GWR-I
INDUSTRIAL
CELLULAR ROUTER
SERIES GPRS/EDGE/HSPA+/DC-HSPA+/LTE/ADSL

GWR-I Industrial High Speed Cellular Router Series represents a group of industrial graded routers especially designed for expansion of existing industrial networks, remote telemetry and data acquisition in harsh environments. Low transmission delay and very high data rates completely eliminate the need for very complex installation of wired infrastructure in industrial environments. Easy to install, reliable and high performance router models from GWR-I series introduce a completely new dimension into industrial networking area.

New GWR-I Industrial Cellular Router Series enables users extend router functionalities by developing their own software applications so the device can perform operations with no need for using PC application. That means router can independently communicate directly with the connected machine. The device is equipped with LCD display for advanced monitoring.

Complete series is based on reliable and high performance hardware platform using powerful microprocessor. All router models have dual SIM card support. The form factor of the router is adjusted to industrial environments and DIN rail mounting kit is part of standard equipment for GWR-I series. With a robust all-metal case and top quality components inside, durability of the product is guaranteed.

GWR High Speed Cellular Routers feature Layer 3 switches with fast forwarding done via hardware and fully support VLANs (802.1Q).

Dual SIM card
Fast switch SIM/failover with SIM keepalive support increases the reliability of the router.

Advanced WAN settings
Allows specifying desired parameters in order to meet the requirements of specific cellular network.

VPN tunnel support
Provides powerful options for network expansion and secures data transfer over the cellular network.

Chroot environment
Write scripts and adapt existing functionality to your needs or develop more complex functionality. Support for shell scripts, LUA, Python, Perl and compiled C/C++ executables. Allows access to device peripherals from user's space.

Serial-to-IP feature
Connect, control and perform data acquisition from almost any device with serial RS-232 port. ModbusRTU-to-ModbusTCP functionality is designed to support expansion of Modbus SCADA networks over the cellular networks.

Galvanic isolation
Galvanic isolation on all ports (except USB) enables the routers to be used in projects where a high degree of reliability is required.

Full control over device
Easy to use web interface, extended CLI (Command Line Interface), SSH, Chroot environment exposed to the customer, detailed log, Timed Actions, Connection Manager, SMS control feature, standard based Simple Network Management Protocol (SNMP), SMS of GPIO input, and partial and full configuration Export/Import provide wide range of management functionalities.

TYPICAL APPLICATION

Industrial applications
- Connection to PLC and SCADA systems
- Backup over mobile network in rough environment
- Critical equipment monitoring with failover option
- Smart grid & solar app. with extended temp. range

Connectivity and Internet Access
- Primary Internet access from remote areas
- Solutions for Remote Access to IT resources

Data collection and system supervision
- Extra-high voltage equipment monitoring
- Running water, oil/gas pipeline supervision
- Centralized heating system supervision
- Environment protection data collection
- Weather station data collection
- Power grid, light supervision
- Solar PV & wind turbine power solutions
- Video surveillance solutions over cellular network

Technical specifications

Interfaces and connectors

• 1 x embedded interface GPRS/EDGE/UMTS/HSPA+/DC-HSPA+/LTE (depending on the router model)
• Dual SIM slots: mini-SIM (2FF), Push-Push
• GSM: 1 or 2 SMA female connectors (50 Ω) for external antennas (depending on the router model)
• 1, 2, 4 or 5 Ethernet ports depending on the model, 10/100 Base-T, RJ-45 connector
• 1 x ADSL2+ interface (available on ADSL models), RJ-11 6P2C connector
• 1 x galvanic isolated serial port RS-485/RS-422, 4 wire, Phoenix connector
• 1 x galvanic isolated serial port RS-232 – DSUB9 connector
• 1 x USB 2.0 interface, ESD, over-current protection, mini USB AB connector
• 3 x digital inputs, photo diode with 4.7 kΩ resistor for current limiting, Phoenix connector
• 3 x digital outputs, open-drain, 500 mA resettable PTC fuse, Phoenix connector

