

TS1084 Memory Expansion Module Installation Sheet

Description

The TS1084 Memory Expansion Module increases user capacity in a Challenger10 control panel to 65,535 (including user 50 Tecom Master).

The module stores user data on a removable microSD card, and loads this data to the module's RAM each time the panel is powered up.

Notes

- The Challenger10 panel must have firmware version V10-03.3951 (or later).
- The microSD card must remain fitted to the module for it to function correctly.
- A fully-populated module takes approximately 30 seconds to load all users to the module's RAM after the panel is powered up or restarted. During this time some users may not be operational.

Figure 1: TS1084 Memory Expansion Module details

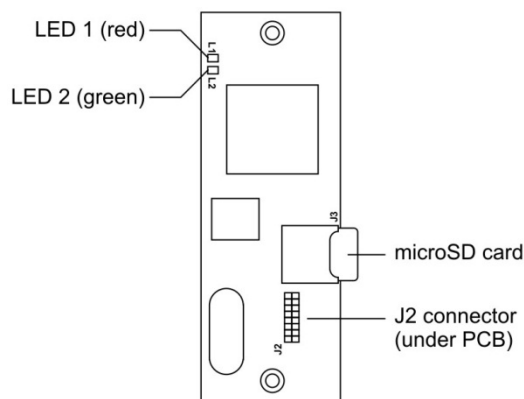


Table 1: Challenger10 system capacity with TS1084

User records (cards)	65,535 (increased from 2,000)
Users with PIN code (10 digits)	all users
User names (max. 16 characters)	Users 1 to 2,000
Card data formats	Up to 48-bit
Programmable alarm groups	245
Door groups	255
Floor groups	128
Hard time zones	46
Alarm events buffer	5,000
Access events buffer	5,000

Installation

The module is plugged in to a Challenger10 control panel PCB at the "Expander 3" slot. Power to the panel must be off during installation.

Note: A qualified service person, complying with all applicable codes, should perform all required hardware installation.

Getting ready

Any changes to users after installing the module are stored **only** on the microSD card and not in the Challenger panel's user database. If the module or the microSD card are removed, or fail, then the Challenger panel will revert to its original (and possibly obsolete) user database.

We recommend the following preventive measures to ensure that obsolete user data does not remain on the Challenger panel.

To prepare for memory expansion (prior to installing):

1. Connect the Challenger panel to management software, and then upload all users.
2. Use an LCD RAS to access Install menu option 14-Defaults.
3. Press [111] [ENTER] to delete all users (user 50 Tecom Master will not be deleted).

After installing the module download the users from management software.

Installing the module

To install the memory expansion module:

1. Disconnect the plug pack and battery from the control panel.
2. Carefully remove the module from its packaging, taking care that none of the pins are bent.
3. Gently push the microSD into its socket to ensure that it's fully inserted.
4. Position the module over the "Expander 3" slot, with the microSD card facing the Challenger panel's USB port (J18).
5. Gently press the module into the socket below J2 until the module sits firmly on the standoffs and the mounting holes are aligned with the PCB studs.
6. Secure the module in place via the two screws provided.
7. Reconnect power to the control panel.

8. Use an LCD RAS to access Install menu option 11 Version, and then select option 1 Chall. Press ENTER to display the module's firmware version. The module's firmware version is shown after the Challenger panel's firmware version. Memory type displays LIUM instead of MIUM.

LED indications

The module performs a self test upon power up, during which LED 1 flashes red. Upon completion of self test, LED 2 flashes green to indicate normal operation.

For module firmware version V01.20.03645 (or later) the LEDs provide the following additional indications:

- During normal operation, LED 2 (green) flashes slowly.
- When the panel is writing to the module, LED 2 (green) flashes quickly.
- When powering down both LED 1 (red) and LED 2 (green) flash quickly.
- When a fault is detected, LED 1 (red) illuminates.

Firmware upgrade process

The module's firmware can be upgraded via Titan 3.2 or later (it is the easiest method of updating firmware). In Titan select Firmware Upgrade from the Control menu. Refer to Titan help for instructions.

This section describes how to upgrade the module's firmware from a USB connection to a computer (not via Titan).

Note: During the upgrade process, the Challenger panel will not be able to receive or report alarm signals. We recommend that you follow the general instructions listed in the *Challenger10 Programming Manual*, "Recommended routine maintenance procedures", in particular to notify the alarm monitoring company and personnel on the premises (if applicable).

