

Benefits:

- Wireless router for industrial Ethernet networks
- Highspeed UMTS/HSPA+* max. bandwidth 14,4 Mbit/s/ 5,76 Mbit/s (DL/UL)
- High security through VPN tunnel (IPsec, OpenVPN) and firewall
- Cost-effective billing based on data volume (GPRS/EDGE/UMTS/HSPA+*)
- Real-time data through "Always Online" without fixed IP-Address
- Simplified configuration of the application through 1-to-1 NAT
- Quad Band GSM enables worldwide use via GSM, GPRS, EDGE and Fiveband UMTS/HSPA+*
- High connection availability and stability
- Display of network, signal strength and connection via LEDs

Key Features:

- GPRS/EDGE/UMTS/HSPA+* modem with integrated VPN-router (Ipsec, OpenVPN) and firewall
- Bi-directional GPRS/EDGE/UMTS/HSPA+* communication
- 2 or 5 Ethernet interfaces to application
- Intelligent connection monitoring
- Integrated DHCP server
- Optimized for top-hat-rail mounting
- Large input voltage range (12...60 VDC, Peak 72 VDC)
- Large temperature range (-40 °C...+70 °C)
- Configuration via integrated web server – local and remote
- Sending of alert SMS and SNMP traps
- Antenna diversity for HSPA+*
- Dual-SIM (TAINY HMOD-V3-E5DS)



The TAINY HMOD-V3-IO from Dr. Neuhaus Telekommunikation combines GPRS/EDGE/UMTS/HSPA+* wireless modem, a VPN (Virtual Private Network) router and Firewall in a single device. As a result, it is possible to transport highly sensitive data wirelessly secure from End to End 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 communication supervision guarantees the stability and availability of the connection. This provides an simple way of incorporating remote.

The device can be configured locally or remotely via a Web interface. In addition, the TAINY HMOD 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 cabinets.

To ensure best wireless reception, even with fluctuating 3G network conditions, the TAINY HMOD-V3-IO support antenna diversity.

*EDGE: Enhanced Data Rates for GSM Evolution refers to a technology for increasing the data transfer rate in GSM mobile radio networks by introducing an additional modulation procedure. EDGE enables further GPRS enhancement to speed up data transfer by one to five times.

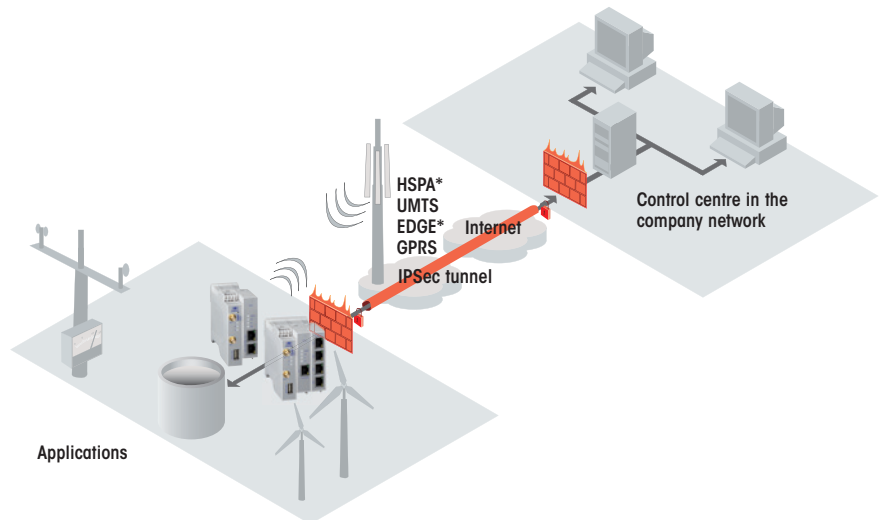
*HSPA+: High Speed Downlink Packet Access is a UMTS mobile radio standard transfer method. The method enables DSL-like transfer speeds on a mobile radio network, thus enabling mobile transfer of large data volumes.



System components

- Device: TAINY HMOD-V3-IO
(for connecting of up to 2 applications)
- or TAINY HMOD-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} 1,26A 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 4,62ms; power consumption (typical): 4,4 W @ 24 V, 5,5 W @ 60 V (an additional 0,5 W per used interface)
Signal input/output	Input: switching voltage 5...30 VDC, isolated; Output U _{Max} 30 VDC, I _{Max} 20mA, isolated

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-to-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 inspection firewall; anti-spoofing; NAT (IP masquerading); port forwarding
Others	DynDNS; DNS cache; DHCP server; NTP; remote logging; Alarm SMS, SNMP Trap; SMS from application; Dual SIM (TAINY HMOD-V3-E5DS)
Management	Web-based administration, HTTPS or SSH remote access via EDGE/GPRS/HSPA+*; SNMP; automatic management via SSH

RADIO

Connection	HSPA+*: up to 14,4 Mbit/s download / up to 5,76 Mbit/S upload; UMTS: up to 384 kbit/s download and upload; EDGE* (EGPRS): Class 12, up to 237kbit/s download and upload; MCS-1 though 9; mobile station class B; GPRS: class 12, up to 85,6 kbit/s download and upload / Uplinks, max. 5 Slots; coding process: CS 1-4, mobile station class B; full PBCC support; CSD / MTC: V.110, RLP, non-transparent 2,4, 4,8, 9,6, 14,4kbps SMS (TX); Point-to-point MO
Transmitting Power	Quad band; GSM 850/900/1800/1900 MHz: max 2 watts, DCS 1800 MHz: max. 1 watts, PCS 1900 MHz: max. 1 watts, Five-Band UMTS/HSDPA (WCDMA/FDD) 800/850/900/1900/2100 MHz
Antenna Port	Nominal impedance: 50 ohms; connector: 2 SMA antenna diversity (female)

APPROVALS

Environmental Conditions	Operation -40 °C to +70 °C; humidity 0-95 %, non-condensing
Approval	CE; R&TTE (GSM); GSM/GPRS module with GCF-certification, PTCRB; EMV/ESD: EN 55024, EN 55022 Klasse A, EN 61000-6-2; electrical safety: EN 60950

MECHANIC

Mechanics	Top hat rail mounting; housing: plastic; protection class: IP20; dimensions: TAINY HMOD-V3-IO approx. 114,5 x 45 x 99 mm (D x W x H); weight: approx. 280 g; TAINY HMOD-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 HMOD-V3-IO, part no.: 319610; TAINY HMOD-V3E5DS, part no.: 319689

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