

# 5G Products Proposal

# Roadmap

## SRM825W



- M.2
- 52x30\*3.6mm
- Standard Interface
- 5G NR Sub-6GHz&mmWave
- QTM525
- Global Band

## SRT856W



- ### mmWave IDU
- 160\*86\*215mm
  - IPQ 8072A
  - QCA8337
  - AQR114C
  - SI32185
  - MP: 2021.2

## SRT856J



- ### mmWave IDU
- 160\*86\*215mm
  - IPQ 8074
  - QCA8337
  - AQR114C
  - SI32185
  - MP: 2021.2



- ## SRT851W
- ### mmWave ODU
- 187\*111\*299mm
  - AQC108
  - POE
  - IP65
  - Sample: 2021.2
  - MP: 2021.4

## Kina Box



- 126\*71\*27.5mm
- AR8035/AQC108
- Sample: 2021.1
- MP: 2021.3



- ## SRT852 ODU
- 200x285x 97mm
  - AQR108
  - IP67
  - Sample: 2021.1
  - MP: 2021.3



- ## SRT858H
- ### mmWave CPE
- 160\*72\*53mm
  - IPQ5018
  - WiFi6E
  - AQR115C
  - Sample: 2021.2
  - MP: 2021.5

## SRM815



- LGA
- 44x41x2.8mm
- 5G NR Sub-6GHz
- SA&NSA
- Abundant Interfaces

## SRT830 Box



- 125x78x27.5mm
- QCA6391
- QCA8035
- MP: 2021.3

## TINA PCBA



- 122x62mm
- 5G NR Sub-6GHz&mmWave
- Global band
- QCA6391
- AR8035

## SRT873W



- ### mmWave MiFi
- 130\*70\*23mm
  - 2.4 Inch touch LCD
  - 5000mAh
  - Sample: 2021.1
  - MP: 2021.5

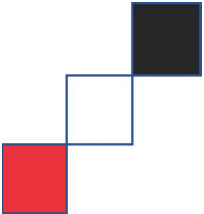


- ## SRT838S
- ### mmWave CPE
- 160\*72\*53mm
  - SI32185
  - Sample: 2021.2
  - MP: 2021.5

Q4' 20

Q1' 21

Q2' 21



# Chapter 1

Solutions Based on SRM825W M.2 Module

# mmWave Module

Model:SRM825W



<b>Chipset</b>	Qualcomm SDX55-0-AA	
<b>Form Factor</b>	M.2 Form Factor 52*30*3.6mm	
<b>Bands</b>	Support SA and NSA mode 5G NR : N78/N79 N257 LTE: B1/B3/B5/B7/B8/B28 WCDMA: B1	
<b>SRS</b>	NSA: 1T4R; SA: 2 x 1T2R	
<b>MAX TX Power</b>	Class 2 for N78/N79; Class 3 for LTE-FDD	
<b>GNSS</b>	GPS/GLONASS/BeiDou/Galileo/QZSS	
<b>Antenna</b>	4G/5G x5; GNSS x1; mmWave RF connector x8; QTM525 x4	
<b>Hardware</b>	Power	3.3V ~ 4.35V , Typ. 3.8V
	Interface	USB3.1, PCIe3.0
<b>Software</b>	Function	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP , Sleep
	Update	Firmware update via USB FOTA
	Drive	Linux/Android/Windows 7 above
<b>Working Temp.</b>	-40 ~ +85 °C	

# Sub6&mmWave CPE

Model:SRM856W



MEIG 美格

<b>Chipset</b>	Qualcomm SDX55+IPQ 8072A		
<b>Dimension</b>	About 160*86*215mm		
<b>Bands</b>	Support SA and NSA; Support Sub-6GHz & mmWave*; -5G NR : N78,N79(SA only) N257 -LTE: FDD: B1/B3/B5/B7/B8/B28 -WCDMA: B1		
<b>Rate</b>	Theoretical Maximum Data Throughput	5G NR mmWave - MIMO 2*2, 64QAM - Downlink up to 7.53Gbps; - Uplink up to 2.98Gbps	5G NR Sub-6GHz: - MIMO 4*4, 256QAM - Downlink up to 3.3Gbps; - Uplink up to 300Mbps
<b>WiFi</b>	Standard	AP Mode; WiFi 802.11 a/b/g/n/ac/ax, 4*4 MIMO; 2.4G+5.8G DBDC; WiFi Black/White list	
<b>Hardware</b>	Ethernet	1WAN/LAN: 100Base/1000Base/5G Base automatic adaptive port 2LAN: 100Base/1000Base automatic adaptive port	
	Antenna	Internal Antenna: LTE/NR*6, WiFi*4, QTM525*2 (If mmwave is needed)	
<b>Software</b>	SIM	4FF SIM card(Nano card)	
	Button	Power, WiFi/WPS, Reset	
	LED	Support	
	Update	FOTA & TR069 & Local	
	Voice	CS/Volte/VOIP	
<b>Software</b>	SMS	Support	
	Others	Firewall /port forwarding/ IPV4 / IPV6 / SNTP/VPN Passthrough	



