

# GW2028 Industrial Router

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



### Applications:

- M2M
- 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

The Virtual Access GW2028 router is a versatile 3G, LTE, dual fibre, CDMA450 wireless router suitable for a variety of industrial deployments. The compact and rugged structure makes it a suitable product for deployments in M2M applications such as CCTV, telemetry, SCADA, digital signage, and intelligent traffic systems.

The product line supports the following radio access technologies: LTE, HSPA+, HSPA, UMTS, EDGE, CDMA450, GPRS and GSM.

### Broadband Connectivity

The GW2028 router provides high speed, secure 3G, LTE, dual fibre, CDMA450 data network connectivity to remote sites.

### Dual SIM

Dual SIM architecture ensures that a backup wireless network can take over should the primary network fail. The router detects a network problem and fails over to a standby SIM/APN, ensuring customer's SLAs are upheld.

### Quad Ethernet Ports

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

### Dual Fibre SFPs

Dual fibre SFPs mean that the unit can be used in point to point or ring configurations.

### 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.

### Serial Ports

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

### 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.

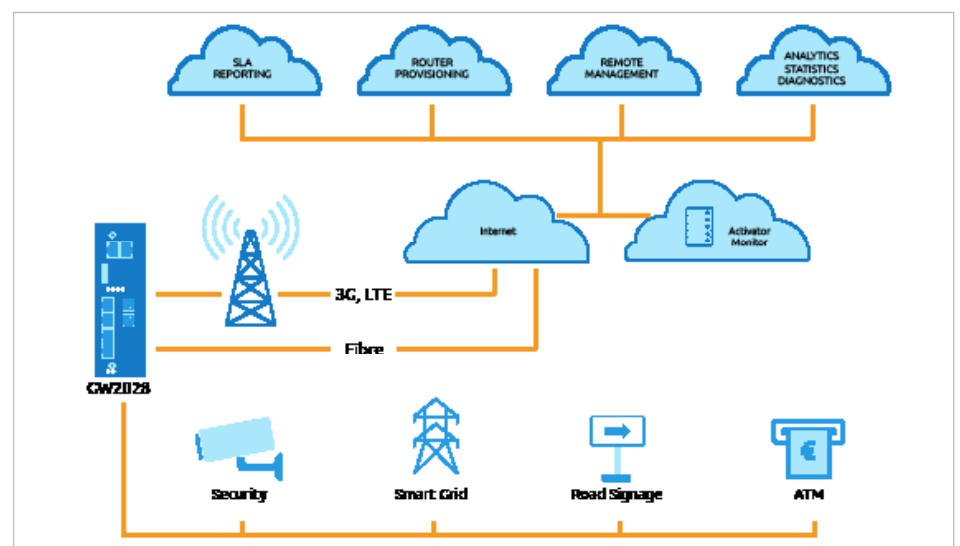
There is also a relay contact output. This can be controlled by a script on detecting any event within the device, or it can be controlled remotely.

### Advanced Security and Routing Features

The GW2028 router offers business grade security and advanced routing features IPsec (3Des and AES), stateful firewall and L2TP as standard.

### Centralised Management and Service Monitoring

As with all Virtual Access routers, the GW2028 router benefits from centralised configuration management, monitoring utilities and SLA reporting. Centralised management and monitoring enables service providers to simplify and automate service deployment, management and support tasks in managed network environments. SLA reporting presents a range of statistics from the router including latency, packet loss and 3G or LTE signal strength over extended periods of time.



