

PCS250 GPRS/GSM Communicator Module V1.2



The Vital Link

Reference and Installation Manual

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Chapter 1: Introduction

The PCS250 GPRS/GSM Communicator Module is the next evolutionary step in wireless communication solutions for Paradox control panels. Providing reliable and fast communication between properties and their respective monitoring stations, the PCS250 is the vital link that keeps you connected.

Using cellular networks, the PCS250 reports to the monitoring station's automation software via two channels (GPRS/GSM), ensuring that all communication is fast, reliable, and stable. The PCS250 can be used as a backup to a traditional landline, or as a primary communicator where no landline is available. It also adds remote home control capabilities to a system, allowing you to arm/disarm with a simple text message (SMS). Feel safe by taking control of your system, wherever you are.

Re-imagined through an array of new technologies, contemporary design, and a modern hi-tech finish, the PCS250 GPRS/GSM Communicator Module enables Paradox systems to be remotely controlled, continuously monitored, and reliably connected at all times.

Features

- Compact, sleek design
- Instant notification of panel supervision loss
- Easily arm/disarm the system via SMS
- Report alarms by sending pre-recorded voice messages to up to eight telephone numbers using the optional Paradox Plug-in Voice Module (VDMP3)
- Report alarms by text messages to up to 16 cellular phone numbers
- Simple installation with 4-wire serial connection
- Supports 2 GSM provider SIM cards for provider redundancy
- Tamper switch support
- Optional rod antenna can be installed up to 18m (60ft) from the module using optional antenna cable extensions depending on the local signal strength
- Increase the distance between the panel and the PCS250 with an RS485 link (GSM mode only (E-bus)). A CVT485 module must be added at the panel.
- In GPRS mode, messages are secured with 128-bit (MD5) and 256-bit (AES) encryption

Included Items

- Serial cable
- GPRS14 Module

Required/Optional Items

- Active SIM card (required)
- Second SIM card (required for provider redundancy)
- Paradox Plug-In Voice Module VDMP3 (optional)
- Antenna extension (optional)
- 12 Vdc external power supply (optional)

Compatibility

- EVO48 and EVO192 panels V2.02 or higher
- K641 and K641R keypads V1.51 or higher
- SP series V3.42 with K32LCD keypads V1.22
- E55 panels V3.0 (labels to be programmed via Winload)
- E65 panels V2.1 (labels to be programmed via Winload)
- MG series V4.0 or higher with K32LCD keypads V1.22 or higher

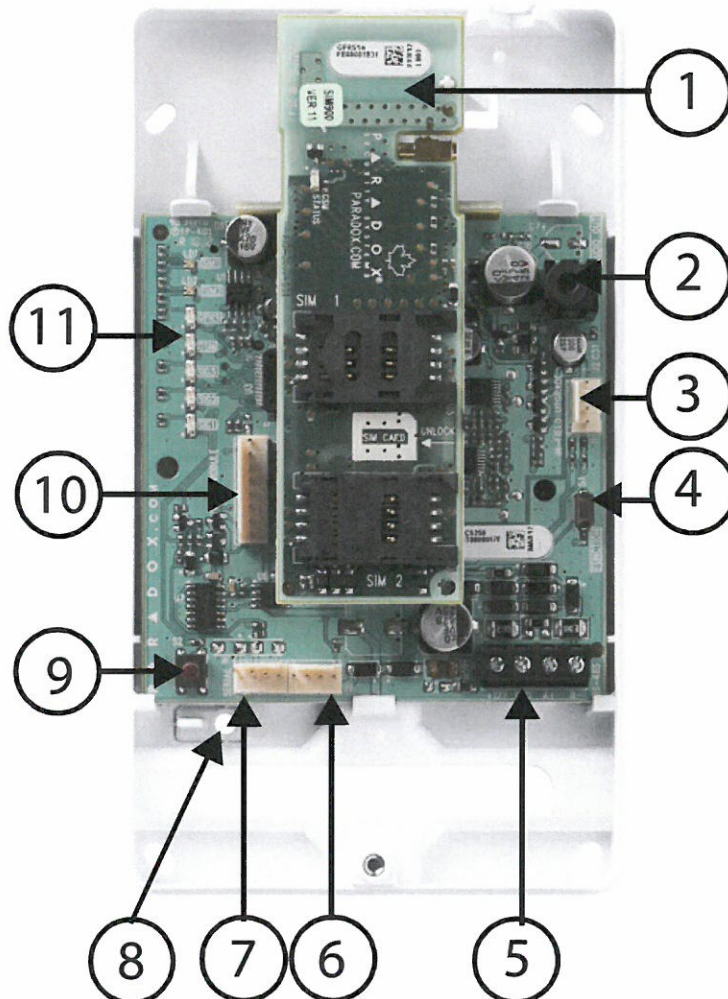
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Chapter 2: Overview

This section provides an overview of the Paradox PCS250 GPRS/GSM Communicator Module. It covers technical specifications, light-emitting diode (LED) functionality, and an overview of the PCS250 system components.

