



AGN3 User Guide

September 28, 2023



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1. Product Description

The AGN3 is a solar-powered tank sensor monitoring device.



Figure 1. AGN3 device

2. How to turn on the device

The device is turned on by peeling the protective film that covers the solar panel. When light is detected (from solar panel) the device powers on the solar panel circuit, wakes up the device and performs the first wake-up to report to the customer's cloud.



3. Hardware Specification

The AGN3 is comprised of three primary components: LTE Cat-M1 Cellular and GNSS radios, MCU host processor and radar sensor.

3.1 Electrical Specification

3.1.1 Battery

- Capacity: 2,500 mAH
- Voltage: 3.7V
- Type: Li-Ion (rechargeable)

3.1.2 Charger

- Voltage: 5V DC
- Current (peak): 0.165mA

3.2 Cellular Radio

3.1.1 Cellular Technology

- LTE Cat-M1 (3GPP Rel.14), 2G
- Data only

3.1.2 Frequency Bands

- 2G (MHz): 850, 900, 1800, 1900
- LTE Cat-M1: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B85, B8_39d

3.1.3 TX Output Power

Band	Mode	Class	RF Power (dBm) Nominal*
850/900MHz	GSM/GPRS	4	32.5
	EGPRS	E2	27
	GSM/GPRS	1	29.5



Band	Mode	Class	RF Power (dBm) Nominal*
1800/1900MHz	EGPRS	E2	26
B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B85, B8_39d	(LTE) CAT-M1	3	23

** Max output power tolerance range according to 3GPP TS 36.521-1 and 3GPP TS 51.010-1 or better.*



4. Document History

2023-09-28 Initial revision

FCC 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.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation 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 undesired operation.

Caution!

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

Canada Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:



- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.