RF characteristics - GPRS/EDGE/UMTS/HSPA+/DC-HSPA+/LTE

GWRI-462 / GWRI-A462 - 4G LTE models

LTE
LTE FDD: 800/850/900/1800/2100/2600 MHz
LTE TDD: 2300/2500/2600 MHz

UMTS/HSPA+/DC-HSPA+
850/900/2100 MHz

GSM/GPRS/EDGE
900/1800 MHz

GWRI-362 / GWRI-A362 - 3G HSPA+ models

UMTS/HSPA+
800/850/900/1900/2100 MHz

GSM/GPRS/EDGE
850/900/1800/1900 MHz

Isolated Power Supply

• Input 18 - 36 VDC, average consumption: 180 mA @ 24 VDC
• Galvanic isolation, redundant (two inputs), reverse polarity protection, over-current protection (1A time-lag fuse), transient protection, EMI filter
• Galvanic isolation on all ports (except USB) enables the device to be used in projects where a high degree of reliability is required

LCD navigation

• LCD information available: Present/active SIM, signal strength/quality, GSM technology, interfaces, power-on, boot status, error
• LCD view port (W x H): 24 mm x 27 mm, LCD viewing angle: 6 o'clock

Physical

• Dimensions (L x W x H): 102 mm x 48 mm x 135 mm
• Weight: up to 400 g depending on the model
• Housing: Plastic coated 0.8 mm steel sheet, black; DIN rail mounting kit

Environmental

• Operating temperature: -20°C to +70°C
• Storage temperature: -40°C to +85°C
• Relative humidity: 5% to 95% (non-condensing)
• IP rating: IP30

Protocols and Features

Network

LAN, VLANs, WAN, DHCP server, DHCP client, RIP, OSPF, DMVPN, VRRP, Port forwarding, DMZ support, SNMPv1,2c, DynDNS, NTP client, Firewall (NAT, PAT, IP filtering, MAC filtering), Serial-to-IP, Gateway Priorities, ModbusRTU-to-ModbusTCP, Radius, PPPoE client, static routes with metric

VPN

GRE, GRE Keepalive, OpenVPN, PPTP, L2TPv3, IPsec site to site tunnel IKEv1 (with main and aggressive mode) and IKEv2, certificate management for IPsec and OpenVPN authentification (CA certificate, private certificate, private key, CRL Certificate), preshared key files, Data integrity (HMAC-MD5, SHA-1, SHA-2), manual keys, IKE features (Perfect Forward Secrecy, Auth-Method PSK, Identify IP address, DPD for constant connection, Automatic NAT-T behind NAT, Initiator and responder), IPSec tunnel failover

Management

Web based configuration interface, Command Line Interface on serial console, SSH, SMS control, Detailed system log, Default reset, Firmware upload, Partial or full configuration Export/Import, Radius Authentication, Display settings, Timed actions

QMS
ISO 9001:2015

$C\epsilon$ certified

Important note: Geneko reserves the right to make changes or improvements to any of the products without prior notice. Please contact the Sales Department regarding current product specifications.

ORDERING INFORMATION

Model	HSPA+	DC-HSPA+	LTE	ADSL2+	RS-232	RS-485	Eth ports	Digital I/O
GWRI-362-2	●	—	—	—	●	●	2	3/3
GWRI-462-2	●	●	●	—	●	●	2	3/3
GWRI-362-5	●	—	—	—	●	●	5	3/3
GWRI-462-5	●	●	●	—	●	●	5	3/3
GWRI-A362	●	—	—	●	●	●	1	3/3
GWRI-A462	●	●	●	●	●	●	1	3/3
GWRI-A362-4	●	—	—	●	●	●	4	3/3
GWRI-A462-4	●	●	●	●	●	●	4	3/3

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