Components for network infrastructure

Competent solutions for your industrial network
Network components from Weidmüller

The Weidmüller product portfolio for Industrial Ethernet applications shows that we can be a dependable, high-quality partner for all your requirements even in the age of “open automation”!

In the Industrial Ethernet market, Weidmüller is positioned as a network infrastructure supplier in technology terms. Active and passive components complemented by a range of accessories for management, connection, supply, protection, switching, conversion, amplification, disconnection and communication functions.

The Weidmüller network components show how we focus on one key area of our expertise: connection technology from the control to the field – all from one supplier. What this means for Industrial Ethernet applications is in addition to the purely electromechanical products such as plugs, cables and outlets, Weidmüller can also supply a series of electronic devices necessary for the standardised operation of a multi-service network infrastructure.

A comprehensive range of products for industrial applications – all from one supplier. This enables planners and installation personnel to set up a fully equipped network. Weidmüller can also supply proven products such as signal converter conditioners, switch-mode power units, cable devise and terminal markers and a wide selection of tools.

Both plug&play and managed switches for industry.

Our cable tester allows you to quickly localise and to repair connection defects.

Junction box and plug with IP67 class of protection form a perfect team in tough industrial environments.

Stick the patches where you want them! Use the terminal rail outlets from Weidmüller.
Plug and play switch series for industrial applications

Thanks to the integrated autocrossing function (Auto-MDi/X), the unmanaged switches of our ECO-Line simply connect to all ports, ideal as simple distribution point for Ethernet signals! The ECO-Line from Weidmüller keeps strictly to the design standards of an industrial component. Mechanically robust toward impacts and vibrations, appropriate operating temperature range, certifications, AC/DC power supply and the option of redundant power supply are some of the technical features of our ECO-Line!

Unmanaged switches of the Advanced Line additionally offer complete visual diagnosis, an extensive temperature range in a robust compact housing (140 x 45 x 156 mm) for all versions from 8 to 24 ports and the choice of copper or optical fibre cable connection. Ideal for applications in harsh environments!

Managed switches from Weidmüller offer the technical design features of the Advanced Line and are protocol-transparent.

The option of redundant power supply and RapidRing™ are just two of the numerous functions of the managed switches line. An integrated web server enables extremely simple configuration. Diagnosis is possible via SNMP. Ideal for building industrial networks! Weidmüller offers a full range of industrial routers in versions with or without integrated 56k or ISDN modem. Ideal for separation of Ethernet networks, for security reasons, to simplify the network configuration and Internet interface!

The compact and real-time capable media converters from Weidmüller remain transparent in the network. For simple changeover from copper to optical fibre cable!

Your benefits at a glance:

- **LED signals** for complete and immediate warning
- **Glass fibre and copper cable version**
  - 12 versions from 8 to 24 ports in the same compact housing (140 x 45 x 156 mm)
  - Transmission speed 10/100 MBit/s
  - Electromagnetic compatibility
  - Autocrossing function
- **Complete range of IP20 and IP67 accessories**
- **Compact standard metal housing**
  - for all ADVANCED versions
  - Mounting on DIN-TS35
- **High MTBF time of > 60 years**
- **CE, UL certified**
- **Power supply**
  - AC/DC
  - Redundant power supply possible
- **Wide operating temperature range**
The Ethernet plug-in connector system

Connectors for modern industrial applications need to be designed in such a way that they simplify processes and cope with faster data transmission. With Ethernet connectors from Weidmüller, you are a significant step ahead of the rest: not only are these products gigabit-enabled, they also conform to the IEC 61076-3-106 standard. The connectors stipulated in this norm – versions 4 (Ethernet TCP/IP), 5 (Profinet) and 1 (Ethernet/IP) – are also required by the standards for general cabling in industrial buildings ISO/IEC 24702 (FDIS; V1, V4), automation machinery IEC 61918 (CDV; V1) and for field bus installations IEC 61784-5 (CDV; V1). What’s more, you have a unique choice of versions made of plastic or metal as well as inserts for copper and fibre-optic cabling.

Unlimited combination options: the modular principle

Benefit from maximum flexibility! Our portfolio gives you crucial advantages for your industrial applications, whether at the planning stage, during assembly or once your system is operative. All versions are also designed for the IP67 protection class. Simply choose the insert you need and the material you want! Our family of connectors is completely compatible – each and every insert can be combined with each and every kind of plug and bulkhead housing. Choose between plastic and metal versions.

Your benefits at a glance:
- Gigabit connector for tool-less on-site assembly
- Wide range of materials and connection options
- Countless versions due to wide variety of possible insert combinations
- Conforms to IEC 61076-3-106 standard and designed for IP67
- Robust and sturdy thanks to zinc die-casting
- Quick on-the-spot fabrication

BTR NETCOM, Telegärtner and Weidmüller, three leading suppliers in the area of electrical and optical connection technology, have pooled their core expertise in a partnership in order to set new standards in the industry.

