



3G7090/3G7090-EU/ LT7090(E)/LE7090 Cellular Alarm Communicator Installation Sheet

Important: Use this manual in conjunction with the iotega alarm system Reference Manual. Observe all the safety instructions specified in the manual. Before operation, ensure that the panel is fully assembled and closed.

Safety Information: All servicing, except backup battery replacement, must be performed by a skilled person only. Use only authorized accessories with this equipment. Observe and respect all rules imposed by local electrical codes. This manual contains information on limitations regarding product use and function, and on the limitations as to the liability of the manufacturer. Read the entire manual carefully. For warning information, refer to the iotega Reference Manual. The communicator must be installed by skilled persons only and used in an environment that provides a maximum pollution degree of 2 and an overvoltages category II in non-hazardous, indoor locations only. Observe these instructions and the instructions specified within the panel manual.

Model Information: Model 3G7090 is UL/ULC listed and covers frequency band 850/1900 MHz. Model 3G7090-EU is CE compliant and covers frequency band 900/1800/2100 MHz. Models LT7090/LT7090E are UL/ULC listed and cover frequency bands 700 MHz (B13) and 1700/2100 MHz (B4 AWS). Model LE7090 is UL/ULC listed and cover frequency bands 700 MHz (B12/B13), 850 MHz(B5), 1700/2100 MHz (B4) and 1900 MHz (B2). For UL/ULC Residential Fire and Burglary installations, the 3G7090 or LT7090/LT7090E/LE7090 is listed as a sole means of communication or as a back up when used in conjunction with the Ethernet/WiFi integrated communicator in the WS900-19 or WS900-29 alarm system. All models are compatible with the iotega alarm panels WS900 and WS901. The communicator supports Internet Protocol (IP) transmission of panel and communicator events over HSPA/GPRS or LTE. The 3G7090, 3G7090-EU and LT7090/LT7090E/LE7090 communicators are compatible with the following receivers: Sur-Gard System I-IP Receiver, version 1.41+, Sur-Gard System II Receiver, version 2.14+, Sur-Gard SG-DRL3-IP, version 2.36+ (for Sur-Gard System III Receiver), Sur-Gard SG-DRL4-IP version 1.29+ (for Sur-Gard System IV Receiver), and Sur-Gard SG-DRL5-IP version 1.04+ (for Sur-Gard System 5 Receiver).

Technical Specifications

The following technical specifications apply to models 3G7090, 3G7090-EU, and LT7090/LT7090E/LE7090.

Input Voltage: 3.4-4.2 V, nominal 3.9 V (provided by the host alarm panel WS900-xx/WS901-xx).

Standby Current: 20 mA @ 3.9 V.

Alarm (Transmitting) Current: 750 mA @3.9 V (max avg).

Operating Temperature: -10 °C to 55 °C. UL/ULC has only verified operation for range 0-40 °C.

Relative Humidity: 5% to 93%, non-condensing. ULC/ULC has only verified operation at 85%.

Mechanical Specifications: 67 x 62 x 25 mm (W x L x H); weight is 15 g.

Model	Operating Frequency	Typical Antenna Gain
3G7090	2G - 850 and 1900 MHz; 3G - 850 (B5) and 1900 MHz (B2)	Band 5: 824-894 MHz 1.9-2.1 dBi Band 2: 1850-1990 MHz 1.8-3.7 dBi
3G7090-EU	2G - 900 and 1800 MHz; 3G - 900 (B8) and 2100 MHz (B1)	Band 8: 880-960 MHz 1.2-2.0 dBi Band 3: 1710-1880 MHz 1.7-2.5 dBi Band 1 TX: 1920-1980 MHz 3.3-3.7 dBi Band 1 RX: 2110-2170 MHz 1.2-2.0 dBi
LT7090/ LT7090E	LTE - 700 MHz (B13), 1700/2100 MHz (B4 - AWS) and 1900 MHz (B2*)	Main Antenna, Band 13: 746-787 MHz 1.3-2.2 dBi Main Antenna, Band 2: 1850-1990 MHz 1.9-2.5 dBi* Main Antenna, Band 4 TX: 1710-1755 MHz 1.2-1.5 dBi Main Antenna, Band 4 RX: 2110-2155 MHz 0.3-0.8 dBi Diversity Antenna, Band 2: 1850-1990MHz 2.4-3.4 dBi* Diversity Antenna, Band 13: 746-787 MHz 0.7-2.2 dBi Diversity Antenna, Band 4 RX: 2110-2155 MHz 0.4-0.8 dBi
		*for model LT7090E only
LE7090	LTE - 700MHz (B12/B13), 850 MHz(B5), 1700/2100 MHz (B4) and 1900 MHz (B2)	Main Antenna, Band 12: 699-746 MHz -0.7 - +1.5 dBi Main Antenna, Band 13: 746-787 MHz -0.7 - 0 dBi Main Antenna, Band 5: 824-894 MHz -2.5 - -1.2 dBi Main Antenna, Band 4TX: 1710-1755 MHz 0 - +3.0 dBi Main Antenna, Band 4RX: 2110-2155 MHz 0.5 - +1.0 dBi Main Antenna, Band 2: 1850-1990 MHz +1.9 - +3.1 dBi Diversity Antenna, Band 12: 729-746 MHz -1.3 - -0.8 dBi Diversity Antenna, Band 13: 746-756 MHz -1.3 - -0.5 dBi Diversity Antenna, Band 5: 869-894 MHz -1.7 - -1.4 dBi Diversity Antenna, Band 4: 2110-2155 MHz -0.2 - +0.5 dBi Diversity Antenna, Band 2: 1930-1990 MHz +2.5 - +3.1 dBi

