GWG+

3G/4G GATEWAY

Geneko GWG+ Gateway is compact and cost effective communications solution that provides cellular capabilities for fixed and mobile applications such as data acquisition, smart metering, remote monitoring, traffic control and management. GWG+ comes with greatly increased storage area and also includes support for Python interpreter. It allows users to create their own applications and add functionalities that they need. GWG+ supports a variety of radio bands options on 2G, 3G and 4G cellular technologies. It is reliable solution thanks to high performance hardware platform and VPN/Security powerful options. When coupled with the rich embedded intelligence, it is the perfect choice for a broad set of M2M solutions.

GWG+ comes with numerous connectivity options and multiple configuration methods. It allows you to connect your existing Ethernet and serial devices using basic configuration. Besides Ethernet, RS-232 and RS-422/RS-485 serial ports, the device is equipped with USB port as well as 1-Wire interface and 2/2 configurable digital input/outputs available on GPIO Connector, and digital input/output and analog input available on power connector. Its small size and easy installation makes it suitable for challenging and size-constrained applications. GWG+ Gateway can be used on either desktop or mounted on a DIN rail.

Features

- Compact, cost effective communication solution
- Cellular capabilities for M2M applications
- Support for remote Management and Monitoring
- Reliable, high performance solution
- Small-sized, convenient for easy installation and rapid deployment
- Multiple configuration methods, including web/serial console and Telnet
- Numerous connectivity options: Ethernet, RS-232, RS-422/RS-485, USB, 2/2+1/1 Digital I/O, Analog input
- 1-wire interface on GPIO connector
- Chroot environment allows the user to write scripts and adapt and develop existing functionality

Typical application

Data collection and system supervision

- Monitor and control environmental conditions
- Remote control of devices
- Extra–high voltage equipment monitoring
- Running water, gas pipe line supervision
- Centralized heating system supervision
- Environment protection data collection
- Flood control data collection
- Alert system supervision
- Weather station data collection
- Power Grid
- Oilfield
- Light Supervision
- Solar PV Power Solutions

Financial and department store

- Connection of ATM machines to central site
- Vehicle based bank service
- POS
- Vending machine
- Bank office supervision

Security

- Traffic control
- Video Surveillance Solutions

Other

- Remote Office Solution
- Remote Access Solution

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Technical specifications

Interfaces and connectors

RF Characteristics - 4G LTE model (Category 4)
LTE FDD/TDD
- 800/850/900/1800/2100/2300/2500/2600 MHz
- Transfer rate (max): 150 Mbps down, 50 Mbps up

WCDMA/DC-HSPA+
- 850/900/2100 MHz
- Transfer rate (max): 42 Mbps down, 5.76 Mbps up

GSM/GPRS
- 900/1800 MHz
- Transfer rate (max): 85.6 Kbps down, 85.6 Kbps up

RF Characteristics - 3G HSPA+ model
UMTS/HSPA+
- 900/2100 MHz
- Transfer rate (max): 14.4 Mbps down, 5.76 Mbps up

GSM/GPRS/EDGE
- 850/900/1800/1900 MHz
- Transfer rate (max): 384 Kbps down, 384 Kbps up

Important note: All DL/UL speeds are given as speeds defined by standards. Actual speeds may vary and are not guaranteed.

Host Interfaces
- 10/100 Base-T RJ45 Ethernet
- RS-232 serial port, DB9 connector
- RS-422/485, 4 wires, Full-Duplex/Half-Duplex, Phoenix 1844249 connector
- USB 2.0 Mini-AB connector
- 1 or 2 SMA antenna connectors (depending on the GWG model)
- Mini-SIM slot (2FF), Hinge

Digital Input/Output (available on GPIO Connector)
- Digital Inputs/Outputs: 2 user selectable input or output
- Digital inputs: internal weak pull-up, active when pulled down to GND
- Digital outputs: open-drain, 4-28V, no over-current protection
- Pinout: 1: +9..36VDC with 500mA resettable PTC fuse, 2: IO1, 3: IO2, 4: 1-Wire, 5: GND

Digital Input/Output (available on Power Connector)
- Digital Inputs/Outputs: 1 output, 1 ignition sense input
- Digital Output: open-drain, 4-28V, 350 mA ressetable fuse
- Ignition Sense Input: active when pulled up to 9-36 VDC
- Pinout: 1: +9..36VDC (also Analog Input), 2: GND, 3: Ignition Sense Input, 4: Digital Output

Analog Input (available on Power Connector)
- Analog Input Range: 9-36 VDC
- Pinout: 1: +9..36 VDC (also Analog Input), 2: GND, 3: Ignition Sense Input, 4: Digital Output

Protocols and features

- Network: TCP/IP, UDP/IP, DNS, DHCP client, DHCP server, DynDNS
- Routing: NAT, Static routes, PAT, Port forwarding, RIP, OSPF, VRRP, DMZ Support, Firewall (IP Filtering, MAC Filtering)
- Application: SMS remote control, SMS sending, Telnet/SSH, SNMP, NTP, CLI, Remote Management, Connection Manager
- Chroot: Support for shell scripts, LUA, Perl and compiled C/C++ executables
  - Python interpreter included with variety of modules
- Serial ports: RS-232 and RS-485, Modbus (TCP/IP and serial RTU), Serial over TCP/UDP, Console on Serial port
- USB port as serial port
- VPN/Security: Ipsec (IKEv1 and IKEv2), OpenSSL, and GRE (with keepalive option); OpenVPN, L2TP, PPTP; Encryption: AES, Blowfish, IPsec and OpenVPN tunnels with authentication possibility using certificates (upload of CA, private and CRL certificates as well as key files on a device) or pre-shared key files
- Other: Radius; Timed Actions; Advanced scripting functions; System control; LED management; GPIO (ability to send SMS after status change); Ping utility; Backup setting (Export/Import configuration); Logs reading

Power

- Input: 9-36 VDC
- Input protection: Reverse polarity, transients, overcurrent (internal 1 A time-lag fuse)

Physical

- Dimensions (L x W x H): 101 x 88 x 30 mm
- Weight: 248 gr
- Status LEDs: Power, Signal, Network, LAN (on Ethernet connector: Link, Activity)
- Housing: Steel sheet 0.8 mm
- DIN rail mounting kit (optional)

Environmental

- Operating Temperature: -20°C to +70°C
- Storage Temperature: -40°C to +85°C
- Relative Humidity: 5% to 95% (non-condensing)
- IP rating: IP40
- Ethernet Isolation: 1.5 kV RMS
- RS-485 Port Protection (ESD): 2 kV

Certifications

QMS ISO 9001:2015 ISMS ISO/IEC 27001:2014 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.

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Ordering information

Model	GPRS/ EDGE	HSPA+	LTE	RS-232	RS-422 /RS-485	Eth Port	USB 2.0	Digital I/O on GPIO	Digital I/O on power c.	1-Wire interface	Analog input
GWG-30+	●	●	—	●	●	●	●	2/2	1/1	●	1
GWG-40+	●	●	●	●	●	●	●	2/2	1/1	●	1

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