

BEST CONTACTS FOR YOUR SUCCESS



**Telegärtner**

KARL GÄRTNER GMBH

---

NETWORKING COMPONENTS

---

COAXIAL CONNECTORS

---

CABLE ASSEMBLIES

---

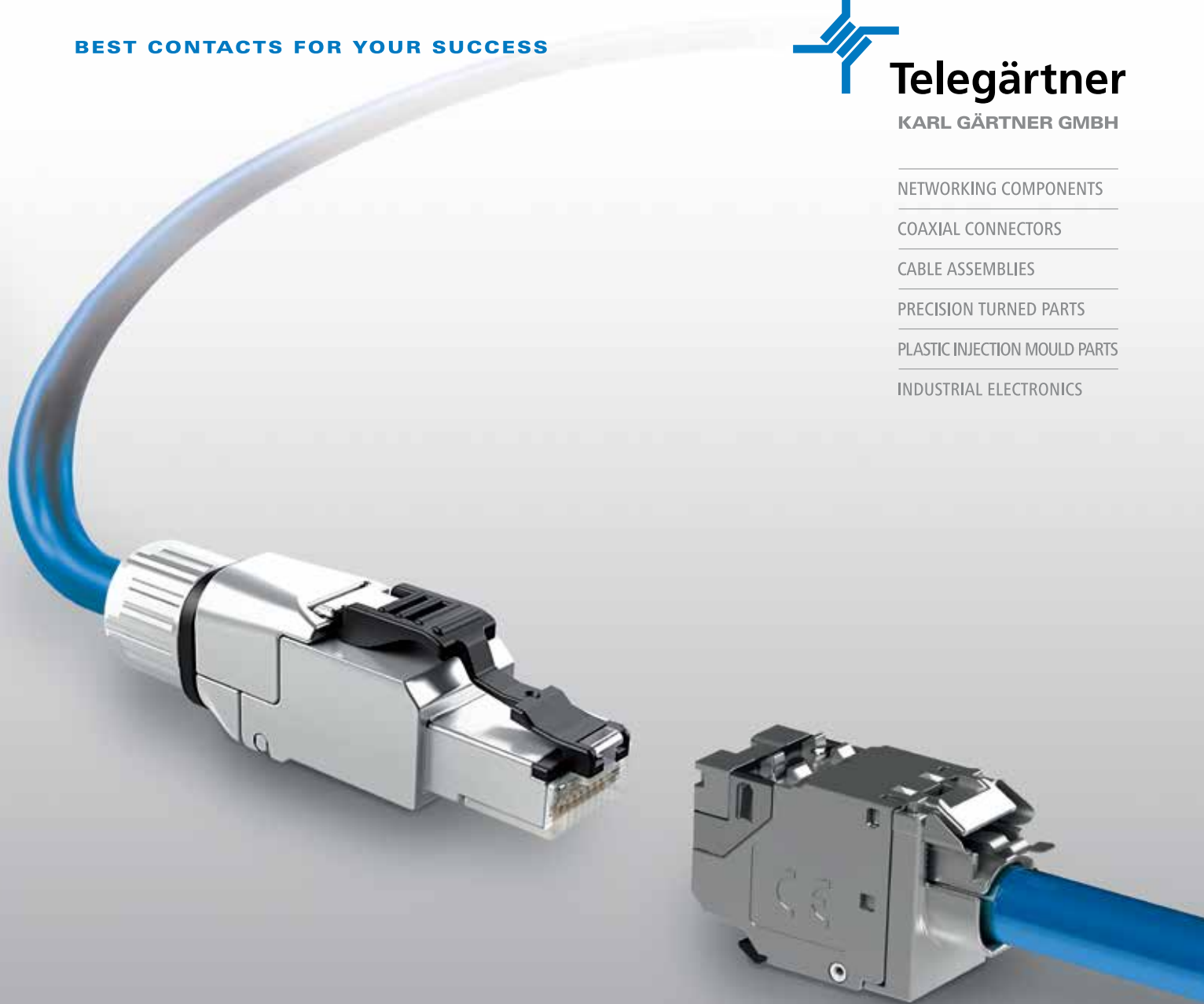
PRECISION TURNED PARTS

---

PLASTIC INJECTION MOULD PARTS

---

INDUSTRIAL ELECTRONICS



DataVoice

**AMJ Module Cat.8.1 & MFP8 Cat.8.1**

Solutions for Permanent Link and Channel Class I

# New networks need new categories

The trend to ever-higher transmission rates is growing due to rapidly increasing use of intelligent mobile devices. That puts more and more pressure on backbone networks and data centres to handle a literal flood of data. The required latency of future applications such as in traffic infrastructure and its inherent traffic leads to a situation where data rates of ten gigabits per second offered by the 10GBASE-T variant of Ethernet are in many cases simply no longer sufficient.

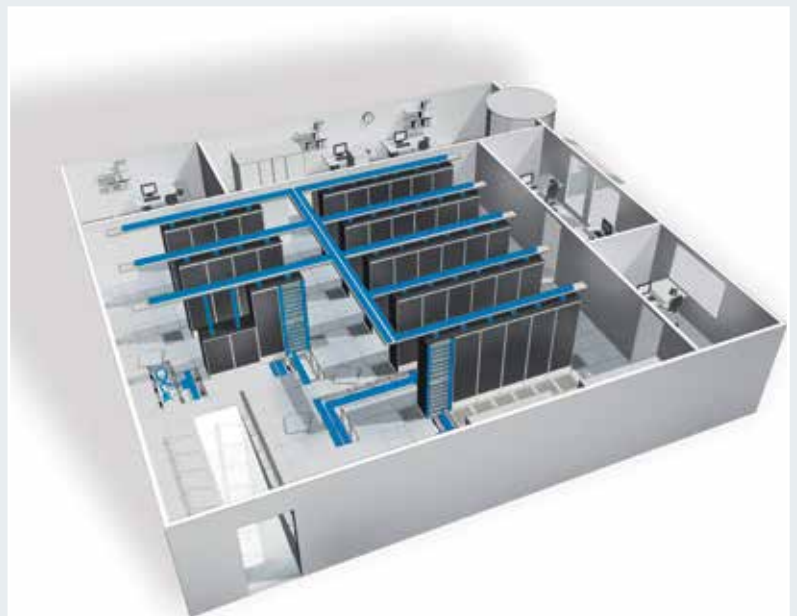
The IEEE (Institute of Electrical and Electronics Engineers) in response to these needs has developed new variants of Ethernet such as 25GBASE-T with 25 Gbit/s and 40GBASE-T with 40 Gbit/s using copper twisted-pair-cabling. Due to the more stringent requirements on insertion loss budget, the link length becomes limited to a maximum of only 30 metres. Therefore, both new Ethernet variants are primarily designed for data centres, server rooms, and connections between switches.

