




ECS QSIP7180 Module Instructions

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QSIP7180 Module Instruction Document

The QSIP7180 has two baseline regulatory certification variants:

- Windows or Chromebook for WWAN + Wi-Fi/BT
- Regulatory Model: QSIP7180
- FCC ID: WL6-718020QT1C

Note:

This module will not be sold separately, this file is only for FCC applications.

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

This device is slave equipment, the device is not radar detection and not ad-hoc operation in the DFS band.

This module is intended for OEM integrators. The OEM integrator is responsible for compliance with all the rules that apply to the product into which this certified RF module is integrated. Additional testing and certification may be necessary when multiple modules are used.

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USERS MANUAL OF THE END PRODUCT:

In the user's manual of the end product, the end-user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated.

The end-user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied.

The end-user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following "Contains FCC ID: WL6-7180QT201C".

47CFR Rules Parts Addressed in Modular Certification

Band	Applicable FCC Rule Part
Band 5	47CFR47 Part 22
Band 2	47CFR47 Part 24
Band 46	47CFR47 Part 15 Subpart E
Other 3GPP Bands	47CFR47 Part 27
Wi-Fi 2.4 GHz	47CFR47 Part 15.247
Bluetooth 2.4 GHz	47CFR47 Part 15.247
Wi-Fi 5GHz	47CFR47 Part 15 Subpart E
Receive Mode	47CFR47 Part 15 Subpart B
Test Standards	ANSI C63.10 (Unlicensed) ANSI C63.26 (Licensed)
Module Guidance	KDB Publication 996369
WWAN KDBs	

This FCC ID: WL6-718020QT1C has been approved by FCC to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

The module is certified for use only with certain antennas described in this chapter.

- For 4GHz/5GHz unlicensed band: Allowed antenna type: PIFA

No.	Antenna Type	Peak Gain
1	PIFA Antenna	3.62 dBi for 2.4 GHz
2	PIFA Antenna	3.08 dBi for 5.150~5.350 GHz
3	PIFA Antenna	4.46 dBi for 5.470~5.850 GHz

Note:

The antenna connector is I-PEX type.

- For WWAN licensed bands:

Allowed maximum gain (dBi), including antenna cable loss

Band	US FCC
	Antenna Gain (dBi)
2: US	5
4: US	5.8
5: US	2.1
7: US	5.4
12: US	0.9
13: US	1.3
14: US	1.8
17: US	0.9
25: US	5.1
26: US	2.1
30: US	0
66: US	5.9
71: US	1.1
38: US	5.2

Integrated Product Test and Certification Requirements

Integrators must adhere to test guidance provided in FCC KDB 996369 D04 available at this website: <https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?switch=P&id=44637>


1. The module has been approved for the rule parts defined in Table 4-1. Host device must be tested for Part15B compliance.
2. Radiated emissions testing should be tested per KDB 996369 with all transmitters active and transmitting at max transmit power. An ECS account representative can assist with making test tools available as needed.
3. The recommended method of test is to use a call box simulator for WWAN where the UE is configured for maximum transmit power. For WLAN testing, if an access point is not available for mission mode testing, Qualcomm test tools can be used to configure the WLAN modem for maximum transmit power and the desired mode/frequency of operation.
4. If a memory variant is utilized, limited WWAN and Wi-Fi transmitter testing should be completed to ensure equivalent compliance. The following testing must be completed at a minimum
 - Limited unlicensed band edge measurement and unwanted radiated spurious emissions
 - Radiated emissions in FCC Part 15.205 restricted bands during Wi-Fi and BT operation
 - Limited WWAN radiated emissions
 - Part 15B testing

NOTE: Data can be leveraged from the part of Part 15B and radiated emissions referenced above to address continued compliance with the variant memory.

- 5. RF Exposure must be addressed at the host level for all “portable” products where users are less than 20cm from the device during normal operation (i.e. SAR testing is required) in accordance with FCC KDB 447498. Host product manufacturers must provide all required documentation to the end-user.
- 6. Antennas must follow the guidelines defined in Section 7.
- 7. In the US, either a Class II Permissive Change or new equipment authorization is required. Data can be leveraged from FCC ID: WL6-718020QT1C per FCC KDB 484596.

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Documents / Resources

 QSIP7180 Module Instruction Document <small>Elitegroup Computer Systems Co., Ltd. No. 239, Sec. 2 Ti Ding Blvd. Taipei, Taiwan 11493</small>	ECS QSIP7180 Module [pdf] Instructions 718020QT1C, WL6-718020QT1C, WL6718020QT1C, QSIP7180, Module
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References

-  [996369 Modules, Module Certification, 15.212](#)