SOLUCIONES TECNOLÓGICAS EN MEDIDA, GESTIÓN, AUTOMATIZACIÓN, PROTECCIÓN Y CONTROL.

ISO 9001
BUREAU VERITAS Certification

Achilles
Repro
Registrado

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New Product Launch – Router 4G

WR312G
Industrial Secure Cellular Router, 2GbE+2COM, LTE

WR322G-WLAN+LTE
Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE

WR322GR-WLAN+LTE
Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE, RSIM

Key Selling Points

- Vertical market: Designed for field site remote communication
- Dual Radio LTE + Wi-Fi for combo connectivity
  - IEEE 802.11ac, up to 866Mbps with enhanced capacity and coverage
  - LTE Cat4, up to 150M DL, 50M UL
- 2-port RS232/422/485 full functions in DB9
- Routing network with 1 WAN 1 LAN
- Cyber Security
  - IPsec/ OpenVPN
  - NAT Routing, firewall, DMZ
- Cyber Redundancy
  - Cellular to Eth-WAN redundancy
  - Wireless auto-offload
  - Dual SIM standby
- Robust design with
  - EN50121-4 railway wayside standard
  - Wide range design -40~75℃& 12~48VDC
- Open platform and external SD storage
  - OpenWRT & SD card support

802.11ac

Lte

LTE Category	Data Rate (DL/UL)
Cat 3	100M/50M
Cat 4	150M/50M

RS232/422/485 Pin define table

DB9	RS232	RS485/422	RS485	Others
1	DCD	TX-	Data-	
2	TXD	RX+		TxD
3	RXD	TX+	Data+	RXD
4	DSR			Optional
5	GND	GND		GND
6	DTR	RX-		Optional
7	CTS			Optional
8	RTS			Optional
9	RI			

Product Appearance

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SMA Antenna Socket

- Up to 5 SMA

Gigabit Ethernet

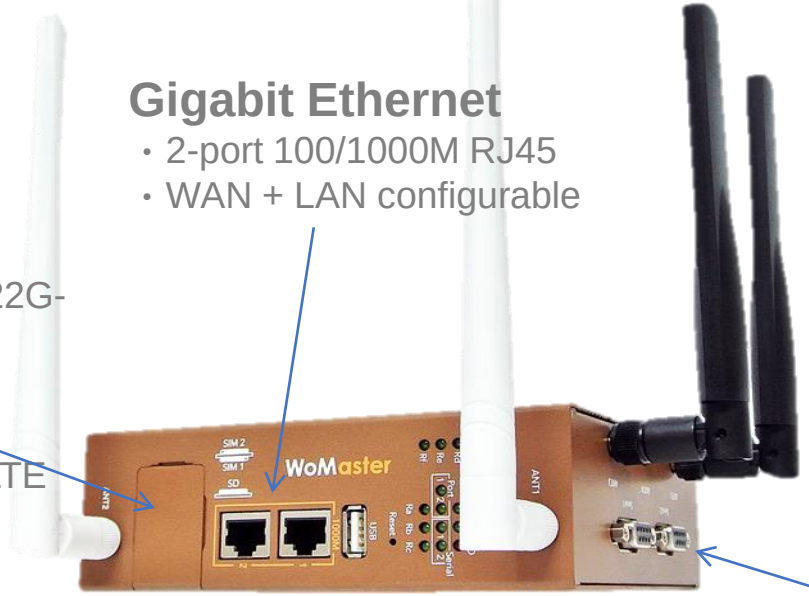
- 2-port 100/1000M RJ45
- WAN + LAN configurable

System LED

- 1 x Power
- 1 x System Status
- 1 x DO
- 2 x Ethernet Port
- 2 x Serial status
- Up to 6 x Radio LED

SIM & SD card

- WR312G-LTE/WR322G-WLAN+LTE
  1x SIM
  1x MicroSD
- WR322GR-WLAN+LTE
  2x SIM
  1x MicroSD
- eSIM by Request



USB Extension Port

- USB for Configuration/Firmware update
- External Storage

Dual Ports Serial Communication

- RS232/422/485 Full functions
- 2 ports in DB9
- 15 kV ESD protection

IEEE 802.11ac Brief

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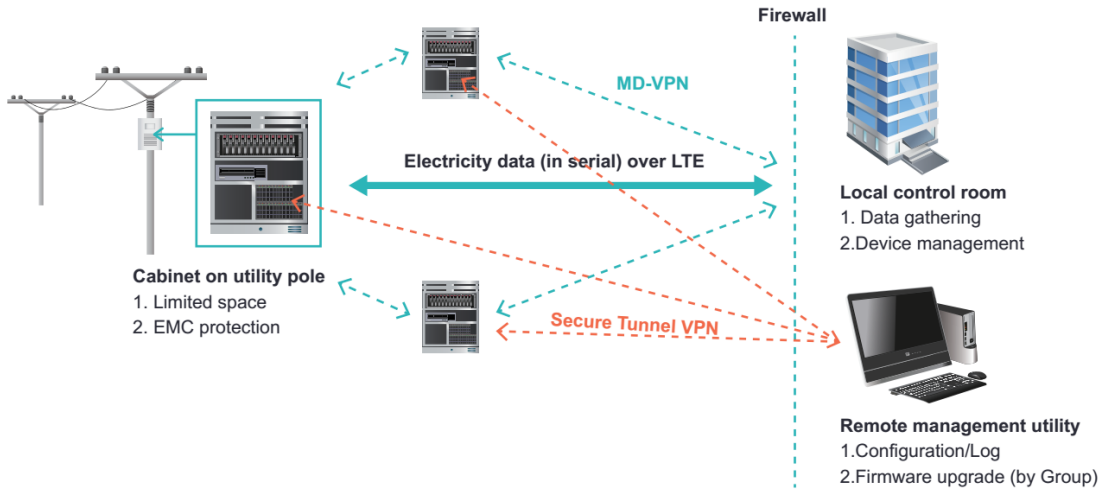
Feature	IEEE 802.11n	IEEE 802.11ac
Channel Width	20, 40 MHz	20, 40, 80 MHz*
Modulation	Up to 64-QAM	Up to 256-QAM
Single Stream (1x1) Maximum Client Data Rate	150 Mb/s	433 Mb/s*
Three Stream (3x3) Maximum Client Data Rate	450 Mb/s	1.3 Gb/s*

