

Cellular module

FCC ID: 2A95KPLS63X / IC: 30482-PLS63X

This manual is based on the original manufacturer's manual and has been produced under TWIG brand in accordance with the Change ID process for our FCC and ISSED IDs.

Compliance with FCC and ISSED Rules and Regulations

The Equipment Authorization Certification for the Twig Com will be registered under the following identifiers:

FCC Identifier: 2A95KPLS63X
Industry Canada Certification Number: 30482-PLS63X
Granted to Twig Com

Manufacturers of mobile or fixed devices incorporating PLSx3 modules are authorized to use the FCC Grants and ISSED Certificates of the PLSx3 modules for their own final products according to the conditions referenced in these documents. In this case, an FCC/IC label of the module shall be visible from the outside, or the host device shall bear a second label stating "Contains FCC ID: "Contains FCC ID: 2A95KPLS63X".

The integration is limited to fixed or mobile categorized host devices, where a separation distance between the antenna and any person of min. 20cm can be assured during normal operating conditions.

For mobile and fixed operation configuration the antenna gain, including cable loss, must not exceed the limits listed in the following Table 1 and Table 2 for FCC and ISSED.

Table 1: Antenna gain limits for FCC and ISSED (for W and EP variants)

Operation band	FCC limit	ISED limit	Unit
Maximum gain in GSM/GPRS 850	8.60	5.30	dBi
Maximum gain in PC 1900	10.20	10.20	dBi
Maximum gain in WCDMA Band 2	8.01	8.01	dBi
Maximum gain in WCDMA Band 4	5.00	5.00	dBi
Maximum gain in WCDMA Band 5	9.40	6.10	dBi
Maximum gain in LTE Band 2	8.01	8.01	dBi
Maximum gain in LTE Band 4	5.00	5.00	dBi
Maximum gain in LTE Band 5	9.40	6.10	dBi
Maximum gain in LTE Band 7	8.01	8.01	dBi
Maximum gain in LTE Band 8	9.70	-	dBi
Maximum gain in LTE Band 12	8.70	5.61	dBi
Maximum gain in LTE Band 13	9.16	5.93	dBi
Maximum gain in LTE Band 26	9.30	6.10	dBi
Maximum gain in LTE Band 38	8.01	8.01	dBi
Maximum gain in LTE Band 41	8.01	8.01	dBi
Maximum gain in LTE Band 66	5.00	5.00	dBi

Table 2: Antenna gain limits for FCC and ISSED (for X variants)

Operation band	FCC limit	ISED limit	Unit
Maximum gain in WCDMA Band 2	8.01	8.01	dBi
Maximum gain in WCDMA Band 4	5.00	5.00	dBi
Maximum gain in WCDMA Band 5	9.40	6.10	dBi
Maximum gain in LTE Band 2	8.01	8.01	dBi
Maximum gain in LTE Band 4	5.00	5.00	dBi
Maximum gain in LTE Band 5	9.40	6.10	dBi
Maximum gain in LTE Band 12	8.70	5.61	dBi
Maximum gain in LTE Band 13	9.16	5.93	dBi
Maximum gain in LTE Band 14	9.23	N.A.	dBi
Maximum gain in LTE Band 25	8.01	8.01	dBi
Maximum gain in LTE Band 26	9.30	6.10	dBi
Maximum gain in LTE Band 66	5.00	5.00	dBi
Maximum gain in LTE Band 71	8.48	5.45	dBi

IMPORTANT:

Manufacturers of portable applications incorporating PLSx3 modules are required to have their final product certified and apply for their own FCC Grant and ISSED Certificate related to the specific portable mobile. This is mandatory to meet the SAR requirements for portable mobiles.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: 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 and with ISSED license-exempt RSS standard(s). 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.
- This Class B digital apparatus complies with Canadian ICES-003.

FCC Part 15.19 Warning Statement

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. 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 UNDESIRE OPERATION.

If Canadian approval is requested for devices incorporating PLSx3 modules the below notes will have to be provided in the English and French language in the final user documentation. Manufacturers/OEM Integrators must ensure that the final user documentation does not contain any information on how to install or remove the module from the final product.

Notes (ISED):

(EN) This Class B digital apparatus complies with Canadian ICES-003 and RSS-210. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

(FR) Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210. Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

(EN) Radio frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Innovation, Science and Economic Development Canada (ISED) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has also been evaluated and shown compliant with the ISED RF Exposure limits under mobile exposure conditions. (antennas at least 20cm from a person's body).

(FR) Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Innovation, Sciences et Développement économique Canada (ISDE).

Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (les antennes se situent à moins de 20cm du corps d'une personne).