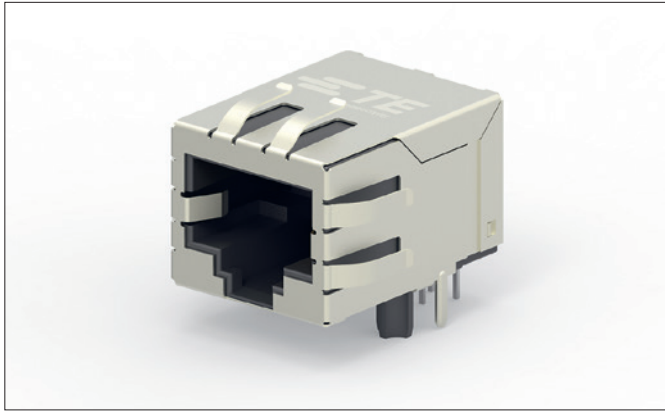


# Industrial RJ45 Jacks with Integrated Magnetics



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

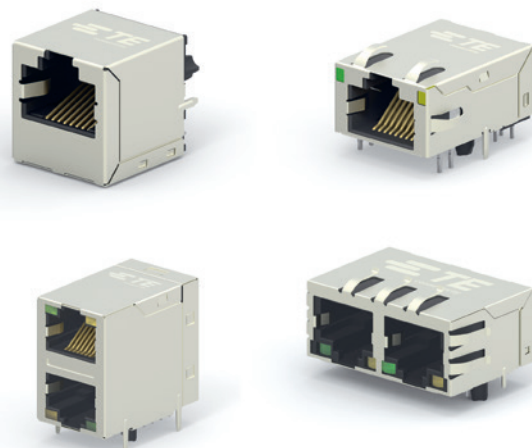
- Plating thickness 0,76 µm [30 µinch] gold over 1,27 µm [50 µinch] nickel
- UL 94 V-0
- 260 °C reflow capable
- High grade LCP (liquid crystal polymer material)

