



# RTDI-5805P

## INDUSTRIAL 5G-NR & WI-FI MESH ROUTER



### 5G

### X4

Industrial-grade  
Quadcore A7 ARM  
CPU

### WI-FI MESH

### HIGH-

### PERFORMANCE

IEEE802.11ac wave-2  
2.4GHz and 5.0GHz

### HARSH ENVIRON- MENTS

### SECURITY

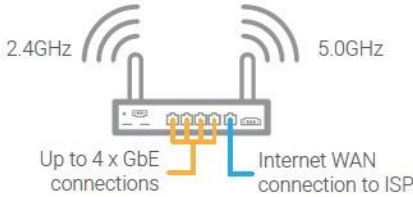
## Description

**CXR RTDI-5805P** is an advanced device that allows a very tangible scale-up of almost any industrial wireless infrastructure. In addition to high EMC protection, wide-temperature operation, superb hardware and advanced features, the **RTDI-5805P** will provide high-speed internet access with load balancing and high degrees of security, high speeds and advanced configurations options.

## Applications

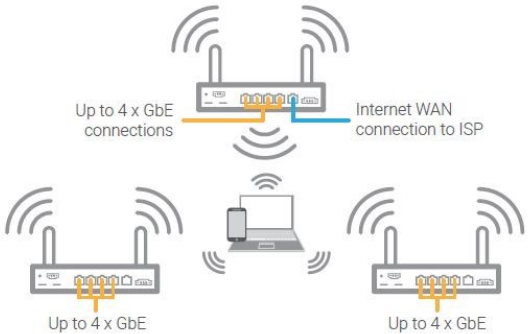
### As a Wi-Fi DBDC Router

RTDI-5805P's simplest operating mode is as a router/access point. Use it to connect to the internet through your broadband provider via PPPoE, Static IP or DHCP and provide Internet connection to Wi-Fi and wired clients. With RTDI-5805P you can define your own wireless access policy and set up a Firewall and VPN connection based on your needs.

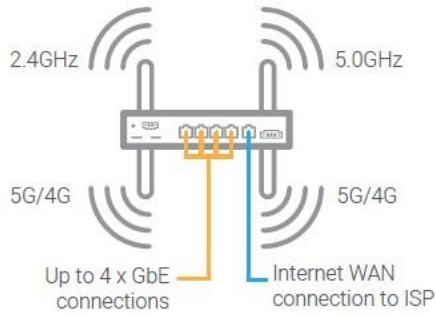


### As a Wi-Fi Mesh Primary Router

RTDI-5805P is designed to act as a mesh router or as a mesh node, and the configuration of one of both radios to work in mesh mode takes barely any time. No more fussing with topology changes or complicated wiring! With Wi-Fi mesh, all nodes can communicate with each other and the transmission paths are dynamically adjusted if a change in signal strength or topology is detected. So, even if a device is temporarily inaccessible due to interference or position, the network will still work perfectly. Mesh functionality can be combined with all other features of RTDI-5805P.



