GWR-I
INDUSTRIAL CELLULAR ROUTER SERIES

GPRS/EDGE/HSPA+/DC-HSPA+/LTE

Geneko GWR-I router series represents a group of industrial graded routers specially designed for expansion of existing industrial networks, remote telemetry and data acquisition in harsh environments. It comprises of 3G and 4G LTE models that support applications where fast data transfer over cellular networks is required.

Complete series is based on reliable and high performance hardware platform using highly integrated ARM9 system-on-chip microprocessor. GWR-I router series is equipped with one Ethernet port, digital input/output and two serial ports and provides the option to choose an appropriate model with RS-232C, RS-422 or RS-485 (full or half duplex) ports.

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. It is very easy to install and set up GWR-I routers using the administration web page and remotely manage and monitor GWR-I units.

Many useful features make GWR-I cellular routers a perfect solution for wide variety of industrial applications:

Dual SIM card

Dual SIM card support increases the reliability of the router and provides a solution for those applications where failure of one mobile network must not result in system downtime.

Advanced WAN settings

The whole set of advanced WAN settings allow a user to specify desired parameters in order to meet the requirements of specific cellular network. GWR routers have proved to be reliable and high performance devices in so many countries around the world.

VPN tunnel support

VPN (GRE, IPsec, OpenVPN) tunnel support provides powerful options for network expansion and secure data transfer over the cellular network.

Serial-to-IP feature

With Serial-to-IP feature it is possible to connect, control and perform data acquisition from almost any device with serial RS-232C, RS-422 or RS-485 port. In addition to this feature, GWR-I router series implements ModbusRTU-to-ModbusTCP functionality designed to support expansion of Modbus SCADA networks over the cellular networks.

Full control over device

Easy to use web interface, extended CLI (Command Line Interface), detailed log, SMS control feature, and partial and full configuration Export/Import provide wide range of management functionalities. All those features and tools empower a user with full control over GWR-I routers.

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
- Flood control data collection
- Alert system supervision
- Weather station data collection
- Power grid, Light supervision
- Solar PV & wind turbine power solutions

Technical specifications

Interfaces and connectors

- 1 x embedded interface GPRS/EDGE/UMTS/HSPA+/DC-HSPA+/LTE (depending on the router model)
- Dual SIM card slot: 2 x Mini-SIM (2FF), SIM holders are inside the router housing
- 1 or 2 SMA female connectors (50 Ω) for external antennas (depending on the router model)
- 1 x Ethernet interface 10/100 Base-T (LAN)
- 1 x RS-232 / RS-485 4-wire / RS-485 2-wire; configuration: DCE / Full-Duplex / Half-duplex; DSUB9 female connector
- 1 x RS-232 / RS-485 4-wire; configuration: DCE / Full-Duplex; RJ45 connector
- 1 x digital input; 6 V min, 48 V max, optocoupler IR diode; FCI 20020110-H041A01LF connector
- 1 x digital output; 48 V max. optocoupler open drain with 500 mA resettable PTC fuse, FCI 20020110-H041A01LF connector

RF characteristics

1) GWR-I352 – 4G LTE model
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

2) GWR-I352 – 3G HSPA+ model
UMTS/HSPA+
- 800/850/900/1900/2100 MHz

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

Status LED

- Ethernet activity/network traffic
- Power on
- GSM link activity
- Signal quality
- Reset

Power

- Input: 12-48 VDC
- Input protection: Reverse polarity, transients, overcurrent (internal 1 A time-lag fuse)
- FCI 20020110-H021A01LF connector

Environmental

- Operating temperature: -20°C to +70°C (-4°F to 158°F)
- Storage temperature: -40°C to +85°C (-40°F to 185°F)
- Relative humidity: 5% to 95% (non-condensing)
- IP rating: IP40
- Ethernet isolation: 1.5 kV RMS
- Serial ports protection (ESD): +/- 15 kV (IEC 61000-4-2 Air Gap)

Physical

- Dimensions (L x W x H): 104 x 50 x 135 mm
- Weight with 2 antennas: 540 gr
- Housing: Plastic coated 0.8 mm steel sheet, black; DIN rail mounting kit

Accessories (included)

- Matching power connector: FCI 20020006-H021B01LF (female, 2 pins)
- Matching GPIO connector: FCI 20020006-H041B01LF (female, 4 pins)
- GSM antenna, frequency: 698-960 / 1710-2700 MHz, 1 or 2 pcs depending on the router model
- Ethernet UTP cable
- DIN rail mounting kit

Protocols and Features

Network

DHCP server; RIP; Port forwarding; DMZ Support; SNMPv1,2c; DynDNS; NTP; Firewall (NAT, PAT, IP filtering); Serial-to-IP; ModbusRTU-to-ModbusTCP

VPN

GRE; GRE Keepalive; IPsec pass-through; IPsec main/aggressive, Data integrity (HMAC-MD5, SHA-1, Authentication and key management); IKE, 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; OpenVPN

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

QMS
ISO 9001:2015

ISMS
ISO/IEC 27001:2013

CE 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	GPRS/ EDGE	UMTS/ HSPA+	UMTS/ DC-HSPA+	LTE	RS-232 or RS-485 (1)	RS-232 or RS-485 (2)	Eth port	Digital I/O
GWR-I352 – 3G HSPA+	•	•	—	—	•	•	1	1/1
GWR-I352 – 4G LTE	•	•	•	•	•	•	1	1/1