Requirements

To upgrade the firmware you need the following:

- A powered and functioning Challenger10 panel
- A Windows PC with a USB 2.0 port
- Tecom Firmware Loader application
- Access to the Challenger10 panel's printed circuit board (PCB)
- A USB cable (Type A Male to Type B Mini Male) to connect the Windows computer to the Challenger panel's PCB
- Firmware upgrade file

Getting ready

Back up the Challenger panel's users by uploading to management software before you upgrade the firmware.

Upgrading the firmware

Note: Refer to the *Challenger10 Installation and Quick Programming Manual* for the locations of any items referred to in this section.

To upgrade the module's firmware:

1. Disconnect the panel's power supply.
2. Fit test links 1 and 2 on the PCB.
3. Reconnect power to the panel. LED L1 will blink rapidly.
4. Use the USB cable to connect the computer to the Challenger panel's USB port at J18.

The first time you connect a Challenger panel to the computer's USB port, the Found New Hardware Wizard may display. If the Found New Hardware Wizard does not display, go directly to step 8.

5. If the wizard asks "Can Windows connect to Windows Update to search for software?", click to select the "No, not this time" radio button, and then click Next.
6. If the wizard asks "What do you want the wizard to do?", click to select the "Install from a list or specific location" radio button, and then click Next.
7. Click to select the "Search for the best driver in these locations" radio button, and then browse to include the location of the Tecom Firmware Loader application in the search (for example, C:\Program Files\Tecom Firmware Loader\inf_driver).
8. Run Tecom Firmware Loader (for example, double-click the file C:\Program Files\Tecom Firmware Loader\tecom-fw-loader_Vn.n.exe).
9. Click Select File... and then browse to the location of the firmware upgrade file on your computer. Select the file and then click Open.
10. Click to select the Exp 3 radio button.
11. Click Program File... to update the firmware. The process will take several minutes. The percentage completion displays at the bottom of the window. When finished, a "Programming is complete" message displays.
12. Remove the USB cable from the Challenger panel.
13. Disconnect the panel's power supply and then wait for the module's LEDs to go off (not flashing or illuminated).
14. Remove test links 1 and 2.
15. Reconnect power to the panel (first time after upgrade), and then wait for the module's LEDs to go off (not flashing or illuminated).
16. Disconnect the panel's power supply and then wait for the module's LEDs to go off (not flashing or illuminated).
17. Reconnect power to the panel (second time after upgrade).
18. Use an LCD RAS to access Install menu option 11 Version, and then select option 1 Chall. Press ENTER to display the module's firmware version. The module's firmware version is shown after the Challenger panel's firmware version.

Replacing a module

In the event that a Challenger10 panel's TS1084 Memory Expansion Module is faulty or damaged and must be replaced, you can avoid waiting for a user download to the replacement module by reusing the populated microSD card from the old module.

Note: Do not reuse a populated microSD card from one Challenger10 panel in a different Challenger10 panel or use a populated microSD card to back up a Challenger10 panel's users over time. Users' access groups are not stored on the microSD card so unintended results may occur.

To reuse a microSD card in a new module:

- 1. Disconnect the plug pack and battery from the control panel.
- 2. Carefully remove the new module from its packaging, taking care that none of the pins are bent.
- 3. Pull the microSD from its socket and set aside (to avoid confusing it with the populated microSD card).
- 4. Remove the old module from the Challenger panel's "Expander 3" slot, and then pull the populated microSD from its socket.
- 5. Gently push the populated microSD into the socket on the new module to ensure that it's fully inserted.
- 6. Position the new module over the "Expander 3" slot, with the microSD card facing the Challenger panel's USB port (J18).
- 7. Gently press the module into the socket below J2 until the module sits firmly on the standoffs and the mounting holes are aligned with the PCB studs.
- 8. Secure the module in place via the two screws provided.
- 9. Reapply power to the control panel.

Regulatory information

Manufacturer	KGS Fire & Security Australia Pty Ltd t/a Aritech A KGS Building & Industrial Systems company Level 4.01, 2 Ferntree Place Notting Hill, Victoria 3168
Year of manufacture	The first two digits of the product serial number (located on the product identification label) are the year of manufacture.
Compliance	 N4131

Disclaimer

The customer is responsible for testing and determining the suitability of this product for specific applications. In no event is Aritech (a division of KGS Fire & Security Australia Pty Ltd) responsible or liable for any damages incurred by the buyer or any third party arising from its use, or their inability to use the product.

Contact information

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