## 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



# Industrial RJ45 Jacks with Integrated Magnetics

## 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                               | <a href="#">2301994-1</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.  | 10/100 | 1     | R/A         | Up   | Yes  | T&R       | 1,9                               | <a href="#">2301994-2</a>   |
| RJ45 JACK INT.MAG. 10/100 1x1 INV.      | 10/100 | 1     | R/A         | Up   | No   | T&R       | 3,0                               | <a href="#">2301994-3</a>   |
| RJ45 JACK INT.MAG. 10/100 1x1           | 10/100 | 1     | R/A         | Down | No   | T&R       | 1,9                               | <a href="#">2301994-4</a>   |
| RJ45 JACK INT.MAG. 1Gb 1x1 INV.         | 1G     | 1     | R/A         | Up   | No   | T&R       | 1,9                               | <a href="#">2301994-5</a>   |
| RJ45 JACK INT.MAG. 1Gb 1x1              | 1G     | 1     | R/A         | Down | No   | T&R       | 1,9                               | <a href="#">2301994-6</a>   |
| RJ45 JACK INT.MAG. 1Gb 1x1              | 1G     | 1     | R/A         | Down | No   | T&R       | 1,9                               | <a href="#">2301994-7</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.  | 10/100 | 1     | R/A         | Up   | Yes  | T&R       | 1,9                               | <a href="#">2301994-8</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 1x1       | 10/100 | 1     | R/A         | Down | Yes  | T&R       | 1,9                               | <a href="#">2301994-9</a>   |
| RJ45 JACK INT.MAG. 1Gb LED 1x1          | 1G     | 1     | R/A         | Down | Yes  | T&R       | 1,9                               | <a href="#">1-2301994-0</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1 INV. low | 1G     | 1     | R/A         | Up   | Yes  | T&R       | 1,7                               | <a href="#">1-2301994-1</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1          | 1G     | 1     | R/A         | Down | Yes  | T&R       | 1,9                               | <a href="#">1-2301994-2</a> |
| RJ45 JACK INT.MAG. 10/100 1x1           | 10/100 | 1     | R/A         | Down | No   | T&R       | 3,0                               | <a href="#">1-2301994-9</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1 INV.         | 1G     | 1     | R/A         | Up   | No   | T&R       | 3,0                               | <a href="#">2-2301994-0</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1              | 1G     | 1     | R/A         | Down | No   | T&R       | 3,0                               | <a href="#">2-2301994-1</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1              | 1G     | 1     | R/A         | Down | No   | T&R       | 3,0                               | <a href="#">2-2301994-2</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1          | 1G     | 1     | R/A         | Down | Yes  | T&R       | 3,0                               | <a href="#">2-2301994-3</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1          | 1G     | 1     | R/A         | Down | Yes  | T&R       | 3,0                               | <a href="#">2-2301994-4</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1 VERT.        | 1G     | 1     | Vertical    | -    | No   | T&R       | 1,9                               | <a href="#">2301995-1</a>   |
| RJ45 JACK INT.MAG. 10/100 1x1 VERT.     | 10/100 | 1     | Vertical    | -    | No   | T&R       | 1,9                               | <a href="#">2301995-2</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 1x1 VERT. | 10/100 | 1     | Vertical    | -    | Yes  | T&R       | 1,9                               | <a href="#">2301995-3</a>   |
| RJ45 JACK INT.MAG. 1Gb LED 1x1 VERT.    | 1G     | 1     | Vertical    | -    | Yes  | T&R       | 1,9                               | <a href="#">2301995-4</a>   |
| RJ45 JACK INT.MAG. 10/100 1x2 INV.      | 10/100 | 1x2   | R/A         | Up   | No   | T&R       | 1,9                               | <a href="#">2301996-1</a>   |
| RJ45 JACK INT.MAG. 10/100 1x2           | 10/100 | 1x2   | R/A         | Down | No   | T&R       | 1,9                               | <a href="#">2301996-2</a>   |
| RJ45 JACK INT.MAG. 1Gb 1x2 INV.         | 1G     | 1x2   | R/A         | Up   | No   | T&R       | 1,9                               | <a href="#">2301996-3</a>   |
| RJ45 JACK INT.MAG. 1Gb 1x2              | 1G     | 1x2   | R/A         | Down | No   | T&R       | 1,9                               | <a href="#">2301996-4</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 1x2 INV.  | 10/100 | 1x2   | R/A         | Up   | Yes  | T&R       | 1,9                               | <a href="#">2301996-5</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 1x2       | 10/100 | 1x2   | R/A         | Down | Yes  | T&R       | 1,9                               | <a href="#">2301996-6</a>   |
| RJ45 JACK INT.MAG. 1Gb LED 1x2 INV.     | 1G     | 1x2   | R/A         | Up   | Yes  | T&R       | 1,7                               | <a href="#">2301996-7</a>   |
| RJ45 JACK INT.MAG. 1Gb LED 1x2          | 1G     | 1x2   | R/A         | Down | Yes  | T&R       | 1,9                               | <a href="#">2301996-8</a>   |
| RJ45 JACK INT.MAG. 10/100 1x1 INV.      | 10/100 | 1     | R/A         | Up   | No   | Tray      | 1,9                               | <a href="#">5-2301994-1</a> |
| RJ45 JACK INT.MAG. 10/100 LED 1x1 INV.  | 10/100 | 1     | R/A         | Up   | Yes  | Tray      | 1,9                               | <a href="#">5-2301994-2</a> |
| RJ45 JACK INT.MAG. 10/100 1x1 INV.      | 10/100 | 1     | R/A         | Up   | No   | Tray      | 3,0                               | <a href="#">5-2301994-3</a> |
| RJ45 JACK INT.MAG. 10/100 1x1           | 10/100 | 1     | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">5-2301994-4</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1 INV.         | 1G     | 1     | R/A         | Up   | No   | Tray      | 1,9                               | <a href="#">5-2301994-5</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1              | 1G     | 1     | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">5-2301994-6</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1              | 1G     | 1     | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">5-2301994-7</a> |

