cudy

5G

5G SA/NSA
AX3000
Wi-Fi 6 CPE

Model: **P5**

5G SA/NSA

Compatible with 802.11ax/ac/a/b/g/n **Wi-Fi 6**

WHOLE HOME MESH

Qualcomm IPQ5018

Qualcomm snapdragon X62 5G Modem

Datasheet

Qualcomm

IPQ5018 SoC

IPQ5018+QCN6102

1 GHz Dual-core ARM Cortex-A53 CPU
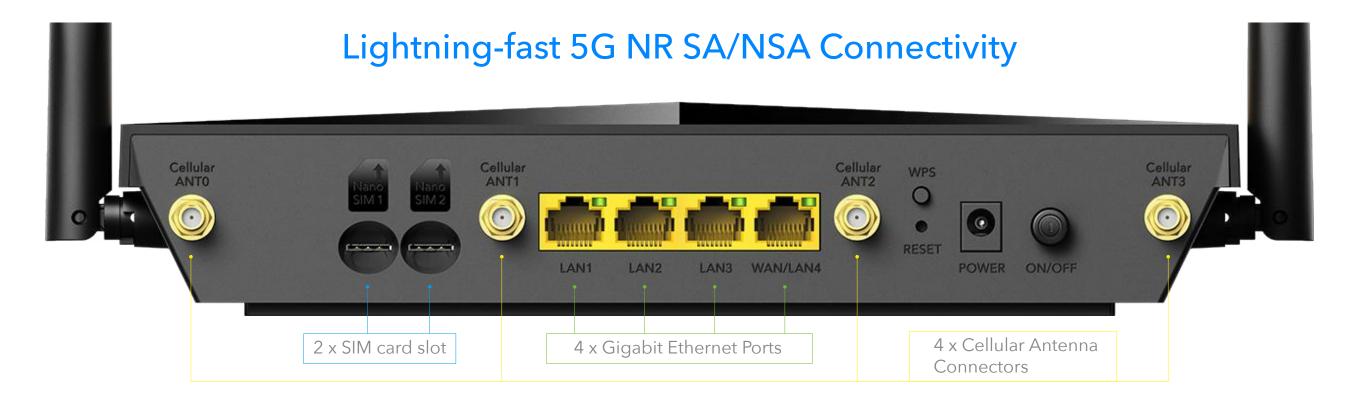High Capacity 802.11ax SoC

Snapdragon X62 5G Modem

Quectel RM520N

2nd generation 5G modem with integrated multi-mode support, designed to deliver breakthrough wireless performance and accelerate global 5G rollout.

Lightning-fast 5G NR SA/NSA Connectivity

Cellular ANT0 | Nano SIM 1 | Nano SIM 2 | Cellular ANT1 | LAN1 | LAN2 | LAN3 | WAN/LAN4 | Cellular ANT2 | WPS | RESET | POWER | ON/OFF | Cellular ANT3

2 x SIM card slot

4 x Gigabit Ethernet Ports

4 x Cellular Antenna Connectors

5G SA/NSA
Sub-6GHz

WiFi 6
AX3000

WAN Internet
Cellular Backup

Nano SIM 1 | Nano SIM 2 | WAN/LAN | SIM

WHOLE HOME
MESH

VPN
Built-in VPN Server and Client

Future-Proof Remote Management with
TR069 / TR098
TR111 / TR181

Lightning-fast 5G Connectivity

Cudy 5G Router employs 3GPP Rel. 16 technology, it supports both 5G NSA and SA modes, covers all the main stream carriers worldwide.
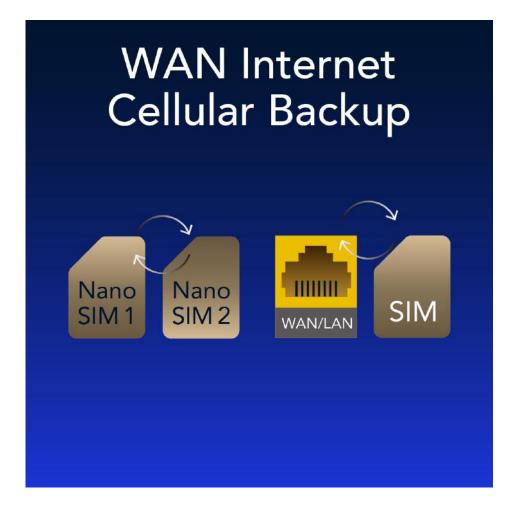
4X4 MIMO