## 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), 3DES and DES
  - 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 fibre sockets for 1 Gigabit Ethernet interfaces

### 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 optional slot cover

### Antennas

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

### LEDs

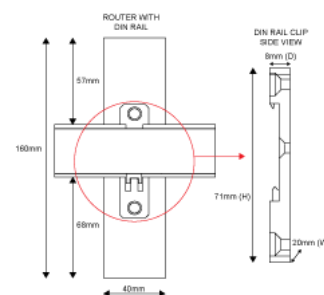
- Power indicator
- Signal strength indicator
- Ethernet activity
- Active SIM

### Power

- 9V-59V DC
- Power consumption: 5W
- DIN rail PSUs can be provided as an option

### Physical and Environment

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



### Operating temperature

- Operating temperatures vary, refer to table below

### Approvals and Certificates

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

## GW2028 Series Models and RF Band Options

### GW2028 Series Models

Model	Ethernet	Serial-0	Serial-1	Dual SIM	Fibre SFP	3G	LTE	CDMA450	Digital Inputs/ Output	Industrial DIN Rail
GW2028	4	RS232	RS232/RS485	✓	Optional 2	●	●	●	✓	✓

### RF Band Options

RF Band	Region	2G Bands	3G Bands	LTE Bands	LTE Category	Operating Temp	Order Code
A	Europe China	850/900/1800 1900	900/2100	-	-	-40°C to 70°C	-RFA
B	Europe Asia	850/900/1800 1900	850/900/1900/2100	-	-	-40°C to 70°C	-RFB
C	Europe Asia	850/900/1800 1900	850/900/1900/2100	B1/B2/B3/B5/B7/B8/B20	-	-30°C to 70°C	-RFC
D	Worldwide	-	-	B3/B7/B20/B31	-	-20°C to 60°C	-RFD
E	Europe	900/1800	900/2100	B1/B3/B7/B8/B20/B38/B40	3	-30°C to 70°C	-RFE
F	Worldwide	-	CDMA TX 452.500 ~ 457.475 RX 462.000 ~ 467.475	-	-	-20°C to 60°C	-RFF
G	Worldwide	850/900/1800 1900	850/900/2100	B1/B3/B5/B7/B20	-	-40°C to 70°C	-RFG
J	Worldwide	450	-	-	-	-40°C to 70°C	-RFJ
L	Europe APAC	900/1800	900/2100	-	-	-40°C to 70°C	-RFL
M	North America	-	850/1900	B2/B4/B5/B17	-	-30°C to 70°C	-RFM
N	Worldwide	-	850/900/1700/1800 1900/2100	B1/B2/B3/B4/B5/B7/B12/B13 B20/B25/B26/B29/B30/B41	-	-40°C to 70°C	-RFN
P	Australia New Zealand Latin America Taiwan	850/900/1800 1900	850/900/1900/2100	B1/B2/B3/B4/B5/B7/B8 B28/B40	4	-40°C to 70°C	-RFP
Q	Mexico/USA Canada	-	850/1900	B1/B2/B4/B5/B12/B13	4	-40°C to 70°C	-RFQ
Q1	Mexico/USA Canada	-	850/1900	B1/B2/B4/B5/B12/B13	1	-40°C to 70°C	-RFQ1
R	EMEA/Korea Thailand Indonesia	900/1800	850/900/2100	B1/B3/B5/B7/B8/B20/B38 B40/B41	4	-40°C to 70°C	-RFR
R1	EMEA/Korea Thailand	900/1800	850/900/2100	B1/B3/B5/B7/B8/B20	1	-40°C to 70°C	-RFR1
S	Europe	900/1800	850/900/2100	B1/B3/B5/B7/B8/B20/B38 B40/B41	4	-40°C to 70°C	-RFS
T	Asia/Pacific	900/1800	800/850/900/1700/2100	B1/B3/B5/B7/B8/B18/B19/B21 B28/B38/B39/B40/	6	-40°C to 70°C	-RFT
U	EMEA/North America/Latin America/APAC/ Japan/Australia	-	800/850/900/ 2100/1900/1800/1700	B1/B2/B3/B5/B7/B8/B18/B19/B21 B25/B26/B38/B39/B40/B41/B66	6	-40°C to 70°C	-RFU
X	Australia	-	850/2100	B1/B3/B5/B7/B28	4	-40°C to 70°C	-RFX
X1	Australia	-	850/2100	B1/B3/B5/B7/B28	1	-40°C to 70°C	-RFX1