# Sub6&mmWave CPE

Model:SRT856J



<b>Chipset</b>	Qualcomm SDX55+IPQ 8074																		
<b>Dimension</b>	About 160*86*215mm																		
<b>Bands</b>	Support SA and NSA Support Sub-6GHz & mmWave*; -5G NR : N78,N79(SA only) N257 -LTE: FDD: B1/B3/B5/B7/B8/B28 -WCDMA: B1																		
<b>Rate</b>	<table border="1"><tr><td>Theoretical Maximum Data Throughput</td><td>5G NR mmWave - MIMO 2*2, 64QAM - Downlink up to 7.53Gbps; - Uplink up to 2.98Gbps</td><td>5G NR Sub-6GHz: - MIMO 4*4, 256QAM - Downlink up to 3.3Gbps; - Uplink up to 300Mbps</td></tr></table>	Theoretical Maximum Data Throughput	5G NR mmWave - MIMO 2*2, 64QAM - Downlink up to 7.53Gbps; - Uplink up to 2.98Gbps	5G NR Sub-6GHz: - MIMO 4*4, 256QAM - Downlink up to 3.3Gbps; - Uplink up to 300Mbps															
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<b>WiFi</b>	AP Mode; WiFi 802.11 a/b/g/n/ac/ax, 8*8 MIMO; 2.4G+5.8G DBDC; WiFi Black/White list																		
<b>Hardware</b>	<table border="1"><tr><td>Ethernet</td><td>1WAN/LAN: 100Base/1000Base/5G Base automatic adaptive port 2LAN: 100Base/1000Base automatic adaptive port</td></tr><tr><td>Antenna</td><td>Internal Antenna: LTE/NR*6, WiFi*8, QTM525*2(If mmwave is needed)</td></tr><tr><td>SIM</td><td>4FF SIM card(Nano card)</td></tr><tr><td>Button</td><td>Power, WiFi/WPS, Reset</td></tr><tr><td>LED</td><td>Support</td></tr><tr><td>Update</td><td>FOTA &amp; TR069 &amp; Local</td></tr><tr><td>Voice</td><td>CS/Volte/VOIP</td></tr><tr><td>SMS</td><td>Support</td></tr><tr><td>Others</td><td>Firewall /port forwarding/ IPV4 / IPV6 / SNTTP/ VPN Passthrough</td></tr></table>	Ethernet	1WAN/LAN: 100Base/1000Base/5G Base automatic adaptive port 2LAN: 100Base/1000Base automatic adaptive port	Antenna	Internal Antenna: LTE/NR*6, WiFi*8, QTM525*2(If mmwave is needed)	SIM	4FF SIM card(Nano card)	Button	Power, WiFi/WPS, Reset	LED	Support	Update	FOTA & TR069 & Local	Voice	CS/Volte/VOIP	SMS	Support	Others	Firewall /port forwarding/ IPV4 / IPV6 / SNTTP/ VPN Passthrough
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Button	Power, WiFi/WPS, Reset																		
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Update	FOTA & TR069 & Local																		
Voice	CS/Volte/VOIP																		
SMS	Support																		
Others	Firewall /port forwarding/ IPV4 / IPV6 / SNTTP/ VPN Passthrough																		
<b>Software</b>																			

# Sub6&mmWave ODU

Model:SRT851W



<b>Chipset</b>	Qualcomm SDX55	
<b>Dimension</b>	About 187*111*299mm	
<b>Bands</b>	South Korea: 5G NR : N78 5G mmWave: N257 LTE: B1/B3/B5/B7	
<b>Hardware</b>	Ethernet	1 LAN, 5Gigabit
	POWER	POE
	Antenna	4G/5G x5; GNSS x1; QTM525 x4
	LED	5G status 4G status
	USB	Type-C USB2.0 Debug
<b>Software</b>	SIM	4FF standard SIM Card
	Water proof	IP65
	UI	WebUI
	Firewall	Mac/IP address filter, Port forwarding
	Update	FOTA
	Others	Port forwarding/IPV4/IPV6/SNTP/TR069