# Industrial RJ45 Jacks with Integrated Magnetics

## 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                               | <a href="#">5-2301994-8</a> |
| RJ45 JACK INT.MAG. 10/100 LED 1x1         | 10/100 | 1     | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">5-2301994-9</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1            | 1G     | 1     | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">6-2301994-0</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1 INV. - low | 1G     | 1     | R/A         | Up   | Yes  | Tray      | 1,7                               | <a href="#">6-2301994-1</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1            | 1G     | 1     | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">6-2301994-2</a> |
| RJ45 JACK INT.MAG. 10/100 1x1             | 10/100 | 1     | R/A         | Down | No   | Tray      | 3,0                               | <a href="#">6-2301994-9</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1 INV.           | 1G     | 1     | R/A         | Up   | No   | Tray      | 3,0                               | <a href="#">7-2301994-0</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1                | 1G     | 1     | R/A         | Down | No   | Tray      | 3,0                               | <a href="#">7-2301994-1</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1                | 1G     | 1     | R/A         | Down | No   | Tray      | 3,0                               | <a href="#">7-2301994-2</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1            | 1G     | 1     | R/A         | Down | Yes  | Tray      | 3,0                               | <a href="#">7-2301994-3</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1            | 1G     | 1     | R/A         | Down | Yes  | Tray      | 3,0                               | <a href="#">7-2301994-4</a> |
| RJ45 JACK INT.MAG. 1Gb 1x1 VERT.          | 1G     | 1     | Vertical    | -    | No   | Tray      | 1,9                               | <a href="#">5-2301995-1</a> |
| RJ45 JACK INT.MAG. 10/100 1x1 VERT.       | 10/100 | 1     | Vertical    | -    | No   | Tray      | 1,9                               | <a href="#">5-2301995-2</a> |
| RJ45 JACK INT.MAG. 10/100 LED 1x1 VERT.   | 10/100 | 1     | Vertical    | -    | Yes  | Tray      | 1,9                               | <a href="#">5-2301995-3</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x1 VERT.      | 1G     | 1     | Vertical    | -    | Yes  | Tray      | 1,9                               | <a href="#">5-2301995-4</a> |
| RJ45 JACK INT.MAG. 10/100 1x2 INV.        | 10/100 | 1x2   | R/A         | Up   | No   | Tray      | 1,9                               | <a href="#">5-2301996-1</a> |
| RJ45 JACK INT.MAG. 10/100 1x2             | 10/100 | 1x2   | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">5-2301996-2</a> |
| RJ45 JACK INT.MAG. 1Gb 1x2 INV.           | 1G     | 1x2   | R/A         | Up   | No   | Tray      | 1,9                               | <a href="#">5-2301996-3</a> |
| RJ45 JACK INT.MAG. 1Gb 1x2                | 1G     | 1x2   | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">5-2301996-4</a> |
| RJ45 JACK INT.MAG. 10/100 LED 1x2 INV.    | 10/100 | 1x2   | R/A         | Up   | Yes  | Tray      | 1,9                               | <a href="#">5-2301996-5</a> |
| RJ45 JACK INT.MAG. 10/100 LED 1x2         | 10/100 | 1x2   | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">5-2301996-6</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x2 INV.       | 1G     | 1x2   | R/A         | Up   | Yes  | Tray      | 1,7                               | <a href="#">5-2301996-7</a> |
| RJ45 JACK INT.MAG. 1Gb LED 1x2            | 1G     | 1x2   | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">5-2301996-8</a> |
| RJ45 JACK INT.MAG. 10/100 2x1             | 10/100 | 2x1   | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">2301997-2</a>   |
| RJ45 JACK INT.MAG. 1Gb 2x1                | 1G     | 2x1   | R/A         | Down | No   | Tray      | 1,9                               | <a href="#">2301997-4</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 2x1         | 10/100 | 2x1   | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">2301997-5</a>   |
| RJ45 JACK INT.MAG. 1Gb LED 2x1            | 1G     | 2x1   | R/A         | Down | Yes  | Tray      | 1,9                               | <a href="#">2301997-7</a>   |
| RJ45 JACK INT.MAG. 10/100 LED 2x1         | 10/100 | 2x1   | R/A         | Down | Yes  | Tray      | 3,0                               | <a href="#">2301997-9</a>   |

For additional features or requests, please reach out to your TE sales representative or our customer care specialists.

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