The correlating standards for cabling infrastructure and its components have been developed and published in unison with the transmission channels of IEEE. The new formed Category 8.1 as a successor of Category 6<sub>A</sub> sets high requirements on the performance characteristics of the passive cabling components. The connector specification acc. IEC 60603-7-81 now includes specifications up to 2000 MHz for amongst others insertion and return loss, near end and far end crosstalk attenuation (NEXT, FEXT) with still a backwards compatibility to existing categories respectively products of former categories such as

Cat.6<sub>A</sub>, Cat.6 or Cat.5.

Components according to Category 8.1 form a Permanent Link of max. 24 m, together with two patch cords of max. 3 m, a Channel Class I (30 m) is set up.

The direct connection of devices (Direct Attach, or end-to-end link) is also supported. In this case, the devices, for example a switch and a server, are connected directly by the cable with field assembly plugs at both ends.



## Connecting Components according ISO/IEC Class I

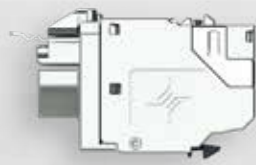
The all new field-assembly keystone jack **AMJ Module Cat.8.1 T568A/B** acc. to IEC series 60603-7 (RJ45 8P8C) features a robust zinc diecast housing with 360° shielding for secure data transmission regardless of outside electrical interference. Its slim and at the same time extremely short housing with keystone mounting dimensions allows easy installation in all kinds of applications. Solid conductor cables can be easily terminated in the field with IDCs suitable for AWG23/1 - 22/1 with no special tools. The AMJ Module Cat.8.1 comes with a multi-level strain relief and shield connection for easy adaptation to various cable outer diameter.