# Interface Description



# Interface Description



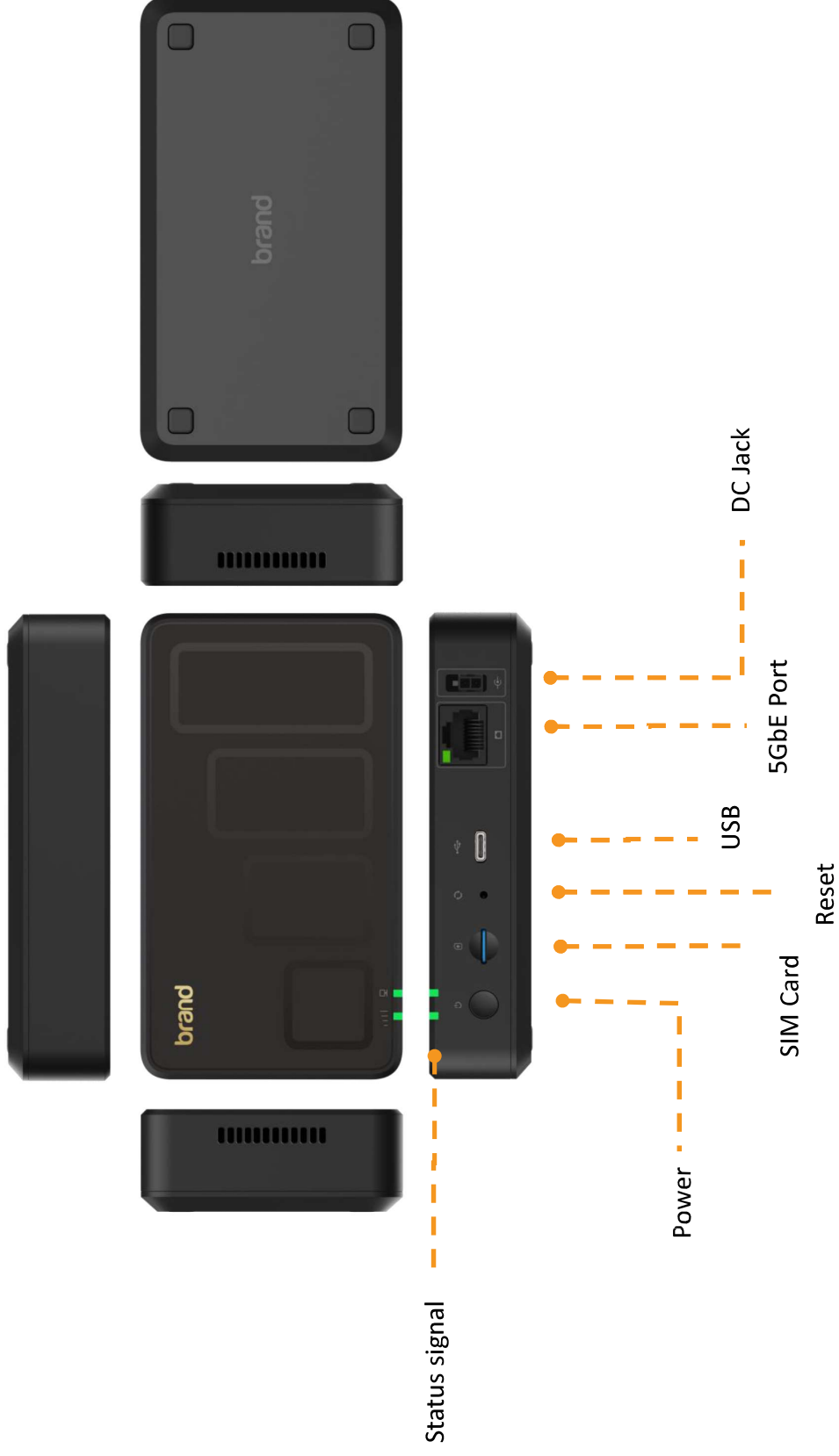
# Sub6&mmWave BOX

Model:Kina Box



<b>Chipset</b>	Qualcomm SDX55
<b>Dimension</b>	About 126*71*27.5mm
<b>Bands</b>	Support SA and NSA mode Support Sub-6GHz ;  South Korea: 5G NR : N78 5G mmWave (optional): N257 LTE: B1/B3/B5/B7
<b>Hardware</b>	Ethernet 1Gigabit Ethernet/5 Gigabit Ethernet (optional)
	SIM 4FF PUSH-PUSH SIM Card
	Antenna 4G/5G x5; GNSS x1; QTM525 x4
	Button Reset
	USB Type-C 3.1
	Power 12V 1.5A
	Operating Temperature -10°C to 45°C
	LED Support
	Update FOTA & TR069 & Local
<b>Software</b>	Others Firewall /port forwarding/ IPV4 / IPV6 / SNTP

