

RTD-I-TX2RS-25 / 275 / 35 RUGGEDIZED ROUTER GPRS/EGDE/UMTS/HSDPA

Characteristics

- Multi-protocol Router
- WAN network interfaces
 - GPRS, EDGE, UMTS, HSDPA
2.5/2.75/3/3.5G
 - Dual SIM slots
- User interfaces
 - 1x Ethernet 10/100BT
 - 2x RS232/RS485 2/4 wires
 - Digital input 0/48Vcc
 - Relay output 700mA/60Vcc

Security features

- SSL V3
- VPN: GRE, OpenVPN, IPsec, IPsec pass-through
- Firewall: NAT/PAT/filtering

Ethernet

- DHCP Server
- DynDNS
- Router: static, RIP 1

Asynchronous Conversion

- RAW TCP or UDP
- Telnet
- Modbus RTU to Modbus TCP

Management

- HTML
- CLI - Telnet, SSH
- SMS
- Remote through 2G/3G and software

Environment

- Ruggedized design in a robust metallic DIN rail enclosure
- Industrial operating temperature range: -25° to + 70°C
- Power input: 9 to 48 Vdc
- Antenna provided
- Antenna extension cable on option

VERSATILE CELLULAR ROUTER

RTD-I-TX2RS is a high speed ruggedized router that connect to 2G,/3G+ mobile networks. It provides harsh environments with secured communications for any industry requirements such as telemetry, data acquisition and IP VPN interconnections. It brings all benefits of 2/3G+ mobile network capabilities with bandwidth up to 7.2 Mbps.

RTD-I-TX2RS carries Ethernet and asynchronous traffics but also isolated digital input and relay output.

RTD-I-TX2RS serves any industry applications for data acquisition, control, telemetry, monitoring:

- smart grid, smart metering
- high voltage system monitoring
- gas and water pipeline supervision
- centralized heating systems
- environment protection
- intelligent traffic systems
- weather station data collection
- lighting control
- solar and wind power farms
- alert, alarm systems

And may other applications that require a network access without copper, fiber, dial-up or DSL connectivity .

Industry grade equipment

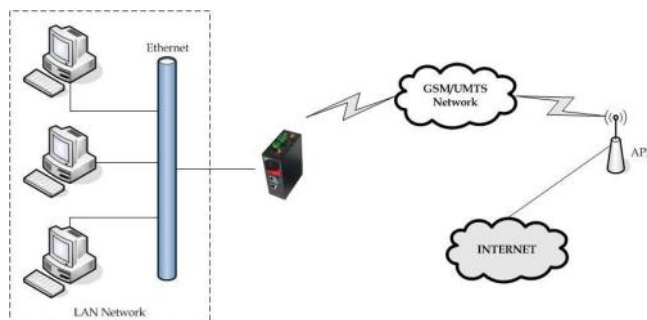
RTD-I-TX2RS is a ruggedized design in a metallic DIN rail enclosure with an operation temperature range of -20 to +70 °C. It can host two SIM cards to provide auto-



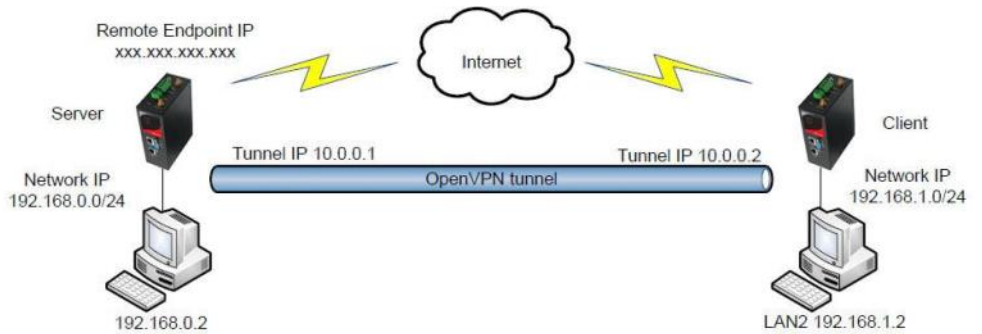
matic mobile network backup. Users can control switching to backup network and restoring to main network which guaranties best communication availability and resilience.