Inserting and Removing the SIM Card

⚠ Use caution when you handle the SIM card. To avoid damage to the SIM card, ensure that there are no bent or scratched contacts.

To insert and remove the SIM card, complete the following steps:

- On the bottom of the panel, slide the cover in the direction shown and remove it.
- Slide the SIM card holder gently in the opposite direction of the Lock arrow and tilt it upwards.
- Insert or remove the SIM card by sliding it in or out of the holder. The notch on the corner of the SIM card must align with the notch on the base of the holder.
- After inserting the SIM card, press the holder down into the base and slide it in the direction of the Lock arrow.

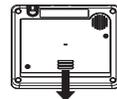


Figure 1: Removing the cover

Installing and Replacing the Communicator

Note: Before installing the communicator, confirm with the local service provider that there is an available and active network in the area.

⚠ Use only the slots provided to release the tabs and remove the top panel cover. Do not attempt to release the cover anywhere other than the slots provided, as you can damage the integrated keypad. Use caution when removing the top panel cover, ensuring that you do not damage the speaker wire.

Opening the unit

To open the unit, complete the following steps:

- Disconnect power from the panel by removing the power cord and battery.
- Remove the Ethernet cable, if connected.
- Insert a flat blade screwdriver into the two rear slots at a downward angle and pry upwards to release the tabs.
- Flip the unit so that the rear slots are facing away from you. Carefully open the top panel cover away from you, ensuring that you do not place excess tension on the speaker wire.

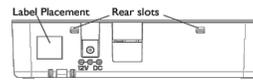


Figure 2: Removing the top panel cover

Installing the communicator

To install the communicator, complete the following steps.

- On the panel, remove the foam pad (12000922) and apply the foam pad provided in the standalone communicator cellular kit. See figures 3 and 5.
- On the new communicator, if required, remove the protective metal tab from the 18-pin CON1 header and plastic from the 4-pin CON3 header.
- Align the two holes on the communicator module with the plastic pegs, ensuring the 18-pin and 4-pin connectors are aligned with matching pins on the panel.
- Press the module down carefully onto the alarm panel.
- Align the base of the unit with the top of the panel and press down firmly.
- Reconnect the Ethernet cable, if required.
- Reconnect the power cord, replace the battery in its compartment and attach the compartment door.

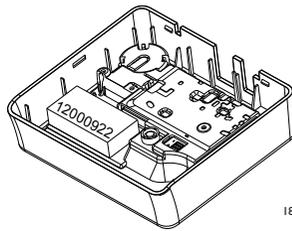


Figure 3: Preparing the panel

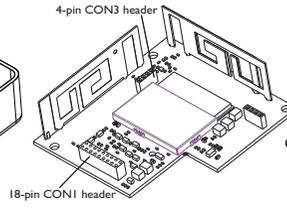


Figure 4: Preparing the communicator

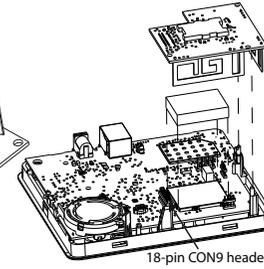


Figure 5: Installing the foam and communicator

Note: Figures 4 and 5 show model LT7090. The instructions are also applicable to other models.

Replacing the communicator

To replace the communicator, complete the following steps.

Note: For panels with a communicator installed, you can use the foam pad in the unit or the foam pad provided in the standalone cellular communicator kit.

- Remove the existing communicator by carefully pulling it upwards.
- Complete steps 2 to 7 in **Installing the communicator**.