# Interface Description



# Sub6&mmWave ODU

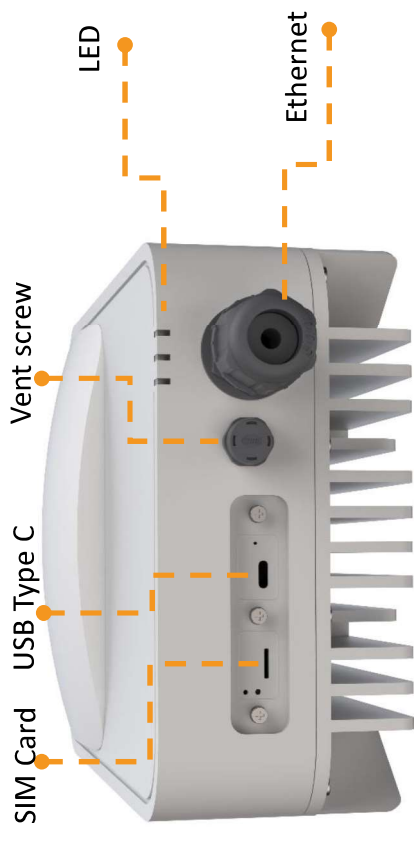
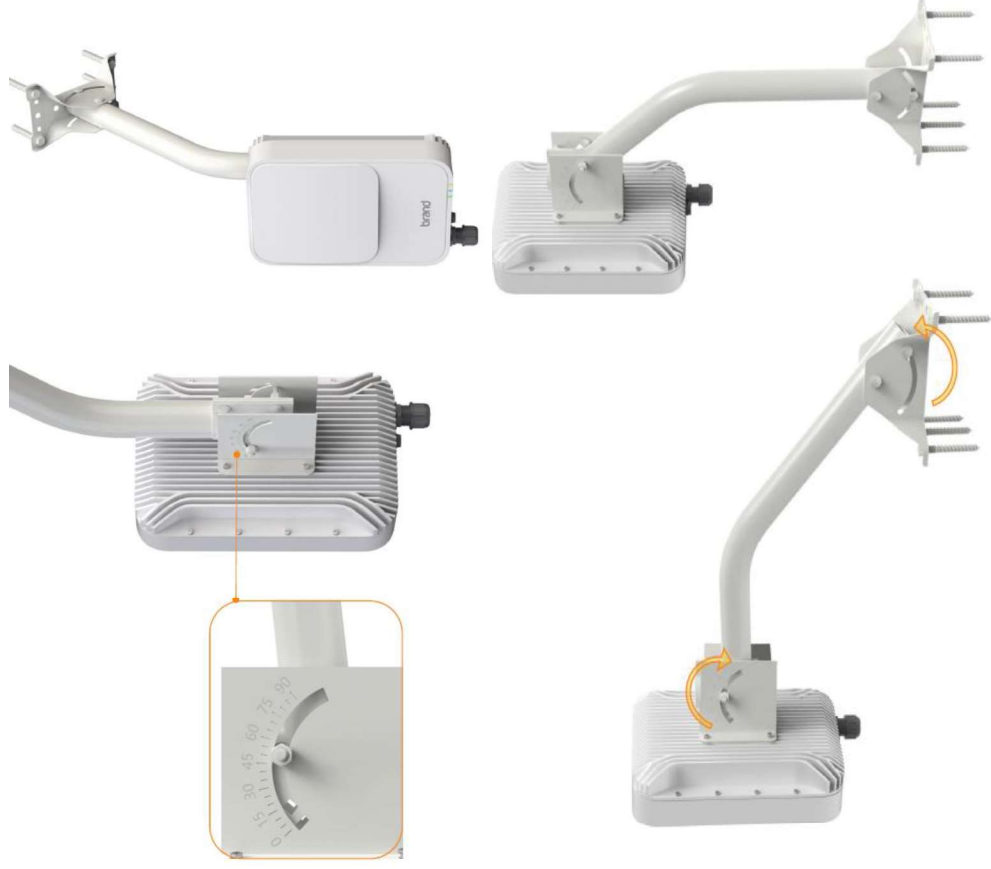
Model:SRT852



MEIG 美格

<b>Chipset</b>	Qualcomm SDX55
<b>Dimension</b>	About 200x285x 97mm
<b>Bands</b>	Support SA and NSA mode; Support Sub-6GHz 5G NR : N78 5G mmWave: N257 LTE: B1/B3/B5/B7
<b>Hardware</b>	Ethernet 1 LAN: 2.5G SIM 1*4FF SIM (nano card) Antenna Internal Antenna: LTE*2, 5G NR*2, 5G NR + 4G LTE MIMO*2, WIFI*4, QTM527*4, GNSS*1 Button RESET USB USB 2.0 Type-C, default connect to IPQ board Power <60W LED*4: Power Indication LED; 5G/4G network Indication LED; Ethernet Indication LED; WiFi Indication LED Update Local Update Others TR069; AP mode; WIFI Security; Mac/IP address filter, Port forwarding, WiFi Black/White list; SNTP; DMZ Waterproof level IP67 Lightning Protection Provide outdoor ground terminal to lower the ground potential.
<b>Software</b>	
<b>Environment</b>	Operating Temperature Full compliance: -20°C to 60°C; Operational but with certain degradations: -40°C to -20°C; 60°C - 70°C. Storage Temperature -40°C to +80°C Humidity 5%~ 95%

