

About Firmware

The Firmware is the microcontroller program that determines the operation and function of Comfort. This is embedded into the U1 microcontroller Integrated Circuit (IC). The embedded firmware can be changed in order to upgrade the functionality of the firmware where there are new features introduced in Comfort, or to correct errors in the firmware (bugs), a term used commonly in software applications. Cytech Technology rigorously tests firmware before release, including prolonged usage in real conditions. However due to the complexity of Comfort's functionality, it is not possible to ensure that the firmware is 100% free of minor errors. Cytech will provide firmware upgrades from time to time where requires to fix existing bugs or to implement new functionality. The new firmware can be downloaded to the Flash version of the MPU01 shown in Figure 2 below

MPU01 Module



Figure 1 - MPU01 OTP Plug-in Board (not Programmable)

MPU01 Plug-in Firmware Module

Gently push the MPU01 down until it comes to a firm stop. Examine the connection to ensure that the headers and sockets are properly aligned without any pins sticking out.

Remove two position Shunt J14 in order to enable operation of the MPU01. J14 must be shunted when the onboard U1 is in control and removed when the MPU01 is in control

After checking that everything is in order, turn on the power and connect the battery. Comfort should start up and announce "Security Off" as usual. Remember to set Date and Time.

The programmed settings for the system do not need to be reprogrammed as they are saved in U4 Nonvolatile memory

Upgrading Firmware in the Flash based MPU01

The firmware in the Flash-based MPU can be upgraded using a UCM05 Universal Communications Module (firmware 5.147 and above) and the Configurator software version 2.2.2 and above. It is recommended that UCM firmware 5.178 and above be used for firmware download as it does not require a prior login.

- 1 Switch off Comfort and disconnect the battery. Take care that self actuated sirens are silenced before attempting this
- 2 **When using UCM 5.147 to 5.155, remove the MPU01 module from the Comfort PCB carefully using a flat edge screwdriver or rool to prise each edge from its connector, taking care not to bend the pins. For UCM 5.156 and above, the MPU01 can be left plugged into the Comfort PCB.**
- 3 Connect the UCM to the MPU01 using the UCM05 programming cable
- 4 Connect the programming cable (with single 6 cables end) to PP1 on the MPU01
- 5 Connect the other ends of the UCM programming cable to the UCM05 that is used for programming to PP1 (with 4 cables end) and PP3 (for 2 cables end).
- 6 **Insert a shunt in PP2 header on the MPU.**
- 7 Switch on the Comfort system. Do not connect the battery. This assumes that the Comfort PCB without the MPU01 has a U1 with older firmware
- 8 **For UCM 5.147 to 5.155, start Configurator, go to Transfer > System Information. Configurator will prompt for a user login. Enter the user code. If the user code is not known, Press F0 on te keypad and enter the Engineer code instead. For UCM 5.156 and above skip this step.**
- 9 Go to Transfer > Firmware Download.
- 10 Configurator 2.2.0 to 2.2.1 will then prompt for the Engineer Code to be entered. Ensure that the Engineer Sign-in Code option has been enabled (Press F0 on the keypad) and enter the Engineer Code (default 6789). Click on "OK". Configurator 2.2.2 and above does not ask for login for firmware download.

MPU01 Plug-in Firmware Module

- 11 Next, Configurator will prompt for the file to be downloaded. Navigate to the correct firmware file with the extension .CBF to be downloaded and select it and click "Open". Firmware can only be downloaded when the module has the same firmware type installed. Eg ULT to ULT, You will not be able to download ULT firmware to an OPT
- 12 After doing so, Configurator will give a warning prompt, informing users that the firmware version will be downloaded. Click on "OK" to proceed with the firmware download.
- 13 When completed, switch off Comfort, unplug the cables from MPU01 and plug in the MPU01 to the Comfort board. Remove the PP2 shunt which was inserted before the firmware upgrade.
- 14 Switch on power to Comfort. The voice announcement "Security Off" should be heard
- 15 Press F0, go to Engineer Menu by entering Engineer code (default 6789) and # key, and press 7,4,3 for System information. The correct Firmware version should be announced

Important Notice

The printed manual supplied with the product may not always be the most current version. Please check and download the latest version from www.cytech.biz



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