



## QUARTZ-ONYX

### 5G 4 x LAN, Dual SIM, Low Latency Industrial Router



#### Key Features

- 5G/4G/3G industrial router
- Supports 5G SA/NSA ultra speed network
- MIPS Dual-core 880 MHz
- 256 Mb Flash
- 2 Gb DDR3 RAM
- 4x Gigabit Ethernet ports
- Resilient against strong magnetic interference
- Metal enclosure for tough industrial applications
- Dual SIM for failover / backup between networks
- VPN: PPTP/L2TP/L2TP V3/GRE/IPSec/Open VPN
- Optional GPS
- Optional storage capacities available- MOQ applies
- 1 x DC Power Interface (7.5 to 32 V DC)

3G UMTS	4G LTE	5G New Radio	AT Over IP	CLI Telnet	DATA Real-Time	DUAL Sim Support	GPIO Interface	GPS Position	Gbit Ethernet
IP Wireshark	LAN Quad Port	LIVE Stats	MIMO Antenna	PSU 7V to 32V	PTP Connect	RS232 Serial	RS485 Serial	SNMP Manage	SSH Manage
Syslog Service	TEMP -30 to +75 C	UPNP Protocol	USER Portal	VLAN Network	VPN Tunnel	VRRP Protocol	WAN Backup	WEB Portal	WiFi 5 802.11ac
WiFi 2.4G & 5G	Win Linux/Mac	WW Global							

#### General Description

The QUARTZ-ONYX is powered with a Mediatek 880 MHz MIPS dual-core processor with 256 Mb flash and 2 Gb of DDR3 RAM which drives the Linux based operating system.

A Quectel RM500QAE module is driven by the Qualcomm Snapdragon X55 5G Modem which provides the cellular capabilities of the QUARTZ-ONYX and is manufactured on a leading edge 7 nm semiconductor fabrication process coupled with dual sim operation to provide seamless connectivity.

With Four Gigabit Ethernet interfaces, the QUARTZ-ONYX also offers RS232 and RS485 interfaces that

may be used to connect serial ports on products such as door access control panels and alarm panels to the Internet.

Enhanced connectivity is provided by an intelligent GPIO interface that can send SMS messages on change of input state, and control outputs based on input state or SMS messages received.

Wi-Fi 5 comes as standard.

Optional GPS using a 56-channel u-blox 7 engine for asset tracking applications is also available.



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#### Additional Features

- » Supports DHCP server
- » Supports DNS proxy and Dynamic DNS (DDNS)
- » LED status lights
- » Supports 802.11 a/b/g/n/ac wireless standards
- » Supports captive portal
- » Local and remote management
- » SNMP network management, NTP support
- » LCP/ICMP/flow/heartbeat check

#### Cellular

- » 5G:  
n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/  
n40/n41/n66/n71/n77/n78/n79
- » LTE:  
B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/  
B18/B19/B20/B25/B26/B28/B29/B30/B32/  
B34/B38/B39/B40/B41/B42/B43/B46/B48/  
B66/B71
- » WCDMA:  
B1/B2/B3/B4/B5/B6/B8/B19

#### Interfaces

- » 4 x GbE  
(3 x LAN, 1 x LAN/1 x WAN Configurable)
- » 4 x I/O  
(2 x Input, 2 x Output)
- » 2 x RS232 (based on 2 wire interface)
- » 1 x RS485 (if RS232 is not utilised)
- » Wi-Fi: 802.11 a/b/g/n/ac
- » 2 x SIM Slot

- » 4 x SMA (Female) 5G Antenna Interface
- » 2 x SMA-RP Wi-Fi

#### Optional Interfaces

- » Optional SMA Female Antenna Interface for GPS
- » Optional Storage 16/32/64/128/256 GB

#### Environmental

- » Ruggedised industrial enclosure
- » Dimensions: 132 mm x 112 mm x 44 mm  
(without antenna)
- » Approx Weight: 400g (not including accessories  
and model dependent)
- » Operating Temperature Range: -30 to +75 °C
- » Storage Temperature Range: -40 to +85 °C
- » Relative Humidity: 0 - 95% Non-condensing

#### Router Settings

##### Network Protocols

- » IPv4
- » PPPoE
- » UDP/TCP/ICMP/NTP/DHCP
- » Modbus/TCP
- » HTTP/HTTPS
- » SNMP

##### Network Features

- » Cellular/WAN failover
- » VLAN
- » Bandwidth management
- » NAT/DMZ
- » IP passthrough/port redirection
- » Static/dynamic routing
- » Captive portal

##### VPN

- » PPTP/L2TP V3
- » GRE
- » IPSec
- » OpenVPN



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### Data Rates\*

#### 5G SA Mode

- » Maximum downlink speed: 2.1 Gbps
- » Maximum uplink speed: 900 Mbps

#### 5G NSA Mode

- » Maximum downlink speed: 2.5 Gbps
- » Maximum uplink speed: 650Mbps

#### LTE

- » Maximum downlink speed: 1.0 Gbps
- » Maximum uplink speed: 200 Mbps

#### WCDMA (3G)

- » Maximum download speed: 42 Mbps (DC-HSDPA)
- » Maximum uplink speed: 5.76 Mbps (HSUPA)

\*Speeds will be dependent on network connection, base station Internet capability, signal strength, environmental conditions, etc.

### Power Specifications

- » Idle: 550 mA @ +12VDC
- » Communications: 680 mA @ +12VDC

### Cellular Antenna Specifications

- » Frequency range:
- » 600-960/ 1710-2680/ 3400-3600/4800-4900
- » Gain: 3dBi
- » VSWR: <=3
- » Polarisation: Vertical

### Approvals and Compliance

- » CE
- » UKCA
- » RoHS
- » FCC (TBC)

### Models Available

#### Dual Wi-Fi & GPS Industrial 5G Quad LAN Ethernet Router

QUARTZ-ONYX-GW42-5G (GL) - Stock Code 61831

QUARTZ-ONYX-GW42-5G (GL) + ACCESSORIES - Stock Code 61870

#### Dual Wi-Fi Industrial 5G Quad LAN Ethernet Router

QUARTZ-ONYX-W42-5G (GL) - Stock code 61818

QUARTZ-ONYX-W42-5G (GL) + ACCESSORIES - Stock Code 61816