Equipotential bonding is child's play with the use of pre-assembled bonding cables using flat connection 2.8 mm. An integrated protective cap is part of scope of delivery, too.

In addition to the AMJ Module Cat.8.1, Telegärtner is also launching the field-assembly cable plug **MFP8 Cat.8.1** for building direct-attach links in-between electronic devices or for the assembly of patch cords.

The fully-shielded housing made of zinc diecast offers a cable strain relief suitable for cable outer diameter from 5.5 - 10.0 mm and can be assembled onto horizontal or patch cable of Category Cat.8.1/Cat.8.2 with solid or stranded conductors such as AWG27/7 - 22/7 or AWG26/1 - 22/1 with no need for any special tools.

As of now, with the help of both cabling products network installations according to ISO/IEC 11801-1 Class I can be carried out in order to support upcoming applications such as 25GBase-T respectively 40GBase-T.



## AMJ Modul Cat.8.1

RJ45 module featuring full-metal cable clamp.

Most suited for assembly with installation cables Cat.8.1/Cat.8.2



## MFP8 Cat.8.1

RJ45 plug featuring full-metal cable strain relief.

Most suited for assembly with installation or patch cables Cat.8.1/Cat.8.2

### Technical data AMJ Module Cat.8.1

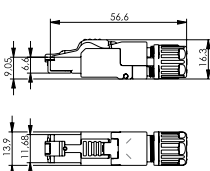
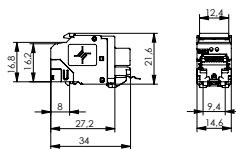
- Category 8.1/Class I acc. ISO/IEC 11801-1
- Connector acc. IEC 60603-7 series RJ45 8P8C
- 25/40GBase-T acc. IEEE 802.3bq
- backward compatible to Class E<sub>A</sub> acc. ISO/IEC 11801-1 (Permanent link up to 90 m and Channel up to 100 m)
- Life ≥ 750 mating cycles
- Shielding housing material: die-cast nickel-plated zinc
- Outer diameter: 6 - 10 mm
- Temperature range: -40°C to 70°C
- Power over Ethernet plus (PoE+) acc. IEEE 802.3at
- **Cu conductor diameter:**  
solid 0,54 – 0,64 mm (AWG23 – 22/1)  
core diameter: 1,0 – 1,6 mm
- IP20

### Technical data MFP8 Cat.8.1




- Category 8.1/Class I acc. ISO/IEC 11801-1
- Connector acc. IEC 60603-7 series RJ45 8P8C
- 25/40GBase-T acc. IEEE 802.3bq
- backward compatible to Class E<sub>A</sub> acc. ISO/IEC 11801-1 (Permanent link up to 90 m and Channel up to 100 m)
- Life ≥ 750 mating cycles
- Contact finish material Ni1,2Au0,8
- Shielding housing material: die-cast nickel-plated zinc
- Outer diameter: 5,5 – 10,0 mm
- **Cu conductor diameter:**  
(J00026A5005)  
solid 0,51 – 0,64 mm (AWG24/1 – 22/1)  
stranded 0,46 – 0,76 mm (AWG27/7 – 22/7)  
outer diameter: 1,0 – 1,6 mm
- **Cu conductor diameter:**  
(J00026A5007)  
solid 0,41 – 0,51 mm (AWG26/1 – 24/1)  
stranded 0,46 – 0,61 mm (AWG27/7 – 24/7)  
outer diameter: 0,85 – 1,1 mm
- Reusable IPC: ≤ 4 cycles
- Temperature range: -40°C to 85°C
- Power over Ethernet plus (PoE+) acc. IEEE 802.3at
- IP20
- Cable strain relief AF13

