Industrial ADSL/VDSL Router

BRD-355

▦ Industrial remote access using the Internet
  • Economic and environmental benefits
  • Access SCADA systems, HMI, sensors and PLCs remotely
  • Fixed broadband connection via ADSL or VDSL2

▦ Designed for industrial applications
  • RS-232 port with intelligent modem replacement features
  • Compact DIN-rail mounted casing for easy integration
  • Wide power input range, 10 to 60 VDC

▦ Secured resilient Internet access
  • Designed to cope with the threats of the Internet environment
  • Easy to use firewall prevents unauthorized access
  • Encrypted and secure data transmission with VPN-tunnels

▦ A wide-variety of solutions to common communication issues
  • Simple replacement of analogue leased lines
  • Serial protocols as well as serial to Ethernet conversion features
  • The unit includes support for ADSL Annex J and VDSL2 vectoring

CE

Member of
broadband
forum
member company

Remote access removes boundaries, eliminates the need for time consuming site visits and provides a network infrastructure suitable for today's "always on"-society. The BRD-355 industrial ADSL & VDSL2 router/modem uses the Internet to cost effectively inter-connect systems, allowing HMI, PLCs, sensors etc to communicate with each other, a pre-requisite for any Industrial Internet (IIoT/IoT) solution.

Most devices today comes equipped with an Ethernet port for communications, therefore the BRD-355 has a built-in two port Ethernet switch. For legacy connectivity the unit also features one RS-232-port to provide multiple connection possibilities for both new and legacy replacement installations. Designed to be installed on a DIN rail all connectors and LEDs have been positioned in the front of the unit, facing the user for easy access and fast status feedback. With the wide power input range the unit can be powered from 10 to 60 VDC and has a low power consumption.

The cyber security features of the BRD-355 prevent unauthorized access and secure the communication for Internet-enabled applications. The easy to use firewall filters incoming traffic, allowing only approved packets to pass through. To inter-connect units with each other securely over the Internet multiple VPN technologies are supported, including IPsec and OpenVPN.

Upgrading legacy solutions to become IP-enabled can prove both costly and tedious therefore the BRD-355 includes a wide feature set for various legacy applications including both modem replacement methods as well as serial to Ethernet conversion. Recent technology changes by the carriers also force the industry to adapt their solutions which is why the BRD-355 support both ADSL Annex J and VDSL2 Vectoring, as well as most other ADSL/VDSL2 standards.

Ordering Information

Art.no	Description
3623-0311	BRD-355, ADSL/ADSL2/ADSL2+/VDSL2 router
3125-0001	PS-30 Power Supply

Specifications BRD-355

Dimensional drawing
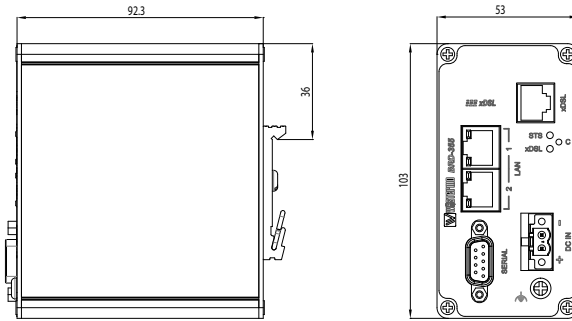
Dimension W x H x D 53 x 103 x 92.3 mm (2.09 x 4.06 x 3.63 in)
Weight 0.4 kg
Degree of protection IP40

Power	
Rated voltage	12 to 48 VDC
Operating voltage	10 to 60 VDC
Operating current	450 mA at 12 VDC
Rated current	1000 mA at 12 VDC

Interfaces				
RS-232	1 x 300 bit/s – 115.2 kbit/s			
Ethernet TX	2 x 10 Mbit/s or 100 Mbit/s			
DSL	1 x RJ-11			
Version	**Common name**	**Standard**	**Downlink**	**Uplink**
ADSL	ADSL	ANSI T1.413	8 Mbit/s	1.0 Mbit/s
ADSL	ADSL (G.dmt)	ITU G.992.1	8 Mbit/s	1.0 Mbit/s
ADSL	ADSL (G.lite)	ITU G.992.2	1.5 Mbit/s	0.5 Mbit/s
ADSL	ADSL over POTS	ITU G.992.1 Annex A	12 Mbit/s	1.3 Mbit/s
ADSL	ADSL over ISDN	ITU G.992.1 Annex B	12 Mbit/s	1.8 Mbit/s
ADSL2	RE-ADSL	ITU G.992.3 Annex L1/L2	5 Mbit/s	0.8 Mbit/s
ADSL2	ADSL2	ITU G.992.3	12 Mbit/s	1.3 Mbit/s
ADSL2	ADSL2 Annex J	ITU G.992.3 Annex J	12 Mbit/s	3.5 Mbit/s
ADSL2+	ADSL2+	ITU G.992.5	24 Mbit/s	1.4 Mbit/s
ADSL2+	ADSL2+ Annex M	ITU G.992.5 Annex M	24 Mbit/s	3.3 Mbit/s
VDSL2	VDSL2	ITU G.993.2*	100 Mbit/s**	100 Mbit/s***
VDSL2	VDSL2 Vectoring	ITU G.993.5 G. Vector	100 Mbit/s**	100 Mbit/s***

Temperature	
Operating	-25 to +70°C (-13 to +158°F)
Storage & Transport	-40 to +85°C (-40 to +185°F)

Agency approvals and standards compliance	
EMC	EN 55032, EN 55024, EMC and ERM - Electromagnetic compability and Radio spectrum Matters
Safety	EN 60950-1, IT equipment

* Supports profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a
** Maximum sustained routing performance over time is around 35 Mbit/s
*** Uplink speed on profile 17a is 50 Mbit/s

Protocols and Functionality

Ethernet Technologies	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseTX Layer-2 QoS IEEE 802.1p Class of Service
xDSL Technologies	RFC2684 Bridged LLC and Bridged VC-MUX ATM encap. (ADSL) TR-067 Compliance Dying Gasp support ITU K.21 Support Rate adaptive modem at 32 Kbps steps ATM Layer with traffic shaping QoS support (UBR, CBR, VBR-rt,VBR-nrt) AAL5 – AAL F5 OAM Loopback/Send and receive RFC2364 PPPoA client support RFC2516 PPPoE client support RFC2225 / RFC1577 Classical IP Support PAP/CHAP/MS-CHAP for Password Authentication support
Serial Port Technologies	RS-232 Serial Over IP (Serial Extender and Virtual Serial Port) Modem emulation AT command interpreter MODBUS DNP3
IP Routing, Firewall, VPN and Cyber Security	Static IP routing Dynamic IP routing • RIPv1/v2 VRRP GRE Stateful inspection Firewall / ACL, NAT, Port Forwarding 25 x IPsec VPN, PSK & X.509, Fail-over 1 x L2TP client 1 x PPTP client 1 x OpenVPN / SSL VPN client Simple Certificate Enrollment Protocol (SCEP) RADIUS PPP Dial in/Dial out
Manageability	Management tools • Web interface (HTTP and HTTPS) • Command Line Interface (CLI) via SSHv2 and TELNET • SNMPv1/v2c/v3 Flexible alarm/event handling system Syslog (log files and remote syslog server) SNTP (NTP client) DHCP client DHCP server DDNS (Dynamic DNS update client)