

# Machine Integration into Production Networks

## Secure Router Technology



Electronics



# Connection of communications networks

## Maximum security with the Industrial Ethernet Router

Communication networks used for office applications and for automation are converging. The advantages that result from this process are put into practice more and more frequently because they make procedures more transparent and facilitate data exchange substantially.

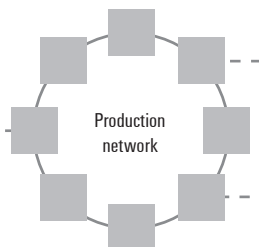
Weidmüller's Industrial Ethernet Router ensures that different networks interoperate in unison and with top-level security.

### Safe integration of machines into a production network with Gigabit-Ethernet

The router can translate the addresses between different networks using protocols such as port forwarding, 1:1 NAT or masquerading. These functions hide all the Ethernet devices of a machine, such as control systems or remote IOs behind the router, so that they are protected. Thereby the router communicates across Gigabit-Ethernet LAN/WAN interfaces.

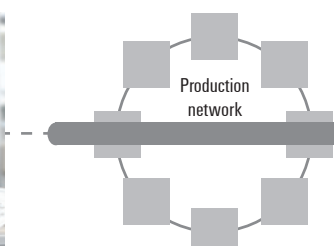
### Intelligent firewall: Stateful packet inspection

Our routers ship with a firewall with configurable filter functions that adapt automatically to the network traffic they see (stateful package inspection). This firewall recognizes the messages that are stateful, i.e. legitimized, and let them pass. Unidentified packets are kept out of your industrial networks.



### Encrypted transmission of your data via VPN to protect against eavesdroppers

Weidmüller's Industrial Ethernet Router enables access to components from around the world through encrypted VPNs using OpenVPN as well as IPSec technologies, thus ensuring top-level security with minimum effort.



# Technical Data

Modes	
IP-Router	Static or dynamic routing, supporting RIPv2 / OSPF
Transparent Bridge	2-port switch with additional layer-2 filter
Network Services	
<ul style="list-style-type: none"><li>• DHCP server / DHCP relay</li><li>• DNS relay</li><li>• NTP client</li><li>• DynDNS (DHCP client by RFC 2136)</li></ul>	
Firewall	
<ul style="list-style-type: none"><li>• IPv4 Stateful inspection Firewall (incoming/outgoing)</li><li>• NAT-Masquerading, 1:1 NAT, Portforwarding</li><li>• Layer-2/3-Filter (VLAN ID, VLAN, QoS day, MAC address, Ethertype frame)</li><li>• "Auto learning" feature to create packet filter rules (analysis of network traffic)</li><li>• Layer 2/3-based packet prioritization (Ethernet frame, IP header, VLAN tag)</li></ul>	
VPN	
OpenVPN	<ul style="list-style-type: none"><li>• Configurable as OpenVPN server or client (Layer 2 and Layer 3)</li><li>• Authentication with X.509 Certificates</li><li>• Tunnel support via HTTP proxy</li><li>• Maximum of 10 different client or server configurations</li><li>• Unlimited number of client connections in server mode</li></ul>
IPsec	<ul style="list-style-type: none"><li>• Can be configured as an IPsec server or client</li><li>• PSK authentication (user ID, password) or X.509 certificates</li><li>• Hardware-based encryption for faster data throughput</li><li>• A maximum of 64 simultaneous connections (subnet to subnet or as an IPsec server)</li><li>• Encryption algorithms DES-56, 3DES-168, AES 128, AES 192, AES-256</li></ul>
Management	
<ul style="list-style-type: none"><li>• Configuration via WEB interface (HHTP / HTTPS)</li><li>• Voice interface in German or English</li><li>• Configuration support through detailed help information (tooltip)</li><li>• Configurable multi-user access with definable rights mask</li><li>• Support of SNMP v1/v2/v3, event log / syslog</li></ul>	
Other	
Modbus/TCP	Integrated Modbus TCP Server for status queries, and software-based activation / de-activation of VPN connections
Diagnosis	"Remote Capture" feature for network diagnostics via a connected PC (Wireshark)
Monitoring	Client Monitoring (via ICMP) with alarm function in case of error
Interfaces	
RJ45 ports	2 x 10/100/1000BaseT(X)
USB port	Option for future expansion
SCM card reader	Save and restore of the configuration using a smart card (memory chip)
LED indicators	Signaling states for power, status, cut, alert, active VPN connection and an active

Digital outputs	<ul style="list-style-type: none"><li>• "Alarm" -&gt; Indicates a configurable network status or error (24V out)</li><li>• "VPN-active" -&gt; Indicates an active VPN connection (24 V out)</li></ul>
Digital inputs	<ul style="list-style-type: none"><li>• "Cut" -&gt; Disconnects physically (link down) the WAN port (24 V)</li><li>• "VPN-initiate" -&gt; Enables a pre-configured VPN connection (24 V)</li></ul>
Reset button	Restoring the factory default

Power	
Input Voltage	1 x 24 VDC (7 to 36 volts)
Current consumption	max. 600 mA @ 24 VDC

Technical data (housing)	
Housing	Metal, IP20
Dimensions (W x H x D)	35 x 159 x 134 mm (without antenna) 35 x 255 x 134 mm (with UMTS antenna)
Assembly	TS35

Environmental conditions	
Operating temperature	-20 °C to +70 °C
Storage temperature	-20 °C to +85 °C
Ambient humidity	6 to 90 % not condensing

DSL and UMTS/HSPA	
DSL	Connection to the DSL modem via LAN or WAN port Free configuration of the PPPoE login
DynDNS	Support automatic registration
UMTS/3G	<ul style="list-style-type: none"><li>• Built-in quad-band UMTS / HSPA modem (only variant IE-SR-2GT-UMTS/3G)</li><li>• 7.2 Mbps peak downlink, uplink 8.5 Mbps peak</li><li>• WCDMA 850/1900/2100 MHz GSM/GPRS/EDGE 850/900/1800/1900 MHz</li><li>• FCC, IC, CE, GCF, PTCRB, A-Tick, AT&amp;T, Telstra, NTT, DoCoMo, Softbank, Bell</li></ul>

Approvals	
Security	UL508
EMV	FCC Part 15 Class A, EN 55022 Class A, EN61000-4-2 (ESD), EN61000-4-3 (RS) EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS)
Shock	DIN EN 60068-2-27
Vibration	DIN EN 60068-2-6

Warranty	
Period of time	3 years

Ordering Information		
Models	Type	Order Code
LAN/WAN router	IE-SR-2GT-LAN	1345270000
LAN/WAN router with integrated modem UMTS/3G	IE-SR-2GT-UMTS/3G	1345250000

## **Weidmüller – Partner in Industrial Connectivity.**

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.



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