

Industrial RJ45 Jacks with Integrated Magnetics



Industrial RJ45 jacks with integrated magnetics offer a highly integrated connectivity solution—from the cable to the physical layer—for Industrial Ethernet. Integrating the magnetics into the jack allows for a much improved EMI noise shielding, enabling more reliable connections. A standardized portfolio with 1x1 straight and R/A, 1x2, 2x1 form factors addresses many of the industrial applications, which allows customers to find the solution they are looking for. Specific industrial requirements such as high reliability through improved corrosion resistance, extended temperature range and long product lifetime are all addressed, including support of the latest reflow soldering production processes.

KEY FEATURES

- Extended temperature range -40...+85 °C
- Minimum product life requirement of 10 years
- 260 °C reflow Pin in Paste Soldering
- Plating thickness 0,76 µm [30 µinch] gold over 1,27 µm [50 µinch] nickel
- Improved EMI integrity and signal integrity performance
- Both current and voltage mode PHY-chips supported

BENEFITS

- The standardized RJ45 jack portfolio with integrated magnetics with 1x1 straight and R/A, 1x2, 2x1 form factors addresses many of the industrial applications
- Integrated magnetics reduces the (analog) design efforts required by the customer
- Thicker gold plating (30 µinch over 50 µinch nickel) improves corrosion resistance reducing equipment electrical problems over lifetime
- TE's products (260 °C reflow capable) fit industrial assembly / solder processes without the need for an extra assembly / solder step
- Extended temperature range addresses industrial equipment requirements where standard temperature (0...70 °C) range is too limited
- Offering standardized Tape & Reel or Tray packing for fully automated or manual assembly process

APPLICATIONS

- All industrial applications requiring Ethernet
- All industrial equipment with RJ45 connectivity
- Industry Computers
- Hubs
- Routers
- Wireless access points
- PLC's
- Switches
- All Ethernet enabled equipment

ELECTRICAL

- 10/100 Base-T Ethernet, 1 Gbps
- Dielectric Withstanding Voltage: 2250 V DC
- Supports Voltage or Current mode applications

MECHANICAL

- -40...+85 °C; min. 750 mating cycles

MATERIALS

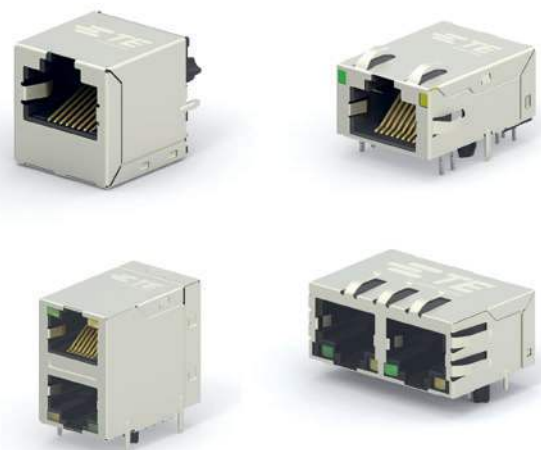
- Plating thickness 0,76 µm [30 µinch] gold over 1,27 µm [50 µinch] nickel
- UL 94 V-0
- 260 °C reflow capable
- High grade LCP (liquid crystal polymer material)

STANDARDS & SPECIFICATIONS

- IEC 60603-7-51 for 1 Gbps
- IEC 60603-7-5 for 10/100 Mbps
- Product Specification 108-94552
- Application Specification 114-94447