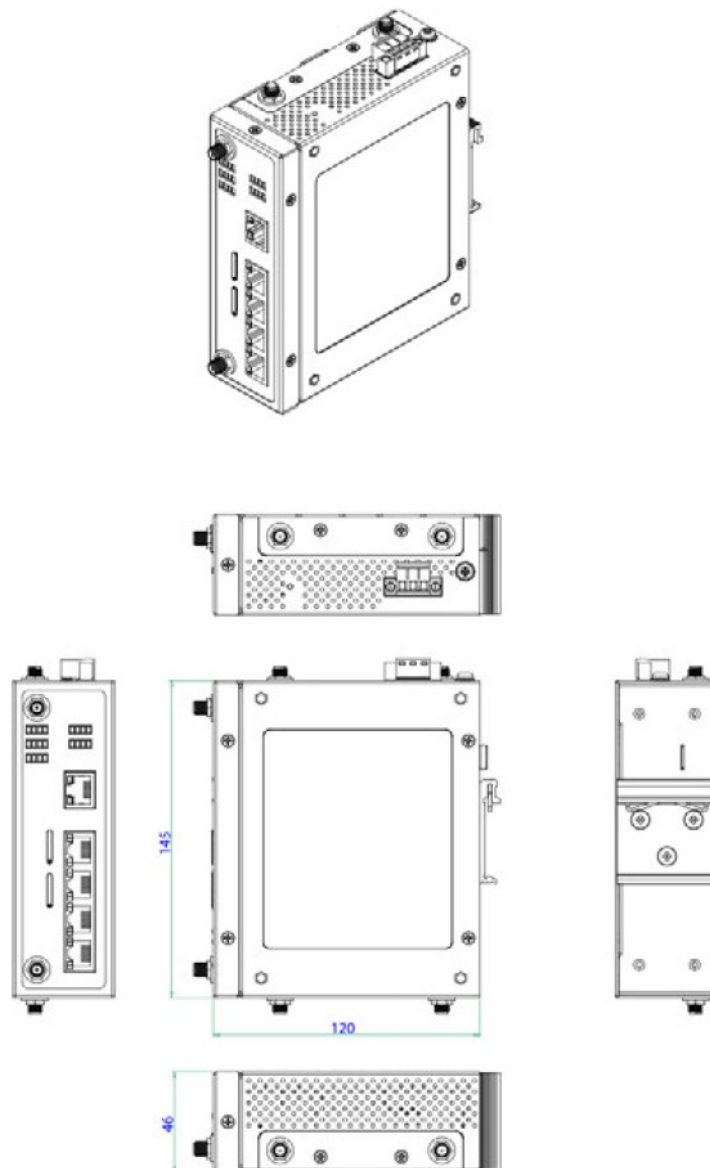
**As a Cellular/Wired/Wi-Fi Router**



RTDI-5805P allows to you to easily set up a mesh Wi-Fi Router environment for providing broadband access to all users, in static or dynamic environments. Perfect for deployment on mass transit vehicles, RTDI-5805P can access the internet via PPPoE, Wi-Fi and Cellular at the same time and provide smart traffic adjustment. The advanced dual-SIM configuration and hot-swappable design guarantees seamless 5G/4G connectivity throughout an entire shift.

Finally, these wide-ranging features are all enclosed in a rugged fanless design with operation temperatures from  $-40^{\circ}\text{C}$  up to  $+75^{\circ}\text{C}$ , to suit applications in any environment.

## Dimension & Layout



RTDI-5805P: 145 x 120 x 46 mm

## Specifications

SOC			
CPU	ARM Cortex A7, Quad-Core		
Cellular Interface—5G/4G			
Standard	5G NR/LTE 4G 5G LTE Cat6 5G-NR SA & NSA		
Frequency Bands	EU Ver.	FDD B1/B3/B5/B7/B8/B20/B28/B32  TDD B38/B40/B41  WCDMA B1/B3/B5/B8  GNSS GPS/GLONASS/BeiDou/Galileo	
		US Ver.	FDD B2/B4/B5/B7/B12/B13/B25/B26/ B29/B30/B66  TDD B41  WCDMA B2/B4/B5  GNSS GPS/GLONASS/BeiDou/Galileo
			5G (Global)
	5G NR		5G Reframed Sub6: n1/n2/n3/n5/n8/ n12/n20/n28/n41/n66/n71/ New Sub6: n77/n78/n79
	LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/ B17/B18/B19/B20/B25/B26/B29/B30/ B32/B66/B71	
	LTE-TDD	B34/B38/B39/B40/B41/B42/B46/B48	
	WCDMA	B1, B2, B3/9, B4, B5/6/19, B8	
	GNSS	GPS	
	Network Interfaces/Connectivity		
	Wi-Fi	802.11ac wave 2 (5Ghz) 802.11 a/b/g/n (2.4GHz/5GHz) MU-MIMO 2x2 (2 streams) Wi-Fi Mesh ready	
Ethernet ports	Standard	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-T(X) IEEE 802.3ab for 1000Base-T(X)	
	Ports	5x 10/100/1000 BASE-TX RJ-45 1x WAN 4x LAN	

## Specifications

Antennas		
Cellular	4G	2x SMA(M) antennas
	5G	4x SMA(M) antennas
Wi-Fi		2x SMA(M) antennas
Watchdog		
Hardware WD Reset	Yes	
External IO Interfaces		
Default/Reset button	1 key	
SIM card slots	Push-pull SIM card Holders (max. available 2 slots)	
SD slot	1x micro-SD slot	
LED Indicators		
LEDS	PWR, 2.4GHZ Wi-Fi, 5.0GHz Wi-Fi, LAN,WAN, 5G/4G signal	
Power		
Voltage Input	DC Power: 12 ~48V	
Consumption	< 20 W	
Redundancy	Yes	
Connector	3-pin Terminal block	
Reverse polarity protection	Yes	
PoE	PoE PD, 802.3at, Mode A, @LAN4	
Mechanicals		
Casing material	Metal housing	
Dimension LxWxH (mm)	145x120x46	
Weight (g)	726	
Installation	DIN-Rail or Wall-Mount (optional kit)	
Ingress Protection Rating	IP30 Protection	
Environment limits		
Operating Temperature	-40°C to +75°C (-40°F to +158°F)	
Storage Temperature	-40°C to +85°C (-40°F to +185°F)	
Ambient Relative Humidity	5% to 95% RH, (non-condensing)	