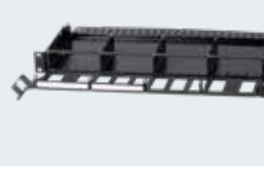



### RJ45 Components

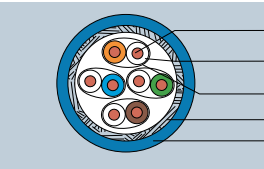
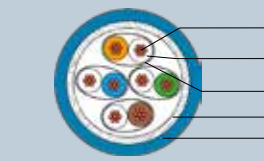


Order no.	Description	VE
J00029A8000	AMJ Module Cat.8.1 T568A/B	6 x 2 pieces in carton
J00026A5005	MFP8 T568B Cat.8.1 incl. pre-assembled protection cap AWG24 - 22/1, AWG27 - 22/7	1 / 10 in carton
J00026A5007	MFP8 T568B Cat.8.1 incl. pre-assembled protection cap AWG26 - 24/1, AWG27 - 24/7	1 / 10 in carton

Module Carrier	Order no.	Description	PU	Colour
	H02025A0167	19" Frontplate 1 HU incl. cable relief for 24 AMJ, AMJ-S Module / Couplers incl. bonding kit 0,3 m	1	light grey RAL 7035
	H02025A0220	19" Frontplate 1 HU with cable relief for 24 AMJ, AMJ-S Modules / Couplers incl. bonding kit 0,3 m	1	black
	H02025A0236	19" Frontplate 1 HU for 48 AMJ-S Modules / AMJ Modules Cat.8.1 with cable relief, w/o modules incl. bonding kit 0.3 m	1	steel zinc plated
	H52025A0000	Owl FPC 0X2B 024 Module Carrier for 24 Modules, empty	1	black

HD <sup>3</sup> Modular Patch Panels	Order no.	Description	PU	Colour
	H02030A4050	19" HD <sup>3</sup> panel 0.5 HU	0.5 HU, with 4 slots for modules 0.5 HU accepts up to 4 modules of 0.5 HU	
	H02030A4049	19" HD <sup>3</sup> panel 1 HU	1 HU, with 4 slots for modules 1 HU; accepts up to 4 modules of 1HU or 8 modules of 0.5 HU or a combination of both	
	H02032A4027	19" HD <sup>3</sup> panel 3 HU	3 HU, with 12 slots for modules 1 HU; accepts up to 12 modules of 1 HU or 24 modules of 0.5 HU or a combination of both	

HD <sup>3</sup> Modules for RJ45	Order no.	Description	PU	Colour
	H02025A4012	HD <sup>3</sup> module 1 HU for 6x RJ45 AMJ-S/AMJ Cat.8.1	Module accepts up to 6 RJ45 jacks type AMJ-S/AMJ Cat. 8.1; full height (34 mm)	
	H02025A4013	HD <sup>3</sup> module 1 HU for 8x RJ45 AMJ-S/AMJ Cat.8.1	Module accepts up to 8 RJ45 jacks type AMJ-S/AMJ Cat. 8.1; full height (34 mm)	

	Order no.	Description	PU	Colour
 <ul style="list-style-type: none"> <li>— Copper conductor</li> <li>— Insulation</li> <li>— Pair shielding</li> <li>— Overall shielding</li> <li>— Outer jacket</li> </ul>	L02002A0277	Installation cable AMJ2000 S/FTP Cat.8.2 Dca-s2,d1,a1, LSZH, 4x2xAWG23/1	1000 m	blue RAL 5012
 <ul style="list-style-type: none"> <li>— Copper conductor</li> <li>— Insulation</li> <li>— Pair shielding</li> <li>— Overall shielding</li> <li>— Outer jacket</li> </ul>	L02002A0279	Patch cable AMJ2000 S/FTP Cat.8.2 Dca-s2,d1,a1, LSZH, 4x2xAWG26/7	1000 m	blue RAL 5012

**Telegärtner**  
**Karl Gärtner GmbH**

Lerchenstr. 35  
D-71144 Steinenbronn

Phone: +49 (0) 71 57/1 25-0  
Fax: +49 (0) 71 57/1 25-5120

E-Mail: [info@telegaertner.com](mailto:info@telegaertner.com)  
Web: [www.telegaertner.com](http://www.telegaertner.com)