

# GW2028 Industrial Router

## 3G, LTE, Dual Fibre DIN Rail Mount Router



### Applications:

- Telemetry
- SCADA
- Roadside
- Global wireless markets

### Hardware features:

- DIN rail mounting
- 3G, LTE, dual fibre
- Quad Ethernet ports
- RS232 and RS485 serial ports
- Digital inputs for event detection
- Relay contact options

### Overview

The Virtual Access GW2028 router is a versatile, LTE wireless router suitable for a variety of industrial deployments. The compact and rugged structure makes it a suitable product for deployments where remote access to OT networks in harsh environments is required such as CCTV, telemetry, SCADA, smart grid, digital signage, and intelligent traffic systems.

The product line supports AT 4G/LTE connectivity as well as legacy HSPA+, HSPA, UMTS, EDGE, GPRS and GSM.

### Quad Ethernet Ports

The GW2028 router offers 4 x 10/100 Mbps Ethernet interfaces. Ports can be fully segmented using VLAN and 802.1q.

### Optional Dual Fibre GbE

Dual fibre SFP GbE can be used in applications where a high degree of isolation is required, for example an electricity substation or applications where distances of over 100m are required to connect to a host device.

### Digital Inputs and Output

Two digital inputs are provided that can be used to detect remote contact states for monitoring door open/close or PIR detectors or similar. Custom scripts can be written to determine the action to be taken on the detection of an input state change. Syslog events, SNMP traps or emails can be generated.

There is also a relay contact output. This can be controlled by a script on detecting any event within the device, or it can be controlled remotely.

### Serial Ports

The RS232 serial and RS485 options facilitate direct connectivity to serial devices and enable remote console access.

### Connection Monitoring & Dual SIM

The connection monitor ensures the GW2028 router delivers maximum availability so long as the cellular network is available. For critical applications a dual SIM architecture ensures that a backup LTE network can take over should the primary network fail. The GW2028 router detects a network problem and fails over to a standby SIM/APN.

### SMS Commands

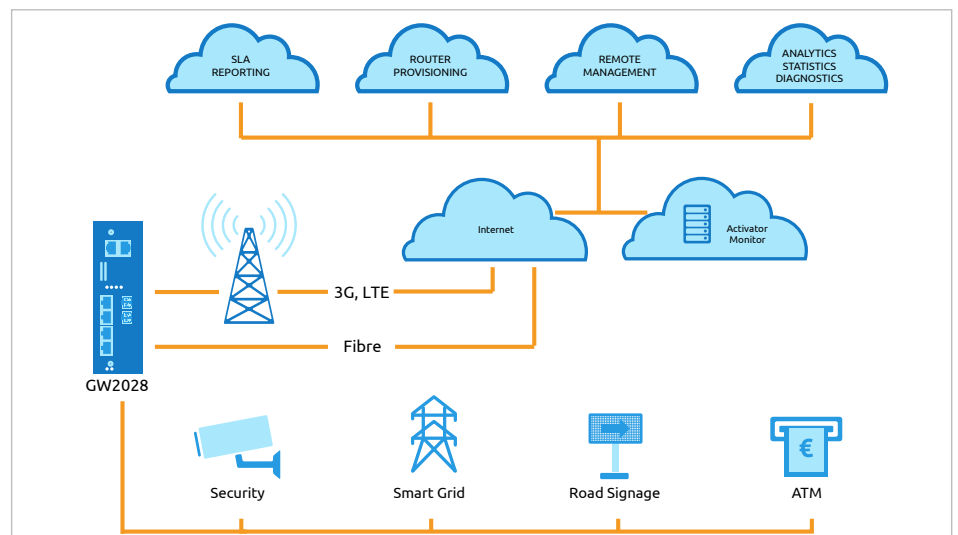
The GW2028 router also supports SMS, so if the packet switched side of the network is down you can still send commands to the router to perform diagnostics or even a reload.

### Advanced Security and Routing Features

The GW2028 router offers the highest level of VPN (IPSec and SSL) encryption and advanced routing features. The inbuilt stateful firewall offer the user compliance to IEC 62443 and IEC 62351 industrial cyber security standards.

