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Industrial IOT

AP/NR520X Specification

5G NR Router/Outdoor AP



Introduction

AP/NR520X is an outdoor AX3000 Wi-Fi 6 dual-band AP. It can be optionally equipped with 5G NR module. The product is based on the powerful Qualcomm wireless core. With a transmission power of 27dBm and external antennas, it can achieve a larger coverage range. It supports IEEE 802.11a/b/g/n/ac/ax protocol, and the maximum WiFi access rate reaches 3000Mbps.

NR520X is equipped with a 5G Sub-6GHz M.2 module designed for IoT/eMBB applications. It adopts 3GPP Release 16 technology, and can automatically adapt to 5G NR NSA and SA networking, and is downward compatible with 4G/3G. It can achieve backup of wired broadband and cellular broadband networks, and can provide network access for WiFi users through 5G broadband in scenarios where wired broadband access is lacking.

The excellent performance and stability not only come from the high-end Qualcomm core platform but also rely on our professional R&D team's hardware and software design. The product can be widely used in industries and scenarios such as park coverage, energy mines, smart harbour, warehousing and logistics, smart cities, exhibition halls, and venues.

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Product Features

- AX3000 Wi-Fi 6, M.2 5G SA/NSA Sub 6GHz Router(NR520X).
- 5G NR Router employs 3GPP Rel. 16 technology, it supports both 5G NSA and SA modes, covers all the main stream carriers worldwide.
- Supports the Wi-Fi 6(802.11ax) standard,2.4GHz and 5GHz dual-frequency UL/DL MU-MIMO, enabling AP to send data to multiple terminals at the same time.
- Fat and Fit AP in one, Fit AP mode managed uniformly by the wireless controller (AC) , Fat AP mode independent web page management.
- 2.5G Ethernet port. Using 2.5Gbps Ethernet port, compared with Gigabit port, the speed is greatly improved.
- Set WAN/LAN port as WAN to enable NR520X use the landline internet from WAN, and 4G/5G connection works as a backup to provide a sustained and reliable internet connection for you.
- Automated failover/failback back up among Ethernet, Cellular and Wi-Fi.
- Multiple SSID.

