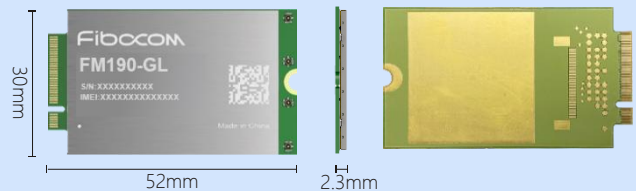# Fibocom FM190-GL

5G Sub-6 Module

30mm
52mm
2.3mm

Key Benefits:

- High-performance 5G wireless modules compliant with 3GPP R17 specifications
- Support for both SA and NSA network architectures
- Compatibility with global 5G frequency bands and certifications
- Excellent uplink capabilities, including FDD+FDD uplink carrier aggregation and FDD uplink MIMO
- Supports 1024QAM modulation, 300MHz bandwidth and supports downlink NR 5 Carrier Aggregation

5G Global 5G Bands

3GPP Release 17

M.2 M.2 Form Factor

PCIe4.0/USB3.1 High-Speed Port

Multi-constellation GNSS

AT Fibocom enhances AT Commands

Reference design and Application development support

Fibocom FM190-GL is a 5G Sub-6GHz Module which is compliant with the 3GPP Release 17 standard. Powered by the Qualcomm Snapdragon SDX75, it supports both 5G standalone (SA) and non-standalone (NSA) network architectures, which provides superior 5G experience connectivity and delivers optimized power consumption benefits for IoT applications.

The module is in an M.2 form factor with dimensions of 30*52*2.3mm, which offers up to 300MHz bandwidth and downlink NR 5CA, FDD+FDD uplink carrier aggregation, and FDD uplink MIMO in the NR Sub-6GHz, it., which delivering a high-speed experience in home, enterprise and manufacturing plants.

The FM190W-GL features rich network protocols and integrates multiple interfaces, including USB 3.1/3.0/2.0, PCIe 4.0/3.0, I2S, and more. It can be applied in applications such as gateways, video surveillance, industrial routers, drones, VR/AR, and more.

Fibocom

5G	FM190-GL
Region	Global
Basic Features	
Chipset	SDX75
Package	M.2
Dimension (mm)	30 x 52 x 2.3mm
Weight	TBD
5G Sub-6	n1/2/3/5/7/8/12/13/14/18/20/25/26/29/30/34/38/39/40/41/46/48/53/66/67/68/70/71/75/76/77/78/79/90/91/92/93/94
LTE FDD/TDD	TDD：B34/38/39/40/41/48/46/53 FDD：B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/70/71/75/76
UMTS	B1/2/3/4/5/6/8/9/19
CDMA	B0/1/10
Antenna	4
Memory	8Gb LPDDR4x+8Gb Nand Flash
Power Supply	3.135V~4.4V, Typical 3.8V
Operating Temp.	-40°C ~+85°C
Software Support	OpenWRT/RDK-B
AT Command	3GPP TS 27.007 and 27.005, Proprietary FIBOCOM AT Commands
Data Transmission	
NR SA	6.18Gbps(DL) / 900Mbps(UL)
NR NSA	4.92Gbps(DL) / 555Mbps(UL)
LTE	2.0Gbps(DL) / 211Mbps(UL)
Enhanced Features	
Voice	VoLTE*/VONR*
SMS	SMS over IP(IMS)
Audio	●
DFOTA	●
GNSS	GPS/GLONASS/Galileo/BeiDou/QZSS/NavIC
Software Features	
Driver	USB: Linux 2.6.38 and later/Windows7&10/Android7.x&8.x&9.x RIL: Android7.x&8.x&9.x NDIS: Windows7&10 ECM: Linux 2.6.38 and later Gobinet: Linux 2.6.38 and later
MBIM	Windows 10 and later/Linux 3.8 and later QMI WWAN: Linux 3.4 and later
QMI WWAN	Linux 3.4 and later
Network Protocol	TCP/UDP/FTP/HTTP/HTTPS/PING/LwM2M/SMS
Interfaces	
USB	USB3.1/3.0/2.0 x 1
PCIe	PCIe4.0/3.0x 1+PCIe3.0 x 2
UIM	●
I2S	●

* = planning /under development ● = support