



Industrial Dual 5G CPE Router Data Sheet

DIREKTRONIK



Introduction:

A multi-functional wireless 5G CPE product with high-performance 4-core CPU, high power WiFi6, and integration of cellular 5G network. Supports 5x 1000M Ethernet ports, which can be configured as LAN/WAN ports, you can choose DC48V POE power out version, 2x2 MIMO 2.4g /5.8G WIFI6, etc. It also adopts wide temperature, wide voltage input and EMC test with electromagnetic compatibility.

Has been widely used in the Internet of things industry chain of M2M industry, such as self-service terminals, smart grid, smart transportation, smart home, financial, mobile POS terminals, supply chain automation, industrial automation, intelligent buildings, fire control, public security, environmental protection, meteorology, digital medical treatment, telemetry, agriculture, forestry, water, coal, petrochemical and other fields.

Features:

- ✓ Qualcomm Quad-core CPU/ 1.8GHz, 8Gb DDR3, 4GB eMMC
- ✓ 802.11ac mode: PHY rate: 866.7 Mbps (5 GHz) and 400 Mbps (2.4 GHz)
or proprietary PHY rate: 1083 Mbps (5 GHz) and 500 Mbps (2.4 GHz)
- ✓ 802.11ax mode: PHY rate: 1201 Mbps (5 GHz) and 573.5 Mbps (2.4 GHz)
- ✓ Wi-Fi supported IEEE802.11ac, IEEE802.11ax
- ✓ Supported 5G SA, NSA network
- ✓ 4x5G antenna interface (FAKRA connector)
- ✓ 2xWiFi antenna interface (FAKRA connector)
- ✓ **Standalone Multi-GNSS engine**
- ✓ 5 x 10/100/1000M Ethernet LAN /WAN Ports (RJ45 Connector)
- ✓ 1xUSB2.0 interface, 1xRS232 port, 1xRS485/ port
- ✓ 1x CAN bus port
- ✓ 2xNANO SIM card for 5G network
- ✓ 48V POE output(optional)



Details:

Hardware :

CPU	Qualcomm Quad-core CPU/ 1.8GHZ
RAM	8Gb
eMMC	4GB
OS	Linux /OpenWRT

Cellular Interface:

Chipset QualcommX62, 3GPP Release 16, Dual 5G Modules

	5G Sub-6G SA	N1/3/5/7/8/20/28/38/40/41/75/76/77/78
	5G Sub-6G NSA	N1/3/5/7/8/20/28/38/40/41/77/78
	TDD FDD	Band 1/3/5/7/8/20/28/32
	TDD	Band 38/40/41/42/43/46(TAA)
	WCDMA	Band 1/5/8
Bandwidth	NR SA: 2.47Gbps(D) / 900Mbps(U) NR ENDC: 3.47Gbps(D) / 660Mbps(U) TDD: 1.6Gbps(D) / 211Mbps(U) WCDMA: 42Mbps(D) / 5.76Mbps(U) Note: The actual network speed and bandwidth depends on the local carrier network and signal.	

Standalone GPS(Optional)

Multi-GNSS engine	GPS, Galileo, BeiDou, Galileo and QZSS
LNA	Built-in LNA for better sensitivity
Supported Bands	GPS L1 C/A: 1575.42 MHz Galileo E1: 1575.42 MHz QZSS L1: 1575.42 MHz Galileo L1: 1602.5625 MHz BeiDou B1: 1561.098 MHz
Channel	Tracking: 48 Fast Acquisition: 2
Horizontal Position Accuracy	Autonomous: < 1.5 m CEP
Velocity Accuracy	Without Aid: < 0.1 m/s
Acceleration Accuracy	Without Aid: < 0.1 m/s ²
TTFB (without AGNSS)	Cold Start: < 32 s Warm Start: < 25 s Hot Start: < 2 s

DIREKTRONIK

Sensitivity	Acquisition: - 145 dBm Tracking: - 162 dBm Reacquisition: - 152 dBm
Protocols	NMEA 0183

WiFi Performance:

WiFi supported	
Wireless	High power WiFi performance On-board 2x2 2.4GHz 802.11b/g/n, max 21dBm per chain @-35dB DEVM On-board 2x2 5GHz 802.11a/n/ac/ax/max 20dBm per chain @-40dB DEVM
Frequency	2.412GHz to 2.472GHz and 5.150GHz to 5.825GHz, simultaneous dual band
WiFi Rate	2x2 MU-MIMO On-board WiFi 2.4GHz radio, up to 574Mbps physical data rate, TCP data up to 400Mbps
	2x2 MU-MIMO On-board WiFi 5GHz radio, up to 1201Mbps physical data rate, TCP data rate up to 800Mbps
Modulation Techniques	802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g: OFDM (BPSK / QPSK / 16-QAM / 64-QAM) 802.11ac/n: OFDM (BPSK / QPSK / 16-QAM / 64-QAM / 256-QAM) 802.11ax: OFDM 1024QAM

Router characteristics:

Router characteristics	
Firewall	Network Address Translation (NAT)
	State full Packet Inspection (SPI)
Media Access Control	CSMA/CA with ACK
WiFi	AP, Client
VPN protocol	PPoP, L2TP, OpenVPN Client, IPsec, Wireguard
DHCP	Build-in DHCP (Dynamic Host Configuration Protocol)
Others protocol	Supported PPP, PPOE, DDNS, ICMP, VRRP etc
Device Manager	SNMP V1, V2, V3 TR069

Interface:

LAN/WAN Ports	5x 10/100/1000M LAN/WAN ports(RJ45 Connector)
Serial Ports	1x RS232 port (RJ45 connector)
	1xRS485 port
	1xCan bus port(Optional)
USB Port	1x USB2.0 interface
Reset	1x Reset
Antennas	2x FAKRA WiFi Antennas interface (50Ω)
	4x FAKRA 5G Antennas interface (50Ω)
	1x FAKRA GPS Antennas interface
LED	Power-SYS-4G-5G-Signal strength - LEDs

DIREKTRONIK

SIM Card Slot	Dual-SIM card slot ,supported e-SIM card
POE Ethernet	Supported 48V POE output(optional)

Power interface :

Default power	DC 12V/2A power adapter (US,EU etc stander option)
Power connector	GX12 3PIN (DC+, DC-, ACC power control)
Input VDC	10~55VDC
Power Consumption	24W (Max)

Physical property:

Physical property:	
Operating Temperature	Storage Temperature: (-40°C to 85°C)
	Operating Temperature: (-40°C to 75°C)
Relative Humidity	95%
Size	[*S*H: 175*108*45 MM
Weight	Net weight:1.5KG
	Packing weight: 2KG
Certification	CCC,CE,FCC,RHOS

Others:

Warranty	2 years
-----------------	---------