

GSM-200

Quad Band GSM/GPRS Cellular Communicator for PIMA Intruder Alarm Systems
Version 3.14



Installation Guide

Overview

The GSM-200 is a Quad Band GSM/GPRS cellular communicator that provides a cellular link to PIMA's Hunter-Pro Series & Captain¹ alarm systems and the SAT-N communicator. It is based on Telit GE864 engine² and can serve for 3 purposes:

- Backup (to the telephone line) or main communication channel;
- Upload & download via GPRS (using the COMAX application);
- Remote access, in the Hunter-Pro Series control panels only;

The GSM-200 supports GPRS (encrypted), Voice & SMS.

Product package contents

- GSM-200 communicator;
- Mounting screws;
- Quad band antenna;
- Wiring harness to the control panel's TRANSMITTER socket;
- Wiring harness to the control panel's AUDIO IN/OUT terminals.

Ver. 3.XX updates

- The power supply connector has been removed; the module's power is now solely supplied by the control panel.
- Boot loader jumper (to be used only after consulting with PIMA support team).
- The Green LED blinking patterns have been modified. See the table on page 4.
- A new jumper J1 was added to enable transmitting only in GSM Full rate.

¹ In Captain 6 the GSM-200 only communicates via the Voice channel and only with monitoring stations.

² See http://www.telit.com/en/products.php?p_id=3&p_ac=show&p=11

Safety instructions and restrictions

- Make sure the GSM-200 is not connected to power before installing the SIM card;
- Cellular line and SIM card are obtained from cellular providers;
- The SIM card must support outgoing calls; support in outgoing SMS is recommended;
- The GSM-200 must be connected to the control panel in order to program the encryption keys.
- Cellular calls require payment for the connection time. Prepaid cards can be used, but not monitored.

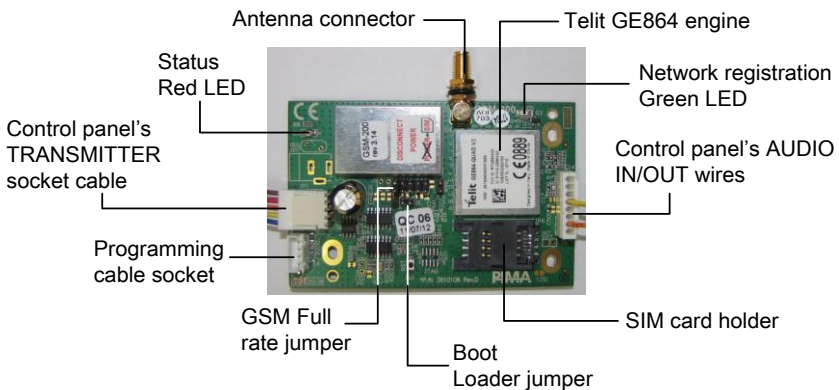


Figure 1. The module's PCB

Choosing a location

Use the following guidelines to choose a location to install the communicator:

1. Avoid mounting the control panel in areas with excessive metal or electrical wiring, such as utility rooms.
2. Leave 20 to 35 cm of open space above the control panel's box for the antenna.

Installation

Before starting make sure the communicator is not connected to the control panel.

1. Unscrew the GSM-200 backplate and remove it;
2. Insert the SIM card to its slot;
3. If the communicator will transmit only in Full rate, place J1 jumper on the left two pins. See Figure 8 "GSM Full rate jumper (Voice channel only)" on page 7.
4. Replace the backplate and fasten its screws;
5. Unscrew the two screws on the communicator's top side;
6. Mount the communicator in the control panel box, top side (see Figure 4 on page 5 Figure 4) and fasten the screws, inside-out.
7. Fasten the antenna to the antenna base.
8. Connect the 5 wire harness to the TRANSMITTER socket on the control panel.
9. Connect the Yellow & Orange wiring harness to the control panel's AUDIO IN/OUT terminals (see the table in page 5 for details).



See the Hunter-Pro Series and Captain 8 installation guide (P/N 4410281) for programming instructions.

