

Benefits:

- Wireless router for industrial Ethernet networks
- High security through VPN tunnel (IPsec, OpenVPN) and firewall
- Cost-effective billing based on data volume (GPRS/EDGE*)
- Complete use of EDGE* bandwidth max. 236.8 kbit/s (down-/uplink)
- Real-time data through "Always Online" without fixed IP-Address
- Simplified configuration of the application through 1:1 NAT
- Quad Band GSM enables worldwide use
- High connection availability and stability
- Display of GPRS/EDGE* network, signal strength and connection via LEDs

Key Features:

- GPRS/EDGE* modem with integrated VPN-Router (IPsec, OpenVPN) and firewall
- Bidirectional GPRS/EDGE*-communication
- 2 or 5 Ethernet interfaces to application
- Intelligent connection monitoring
- Integrated DHCP server
- Optimized for top hat rail mounting
- Switching output to signal VPN connection
- Large input voltage range (nominal 12...60VDC, Peak 72VDC)
- Large temperature range (-40 °C...+60 °C)
- Configuration via Web interface and SNMP - local and remote
- Dual-SIM (TAINY EMOD-V3-E5DS)



The TAINY EMOD-V3-IO from Dr. Neuhaus Telekommunikation combines a GPRS/EDGE* wireless modem, a VPN (Virtual Private Network) router and a firewall in a single device. As a result, it is possible to transport highly sensitive data wirelessly and securely via the GSM network.

The integrated firewall provides extensive additional protection for the application against unauthorized access – resulting in a perfect combination of security and flexibility.

Intelligent communications management guarantees the stability and availability of the connection. This way remote stations are easily integrated in IP networks.

The device can be configured locally or remotely via a Web interface. In addition, the TAINY EMOD router can be easily managed by a central management solution via SNMP functions. An integrated SNMP trap agent enables the device to send its status information to a central location.

Thanks to the compact plastic housing in standard design it is optimized for top hat rail mounting in control cabinets.

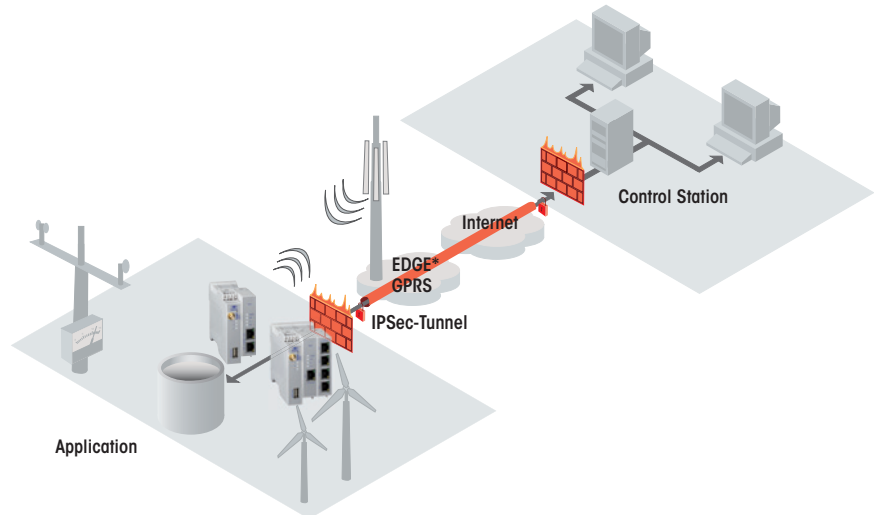
*EDGE: Enhanced Data Rates for GSM Evolution is a digital GSM technology that allows increased data transmission rates by implement new modulation and coding schemes. EDGE enables as enhancement of GPRS up to 5 times faster data transmission rates.