Internet access

RTD-I-TX2RS enables high speed Internet access through the 2/3G+ mobile network. Remote systems can be activated by SMS. Network access can be secured by a VPN tunnel with a keep-alive function for always-on communication.

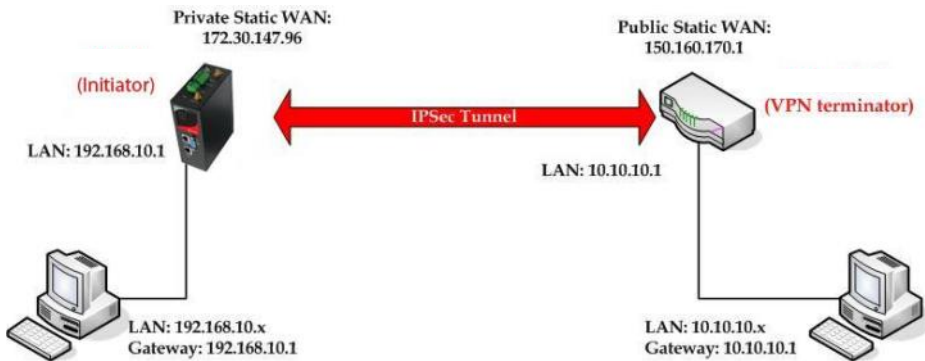


2/3G MOBILE NETWORK COMMUNICATIONS



VPN and M2M

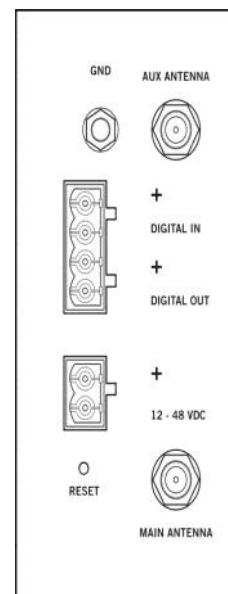
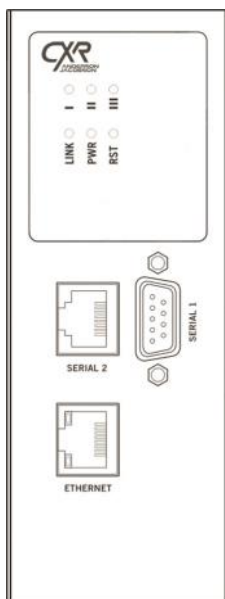
RTD-I-TX2RS enables point to point connections through a secured VPN tunnel. A device is set as Server and the remote unit is set as Client. A Server equipment can support several VPN connections to a number of remote Client devices. **RTD-I-TX2RS** supports IPSEC, GRE and OpenVPN protocols.



Asynchronous to IP Conversion

RTD-I-TX2RS delivers two RS232/RS485 serial ports with DB9 and RJ45 connectors. Asynchronous traffic is transferred over IP though either Telnet, RAW-TCP or RAW-UDP protocols.

RTD-I-TX2RS performs ModBus/TCP to ModBus /RTU conversion with ModBus/TCP master polling. This function enables direct connection of Slave Modbus devices from their RS232 interfaces.



CXR Anderson Jacobson
Rue de l'Omette
28410 Abondant - France

T +33 (0) 237 62 87 90
F +33 (0) 237 62 88 01
email: contact@cxr.com

2G / 3G CAPABILITIES

Maximum Bandwidth (*)				RTD-I-TX2RS	
Mobile Network		Downstream	Upstream	275	350
GPRS	2.5G	171Kbps	48Kbps		
EDGE	2.75G	384Kbps	171Kbps		
UMTS	3G	2Mbps	384Kbps		
HSDPA	3.5G	7.2Mbps	384Kbps		

