



Kwêbeam GSM/Interface/Repeater Module

Features

- Full Kwêbeam system control via SMS
- Easy to use with no installation required
- Built-in backup battery
- 868Mhz Kwêbeam repeater functionality
- One Programmable input
- Alarm & Panic output

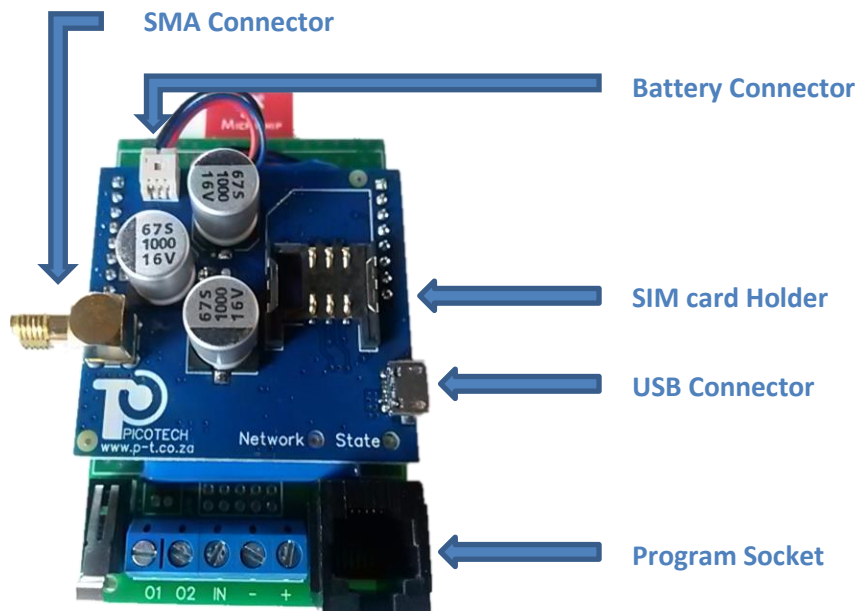


Figure 1

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Quick Setup

1. Connect the antenna

Screw SMA connector until finger-tight and ensure that the antenna is placed upright.

2. Insert SIM Card

Use the open insertion at the back of the enclosure & gently pull the cover to clip open. Insert a Nano SIM using the supplied SIM adapter.

- **Make sure the SIM PIN is disabled.**
- **Ensure that Caller Identity is enabled when using contract SIM cards.**

3. Connect the backup battery

See Figure 1 for battery connector orientation.

4. Connect the USB power supply

Connect the supplied MICRO Type B USB charger. The State LED will illuminate to indicate charging. The GSM module will automatically control the charge state according to the battery condition. Always leave the USB power supply connected.

5. Verify Network Status

Searching for a Network - Network LED will flash once every second.

Registered to a Network - Network LED will flash once every 3 seconds.

6. SMS your number to the GSM sim number using the command below

AddControlNumber 2782*****

Note: The number format must have a '**27**' prefix & **NOT '0'**.

Note: The first control number must be entered while the enclosure lid is open.

7. SMS the Air Time code to the GSM sim number using the command below

ATC*111*502# (Vodacom SIM card)






ATC*101# (CellC SIM card)

ATC*141# (MTN SIM card)

8. Call Test

Call the GSM Unit number. The GSM unit will "drop" any incoming call. If the Calling number is recognized as a Control Number, the Current Alarm state will be toggled. A confirmation SMS with the new alarm state will be sent to all CONTROL numbers.

9. Add GSM module to the KwêBeam system

- Make sure Led  on the Kwêbeam keypad is off. If not press & hold  to switch off.
- Connect the Keypad to the Programming Socket with the supplied cable.
- Press  to show the current Zone.
- Select **Zone 1 – 8**
- Press & Hold  to save the ZONE.
- LED  will illuminate to indicate successful pairing.

Note: The GSM can also be programmed as **ZONE 9**. All Keypads & Sensors must be reprogrammed if the GSM Module is programmed as **ZONE 9** (See Kwêbeam_User_Manual).

The unit is now ready to operate as a Kwêbeam GSM module

SMS Configuration

The Kwêbeam GSM module is managed entirely by SMS commands which are NOT case sensitive & can only be sent from cell phone numbers saved as Control Numbers.

Note: The module will accept commands from ANY cell number while the enclosure lid is open.

A maximum of 10 Cell phone numbers can be stored in the following 2 categories:

- **Control Numbers:** Full system Control & receive all SMS Notifications.
- **SMS Numbers:** Receive Alarm and Panic SMS Notifications only.
- A number can be saved as a **SMS OR Control** number, not both.

SMS Control Commands

1. AddControlNumber

e.g.: AddControlNumber 27820504458

Note: The first control number must be entered while the enclosure lid is open.

2. AddSMSNumber

e.g.: AddSMSNumber 27820504458

Note: A number can be saved as a **SMS OR Control** number, not both.

3. DeleteNumber

e.g.: DeleteNumber 27820504458

4. DeleteAllNumber

All Stored Numbers will be deleted.