Communicator Configuration

For information on how to configure the communicator, refer to the iotega alarm system Reference Manual.

Placement Test

To ensure that the communicator is active with a strong signal connection, place the iotega panel in its intended location. Confirm that the cellular signal strength LED is on and green. If the cellular signal strength LED is yellow, the communicator is active but has a weak signal connection. Minor adjustments to the position of the alarm panel may improve reception. If not, relocate the iotega panel to an area where the cellular signal strength LED is green.

For information about signal strength display, refer to the iotega alarm system Reference Manual.

Viewing Troubles

For information on how to view troubles, refer to the iotega alarm system Reference Manual.

Limited Warranty

Digital Security Controls (DSC) warrants that for a period of 12 months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, DSC shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment. The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls. Digital Security Controls neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. In no event shall Digital Security Controls be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product. Warning: Digital Security Controls recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

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Digital Security Controls has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment. Digital Security Controls n'approuve aucune modification apportée à l'appareil par l'utilisateur, quelle qu'en soit la nature. Tout changement ou modification peuvent annuler le droit d'utilisation de l'appareil par l'utilisateur.

FCC AND ISED CANADA INTERFERENCE STATEMENT

This device complies with Part 15 of the FCC Rules and ISED Canada licence-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'ISED 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, éme si le brouillage est susceptible de compromettre le fonctionnement.

FCC CLASS B DIGITAL DEVICE NOTICE - 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 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 experienced radio/television technician for help.
CAN ICES-3 (B) / NMB-3 (B)

The reference to the Cellular Communicator xx7090 throughout this manual is applicable to models 3G7090 and LT7090. 3G7090 FCC ID: F53163G7090; IC: 160A-3G7090; LT7090 FCC ID: F5316L7090; IC: 160A-LT7090; LT7090E FCC ID: F5318L7090E; IC: 160A-LT7090E; LE7090 FCC ID: F5318LE7090; IC: 160A-LE7090.





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3G7090/3G7090-EU/ LT7090(E)/LE7090 Cellular Alarm Communicator Installation Sheet

FCC/ISED CANADA WIRELESS NOTICE

WARNING: To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20cm or more must be maintained between the antenna of this device and persons during device operation.
AVERTISSEMENT: Pour satisfaire aux recommandations d'exposition RF FCC des dispositifs de transmission mobile, un espace de séparation de 20 cm ou plus doit être maintenu entre l'antenne de l'appareil et les personnes pendant son fonctionnement.

Antenna gain must be below. Gain de l'antenne doit être ci-dessous:

3G7090: GSM 850/FDD V is 2.1 dBi; PCS 1900/FDD II is 3.7 dBi

LT7090: LTE B4 (1700 MHz) is 1.5 dBi; LTE B13 (700 MHz) is 2.2 dBi

LT7090E: LTE B4 (1700 MHz) is 1.5 dBi; LTE B13 (700 MHz) is 2.2 dBi and LTE B2 (1900 MHz) is 3.4 dBi

LE7090: LTE B4 (1700 MHz) is 3.0 dBi; LTE B13 (700 MHz) is 2.2 dBi and LTE B2 (1900 MHz) is 3.1 dBi

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except as described in this user manual.

Les antennes utilisées avec ce produit ne doivent pas être placées ni utilisées en association avec une autre antenne ou un autre émetteur, comme indiqué dans ce manuel.

FCC/IC LABEL: A label is shipped together with the module and it is the responsibility of the integrator to apply it to the exterior of the enclosure (see Figure 2).

Une étiquette est livré avec le module et il est de la responsabilité de l'intégrateur de l'appliquer à l'extérieur de l'enceinte.

Model 3G7090: Contains FCC ID: F53163G7090. Contains IC: 160A-3G7090.

Model LT7090: Contains FCC ID: F5316LT7090. Contains IC: 160A-LT7090.

Model LT7090E: Contains FCC ID: F5318LT7090E IC: 160A-LT7090E.

Model LE7090: Contains FCC ID: F5318LE7090 IC: 160A-LE7090.

For label placement, refer to Figure 2 in this document.

SIMPLIFIED DECLARATION OF CONFORMITY: Hereby, Tyco Safety Products Canada Ltd declares that this radio equipment is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address.

3G7090-EU: <http://dsc.com/pdf/1707009>

Operating frequency bands and related max radio-frequency power transmitted:

E-GSM 900: 2W, EDGE 900: 0.5W

DCS 1800: 1W, EDGE 1800: 0.4W

FDD I/III: 0.25W

European single point of contact: Tyco Safety Products, Voltaweg 20, 6101 XK Echt, Netherlands.



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