### Centralised Management and Zero Touch Deployment

The GW2028 router benefits from Activator, Virtual Access' centralised configuration management and monitoring system. Activator simplifies and automates deployment, management and support tasks in managed network environments. The zero-touch deployment functionality built into Activator means GW2028 routers can be deployed without the need of onsite configuration or even knowledge of IP or LTE networks.



## Software Features

### Management

- SMS management support
- Local and remote advanced configuration through embedded web server and Java applets
- HTTP/HTTPS
- Command Line Interface via Telnet or SSH
- TFTP client download/upload
- SNMP agent

### Fault Investigation and Reporting

- Event logging
- Syslog support
- Packet tracing

### Routing Features

- IPv4 and IPv6
- DHCP server/client
- DynDNS
- NAT
- NAT Traversal
- NTP Client
- VLAN support
- Packet filtering
- Firewall
- Port forwarding
- BGPv4, OSPF
- RIP (v1 and v2)
- IPSec/L2TP/GRE
- DMVPN
- SNMP v1/v2/v3
- TLS 1.2
- 802.1x authentication
- IEC104
- QoS
- VRRP

### IPSec VPN

- IKE Version 2
- X.509 certificates
- Elliptic Curve Cryptography (ECC)
- SHA2\_512 support
- AES\_CBC (256)
- PFS
- SCEP
- DH\_8192

## SCADA Protocol Conversion

- Protocol conversion including the following:
  - IEC 60870-5-104
  - IEC 60870-5-101
  - IEC 61850
  - Modbus RTU
  - Modbus TCP
  - Modbus RTU to TCP automatic conversion
  - DNP3
  - Serial to Ethernet

### RTU Functionality

- Control of I/O from SCADA master
- Protocol conversion
- Monitoring of comms. interface status from SCADA master
- Basic PLC functions

### Terminal Server

- Serial RS232, RS485 to TCP/IP or UDP/IP conversion
- Connects serial ports to TCP or UDP streams

## Hardware Features

### LAN Interfaces

- Quad 10/100 Mbps base-T Ethernet port
- Auto detects full- or half-duplex operation
- Auto detects a regular or crossover cable for easy connection to a switch or hub

### WAN Interfaces

- Wireless WAN with 3G and LTE options
- Dual fibre option
- Ethernet ports can optionally be configured for WAN use

### Fibre Ethernet Interface (Optional)

- 2 SFP sockets for 1 Gigabit Ethernet interface

### Serial Interfaces

Two serial interfaces configured as:

- 2 x RS232, or
- 1 x RS232 + 1 x RS485

### Digital Inputs

- 2 x digital inputs for detecting remote contact open/close
- Scripts define action to be taken on input events

### Digital Output

- Relay contact output. 30V DC 1A rating NO, NC and Common

### SIM

- 2 x SIM card socket with slot cover

## Antennas

- Supports dual antenna configuration for diversity
- 3G or LTE rubber antenna supplied as standard
- Other antenna options available

### LEDS

- Power indicator
- Signal strength indicator
- Ethernet activity
- Active SIM

### Cellular Technologies

- LTE category 4
- LTE FDD Bands:
  - B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B26/B28
- LTE TDD Bands:
  - B38/B39/B40/B41
- WCDMA Bands:
  - B1/B2/B4/B5/B8/B6/B19
- GSM Bands:
  - B2/B3/B5/B8

### Approvals and Certificates

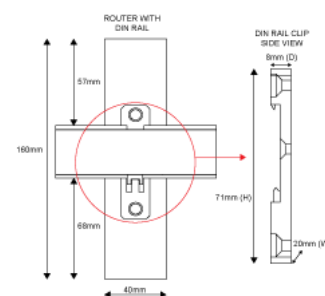
- EN 60950 safety approval
- EN 55022 and EN 55024 EMC
- IEC 61850-3

### Power

- 18-60V DC input voltage
- Isolated
- 6 Watts maximum

### Physical and Environment

- IP31
- Unit weight: 500g
- Unit size: 40(W) 115(D) 160(H) mm



### Operating temperature

- -40°C to +70°C

## GW2028 Series Models

Article No.	Model	Power Input	Isolated Power Input	Ethernet Ports	SFP Ports	Serial Ports	SCADA	RTU
3490-0200	GW2028W-QFR-DC24	18-60V DC	Yes	4	-	2	Yes	Yes
3490-0210	GW2028W-2SFP-QFR-DC24	18-60V DC	Yes	4	2	2	Yes	Yes