## Software specifications

Internet Connection	
Access	APN
Authentication	CHAP/PAP/Auto
Network	
IPv4/IPv6	DHCP server DHCP Client/Static IP/PPPoE
Connection Protocol/Service	Telnet, SSH, TFTP/SFTP, Http, Https, SNMP
Industrial Protocol	NTP, DNS, 802.1Q VLAN, QoS, VRRP, MQTT
Security	
Firewall	Access control list (ACL) Port Forwarding Attack Prevention (Inserted after Port Forwarding)
VPN	IPSEC, OPEN-VPN, LT2P, PPTP
Reliability	
Cellular Backup	Dual SIM auto-switch
WAN Backup	Cellular and Ether WAN redundancy
Schedule operation	Schedule control of application
WLAN	
Wi-Fi Connection	AP (802.11 a/b/g/n/ac), Mesh
Wi-Fi Security	OWE/WPA-PSK/WPA2-PSK/WPA3-PASK (SAE)
Management	
System Configuration	WEB, Telnet, SSH
Firmware upgrade	WEB, TFTP
System Log	Lod data to Local memory, remote logger, local flash
SNMP	SNMP v1/v2/v3
Diagnostics	Ping, Traceroute, Nslookup
Statistics	
Statistics	Memory, Mobile, WAN , Wireless, LAN

## Regulatory Approvals

Regulatory Approvals				
<b>Safety</b>		UL/IEC 62368-1, IEC60950-1, EN62368-1		
<b>EMC</b>		EN55032, EN61000-6-4, EN55024, EN61000-6-2, FCC Part 15B, FCC Part 18		
<b>Cellular</b>		EN301489-1/-17/-52, EN301908-1 RSE for LTE, EN301908-1 RSE for WCDMA, EN301511 for GSM, EN301908-25 for 5G NR RF, EN301489-1/-52 for 5G NR EMC, Part 24E/27L/27H for WCDMA, Part 22H/24E/27L/27H/27F/27M/90R for LTE, Part 22/24/27 for 5G NR FR1, Part 30 for 5G NR FR2		
<b>Wi-Fi</b>		EN300328 for WIFI b/g/n 2.4G, EN301893 for WIFI a/n/ac 5G, EN62311 MPE Report, Part 15C for 2.4G b/g/n, Part 15E for 5G B1/B4 a/n/ac		
Test	Item	Value	Level	
IEC 61000-4-2	ESD	Contact Discharge	±6KV	3
		Air Discharge	±8KV	3
IEC 61000-4-3	RS	Enclosure Port	10 (V/m), 80-1000MHz	3
			3 (V/m), 1.4-2.0GHz	3
IEC 61000-4-4	EFT	DC Power Port	10 (V/m), 2.0~2.7GHz	3
		Signal Port	±2.0KV@ 5.0kHz	3
IEC 61000-4-5	Surge	DC Power Port	±1.0KV @ 5.0kHz	3
		Signal Port	Line-to-Line ±1KV	3
IEC 61000-4-6	CS	DC Power Port	Line-to-Earth ±2KV	3
		Signal Port	Line-to-Earth ±2.0KV	3
IEC 61000-4-8	PFMF	DC Power Port	10V, 150KHz to 80MHz, 80%AM	3
		Signal Port	10V, 150KHz to 80MHz, 80%AM	3
Shock	IEC 60068-2-27	Enclosure	30A/m (r.m.s), 50Hz or 60Hz	4
Drop/Freefall	IEC 60068-2-32			
Vibration	IEC 60068-2-64			
Others	RoHS, including 2015 amendment			
	REACH			
	Conflict Mineral Free			
Warranty	2 years			

## Ordering information

Model	Description
RTDI-5805P	Industrial 5G-NR & Wi-Fi Router 5G-M.2 module, 1xWAN, 4x LAN, 802.11ac, PoE, GPS, 2x SIM



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