Note: The first control number must be re-entered while the enclosure lid is open.

5. GetNumbers

GSM will reply with all stored Control & SMS Numbers

6. Signal

To view GSM signal strength

7. ATC

Store the USD Air Time Code.

ATC*111*502# (Vodacom SIM card)

ATC*101# (CellC SIM card)

ATC*141# (MTN SIM card)

8. Airtime

The command ATC (Air Time Code) must first be entered before the GSM module will reply with the available balance.

9. PowerState

GSM will reply with the current Power State

Alarm Control Commands

10. AlarmOn

ALL Kwêbeam Zones will be armed. A confirmation SMS with the new alarm state will be sent to all CONTROL numbers. The Air Time Balance will be included in the confirmation SMS if a valid ATC (Air Time Code) is entered.

11. AlarmOff

Disarm the Kwêbeam system. A confirmation SMS with the new alarm state will be sent to all CONTROL numbers.

12. Panic

Trigger all beam sirens.

13. ZoneOff

e.g.: ZoneOff 1. Zone 1 will be ignored while the system is armed. A confirmation SMS will be sent to the calling number.

14. ZoneOn

e.g.: ZoneOn 1. Zone 1 will be armed. A confirmation SMS will be sent to the calling number.

Note: All zones will be activated with command AlarmOn

15. AlarmState

GSM will reply with the current alarm state.

16. Kwebeams

GSM will reply with all the commands.

17. ZN

Link an optional ZONE NAME with the zone number, e.g. ZN 1 Pool

Note: The zone description must not exceed 14 characters.

18. ADL1

Link an optional Address Line 1 to the GSM module. This address will be included in all Notification SMS's, e.g. ADL1 John

Note: The address description must not exceed 14 characters.

19. ADL2

Link an optional Address Line 2 to the GSM module. This address will be included in all Notification SMS's, e.g. ADL2 Unit 3

Note: The address description must not exceed 14 characters.

20. ADL3

Link an optional Address Line 3 to the GSM module. This address will be included in all Notification SMS's, e.g. ADL3 Magg str.

Note: The address description must not exceed 14 characters.

A Confirmation SMS (**Update Successful**) will be sent to the calling number after successful execution of the following commands:

AddControlNumber, AddSMSNumber, DeleteNumber, DeleteAllNumbers, ATC, ZN, ADL1, ADL2, ADL3

SMS Notifications

- 1. Mains power Failure**
Notify all CONTROL numbers of a power failure.
- 2. Mains power Restore**
Notify all CONTROL numbers of power restore.
- 3. Sensor Battery Low**
Notify all CONTROL numbers of a low battery condition on a sensor.
- 4. Tamper**
Notify all CONTROL numbers of a Tamper condition on a sensor.
- 5. Alarm**
Notify all CONTROL & SMS numbers of an Alarm condition on a sensor.
- 6. Panic**
Notify all CONTROL & SMS numbers of a Panic condition.
- 7. GSM Battery Low**
Notify all CONTROL numbers that the GSM battery is low. Only the GSM functionality will shut down until power is restored. During this period the module still functions as a repeater & interface unit.

Calling the GSM module





The GSM unit will “drop” any incoming call. If the Calling number is recognized as a Control Number the Current Alarm state will be toggled. A confirmation SMS with the new alarm state will be sent to all CONTROL numbers.

The GSM module will include the Air Time Balance in the confirmation SMS when the system is armed. A valid ATC (Air Time Code) must be entered for this feature.

Any sensor can be programmed to indicate the ‘On/Off’ status of the system (One siren beep = ON, Two siren beeps = OFF). See “Kwêbeams_User_Manual” for sensor programming instructions.

GSM Programming Options

The GSM module can be programmed NOT to send SMS notification when armed from the Keypad.

- Make sure Led  on the Kwêbeam keypad is off. If not press & hold  to switch off.
- Connect the Keypad to the Programming Socket with the supplied cable.
- Press  to show the current Selection.
 - Key 5 on: SMS alarm notification when armed from Keypad or GSM unit.
 - Key 5 off: SMS alarm notification **ONLY** when armed from GSM unit.
- Press & Hold  to save the setting.

Interface Connections

This section is only required to integrate optional external devices.

All external connections are isolated from the Interface Module circuit, therefore the module is always powered from the USB power supply, irrespective if an external power source is connected or not. The outputs are capable of sourcing 100mA & can be connected to various external notification devices. Relays can be directly connected to the outputs if required.

Output 1

O1 will be positive for the programmed period (see programming section) when an Alarm signal is received & the Kwêbeam system is in the armed state.

Output 2

O2 will be positive for 1 second when a Panic signal is received.

Input

The Input (IN) can be programmed to Arm/Disarm the system or send an alarm signal. See “Changing settings for the input & outputs of the Interface Module”.

Note: Any sensor can be programmed to indicate the ‘On/Off’ status of the system (One siren beep = ON, Two siren beeps = OFF). See “Kwêbeams_User_Manual” for sensor programming instructions.

