

RELIABLE SECURE CONNECTIVITY

XWR9450G Series

Highly Industrial Substation LTE Router





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FEATURE HIGHLIGHTS

Market leader

- IEC61850-3 Compliance
- Serial SCADA protocols
- SFP Interface
- Expansion ready – mPCIe

Performance

- 4G/5G NR NSA, 3G/UMTS, 2G/EDGE, NB-IoT, LTE 450 MHz
- Dual SIM
- Static & Dynamic routing
- QoS

Security

- IPsec, OpenVPN
- RADIUS, SNMPv3
- Firewall, VLAN
- Digitally signed FW

Reliability

- Industrial hardened design
- Approved for Power Substations
- -40 to +70 °C
- MTBF > 100 years

PRODUCT DESCRIPTION

XWR9450G cellular routers are designed for SCADA & Telemetry applications at critical infrastructure like Power and Water Utilities and Oil & Gas. They are also well suited to other applications where high reliability is required, such as POS, ATM and Security.

The XWR9450G has been designed with attention to detail, performance, quality and reliability. All relevant state-of-the-art concepts have been carefully implemented, meeting current and future market needs. With one SFP and four 1 Gb/s Ethernets, it is a top-of-the-line device when a highly reliable and secure cellular network is required.

XWR9450G security features include: Advanced Physical, Management, Access control and Data security mechanisms maintain network integrity in line with the robust demands of cyber security; Management access options are available, based on customer preferences and allowing different levels of secure access to be set; Cryptographic end-to-end tunneling secures data transmissions and the firewall blocks all unwanted traffic at the network boundary.



PRODUCT SPECIFICATIONS

| Cellular interface | |
|--------------------|---|
| Frequency bands W | 4G/5G NR NSA - Band 1 (2100 MHz), Band 2 (1900 MHz), Band 3 (1800 MHz), Band 4 (2100 MHz), Band 5 (850 MHz), Band 7 (2600 MHz), Band 8 (900 MHz), Band 12 (700 MHz), Band 13 (700 MHz), Band 18 (850 MHz), Band 19 (850 MHz), Band 20 (800 MHz), Band 26 (850 MHz), Band 28 (700 MHz), Band 38 (2600 MHz), Band 40 (2300 MHz), Band 41 (2500 MHz), Band 66 (2100 MHz) 3G UMTS/HSDPA/HSUPA - Band 1 (2100 MHz), Band 2 (1900 MHz), Band 3 (1800 MHz), Band 4 (2100 MHz), Band 5 (850 MHz), Band 6 (850 MHz), Band 8 (900 MHz), Band 19 (850 MHz) 2G GSM/GPRS/EDGE - GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz LTE 450 Cat M1, 3GPP Release 14: B1, B3, B8, B20, B28, B31, B72 LTE 450 Cat NB1/2, 3GPP Release 14: B1, B3, B8, B20, B28, B31, B72 LTE 450 Cat M1, 3GPP Release 14: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B85 LTE 450 Cat NB1/2, 3GPP Release 14: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66, B71, B85 |
| Data rates | Up to 150 Mb/s downlink; 50 Mb/s uplink |
| SIM slot | 2x Micro SIM (3FF) |

| Electrical | |
|-------------------|---|
| Primary power | 10 – 50 VDC |
| Power consumption | Average 7W |
| Interfaces | |
| Ethernet | 4x Ethernet 10/100/1000 Base-T, Auto MDX 4x RJ45 bridged or routed |
| SFP | 1x 10/100/1000 Base or T/1000Base-SX or 1000Base-LX 1x SFP |
| Serial | 1x RS232/RS485 SW configurable Terminals (5 pins) 600 b/s – 1 Mb/s |
| USB | 1x USB 3.0 / Host A |
| Antenna | 2x SMA female – receiver diversity |

| Optional Expansions | |
|---------------------|-----------------------------|
| PCI slot | Cellular module or 2x RS232 |

| Environmental | |
|-----------------------|---------------------------------|
| IP Code | IP40 |
| MTBF | > 900 000 hours (> 100 years) |
| Operating temperature | -40 to +70 °C (-40 to +158 °F) |
| Operating humidity | 5 to 95% non-condensing |

| Mechanical | |
|------------|--|
| Casing | Metal |
| Dimensions | 132 H x 43 W x 110 D mm (5.20 x 1.69 x 4.33 in) 125 H x 45 W x 110 D mm (4.9 x 1.8 x 4.3 in) |
| Weight | 0.50 kg (1.1 lbs) 0.45 kg (1.0 lbs) |
| Mounting | DIN rail, optionally: Flat-bracket or L-bracket |