System Components

- 1) GPRS14 with dual SIM card slots
- 2) Audio jack
- 3) InField upgrade connector
- 4) Future use
- 5) RS485/power terminal
- 6) Future use
- 7) Serial cable connector
- 8) Tamper screw
- 9) Tamper switch
- 10) Audio module connector (e.g., VDMP3)
- 11) System LEDs (refer to "LED Feedback" on page 7)



LED Feedback

The following table provides a description of the PCS250 Communicator Module LEDs.

LED	Feedback
SIM Card 1	Solid green = SIM card 1 is installed on the GPRS14 Quick green flashing = SIM card 1 is exchanging data Slow green flashing = Searching the network Flash red (once) = SIM card 1 is defective Off = SIM card 1 is not installed, not active, or currently not in use
SIM Card 2	Solid green = SIM card 2 is installed on the GPRS14 Quick green flashing = SIM card 2 is exchanging data Slow green flashing = Searching the network Flash red (once) = SIM card 2 is defective Off = SIM card 2 is not installed, not active, or currently not in use
GPRS	Solid green = unit is set for GPRS operation Quick green flashing = exchanging data Note: When this LED is ON, the GSM LED stays OFF.
GSM	Solid green = unit is set for GSM operation Quick green flashing = exchanging data Note: When this LED is ON, the GPRS LED stays OFF.
Signal Strength	LED 1, 2, and 3 (bottom three LEDs) indicate the strength of the incoming antenna signal.

Communication Loss

Upon loss of communication with the panel, the PCS250 LEDs will behave in the following manner:

- 1) GPRS or GSM LED displays are off; the SIM card and signal strength LEDs display their status for about 3 seconds.
- 2) Signal strength LED remains OFF; GSM (green) is turned ON, followed in turn by GPRS (green), SIM2 (orange) and SIM1 (red). When a LED is ON, all others are off. Each LED lights for about 200 ms. This sequence is repeated two times.
- 3) This cycle repeats until communication is restored.

SIM Card Functionality

The PCS250 provides dual SIM card support for provider redundancy. If a SIM card encounters network connectivity problems, the PCS250 will switch automatically to the other SIM card (only if installed). The PCS250 will then try to communicate and upon a successful communication, an SMS trouble message will be reported to the assigned recipients.

If connectivity problems occur on SIM card 1, the PCS250 will attempt to switch to SIM card 2. When successful, an SMS message will be sent to the assigned recipients informing them of the SIM card connectivity problem. If the panel is disarmed, the PCS250 will try to switch back to SIM card 1 after a 15 minute delay. If there is a connection problem on SIM card 1, it will retry to switch back to SIM card 1 every 15 minutes, or until the system is armed. If the system is armed, an attempt to switch back to SIM card 1 will occur only at midnight, otherwise SIM card 2 will remain the reporting channel until the system is disarmed. Detecting network connectivity problems on one SIM will result in a trouble message. Once the original SIM card connection is restored, a new SMS message will be sent to the assigned recipients informing them of the restore.

Note: *The SIM Card 2 functionality is the same as SIM Card 1. Both SIM cards must use the same communication method (either both in GPRS mode or both in GSM mode) depending of the connection method (E-bus or Serial).*

Tamper Switch Functionality

Upon removal of the PCS250 from its original installation surface, or if the PCS250 cover has been removed, a tamper switch open condition is recognized and is communicated to the control panel.

Note: If desired that the tamper switch activates upon removal of the PCS250 from its installation surface, a screw must be installed in the tamper screw hole, refer to "System Components" on page 6.

Once a "tamper switch open condition" has occurred, the control panel will generate an alarm (if armed), or send a trouble message to the keypad(s) (if disarmed). The control panel will also report a GSM/GPRS module tamper to the monitoring station and to SMS recipients assigned to receive trouble notifications.