Wiring diagrams

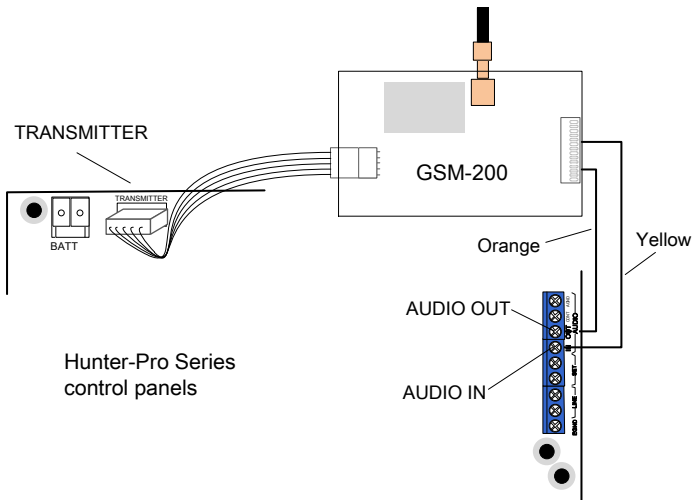


Figure 2. Wiring diagram for the Hunter-Pro series

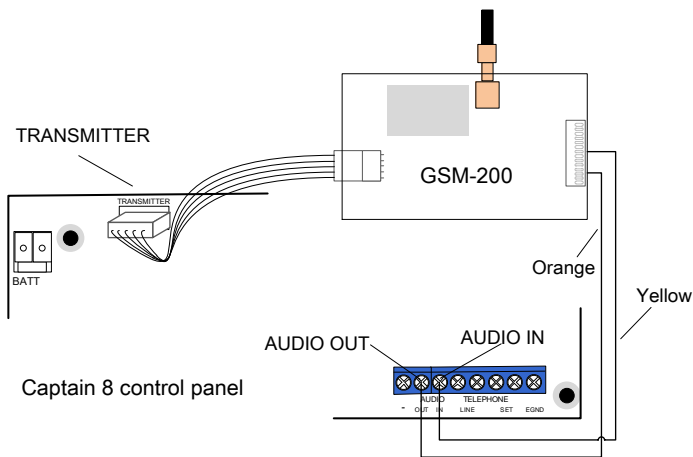


Figure 3. Wiring diagram for the Captain 8

The audio wires

GSM-200	Control panel
Orange wire	Audio Out
Yellow wire	Audio In

Green LED

LED blinking	Module status
Once every second	Searching for a network/not registered/turning off
Once every 3 seconds	Full service & registered
Is ON	Communicating
Is OFF	Off

Red LED

LED blinking	Graphic pattern	Description
Fast, uniformed	●●●●●●●●●●●●●●●●	Internal process
Uneven	●●●●●●●●●●●●●●●●	Communicating with the control panel
Very fast, uniformed	●●●●●●●●●●●●●●●●	Boot loading
Twice every second	●●●●●●●●●●●●●●●●	Resetting
Once every second	●---●---●---●---●---●	Idle mode
ON/OFF	-	Fault

Installing the GSM-200 along the TRV/ TRU-100 Radio transmitters

Use the following figure to install the GSM-200 communicator and the TRV/TRU-100 long-range radio transmitters in the same control panel's designated metal box (P/N 4210111) top side.

There are two mounting options for the GSM-200: middle side (front view) when the communicator is installed alone; on the right side when installed along the TRV/TRU-100 radio transmitters. See the next figures.

Note that special adapters (P/N 4210115 for the GSM-200; P/N 4210114 for the TRV/TRU-100) and a designated harness (P/N 3411058) must be used to install the two modules.