(*) depends on network operation

SPECIFICATION - SOFTWARE

Routing	Static, RIP
RIP	Dynamic routing protocol
DHCP server	Static Address
	Address exclusion
	DHCP server for local interface clients
Port forwarding	LAN and WAN IP, TCP, UDP packets
	DMZ support
SNMPv1,2c	Management protocol with GET, SET and TRAP. MIB2
NTP(RFC1305)	NTP client for router synchronization
DynDNS	Dynamic DNS (DDNS) is a DNS server for dynamic IP address link to static host names
Firewall	NAT, PAT
	IP address filtering
Serial / IP conversion	RAW-TCP, RAW-UDP, Telnet
	Modbus RTU-to-TCP gateway
	Modbus to Ethernet conversion with VPN
VPN	GER, Ipsec, OpenVPN
GRE	Generic Routing Encapsulation, tunnel protocol for non-routable protocols (NetBIOS, IPX, AppleTalk...)
GRE Keep-Alive	Keeps always-on tunnel even when no traffic
IPSec pass-through	ESP Tunnels
IPsec	Enables up to 5 simultaneous secured and encrypted 5 tunnels
OpenVPN	OpenVPN with graphical interface for network interconnection
	Enables Point to Point connections through the 2G/3G network
IPSec IKE failover	Connection trial control over 2 SIM cards / mobile networks
IPSec tunnel failover	IPSec quality control management
Management	Local console port, LAN, WAN
	http, CLI via serial port, Telnet, SSH
Wizard	Configuration tool through the 2G/3G network
SMS Control	Router operation control through SMS messages
Software - option	This software performs configuration and operation management for a large number of routers
Log	Log file of operation and diagnostic information
Export/Import configuration	Equipment configuration Export / Import

These are maximum rates supported by the RTD-I-TX2RS product.

Actual available bandwidth may vary on environmental conditions, distance to base station or mobile network congestion



SPECIFICATION - HARDWARE

EMC	2004/108/EC Directive EN 301 489-1 V1.6.1(2005-09) EN 301 489-7 V1.3.1(2005-11)
LVD	EN60950-1:2001
R&TTE	1999/05/EC Directive ETSI EN 301 511 V9.0.2 EN 301 908-1 & EN 301 908-2(v2.2.1)
RoHS	Directive 2002/95/EC EU Commission 2005/618/EC, 2005/717/EC, 2005/747/EC, 2006/310/EC, 2006/690/EC, 2006/691/EC and 2006/692/EC
Ethernet Interface	RJ-45 socket Standard: IEEE 802.3 10/100Base-T Rate: 10/100Mbps Mode: full or half duplex
Other interfaces	1 x RS-232C / RS485 / RS422 – RJ45 (+/- 15KV ESD protection) 1 x RS-232C / RS485 / RS422 – DB9 (+/- 15KV ESD protection) 1 x Digital input (0/48VDC;1.5KV isolation) 1 x Relay output (700mA@60VDC; 1.5KV isolation)
Product Models RTD-I-TX2RS-25	Mobile network capabilities GPRS Tri-band: 900/1800/1900 MHz GPRS multi-slot class 10, mobile station class B GPRS DL: 85.6Kbps, UL: 42.8Kbps
RTD-I-TX2RS-275	GPRS EDGE Quad band: GSM 850/900/1800/1900 MHz GPRS/EDGE multi-slot class 12, mobile station class B EDGE DL: 236.8Kbps, UL: 236.8 kbps GPRS DL: 85.6Kbps, UL: 85.6 kbps
RTD-I-TX2RS-35	GPRS EDGE UMTS HSPA UMTS/HSDPA/HSUPA: Quad band, 850/900/1900/2100 MHz GSM/GPRS/EDGE: Quad band, 850/900/1800/1900 MHz GPRS/EDGE multi-slot class 12, mobile station class B HSUPA DL: 7.2 Mbps, HSDPA: UL: 5.76 Mbps UMTS DL: 384 Kbps, UL: 384 Kbps EDGE DL: 236.8 Kbps, UL: 236.8 Kbps GPRS DL: 85.6 Kbps, UL: 85.6 Kbps
Antenna connector	SMA, 50 Ω, antenna provided
Operation Light indicators	Ethernet Link / Traffic Power on Mobile network connection Signal quality Reset
Power input	12 - 48 Vdc
Environment	Operating temperature range: -25 °C to 70 °C (-13 °F to 158 °F) Stocking temperature range: -40 °C to +75 °C (-40 °F to +167 °F) Hygrometry: 5% to 95% - non-condensing
Size and Weight	Weight : 500 g W x H x D = 50 x 135 x 104 mm
Enclosure	Robust metallic enclosure with DIN rail mounting kit



CXR Anderson Jacobson
Rue de l'Ornette
28410 Abondant - France

T +33 (0) 237 62 87 90
F +33 (0) 237 62 88 01
email: contact@cxr.com

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