PRODUCT COMPLIANCE

- UL recognized
- RoHS compliant



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ORDERING INFORMATION

Description	Speed	Ports	Orientation	Tab	LEDs	Packaging	Solder Pin and Shield Length [mm]	TE PN
RJ45 JACK INT.MAG. 10/100 1x1 INV.	10/100	1	R/A	Up	No	T&R	1,9	2301994-1
RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.	10/100	1	R/A	Up	Yes	T&R	1,9	2301994-2
RJ45 JACK INT.MAG. 10/100 1x1 INV.	10/100	1	R/A	Up	No	T&R	3,0	2301994-3
RJ45 JACK INT.MAG. 10/100 1x1	10/100	1	R/A	Down	No	T&R	1,9	2301994-4
RJ45 JACK INT.MAG. 1Gb 1x1 INV.	1G	1	R/A	Up	No	T&R	1,9	2301994-5
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	T&R	1,9	2301994-6
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	T&R	1,9	2301994-7
RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.	10/100	1	R/A	Up	Yes	T&R	1,9	2301994-8
RJ45 JACK INT.MAG. 10/100 LED 1x1	10/100	1	R/A	Down	Yes	T&R	1,9	2301994-9
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	T&R	1,9	1-2301994-0
RJ45 JACK INT.MAG. 1Gb LED 1x1 INV. low	1G	1	R/A	Up	Yes	T&R	1,7	1-2301994-1
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	T&R	1,9	1-2301994-2
RJ45 JACK INT.MAG. 10/100 1x1	10/100	1	R/A	Down	No	T&R	3,0	1-2301994-9
RJ45 JACK INT.MAG. 1Gb 1x1 INV.	1G	1	R/A	Up	No	T&R	3,0	2-2301994-0
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	T&R	3,0	2-2301994-1
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	T&R	3,0	2-2301994-2
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	T&R	3,0	2-2301994-3
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	T&R	3,0	2-2301994-4
RJ45 JACK INT.MAG. 1Gb 1x1 VERT.	1G	1	Vertical	-	No	T&R	1,9	2301995-1
RJ45 JACK INT.MAG. 10/100 1x1 VERT.	10/100	1	Vertical	-	No	T&R	1,9	2301995-2
RJ45 JACK INT.MAG. 10/100 LED 1x1 VERT.	10/100	1	Vertical	-	Yes	T&R	1,9	2301995-3
RJ45 JACK INT.MAG. 1Gb LED 1x1 VERT.	1G	1	Vertical	-	Yes	T&R	1,9	2301995-4
RJ45 JACK INT.MAG. 10/100 1x2 INV.	10/100	1x2	R/A	Up	No	T&R	1,9	2301996-1
RJ45 JACK INT.MAG. 10/100 1x2	10/100	1x2	R/A	Down	No	T&R	1,9	2301996-2
RJ45 JACK INT.MAG. 1Gb 1x2 INV.	1G	1x2	R/A	Up	No	T&R	1,9	2301996-3
RJ45 JACK INT.MAG. 1Gb 1x2	1G	1x2	R/A	Down	No	T&R	1,9	2301996-4
RJ45 JACK INT.MAG. 10/100 LED 1x2 INV.	10/100	1x2	R/A	Up	Yes	T&R	1,9	2301996-5
RJ45 JACK INT.MAG. 10/100 LED 1x2	10/100	1x2	R/A	Down	Yes	T&R	1,9	2301996-6
RJ45 JACK INT.MAG. 1Gb LED 1x2 INV.	1G	1x2	R/A	Up	Yes	T&R	1,7	2301996-7
RJ45 JACK INT.MAG. 1Gb LED 1x2	1G	1x2	R/A	Down	Yes	T&R	1,9	2301996-8
RJ45 JACK INT.MAG. 10/100 1x1 INV.	10/100	1	R/A	Up	No	Tray	1,9	5-2301994-1
RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.	10/100	1	R/A	Up	Yes	Tray	1,9	5-2301994-2
RJ45 JACK INT.MAG. 10/100 1x1 INV.	10/100	1	R/A	Up	No	Tray	3,0	5-2301994-3
RJ45 JACK INT.MAG. 10/100 1x1	10/100	1	R/A	Down	No	Tray	1,9	5-2301994-4
RJ45 JACK INT.MAG. 1Gb 1x1 INV.	1G	1	R/A	Up	No	Tray	1,9	5-2301994-5
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	Tray	1,9	5-2301994-6
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	Tray	1,9	5-2301994-7