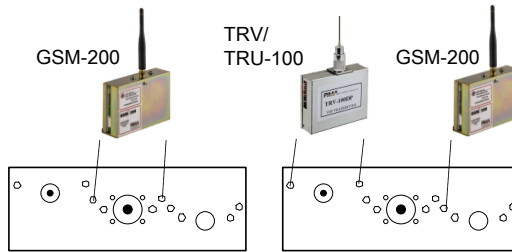


Figure 4. Mounting options (top view)



Figure 5. The GSM-200 installed alone in the control panel box



- **The antennas of both modules must be connected with coaxial cables and be installed at least 1 meter away from each other.**
- **Grounding should be connected directly to the TRV/TRU-100.**

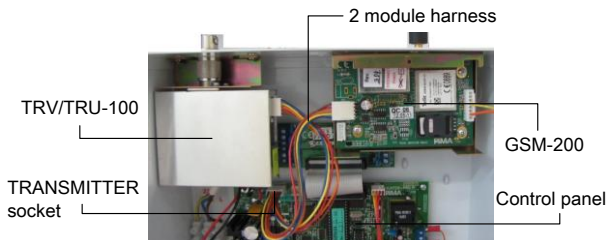


Figure 6. The GSM-200 and the TRV/TRU-100 installed together

Programming encryption keys

Encryption keys for PIMA's network products (using GPRS) are programmed by the COMAX application. The communicator is connected to the COMAX's PC with a designated cable (P/N 3411078).

Follow the next steps to program the GSM-200 in the COMAX. You will need PIMA's LCL-11A adapter kit (P/N 8180005):

1. Connect the PC with the COMAX to the GSM-200:
 - a. Connect the LCL-11A adapter directly to a PC COM port or USB port, using Serial-to-USB converter.
 - b. Connect the RJ-11/Molex programming cable (P/N 3411078) between the LCL-11A and the GSM-200 programming socket. See Figure 1 and Figure 7.
2. Connect the GSM-200 to the control panel's TRANSMITTER socket, as the GSM-200 MUST be powered up in order to be programmed.

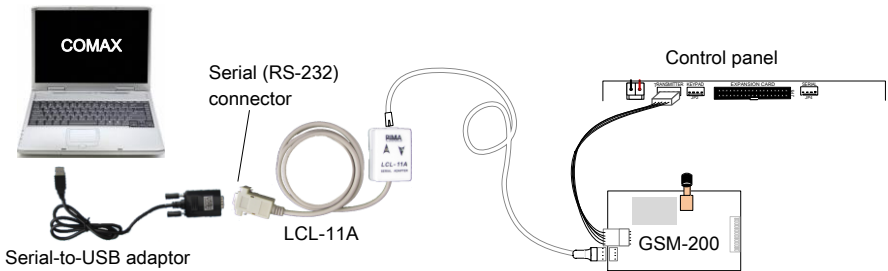

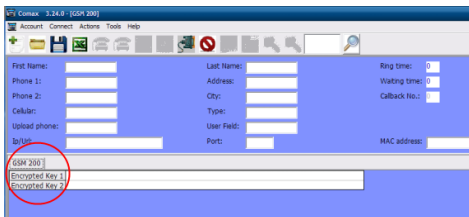



Figure 7. Connecting the GSM-200 to the COMAX application

3. In the COMAX, click  or Account → New and select 'GSM-200' from the drop-down list.
4. Enter the 64 character encryption key/s.



5. Press the 'Connect locally' icon  and wait for confirmation message, "Connected".
6. Click 'Actions'->'Download key X' to download the encryption key/s.

Troubleshooting

GSM Full rate jumper (Voice channel only)

The GSM Full rate jumper is to be used when the GSM-200 is transmitting in the Voice channel but transmissions are not received in the Monitoring Station. Since this may be a network load related problem, transmitting in Full rate (i.e., wider bandwidth) may be a solution.

Starting version 3.12, the communicator's GSM rate can be set by a new jumper, J1 (see the next figure). When the jumper is in place, the GSM-200 will transmit (in the Voice channel only) in Full rate; without the jumper the communicator will transmit in Full or Enhanced full or Half rate, depending on the cellular network load and characteristics.

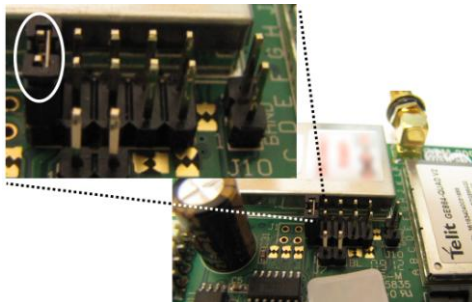


Figure 8. GSM Full rate jumper

Limited warranty

PIMA Electronic Systems Ltd. shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.

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