, black aluminum with locking system	UU-0016-2295-8	7100053951
VOL-PPCA-F24-K	24 ports, 19" x 1U x 100 mm, brushed aluminum	UU-0016-2270-1	7100054000
VOL-PPUD-F24-K	24 ports, 19" x 1U x 11 mm, black aluminum, Eco version, UTP only	UU-0016-2286-7	7100053858
VOL-PPCB-F32-K	32 ports, 19" x 2U x 118 mm, black aluminum	UU-0016-2289-1	7100053786
VOL-PPCA-F32-K	32 ports, 19" x 2U x 118 mm, brushed aluminum	UU-0016-2292-5	7100053853
VOL-PPCB-HD-F32K	32 ports, 19" x 1U x 118 mm, black aluminum, high density	UU-0016-2296-6	7100053856
VOL-PPCB-F48-K	48 ports, 19" x 2U x 118 mm, black aluminum	UU-0016-2290-9	7100053851
VOL-PPCA-F48-K	48 ports, 19" x 2U x 118 mm, brushed aluminum	UU-0016-2293-3	7100053854
VOL-PPCB-A24K	24 ports, 19" x 1U x 171 mm, angled, black aluminum (91 mm back depth, 80 mm front depth)	DE-6200-4578-6	7000145715
VOL-P334-10-AA	19" 1U patch cord management panel with 5 plastic rings, black steel	FQ-1000-2224-0	7100023170
VOL-0300	Blank port insert, white	80-6110-2039-9	7000058532
VOL-0300BK	Blank port insert, black	80-6110-2073-8	7000058535
VOL-PCC-B	Blue port cap for RJ45 patch panel (bag of 8)	FQ-1000-2061-6	7000078622
VOL-PCC-Y	Yellow port cap for RJ45 patch panel (bag of 8)	FQ-1000-2062-4	7000078623
VOL-PCCR	Red port cap for RJ45 patch panel (bag of 8)	FQ-1000-2063-2	7000078624
VOL-PCC-G	Green port cap for RJ45 patch panel (bag of 8)	FQ-1000-2064-0	7000078625
VOL-PEC-B	Blue port cap and label holder for RJ45 patch panel (bag of 8)	XS-0038-7364-2	7000110616
VOL-PEC-R	Red port cap and label holder for RJ45 patch panel (bag of 8)	XS-0038-7369-1	7000110617
VOL-PEC-Y	Yellow port cap and label holder for RJ45 patch panel (bag of 8)	XS-0038-7370-9	7000110618
VOL-PEC-G	Green port cap and label holder for RJ45 patch panel (bag of 8)	XS-0038-7371-7	7000110619

# 3M™ Faceplates & Outlets

3M™ Faceplates are compatible with most electrical wall boxes and are available in 2-port and 4-port versions. These faceplates fit common European dimensions and are compatible with 3M™ RJ45 Modular Jacks. Port icons for port identification as well as label windows are included in some products.



## 3M™ Faceplates & Wall Outlets Ordering Information

Product Number	Description	3M ID	Order ID
VOLFPUK-1K	RJ45 Faceplate single gang UK, 1 port, White, 86 × 86 mm	XF-0038-4920-5	7000107398
VOLFPUK-2K	RJ45 Faceplate Single gang UK, 2 port, White, 86 × 86 mm	XF-0038-4921-3	7000107399
FP4MF1KND	Modular faceplate for 1 RJ45 connector, 45 × 45 mm, translucent	FQ-1000-7780-6	7000079176
FP4MF2KND	Modular faceplate for 2 RJ45 connectors, 45 × 45 mm, translucent	FQ-1000-7779-8	7000079175
FP4MF1KNDA	Modular faceplate for 1 RJ45 connector, 45 × 45 mm, aluminum	FQ-1000-7969-5	7000079250
FP4MF2KNDA	Modular faceplate for 2 RJ45 connectors, 45 × 45 mm, aluminum	FQ-1000-7970-3	7000079251
FP4MF1KW	Modular faceplate for 1 RJ45 connector, 45 × 45 mm, white	FQ-1000-8136-0	7000079331
FP4MF2KW	Modular faceplate for 2 RJ45 connectors, 45 × 45 mm, white	FQ-1000-8137-8	7000079332
60-516-10425	Modular faceplate for 1 RJ45 connector, 50 × 50 mm, white	DE-6200-4553-9	7000063454
60-516-10525	Modular faceplate for 2 RJ45 connectors, 50 × 50 mm, white	DE-6200-4554-7	7000063455
FP4MF1KI	Angled faceplate for 2 RJ45 connectors, 45 × 45 mm, white	FQ-1000-3100-1	7000078791
FP4MF2KI	Angled faceplate for 1 RJ45 connector, 45 × 45 mm, white	FQ-1000-3101-9	7000078792
FP4MF2K	Modular faceplate for 2 RJ45 connectors, 22.5 × 45 mm, white	FQ-1000-7977-8	7000033711
FP2MF1K	Modular faceplate for 1-click 2 RJ45 jack, 22.5 × 45 mm, white	FQ-1000-7864-8	7000033701
N/A	RJ45 ECO front faceplate 45 × 45 mm, 1 port	FQ-1000-8452-1	7100032937