# Interface Description



# Sub6&mmWave CPE

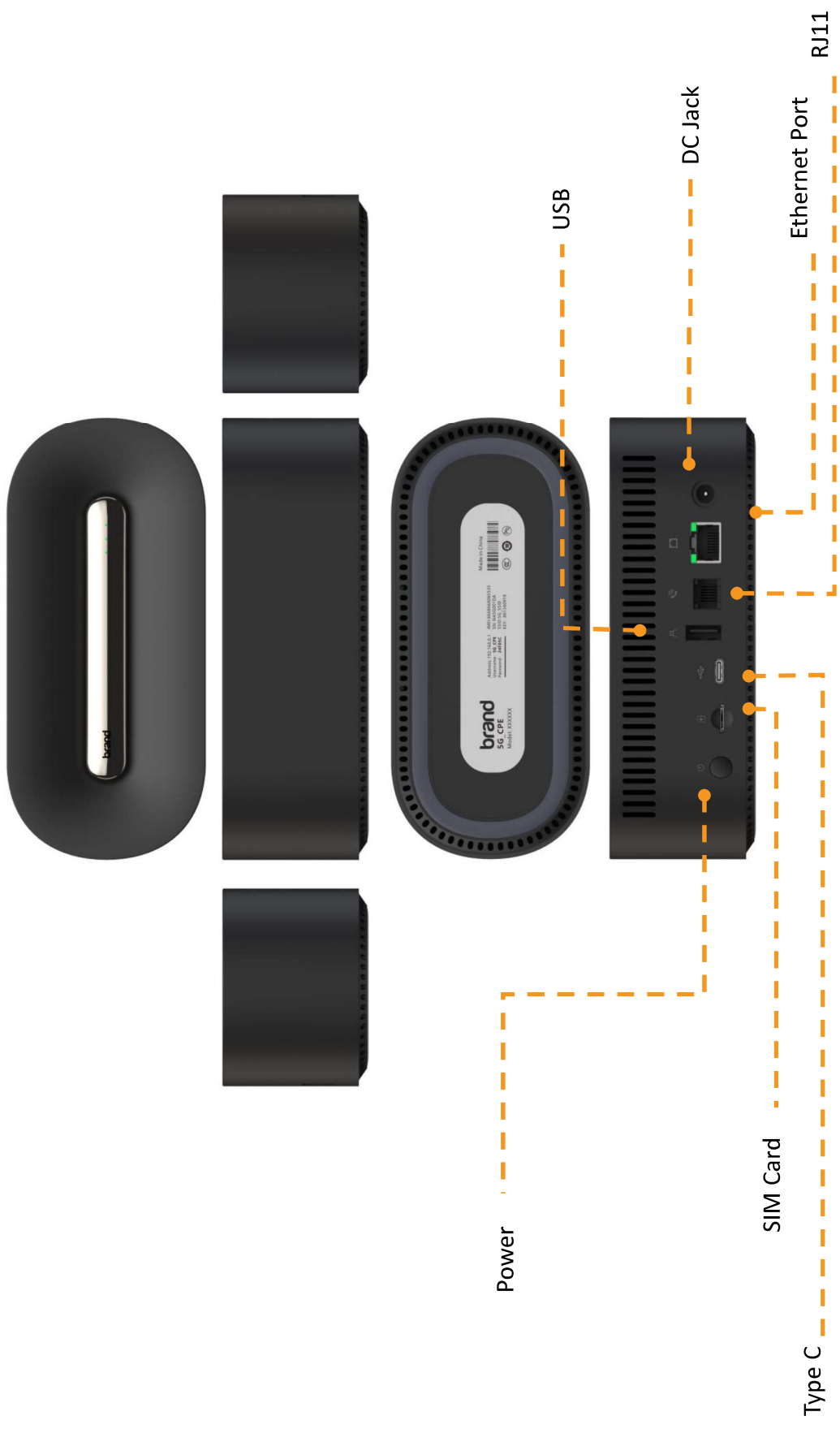
Model:SRT858H



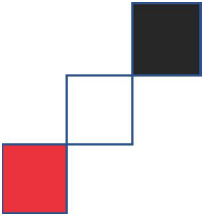
Note: Optional solution:9X50+IPQ5018.  
This solution is supported by the replacement of the M.2 module.

<b>Chipset</b>	Qualcomm SDX55+IPQ 5018
<b>Dimension</b>	About 160*72*53mm
<b>Bands</b>	Support SA and NSA Support Sub-6GHz & mmWave*; -5G NR : N78,N79(SA only) N257 -LTE: FDD: B1/B3/B5/B7/B8/B28 -WCDMA: B1
<b>Rate</b>	Theoretical Maximum Data Throughput WIFI6 AX5400
<b>WiFi</b>	Support WiFi6 (WiFi 6E) 2.4GHz (40M 2*2) & 5.8GHz (160M 4*4), 802.11 a/b/g/n/ac/ax, DBDC 1LAN: 10BaseT/100Base/1000Base automatic adaptive port 1LAN: 2.5G
<b>Hardware</b>	Antenna SIM Button LED Update Firewall WiFi Mode Others
<b>Software</b>	4G/5G x5; GNSS x1; mmWave RF connector x8; QTM525 x4 4FF SIM Card RESET/POWER Status LED*3(Power, WiFi, 5G/4G/3G Network) Local Update, FOTA, Upgrade under Power Failure Mac/IP address filter, Port forwarding, WiFi Black/White list AP mode/Easy MESH IPv4/ IPv6/ Data Statistics/ SNTP/ DMZ/ WPS/ Port Mapping

# Interface Description





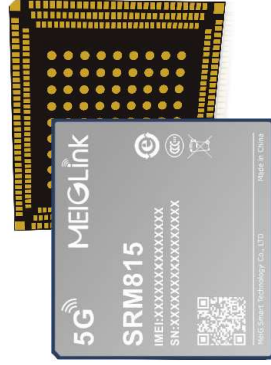


# Chapter 2

## Solutions Based on SRM815 LGA Module

# Sub6 Module

Model:SRM815



<b>Chipset</b>	Qualcomm SDX55
<b>Form Factor</b>	392-Pin LGA 44 x 41 x 2.8mm Support 5G NR Sub 6G Support SA and NSA mode
<b>Bands</b>	SRM815-EA: Region: EMEA, China, Korea, Australia 5G NR Sub-6G: N1/N3/N5/N7/N8/N20/N28/N38/N40/N41/N77/N78/N79 LTE: FDD: B1/B3/B5/B7/B8/B18/B19/B20/B28/B32* TDD: B34/B38/B39/B40/B41/B42 WCDMA: B1/B5/B8  SRM815-NA*: Region: North America 5G NR Sub-6G: N2/N5/N12/N25/N41/N48/N66/N71/N78 LTE: FDD: B2/B4/B5/B12/B13/B14/B25/B26/B28/B29/B30/B66/B71 TDD: B41/B42/B43/B48 WCDMA: B2/B4/B5
<b>GNSS</b>	GPS/GLONASS/BeiDou/Galileo/QZSS Support L1 and L5 band
<b>Antenna</b>	LTE/NR Antenna x 8, GNSS Antenna x 1 Power 3.3V ~ 4.35V, Typ. 3.8V
<b>Hardwre</b>	Interface PCM/JART/SIM/I2C/RGMII/SDIO/ADC/Reset/Power/LED_M ODE/LED_STATUS/GPIOs/USB3.1/PCIe3.0
<b>Software</b>	Functions TTS, Voice, SMS, TCP/IP, SSL, FTP, Sleep Update Firmware update via USB, FOTA Driver Linux/Android/Windows 7 above
<b>Working Temp.</b>	-40 ~ +85 °C