802.11ac的理論速率，單位Mbps（僅包含1T1R）

MCS 索引	調變種類	編碼率	20MHz		40MHz		80MHz		160MHz	
			800ns	400ns	800ns	400ns	800ns	400ns	800ns	400ns
0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5	58.5	65
1	QPSK	1/2	13	14.4	27	30	58.5	65	117	130
2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5	175.5	195
3	16-QAM	1/2	26	28.9	54	60	117	130	234	260
4	16-QAM	3/4	39	43.3	81	90	175.5	192	351	390
5	64-QAM	2/3	52	57.8	108	120	234	260	468	520
6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5	526.5	585
7	64-QAM	5/6	65	72.2	135	150	292.5	325	585	650
8	256-QAM	3/4	78	86.7	162	180	351	390	702	780
9	256-QAM	5/6	不支援	不支援	180	200	390	433.3	780	866.7

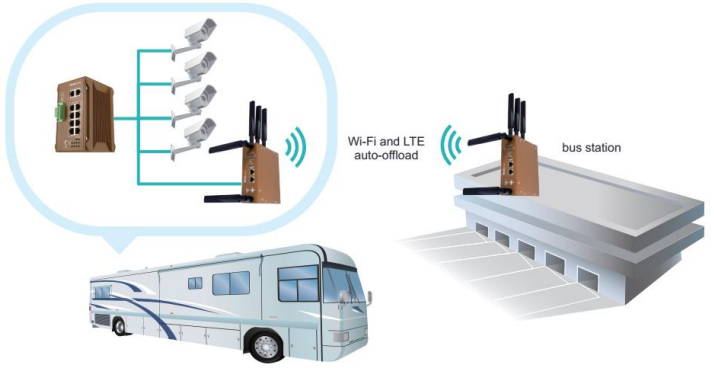
Power Distribution

- Real time status to improve energy efficiency
- RS232/422/485 9-pin full serial functions
- Secure control/data channel
  - MD-VPN, IPsec, OpenVPN
- OpenWRT platform (w/ MicroSD) for open system requirement
- SD Card for persistent log storage
- Consistent LTE connectivity & exceptional EMC capability



Bus Wireless

- Dual Radio IEEE802.11ac Wi-Fi + LTE C4
  - Onboarding Wi-Fi network hotspot for user data (with traffic shaping)
  - Surveillance data high speed synchronization (@bus station)
- Flexible SW capability
  - Traffic shaping: Classified bus onboarding network
  - Redundancy : LTE to WAN redundant
- Exceptional EMC capability
  - EN50121-4 certificate and emark compliance
- 12~48VDC wide and low voltage power input
  - PoE products (DP210: 8~32VDC) + Wireless as a solution pack
- Optional GPS model (accuracy < 1.5m)



Ordering Information

Model Name	Description
WR302G	Industrial Secure Serial Server, 2GbE+2COM
WR312G-LTE-E	Industrial Secure Cellular Router, 2GbE+2COM, LTE-E, FDD B1/3/5/7/8/20, TDD B38/40/41
WR312G-LTE-U	Industrial Secure Cellular Router, 2GbE+2COM, LTE-U, FDD B2/4/12, B2/B4/B5@WCDMA
WR312G-LTE-CN	Industrial Secure Cellular Router, 2GbE+2COM, LTE-CN, FDD B1/B3/B5/B8, TDD B38/B39/B40/B41
WR312G-WLAN	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN
WR322G-WLAN+LTE-E	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE-E, GPS, FDD B1/3/5/7/8/20, TDD B38/40/41
WR322G-WLAN+LTE-U	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE-U, GPS, FDD B2/4/12, B2/B4/B5@WCDMA
WR322G-WLAN+LTE-CN	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE-CN, GPS, FDD B1/B3/B5/B8, TDD B38/B39/B40/B41
WR322GR-WLAN+LTE-E	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE-E, RSIM, GPS, FDD B1/3/5/7/8/20, TDD B38/40/41
WR322GR-WLAN+-LTE-U	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE-U, RSIM, GPS, FDD B2/4/12, B2/B4/B5@WCDMA
WR322GR-WLAN+LTE-CN	Industrial Secure Cellular Router, 2GbE+2COM, 802.11ac/n WLAN, LTE-CN, RSIM, GPS, FDD B1/B3/B5/B8, TDD B38/B39/B40/B41

Package List
1 x Product Unit
1 x 6-pin Removable Terminal Connector
WR312G-LTE: 2 x LTE Antenna, Black **WR312G-WLAN**: 2 x Wi-Fi Antenna, White **WR322G-WLAN+LTE/WR322GR-WLAN+LTE**: 2 x LTE Antenna, Black + 2 x Wi-Fi Antenna, White
1 x Attached Din Clip
1 x Quick Installation Guide

GRACIAS POR SU ATENCIÓN

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