

GPRS/EDGE  
HSDPA/HSUPA  
**ROUTERS**



### Advantages

- GSM/UMTS mobile network connectivity
- Access to remote locations or devices
  - Remote equipment control
  - Primary and backup Internet access
- Ethernet Network Routing between LAN and joint network or Internet
  - Download up to 7.2 Mbps, Upload up to 5.76 Mbps
  - 2 SIM card support

### Introduction

Geneko GWR Series Routers enable alternative connection of computers and small computer networks (LAN) in remote business units with central server over mobile network and Internet, using GPRS/EDGE/HSDPA/HSUPA technology, primarily at locations where there is no other way for connection. This device is also designed for access to Internet by one or several PCs or engaging other networks devices (automatic units, sensors...), but also for securing spare (redundant) IP connection or connecting field mobile systems with central computer.

### System description

Central processor unit of Geneko GWR Router is based on ARM CPU family. WAN connection to GSM and UMTS networks is provided by integrated GPRS/EDGE/HSDPA/HSUPA module. GWR Router provides communication with outside devices through Ethernet and RS-232 connection. The operation system of device is reliable and efficient GNU/Linux, which provides necessary functions of a modern router. Beside static and dynamic routing function, this operation system performs as well all other functions characteristic for network routers, like: DHCP server, IP filtering, NAT/PAT translation, etc. System concept enables great flexibility and adaptability for other specialized purposes as well. Device support operation with two SIM cards (alternate connection), so that in case of one connection interruption, it automatically transfers communication to the other connection (SIM card) with possibility of automatic relapse to first connection.

## Technical specifications

|   |   |   |
|---|---|---|
| Network functions   | Network functions: TCP/IP protocols set, DHCP server, GRE+keepalive, IPSec openVPN tunnels, Rip, Ser2Net, NTP, SNMP, GSM Failover, DYNDNS |   |
| Status LED  | Ethernet activity / network traffic, Power on, GSM/UMTS link activities, Signal quality   |   |
| Router/firewall characteristics   | NAT/PAT, IP forwarding, IP filtering, DMZ   |   |
| Ethernet interface  | RJ-45, IEEE 802, 10/100Base-T, 10/100Mbps data rate, Full or half duplex mode   |   |
| RF characteristics of GPRS/EDGE/HSDPA/ HSUPA modules depend of GWR router model | <b>Model</b>  | <b>Description</b>  |
|   | <b>GWR 202</b>  | GPRS Router with dual SIM card support; Up to 85.6 kbit/s<br>Quad-Band: GSM 850/900/1800/1900 MHz<br>GPRS Multislot Class 12 / 10 / 8   |
|   | <b>GWR 252</b>  | GPRS/EDGE Router with dual SIM card support; Up to 236.8 kbit/s<br>Quad-band GSM 850/900/1800/1900 MHz<br>EGPRS Multislot Class 10 / 8  |
|   | <b>GWR 302</b>  | GPRS/EGDE/HSDPA Router with dual SIM card support; Up to 3.6 Mbps<br>Three band UMTS 850/1900/2100 MHz<br>Quad band GSM 850/900/1800/1900 MHz   |
|   | <b>GWR 352</b>  | GPRS/EGDE/HSDPA/HSUPA Router with dual SIM card support<br>WCDMA 850/1900/2100 MHz; Downlink up to 7.2 Mbps, Uplink up to 2.0 Mbps (upgradeable to 5.76 Mbps);<br>GSM 850/900/1800/1900 MHz, Downlink up to 236 kbps, Uplink up to 236 kbps |
| Interface for configuration   | WEB application through HTTP protocol, console application through serial port RS-232   |   |
| Power supply  | 9-12 V DC, 1A   |   |
| Operating temperature   | -5°C to +50°C   |   |
| Dimensions  | 135x95x35 mm  |   |
| Weight  | 380 gr  |   |

## Typical applications

Geneko GWR Router is universal communication device for business and personal use with wide application range.

### A. Multi-point to Center

Connections of remote devices to central server by routers they become a part of the same customer IP network. Most common use of this configuration is for connecting points of sale to centre. Other options of GWR Router application are connection of ATM terminals, POS terminals, UPS devices or data acquisition from various sensors and measure devices and sending to remote server. For provision of Machine-to-Machine (M2M) application it is not necessary to use HSDPA or HSUPA service; GPRS and EDGE can completely cover the system requirements. Models GWR20x and GWR25x are typical used in these applications.

### B. Ethernet Network Routing

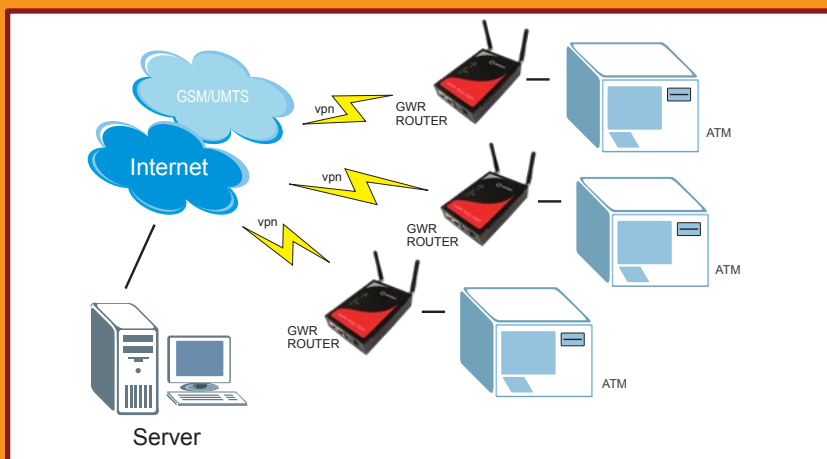
Geneko GWR Router's application in this configuration provides connection for several computers, devices or local computer network into joint computer network. The same concept enables access of large number of computers of the same local network to Internet available through service provided by mobile operator. These solution can be used for fast implementation of temporary local network with broadband connection in places with no other communication infrastructure, as on building sites or during business events or for video monitoring. For this purpose routers series GWR25x, GWR30x and GWR35x are used since they support EDGE, HSDPA and HSUPA technologies with faster data transfer.

### C. Direct connection

In case of direct connection of desktop or portable computer with Geneko Router, Internet access is provided through GSM and UMTS networks. This option is usually implemented as the auxiliary one in case when conventional connection (hired line, ADSL, cable connection...) is out of function or as primary connection in case of temporary Internet access during field operation or afloat.

### D. Serial to Ethernet Converter

GWR Router can be used as media converter, i.e. for connecting network devices and devices containing standard serial port RS-232 as the only way of communication. In this case router performs processing of communication from serial port and conversion in TPC/IP packages. GWR Router does transfer of these packages to remote computer system or computer in local network, which have client application.



Geneko GWR Router – Multi-point to Center connection topology