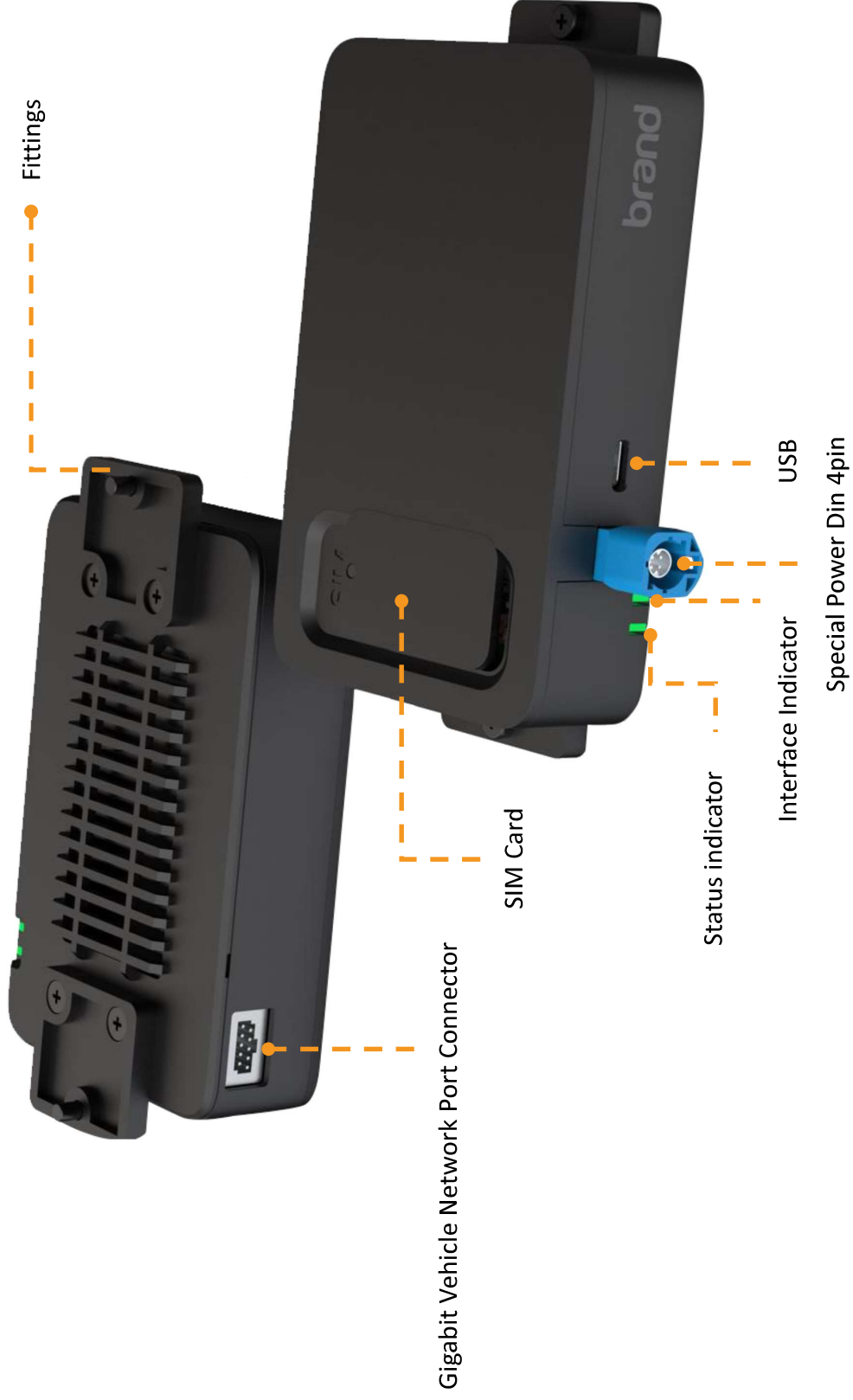
# Sub6 BOX

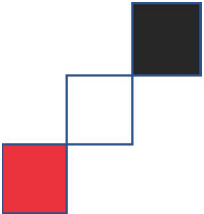
Model:SRT830



<b>Chipset</b>	Qualcomm SDX55 + QCA6391																								
<b>Dimension</b>	About 125x78x27.5mm																								
<b>Bands</b>	Support SA and NSA mode Support Sub-6GHz ; 5G NR Sub-6G: N28/N41/N78/N79; LTE: FDD: B1/B3/B5/B8/B28 TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8																								
<b>Wi-Fi</b>	<table border="1"><tr><td>Technical Standard</td><td>AP Mode; Wi-Fi 802.11 a/b/g/n/ac/ax, 2*2 MIMO; 2.4G+5G DBDC;</td></tr><tr><td>Ethernet Port</td><td>1 Vehicle LAN, Gigabit Ethernet</td></tr><tr><td>SIM</td><td>2FF standard SIM Card</td></tr><tr><td>IPXX</td><td>IP4X</td></tr><tr><td>Antenna</td><td>Internal antenna; LTE/NR Antenna x 6 Wi-Fi x 2</td></tr><tr><td>Button</td><td>Reset</td></tr><tr><td>USB</td><td>Type-C 3.0</td></tr><tr><td>Power Supply</td><td>12V1A</td></tr><tr><td>Working Tem.</td><td>-30°C to 70°C</td></tr><tr><td>LED</td><td>Support</td></tr><tr><td>Upgrade</td><td>FOTA &amp; TR069 &amp; Local</td></tr><tr><td>Others</td><td>Firewall /port forwarding/ IPV4 / IPV6 / SNTP</td></tr></table>	Technical Standard	AP Mode; Wi-Fi 802.11 a/b/g/n/ac/ax, 2*2 MIMO; 2.4G+5G DBDC;	Ethernet Port	1 Vehicle LAN, Gigabit Ethernet	SIM	2FF standard SIM Card	IPXX	IP4X	Antenna	Internal antenna; LTE/NR Antenna x 6 Wi-Fi x 2	Button	Reset	USB	Type-C 3.0	Power Supply	12V1A	Working Tem.	-30°C to 70°C	LED	Support	Upgrade	FOTA & TR069 & Local	Others	Firewall /port forwarding/ IPV4 / IPV6 / SNTP
Technical Standard	AP Mode; Wi-Fi 802.11 a/b/g/n/ac/ax, 2*2 MIMO; 2.4G+5G DBDC;																								