Wiring the Input & Outputs

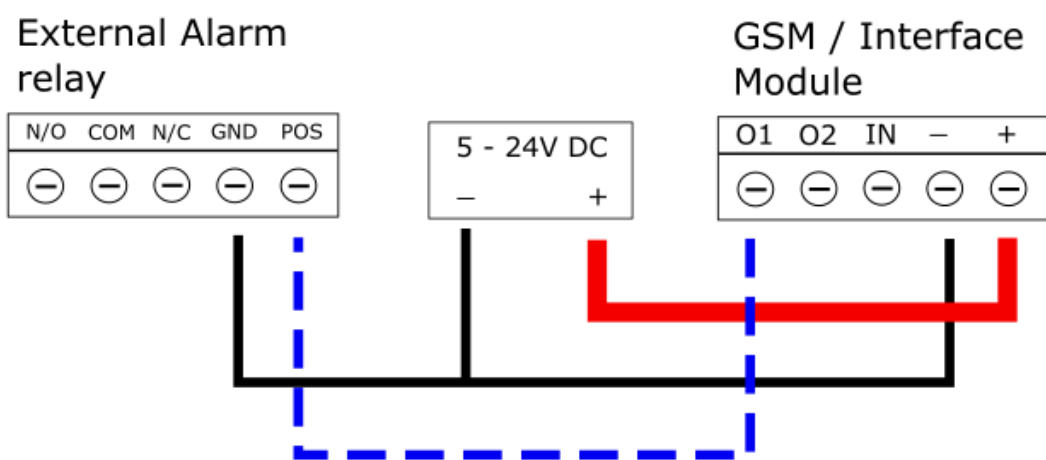
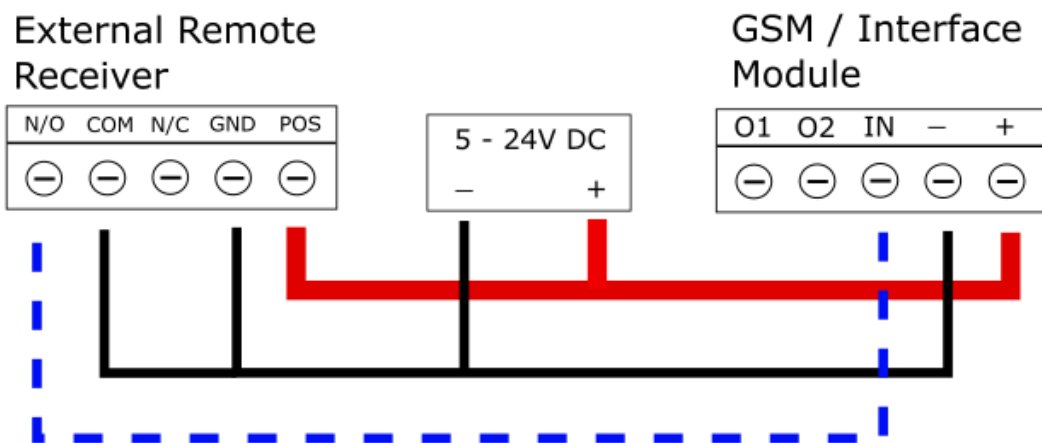
Connect the [+] terminal to the positive of the external power source (5 – 24V).

Connect the [-] terminal to the negative of the external power source.



Connect the [O1] terminal to the input of the external device (Alarm trigger).

Connect the [O2] terminal to the input of the external device (Panic trigger).


The input is triggered when the [IN] terminal is momentarily connected to negative.




Changing settings for the input & outputs of the Interface Module



Make sure Led  on the keypad is off. If not, press & hold  to switch off.
Connect the Keypad to the Programming Port with the supplied cable.

- Changing the ON delay of OUTPUT 1

- Press  to show the current delay on OUTPUT 1.
- Press key 1 – 8 to select the new ON delay for output 1:

1 = 1 second	5 = 13 seconds
2 = 4 seconds	6 = 16 seconds
3 = 7 seconds	7 = 19 seconds
4 = 10 seconds	8 = 22 seconds
- Press & Hold  to save the new setting.
- A second long “beep” will indicate a successful save.

- Changing INPUT & OUTPUT settings

- Press  to show current selection.
- Press key 1 – 3 to select the input option.
 - Key 1 – Arm / Disarm with a latched input.
 - Key 2 – Arm / Disarm with a pulsed input.
 - Key 3 – Send an alarm signal when the input is pulsed.
- Press key 4 to set the INPUT to Normally Close state.
Key 4 on: Input will trigger when the [IN] terminal is disconnected from negative (Normally Close).
Key 4 off: The input will trigger when the [IN] terminal is connected to negative (Normally Open).
- Key 5 on: OUTPUT is enabled when armed from the Keypad or any external device connected to the INPUT.
Key 5 off: OUTPUT is **ONLY** enabled when armed from an external device connected to the INPUT.
OUTPUT 1 will go HIGH when an alarm signal is received.
- Press & Hold  to save the new settings.
- A second long “beep” will indicate a successful save.