NCM865

2.4/ 5/ 6 GHz Wi-Fi Bands
2 × 2 MIMO DBS HBS
Wi-Fi 7 & Bluetooth 5.4 Module

30.0 mm
22.0 mm
2.25 mm

QCNCM865
QCNCM865XXXX-665
SN:XXXXXXXXXXXXXX
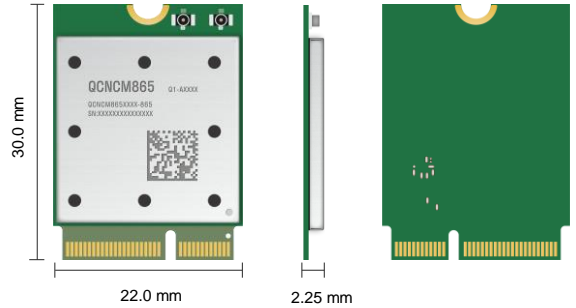
NCM865 is a highly integrated module supporting Wi-Fi 7 and Bluetooth 5.4. NCM865 supports simultaneous operation on 2.4 GHz + 5 GHz, 2.4 GHz + 6 GHz, 5 GHz + 5 GHz, and 5 GHz + 6 GHz. With 4K-QAM and 320 MHz bandwidth, NCM865 achieves a max of 5.8 Gbps data rate. Meanwhile, it supports ultra-low latency for real-time response.

Multi-Link Operation (MLO) is one unique feature that allows routers to use multiple wireless bands and channels simultaneously to connect to a Wi-Fi 7 client. NCM865 supports MLO and brings faster data rate, much lower latency and higher network reliability to users.

NCM865 also integrates dual Bluetooth and supports LE audio, as well as 2 Mbps Bluetooth Low Energy (BLE) and BLE Long Range.

Higher data rate, lower latency and enhanced network reliability makes NCM865 suitable for the laptop application.

🗎))) **Key Features**

✔ 2.4 GHz/5 GHz/6 GHz Wi-Fi bands and Bluetooth 5.4

✔ High Band Simultaneous

✔ Dual Band Simultaneous

✔ 4096 QAM

✔ Multi-Link Operation

✔ Ultra-low Latency

✔ Multi-User Multiple Input Multiple Output

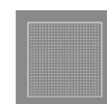✔ Wide operating temperature range: -10 °C to +65 °C
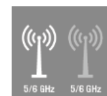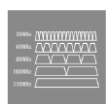

High Band Simultaneous

Multi-Link Operation

Ultra-low Latency

MU-MIMO

4K QAM

320 MHz Bandwidth

Wi-Fi 7 & Bluetooth 5.4	NCM865
WLAN Protocol	IEEE 802.11a/b/g/n/ac/ax/be
Wi-Fi Frequency Band	2.4 GHz/ 5 GHz/ 6 GHz
Wi-Fi Antenna	2 × 2 + 2 × 2
Wi-Fi Modulation Mode	DBPSK/DQPSK/CCK/BPSK/QPSK/QAM
2.4 GHz Channel Bandwidth	20 MHz/ 40 MHz
5 GHz Channel Bandwidth	20 MHz/ 40 MHz/ 80 MHz/ 160 MHz
6 GHz Channel Bandwidth	20 MHz/ 40 MHz/ 80 MHz/ 160 MHz/ 320 MHz
DBS	Supported
HBS	Supported
Encryption Mode	WPA3
Wi-Fi Operating Mode	AP/ STA
Bluetooth Protocol	Bluetooth 5.4
Dimensions	22.0 mm × 30.0 mm × 2.25 mm
Weight	Approx. 2.57 g
Temperature Range	
Operating Temperature	-10 °C to +65 °C
Data Rate (Max.)	
802.11a	54 Mbps
802.11b	11 Mbps
802.11g	54 Mbps
802.11n	600 Mbps
802.11ac	1732 Mbps
802.11ax	3000 Mbps
802.11be	5800 Mbps
Interfaces	
PCIe 3.0	× 1 (for Wi-Fi)
PCM/I2S	× 1 (for Bluetooth Audio)
USB	× 1 (for Bluetooth)
Wi-Fi/Bluetooth Antenna	× 2
Electrical Features	
Power Supply Voltage	VBAT: 3.0–3.6 V, Typ. 3.3 V
Power Consumption	Max. current at Tx mode: TBD @ VBAT
Certifications	
Regulatory	**Europe:** CE **America:** FCC **Canada:** IC **China:** SRRC **South Korea:** KC **Japan:** TELEC **Australia/New Zealand:** RCM

Model	Ordering Code	DBS/ HBS	Host Platform
NCM865	QCNCM865AAMD-865	Supported	x86 platform

QUECTEL