# 3M™ Copper Cable

3M 4-pair Copper Cable is high performing, compliant with IEC 61156-5:2013 (ed. 2.1) and EN 50288-10-1: 2012. Category 5e FTP cable is made up of 4 pairs of color coded solid copper wires, surrounded by a polyester backed aluminum foil and an outer fire retardant jacket. The cable meets industry standards for low voltage networks to transfer voice, data and video signals. Applications include IEEE 802.3 standards for 10 Mb to 1 Gb networks.

## 3M™ Copper Cable Specifications

<b>Application</b>	IEEE 802.3: 1000BASE-T; 100BASE-TX; 10BASE-T IEEE 802.3af – PoE; IEEE 802.3at - PoE+ 155 / 622 Mb/s ATM
<b>Typical properties</b>	
Conductor diameter Insulation diameter Separator Cable assemblies Sheath material Weight	AWG 24 Min: Pe 0.85 mm None 1x4 pairs LSZH or PVC Max: 30 kg/km
<b>Mechanical features</b>	
Cable outer diameter	Max: 5.20 mm
<b>Bending radius</b>	
Dynamic (installation) Static (installed)	8x outer diameter 4x outer diameter
<b>Temperature range:</b>	
In service Installation/transport/storage Max. pulling tension	-20°C to + 60°C 0°C to + 50°C 80N
<b>Electrical features (@ 20°C ± 5°C)</b>	
DC resistance (max) Resistance unbalance (max) Insulation resistance (500 V) Mutual capacitance (nominal) Test voltage (DC, min) Capacitance unbalance max (pair to ground) NVP (nominal) Coupling attenuation @100MHz	9.5Ω / 100m @ 20°C 2% @ 20°C 5000 MΩ.km @ 20°C No requirement specified 1 kV / 1 min 160 pF/ 100m @ 1 kHz 66% ≥ 40 dB (TYPE 3)
<b>Directive/Standard</b>	
Cable Cabling system standard	IEC 61156-5 / EN 50288-3-1 ISO 11801 2. ed / EN 50173-1 / TIA 568-C.2
Directive ROHS LVD	2011/65/EU (RoHS2) LVD 2006/95/EC
PVC Fire Rating	IEC 60332-1
LSZH Smoke Gas/toxicity	EN / IEC 61034-2 IEC 60754-2 / IEC 60754-1

## 3M™ Copper Cable Ordering Information

Product Number	Description	Color	Length
VOL-5EUP4-305	Cat. 5e Cable (100 ohms U/UTP, PVC, 4 pairs, 24 AWG)	Grey	305 m
VOL-5EUP4-305G	Cat. 5e Cable (100 ohms U/UTP, PVC, 4 pairs, 24 AWG)	Grey	305 m
VOL-5EUL4-305	Cat. 5e Cable (100 ohms U/UTP, LSZH, 4 pairs, 24 AWG)	Green	305 m

Additional lengths and colors of cable available upon request.

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**Communication Markets Division**

6801 River Place Blvd.  
Austin, TX 78726-9000 USA

Phone 1-800-426-8688  
Fax 1-800-626-0329  
Web 3M.com/Telecom

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