Ethernet Port	1 Vehicle LAN, Gigabit Ethernet																								
SIM	2FF standard SIM Card																								
IPXX	IP4X																								
Antenna	Internal antenna; LTE/NR Antenna x 6 Wi-Fi x 2																								
Button	Reset																								
USB	Type-C 3.0																								
Power Supply	12V1A																								
Working Tem.	-30°C to 70°C																								
LED	Support																								
Upgrade	FOTA & TR069 & Local																								
Others	Firewall /port forwarding/ IPV4 / IPV6 / SNTP																								
<b>Hardware</b>																									
<b>Software</b>																									

# Interface Description



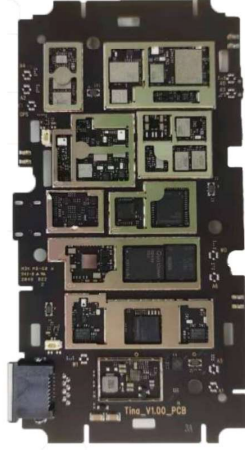


# Chapter 3

## Solutions Based on Tina PCBA

# mmWave PCBA

Model:Tina



<b>Chipset</b>	Qualcomm SDX55+QCA6391
<b>Dimension</b>	About 122*62mm
<b>Bands</b>	Support SA and NSA mode 5G Sub6: N77/N78/N79/N41 5G mmWave: N257/N258/N260/N261 LTE: B1/B2/B3/B4/B5/B7/B8/B11/B12/B13/B14/B17/B18/B19/B20/B21/ B25/B26/B28/B29/B30/B32/B34/B39/B40/B41/B42/B43/B46/B48/ B66/B71 WCDMA: B1/B2/B4/B5/B8
<b>Maximum Data Throughput</b>	5G NR->LAN: 5Gbps
<b>Technical Standard</b>	5G/4G/3G 802.11 a/b/g/n/ac/ax
<b>WiFi</b>	2.4G&5G , WIFI 2*2 MIMO, 802.11 a/b/g/n/ac/ax
<b>GNSS</b>	L1/L5
<b>Antenna</b>	5G+4G: 5 antennas; WiFi: 2X2; QTM525*4
<b>Hardware</b>	USB Type-C, 5V 3A Ethernet 1 LAN: 5G Interface FPC 30PIN 56PIN Cable
<b>Software</b>	Update Firmware update via USB FOTA Drive Linux/Android/Windows 7 above
<b>Working Temp.</b>	-40 ~ +85 °C