| Security | |
|----------------------------------|---|
| Management | HTTPS (Web) HTTPS (Web), SSH (CLI) |
| Role-based access control (RBAC) | 4 levels (Guest, Tech, SecTech, Admin) 2 levels (User, Admin) |
| Yes | Yes |
| Firewall | Layer 2 – MAC, Layer 3 – IP, Layer 4 – TCP/UDP, SMS filter |
| AAA protocol | RADIUS |
| FW | Digitally signed |
| HW tamper | Case opening evidence |
| Software | |
| Fallback management | Yes |
| Connection supervision | Yes |
| Automatic connect recovery | Yes |
| SMS management | Yes |
| Routing | Static / Dynamic |
| BGP/OSPF/BABEL | Yes/Yes/Yes |
| QoS | Yes |
| NAPT | Yes |
| User protocols on Ethernet | Yes |
| Serial SCADA protocols | DNP3, DF1, IEC101, Modbus RTU, PR2000, RDS, Siemens 3964(R), COMLI, SAIA S-bus, Mars-A, UNI, Async Link |
| Serial to IP convertors | DNP3 / DNP3 TCP, Modbus RTU / Modbus TCP, Terminal servers |
| VPN | IPsec, GRE |
| NTP | Client, Server |
| SNMP | v1, v2c, v3 |
| Approvals | |
| CE | RED; RoHS; WEEE |
| Spectrum | ETSI EN 301 511 V12.5.1 ETSI EN 301 908-01 V13.1.1 ETSI EN 301 908-02 V11.1.2 ETSI EN 301 908-13 V13.1.1 ETSI EN 303 413 V1.1.1 |
| EMC | ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-5 V3.2.1 ETSI EN 301 489-19 V2.1.0 ETSI EN 301 489-52 V1.1.0 |
| Product safety | EN 62368-1:2014 + A11:2017 |
| RF health safety | EN 62311:2008 |
| Electric power substations | IEEE 1613:2009 IEEE 1613.1:2013 EN 61850-3:2014 |
| Environmental | EN 61850-3: 2014 |
| Vibration & shock | EN 60068-2-6:2008 ETS 300 019-2-3:1994, Class 3.4 EN 61850-3:2014 |
| Cyber security | EN 62443-3-2 EN 62443-4-2 |
| Seismic qualification | EN 60068-2-27:2010 |
| IP rating | EN 60529:1993 + A1:2001 + A2:2014 |





ORDERING INFORMATION

| Model | Cellular | Ethernet | SFP | Wi-Fi | SIM | GPS | I/O |
|----------------|-----------------------|----------|-----|-------|-----|-----|-----|
| XWR9450G | LTE Cat4/5G NR NSA | 4 | 1 | 1 | 2 | 1 | 1 |
| XWR9450G-W-N-O | LTE Cat4/5G NR NSA | 4 | 1 | 1 | 2 | 0 | 0 |





WHO WE ARE

Built on 20 years of experience in designing and manufacturing industrial networking products, **Agatel** was established from the UK to serve the infrastructure and industrial sectors in EMEA markets with reliable connectivity for mission-critical systems in demanding environments.

Experienced in hardware and software design and integration, we produce high-quality yet cost-effective industrial networking and communication products with great customization capabilities and robust implementations, equipping our customers for reliable secure industrial networks.



WHAT WE OFFER

The needs of our customers' industry are different from those of corporate IT environments – industrial operating environments are tough and the impact of failure in the field can lead to business threatening situations, hence our products will have lifetimes in excess of 20 years.

From entry-level to high-performance industry-certified hardware, **Agatel** offers a full solution spectrum to suit our customers' budgets and application requirements, with features such as industrial-grade reliability, integrated security, network redundancy, and advanced performance.

Our product solution profile includes industrial Ethernet switches, network time servers, media converters, industrial wireless devices, and serial device servers, covering a wide array of mission-critical applications such as automation, security, transport, water, oil and gas, and power grids.



WHY CHOOSE US

We help our customers reduce downtime and operational costs of their industrial applications in harsh environments. Leading system integrators in EMEA rely on our niche technical expertise and product quality to increase their applications' robustness, revenues, and competitive differentiation.

Agatel ruggedized high-quality solutions are designed to deliver zero-network-downtime for harsh project demands, allowing for reliable connectivity to keep people and assets safe and secure in harsh and hazardous environments, and allowing customers to focus on growing their business.

Agatel Ltd

1st Floor, Apex House
Calthorpe Road, Edgbaston
Birmingham B15 1TR
United Kingdom

Tel: +44 203 488 6888
E-mail: info@agatel.co.uk
Website: www.agatel.co.uk