System Components

- Device: TAINY EMOD-V3-IO
(for connecting of up to 2 applications)
- or TAINY EMOD-V3-E5DS
(for connecting of up to 5 applications)
- Antenna
- Power supply
- SIM card with data option
(with the TAINY EMOD-V3-E5DS it is possible to use an additional SIM card due to Dual-SIM)
- VPN compliant remote station

Topology



Technical Data

INTERFACE

Application Interface	2 or 5 x 10/100 base-T (RJ45 jack), Ethernet IEEE802; 10/100 Mbit/s; Auto Cross Over; 2 or 5 Port Switch
Service Interface	„Service“ USB-A
Power Supply	Device input voltage: nominal 12-60 VDC, min. -10 %, max +20 %; I _{in} 365 - 92 mA; I _{Burst} 1,26 A at full transmitter power (Power Level 10) with continuous data transfer; I _{in} 174 - 59 mA at Idle-Mode (connection establish, but non data traffic); burst repeat rate 4,62 ms; power consumption (typical): 4,4 W @ 12 V, 4,0 W @ 24 V, 5,5 W @ 60 V (an additional 0.5 W per used interface)
Signal input/output	Input: switching voltage 5..30VDC, potential-free; Output: U _{max} 30 VDC, I _{max} 20 mA, potential-free

FUNCTIONALITY

Virtual Private Network	Protocol: IPSec (tunnel and transport mode); encryption: 3DES, AES, DES; paket authentication: MD5, SHA-1; Internet Key Exchange (IKE); authentication: Pre-Shared Key (PSK), X.509v3 certificates; NAT-T, Dead Peer Detection (DPD); 1:1 NAT through VPN tunnel; Protocol: Open VPN (TLS/SSL); Encryption: Cipher BF-CBC; Authentication: certificates; Modus: End-to-Site (1x); Supports mdxpublic.IP
Firewall	Stateful packet inspection firewall; anti-spoofing; NAT (IP masquerading); port forwarding
Other	DynDNS; DNS cache; DHCP server; NTP; remote logging; Alarm SMS; SNMP Trap; SMS from application; Dual-SIM (TAINY EMOD-V3-E5DS)
Management	Web-based administration, https or SSH remote access via EDGE/GPRS or CSD; SNMP; Automatic management via SSH

RADIO

Connection	EDGE* (EGPRS): class 12, up to 4 uplinks / up to 4 downlinks, max. 5 Slots; modulations and coding process: MCS-1 to 9; Mobile station class B; GPRS: class 12, up to 4 uplinks / up to 4 downlinks, max. 5 Slots; coding process: CS-1, CS-2, CS-3, CS-4; Mobile station class B; Full PBCCH support; CSD / MTC: V.110, RLP, non-transparent 2.4, 4.8, 9.6, 14.4 kbps; SMS (TX): Point-to-point MO
Transmitting Power	Quad band; GSM 850 MHz: max. 2 watts, GSM 900 MHz: max. 2 watts, DCS 1800 MHz: max. 1 watt, PCS 1900 MHz: max. 1 watt;
Antenna Port	Nominal impedance: 50 ohms; connector: SMA (female)

APPROVALS

Environmental Conditions	Operation -40 °C to +60 °C; humidity 0-95 %, non-condensing
Approvals	CE; R&TTE (GSM); GSM/GPRS module with GCF certification, PTCRB; EMV/ESD: EN 55024; EN 55022 Class A; EN 61000-6-2; Electrical safety: EN 60950

MECHANIC

Mechanics	Top hat rail mounting; housing: plastic; protection class: IP20; dimensions: TAINY EMOD-V3-IO approx. 114.5 x 45 x 99 mm (D x W x H); weight: approx. 280g; TAINY EMOD-V3-E5DS approx. 114.5 x 67 x 99 mm (L x B x H); weight: approx. 400g
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MISCELLANEOUS

Accessories	Various antennas, power supply, adapter, Cross-Over network cable
Scope of Delivery	Device; CD with user manual;
Order Number	TAINY EMOD-V3-IO, part no.: 319627; TAINY EMOD-V3- E5DS, part no.: 319658

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