The common goal is to develop and launch reliable technologies for new transmission standards in connector technology. It is also our aim to develop technologies which fulfil even the highest customer expectations and enable new, professional and universal solutions. The result is an extremely reliable, exceptionally practical, highly powerful and flexible connector system for office and industrial use, with products which reflect the qualities of the partnership itself:

- Reliable
- Straightforward
- Fast
- Problem-solving
New SAI I/O modules for all common protocols

The SAI Active Universal family is the result of Weidmüller’s many years of experience with remote I/Os. The housing satisfies the stringent standards of the industry and is resistant to aggressive substances, vibration, impact and thermal changes. The IP67 class of protection guarantees resistance to water and dust. The large product range of connectors, accessories and cables for BUS, power supply and I/O terminals lead to substantial simplification of your cabling!

### I/O configuration

<table>
<thead>
<tr>
<th>I/O Configuration</th>
<th>16 digital inputs</th>
<th>channel-by-channel configuration with DESINA diagnostic function</th>
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</thead>
<tbody>
<tr>
<td>16 digital inputs and 8 digital outputs</td>
<td>8 channels can be individually configured as inputs or outputs. E.g. 16DI, 15DI and 1DO ... 8DI and 8DO</td>
<td></td>
</tr>
<tr>
<td>6 analogue channels and 4 digital</td>
<td>4 analogue inputs, 2 digital outputs and 4 digital inputs. The analogue functions can be set to the following ranges: 0 … 20 mA, 4 … 20 mA, 0…10 V, –10 V … +10 V</td>
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### Your benefits at a glance:

- **UL/CSA approval**
- **Housing:**
  - IP67 class of protection
  - PBT material
  - Only 54 mm wide!
- **Transparent tags:**
  - 1 tag per I/O point
  - Illuminated marking
- **I/O LEDs** for input/output status and diagnosis
- **M12 or M8 sockets** with metal screw ring
- **Status LEDs** for voltage, fieldbus and group diagnosis
- **Illuminated setting area** for the fieldbus address
- **2 x M12 fieldbus connections**
- **2 x M12 terminals** – for the modular power supply:
  - 4 separate potentials in the 16DI/8DO module possible
  - 3 x for outputs and 1 x for the module and inputs together
- **40mm wide marking tag** for marking the module (e.g. IP address)
Where do I find the products in the field?

Weidmüller’s Industrial Ethernet components are the connecting links between Ethernet-compatible devices from diverse manufacturers for diverse applications. The drawing below illustrates typical applications.

Industrial Ethernet switches from Weidmüller are the distribution points in Ethernet data communications. This is often a managed switch 1️⃣ with channel grouping options in a central position as like a building distribution board, or – typically – plug&play switches in storey distribution racks, machine distribution panels, etc., depending on requirements, e.g. even an inexpensive switch 2️⃣ from the ECO-Line range.

The link between the wiring in the switching cabinet with patch cables 2️⃣ to the installation or connecting cables 3️⃣ for tough industrial environment is achieved by way of switching cabinet outlets 4️⃣. The Weidmüller switching control cabinet outlet is also available with SC plug-in connectors for multimode fibre optic cables 5️⃣.

Cabtite cable entry points 6️⃣ enable cables to be fed through the side panel of the switching cabinet enclosure without the need for a connection at this point. The trouble-free provision of permanent connections between Ethernet cables is achieved with the IE-CCM connection module 9️⃣ in its robust metal enclosure. For those applications that involve frequent movement of the cable, Weidmüller can supply an especially robust cable for carrier systems 7️⃣.

Routers 1️⃣ enable the network to be split into subnetworks with independent IP addresses and secure connections to the Internet.

Fibre optic connections are frequently preferred for transmissions over long distances or through environments with strong electromagnetic fields. Again, Weidmüller can supply a range of multimode fibre optic cables 4️⃣ plus protocol-transparent – and hence real-time-compatible – media converters 6️⃣ to convert from copper to glass fibre and back again.

The IP67 mounting flange, 6️⃣ IP67 plugs and couplers, 7️⃣ plus our 8 port IP67 switches 8️⃣ are ideal for the tough conditions in the field.

Useful accessories such as wall-mounted front panel interface 8️⃣ with optional locking feature complement the range. Tools, a cable tester 9️⃣, overvoltage protection 10️⃣ and a GPRS alarm modem 11️⃣ round off the Weidmüller product portfolio.
Product portfolio – everything from a single source

Active components

Unmanaged Switches

IE-SW5-ECO
IE-SW5-ECO-FLAT
IE-SW8-ECO
IE-SW16
IE-SW22/2ST
IE-SW8-IP67

Managed Switches

IE-SW8-M
IE-SW14/2SC-M
IE-SW22/2ST-M
IE-SW8-M-IP67
IE-MC-SC
IE-MC-ST

Media converters

Routers

IE-ARM-E
IE-ARM-U
IE-AR-10T

GPRS

IE-GPRS-I/O

Passive components

Connecting elements

IE-P/S-IP67
IE-XM-RJ45/IDC-IP67
IE-XM-RJ45/IDC

System cables

Cat. 5 - 6 - 7

FrontCom®

FrontCom® GH Key

Tools / Tester

TT 8 RS MP 8
IE-CT
AM 12

Plug-in connectors

Weidmüller
Weidmüller is the leading manufacturer of components for electrical data and power connection technology. The Weidmüller product portfolio ranges from terminal blocks, PCB connectors and terminals, protected components, Industrial Ethernet components and relay sockets to power supply and overvoltage protection modules suitable for all applications. Electrical installation and marking material, basic I/O components and a variety of tools round off the range. As an OEM supplier, the company sets global standards in the field of electrical connection technology.

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