2.5Gbps ~ 5Gbps

5G

1.2Gbps DL

4G CAT 18

600Mbps DL

4G CAT 12

300Mbps DL

4G CAT 6

150Mbps DL

4G CAT 4

Wi-Fi 6 - The most powerful Wi-Fi ever

4X
more capacity

Mobile Phone
Pad
laptop
game
IP camera
TV
Smart bulb
Smart speaker
Mobile Phone
Robotic Vacuum

150%
increase in data throughput

AX3000 2974Mbps

AC1200 1167Mbps

100%
backwards compatibility

8K

6 5 4

Redundant SIM Slots

Dual SIM slots provide redundancy and keep the device always online. Both SIM slots can be filled, you can choose whether to use SIM card 1 or SIM card 2, or auto select by Cudy.
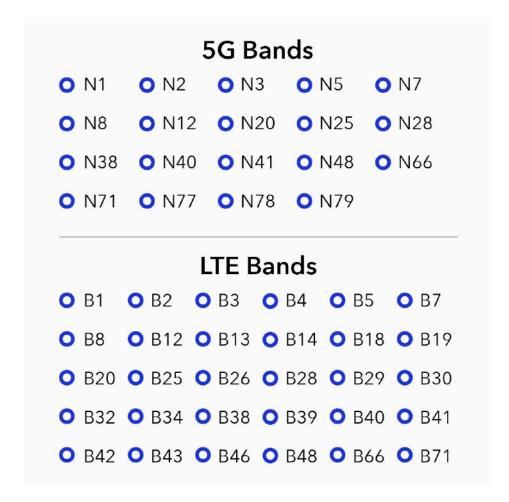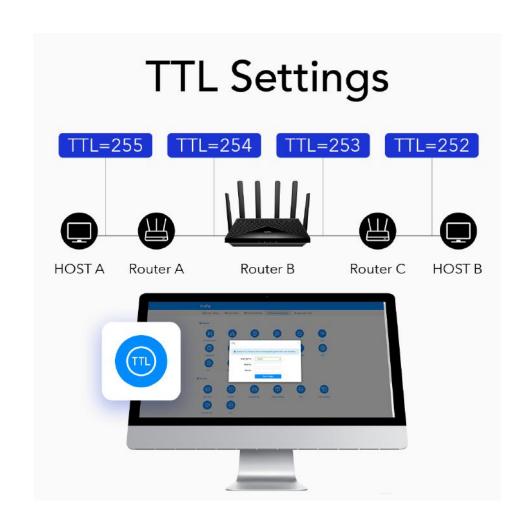
WAN Internet, Cellular Backup

Set WAN/LAN port as WAN to enable Cudy use the landline internet from WAN, and 4G/5G connection works as a backup to provide a sustained and reliable internet connection for you.
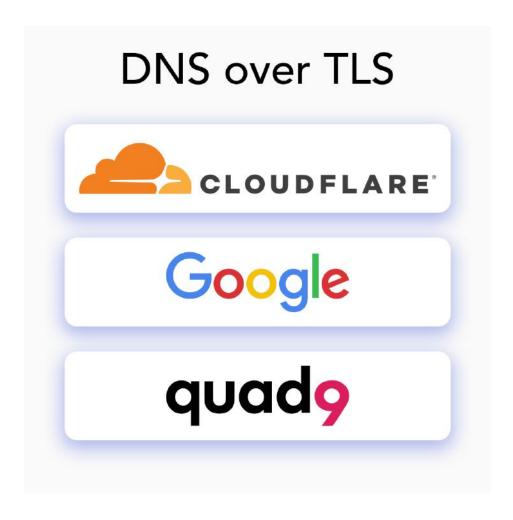
External SMA Antenna connector

Combined with 4 detachable SMA Antenna interface to connect outdoor cellular antennas for better and stable signal.

5G Bands

○ N1　○ N2　○ N3　○ N5　○ N7

○ N8　○ N12　○ N20　○ N25　○ N28

○ N38　○ N40　○ N41　○ N48　○ N66

○ N71　○ N77　○ N78　○ N79

LTE Bands

○ B1　○ B2　○ B3　○ B4　○ B5　○ B7

○ B8　○ B12　○ B13　○ B14　○ B18　○ B19

○ B20　○ B25　○ B26　○ B28　○ B29　○ B30

○ B32　○ B34　○ B38　○ B39　○ B40　○ B41

○ B42　○ B43　○ B46　○ B48　○ B66　○ B71

TTL Settings

TTL=255　TTL=254　TTL=253　TTL=252

HOST A　Router A　Router B　Router C　HOST B

DNS over TLS

CLOUDFLARE®

Google

quad9

Band Lock

Band lock make it possible to lock the 4/5G working frequency to one or several bands to keep the stability of operation.