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ORDERING INFORMATION (CONTINUED)

Description	Speed	Ports	Orientation	Tab	LEDs	Packaging	Solder Pin and Shield Length [mm]	TE PN
RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.	10/100	1	R/A	Up	Yes	Tray	1,9	5-2301994-8
RJ45 JACK INT.MAG. 10/100 LED 1x1	10/100	1	R/A	Down	Yes	Tray	1,9	5-2301994-9
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	Tray	1,9	6-2301994-0
RJ45 JACK INT.MAG. 1Gb LED 1x1 INV. - low	1G	1	R/A	Up	Yes	Tray	1,7	6-2301994-1
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	Tray	1,9	6-2301994-2
RJ45 JACK INT.MAG. 10/100 1x1	10/100	1	R/A	Down	No	Tray	3,0	6-2301994-9
RJ45 JACK INT.MAG. 1Gb 1x1 INV.	1G	1	R/A	Up	No	Tray	3,0	7-2301994-0
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	Tray	3,0	7-2301994-1
RJ45 JACK INT.MAG. 1Gb 1x1	1G	1	R/A	Down	No	Tray	3,0	7-2301994-2
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	Tray	3,0	7-2301994-3
RJ45 JACK INT.MAG. 1Gb LED 1x1	1G	1	R/A	Down	Yes	Tray	3,0	7-2301994-4
RJ45 JACK INT.MAG. 1Gb 1x1 VERT.	1G	1	Vertical	-	No	Tray	1,9	5-2301995-1
RJ45 JACK INT.MAG. 10/100 1x1 VERT.	10/100	1	Vertical	-	No	Tray	1,9	5-2301995-2
RJ45 JACK INT.MAG. 10/100 LED 1x1 VERT.	10/100	1	Vertical	-	Yes	Tray	1,9	5-2301995-3
RJ45 JACK INT.MAG. 1Gb LED 1x1 VERT.	1G	1	Vertical	-	Yes	Tray	1,9	5-2301995-4
RJ45 JACK INT.MAG. 10/100 1x2 INV.	10/100	1x2	R/A	Up	No	Tray	1,9	5-2301996-1
RJ45 JACK INT.MAG. 10/100 1x2	10/100	1x2	R/A	Down	No	Tray	1,9	5-2301996-2
RJ45 JACK INT.MAG. 1Gb 1x2 INV.	1G	1x2	R/A	Up	No	Tray	1,9	5-2301996-3
RJ45 JACK INT.MAG. 1Gb 1x2	1G	1x2	R/A	Down	No	Tray	1,9	5-2301996-4
RJ45 JACK INT.MAG. 10/100 LED 1x2 INV.	10/100	1x2	R/A	Up	Yes	Tray	1,9	5-2301996-5
RJ45 JACK INT.MAG. 10/100 LED 1x2	10/100	1x2	R/A	Down	Yes	Tray	1,9	5-2301996-6
RJ45 JACK INT.MAG. 1Gb LED 1x2 INV.	1G	1x2	R/A	Up	Yes	Tray	1,7	5-2301996-7
RJ45 JACK INT.MAG. 1Gb LED 1x2	1G	1x2	R/A	Down	Yes	Tray	1,9	5-2301996-8
RJ45 JACK INT.MAG. 10/100 2x1	10/100	2x1	R/A	Down	No	Tray	1,9	2301997-2
RJ45 JACK INT.MAG. 1Gb 2x1	1G	2x1	R/A	Down	No	Tray	1,9	2301997-4
RJ45 JACK INT.MAG. 10/100 LED 2x1	10/100	2x1	R/A	Down	Yes	Tray	1,9	2301997-5
RJ45 JACK INT.MAG. 1Gb LED 2x1	1G	2x1	R/A	Down	Yes	Tray	1,9	2301997-7
RJ45 JACK INT.MAG. 10/100 LED 2x1	10/100	2x1	R/A	Down	Yes	Tray	3,0	2301997-9

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1-1773921-5 08/2017 Original: WR

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