# Sub6&mmWave MiFi

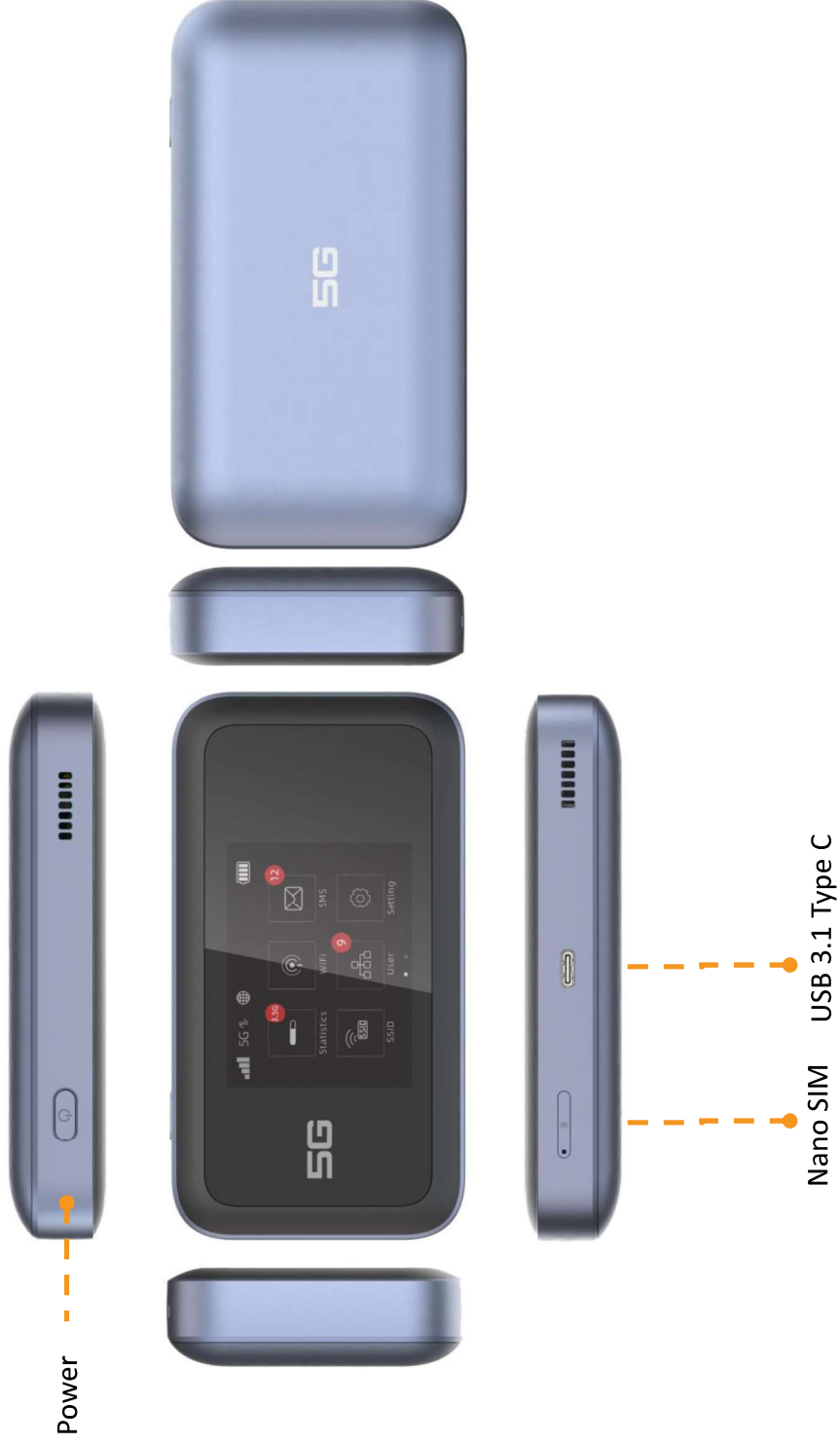
Model:SRT873



MEIG 美格

<b>Chipset</b>	Qualcomm SDX55 + QCA6391
<b>Dimension</b>	About 130*70*23mm
<b>Bands</b>	Support SA and NSA mode Support Sub-6GHz & mmWave  5G NR Sub-6G:N1/N3/N5/N7/N8/N20/N28/N38/N40/N78; LTE: FDD: B1/B3/B5/B7/B8/B20/B28/B32 TDD: B38/B40/B46 WCDMA:B1/B3/B5/B8
<b>Data Rates</b>	Theoretical Maximum Throughput 5G to WiFi6: up to 3Gbps
<b>WiFi</b>	Standard 2.4G&5G , WiFi 2*2 MIMO, 802.11 a/b/g/n/ac/ax  Battery 5000mAh Continuous working time(5G):about 7 hours Continuous standby time :about 400 hours
<b>Hardware</b>	USB USB 3.1  SIM Card Nano SIM  Antenna Default Internal antenna  Button Power, WiFi/WPS ,Reset  LCD Support 2.4 Inch touch LCD  Update FOTA & TR069 & Local  Others Firewall / port forwarding / DHCP server/SNTP

# Interface Description





# Sub6&mmWave CPE

Model:SRT838S



<b>Chipset</b>	Qualcomm SDX55+QCA6391 (low cost)
<b>Dimension</b>	About 160*72*53mm
<b>Bands</b>	Support SA and NSA Support Sub-6GHz & mmWave*;  5G NR Sub-6G:N1/N3/N5/N7/N8/N20/N28/N38/N40/N78; LTE: FDD: B1/B3/B5/B7/B8/B20/B28/B32 TDD: B38/B40/B46 WCDMA:B1/B3/B5/B8
<b>Rate</b>	Theoretical Maximum Data Throughput WiFi6 AX1800
<b>WiFi</b>	Support WiFi6 2.4GHz (40M 2*2) &5.8GHz (80M 2*2), 802.11 a/b/g/n/ac/ax, DBDC  1LAN: 10BaseT/100Base/1000Base automatic adaptive port
<b>Hardware</b>	RJ11 1
	Antenna 5G+4G: 5 antennas; WiFi: 2X2; QTM525*4
	SIM 4FF SIM Card
	Button RESET/POWER
	LED Status LED *3(Power, WiFi, 5G/4G/3G Network)
<b>Software</b>	Update Local Update, FOTA, Upgrade under Power Failure
	Firewall Mac/IP address filter, Port forwarding, WiFi Black/White list
	WiFi Mode AP mode/Easy MESH
	Others IPv4/ IPv6/ Data Statistics/ SNTP/ DMZ/ WPS/ Port Mapping