TTL Settings

Support manual set TTL values to meet ISP's requirement(such as Verizon, Visible). Support set IPv4 TTL and IPv6 HL Values.

DNS over TLS

Support DNS Encryption with Cloudflare, Google, or Quad9, protects your privacy, prevents eavesdropping and manipulation of DNS data via man-in-the-middle attacks.

Highlights

- 5G NR SA/NSA Wi-Fi Router
- AX3000 Dual-Band Wi-Fi 6
- Qualcomm Chipset
- Dual Nano SIM slots (Redundant SIM)
- 4× Gigabit Ethernet Ports (WAN Failover)
- 4× Detachable Cellular Antennas
- PPTP/L2TP/OpenVPN/WireGuard/IPSec/Zerotier VPN

Hardware

CPU	Qualcomm IPQ5018 (Dual Core 1 GHz)
DRAM	256 MB DDR3
Flash	128 MB Nand
Ethernet	1 GbE WAN/LAN + 3 GbE LAN
SIM Card Slots	2× Nano SIM Slots
Buttons	1× WPS Button
	1× Reset Button
Antennas	2× Fixed WiFi Antennas
	4× Detachable Cellular Antennas
LED	LED indicators (Power, WiFi, Internet, Signal)

Cellular

Standards	5G SA/NSA Sub-6 GHz
Cellular Bands	See Available Versions Section

Wireless

Wi-Fi Standards	Wi-Fi 6 (802.11ax/ac/n/g/b/a)
Wi-Fi Speed	Up to 2402 Mbps on 5 GHz
	Up to 574 Mbps on 2.4 GHz
Wi-Fi Encryption	WPA-PSK, WPA2-PSK, WPA3, WPA-PSK/WPA2-PSK
	WPA-PSK/WPA2-PSK, WPA2-PSK/WPA3
Wi-Fi Features	OFDMA, MU-MIMO, Beamforming

Available Versions

P5	5G Rel. 16 Up to 3.4 Gbps / 900 Mbps (Download/Upload)
Quectel RM520N	5G NR: n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79;
Qualcomm X62	
Global	LTE-FDD: B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71;
	LTE-TDD: B34/38/39/40/41/42/43/48; LAA: B46;
	WCDMA: B1/2/4/5/8/19
P5	5G Rel. 16 Up to 3.4 Gbps / 900 Mbps (Download/Upload)
Quectel RM520N	5G NR: n1/3/5/7/8/20/28/38/40/41/71/75/76/77/78;
Qualcomm X62	LTE-FDD: B1/3/5/7/8/20/28/32/71;
Europe	LTE-TDD: B38/40/41/42/43;
	WCDMA: B1/5/8

Software

DHCP	Server, Client List, Address Reservation
NAT	Port Forwarding, Port Triggering, UPnP, DMZ
Firewall	Mac Filter, IP Filter, Domain Filter
DDNS	Compatible with 15 more DDNS providers
VPN Sever & Client	PPTP/L2TP/OpenVPN/WireGuard/IPSec/Zerotier
DNS over TLS	Cloudflare/Google/Quad9
Schedule	Schedule Reboot /Wi-Fi Schedule
Internet Protocol version	IPv4/IPv6
IPv6	Relay
	Dynamic(SLAAC/DHCPv6)
	Static (Fixed IP)
	Passthrough
	MAP-E (Dual-stack)
	DS-Lite (Dual-stack)
Quality of Service (QoS)	Support
IPTV / VLAN configuration	Support
TTL configuration	Support
Band Lock (Band Select)	Support
CWMP Protocol	TR069 / TR098 / TR111 / TR181

Other

Physical	Product Dimension: 252.5×161×48.2 mm (W×D×H)
	Package Dimension: 408×238×58 mm (W×D×H)
Power	AC Power Adapter: Input: 90~260 V Output: 12 V, 2.5 A
	DC Input (12 V- 2.5 A) Barrel Plug
Environmental	Operation Temperature: 0° C to +45° C
	Storage Temperature: -40° C to +70° C
	Relative Humidity: 5% to 95% Non-Cond
SMS	Send, Receive, Data Usage Notification
Package Content	5G SA/NSA Wi-Fi Router
	Power Adapter
	RJ45 Ethernet Cable
	Quick Installation Guide
System Requirements	Windows, macOS, Android, iOS, or other OS with networking capability
	Firefox, Chrome, Safari, Edge, or other up-to-date web browsers
	Nano SIM card with active internet subscription with ISP or carriers