Dimensions

Unit: mm

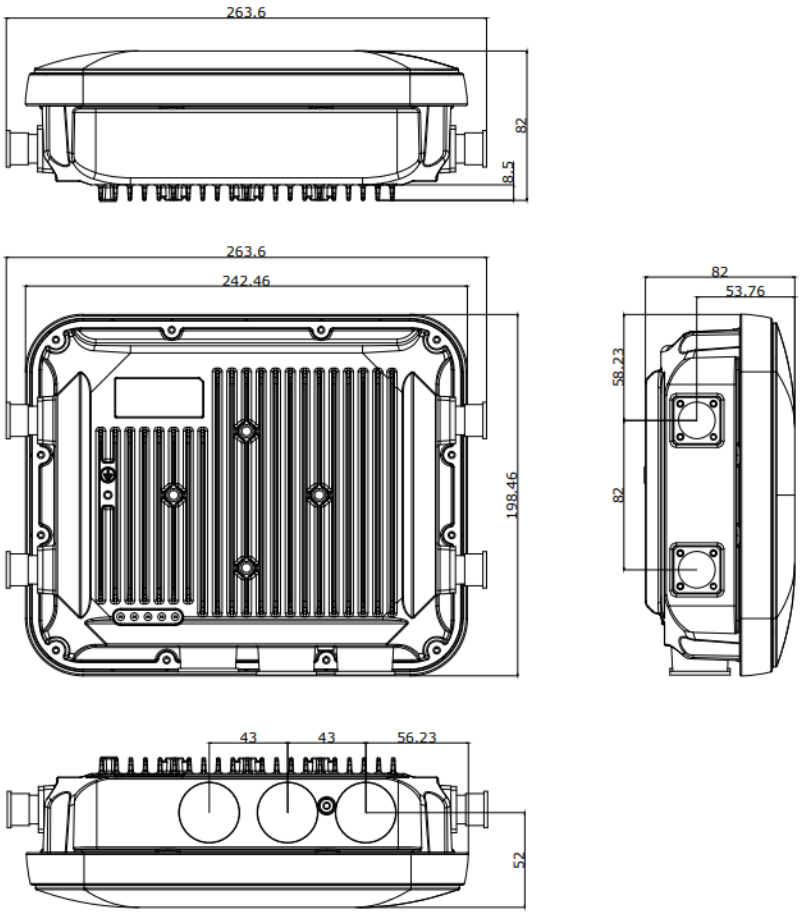


Fig.1

Specification

Mobile(Optional)	
5G NR Module	Qualcomm Snapdragon X62
Frequency Bands	5G NR SA: n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79
	5G NR NSA: n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79
	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/ B30/B32/B66/B71
	LTE TDD: B34/B38/B39/B40/B41/B42/B43//B48
	LAA:B46
	WCDMA:B1/B2/B4/B5/B8/B19
Data Transmission Rates	5G SA Sub-6: Max. 2.4 Gbps (DL)/Max. 900 Mbps (UL)
	5G NSA Sub-6: Max. 3.4 Gbps (DL)/Max. 550 Mbps (UL)
	5G NSA mmWave: Max. 4.0 Gbps (DL)/Max. 1.4 Gbps (UL)
	LTE-FDD: Max. 1.6 Gbps (DL)/Max. 200 Mbps (UL)
	HSPA+ : Max. 42Mbps (DL)/Max. 5.76Mbps (UL)
Antennas	Internal 4 high gain antennas
SIM Card	1 x Mini SIM(2FF), Push-push type
Wi-Fi Interface	
Wi-Fi Chipsets	2.4GHz: Qualcomm IPQ5018 (Dual-core ARM Cortex-A53@1GHz)
	5GHz: Qualcomm QCN6102
Memory	Flash:SPI NAND 128MB + SPI NOR 8MB
	RAM:512MB DDR3L SDRAM
Wi-Fi Standards	2.4 GHz: IEEE802.11b/g/n/ax
	5.8 GHz: IEEE 802.11a/n/ac/ax
Frequency	2.4 GHz(2.412GHz - 2.484GHz)
	5 GHz(5.15GHz ~5.85GHz)
Antennas	2.4GHz: 2 × N type Connectors
	5GHz: 2 × N type Connectors
Wi-Fi Security	Open, WPA, WPA2PSK_TKIPAES,WAP2_EAP, WPA3
Operating Modes	Wireless router mode Access point mode Repeater mode

End Users	256
Wi-Fi Data Rates	802.11a : up to 54 Mbps 802.11b : up to 11 Mbps 802.11g : up to 54 Mbps WiFi 4 (802.11n) : up to 300 Mbps WiFi 5 (802.11ac) (1024QAM) : up to 1733 Mbps WiFi 6 (802.11ax) (2.4GHz) : up to 574 Mbps WiFi 6 (802.11ax) (5GHz) : up to 2402 Mbps
TX Power	27dBm
Ethernet Interface	
WAN/LAN Port	1 x Gigabit WAN (can be configured as LAN) RJ45, 10/100/1000 Mbps, auto MDI/MDIX
Mode	Full or Half Duplex (Auto-Sensing)
Power Supply	
Power Input	48V PoE input over WAN
Power Consumption	15W
Standard	IEEE 802.3at standard
Physical Characteristics	
Housing	Metal
Dimension	245*200*90mm(L*W*H)
Installation	Wall or Bracket mounting
Operating Temperature	-40°C ~ +70°C
Storage Temperature	-40°C ~ +85°C
Ingress Protection	IP67
Weight	1800g
Software	
VPN Client	IPSec Client PPTP VPN Client L2TP VPN Client
Others	
Button	Press and hold 5s to restore factory Settings
Console	RJ45
Indicators LED	PWR,ETH, 5G , 2.4G, 5.8G.

Order Guide

Wireless AP Order guide			
Model Item	AP530X(Wi-Fi6) NR530X（5G+Wi-Fi6）	AP520X（Wi-Fi6） NR520X（5G+Wi-Fi6）	AP310i（Wi-Fi6） NR310i（5G+Wi-Fi6）
Product Views			
Description	WiFi 6/ 6E ax7800 Tri-band outdoor AP	WiFi 6 ax3000 dual-band outdoor AP	WiFi 6 ax3000 dual-band ceiling AP
Wi-Fi Generation	WiFi 6/WiFi 6E(Optional)	WiFi 6	WiFi 6
Wi-Fi Frequency	2.4G+5G1+5G2(or 6G)	2.4G+5G	2.4G+5G
Spatial Streams	2*2+2*2+4*4 MU-MIMO	2*2+2*2 MU-MIMO	2*2+2*2 MU-MIMO
Wi-Fi speed	573.5+2401+4802Mbps	573.5+2401Mbps	573.5+2401Mbps
Wi-Fi antenna	External	External	Internal
Ethernet	1*2.5G WAN/LAN(PoE in)	1*1G WAN/LAN(PoE in)	1*2.5G WAN/LAN(PoE in)
Operating Temperature	-40℃ ~70℃	-40℃ ~70℃	-10℃ ~50℃
Humidity	5%~95%(non-condensing)	5%~95%(non-condensing)	5%~95%(non-condensing)
Dimension（mm）	245*200*90	245*200*90	195*195*42
Installation	Bracket	Bracket	Ceiling

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