

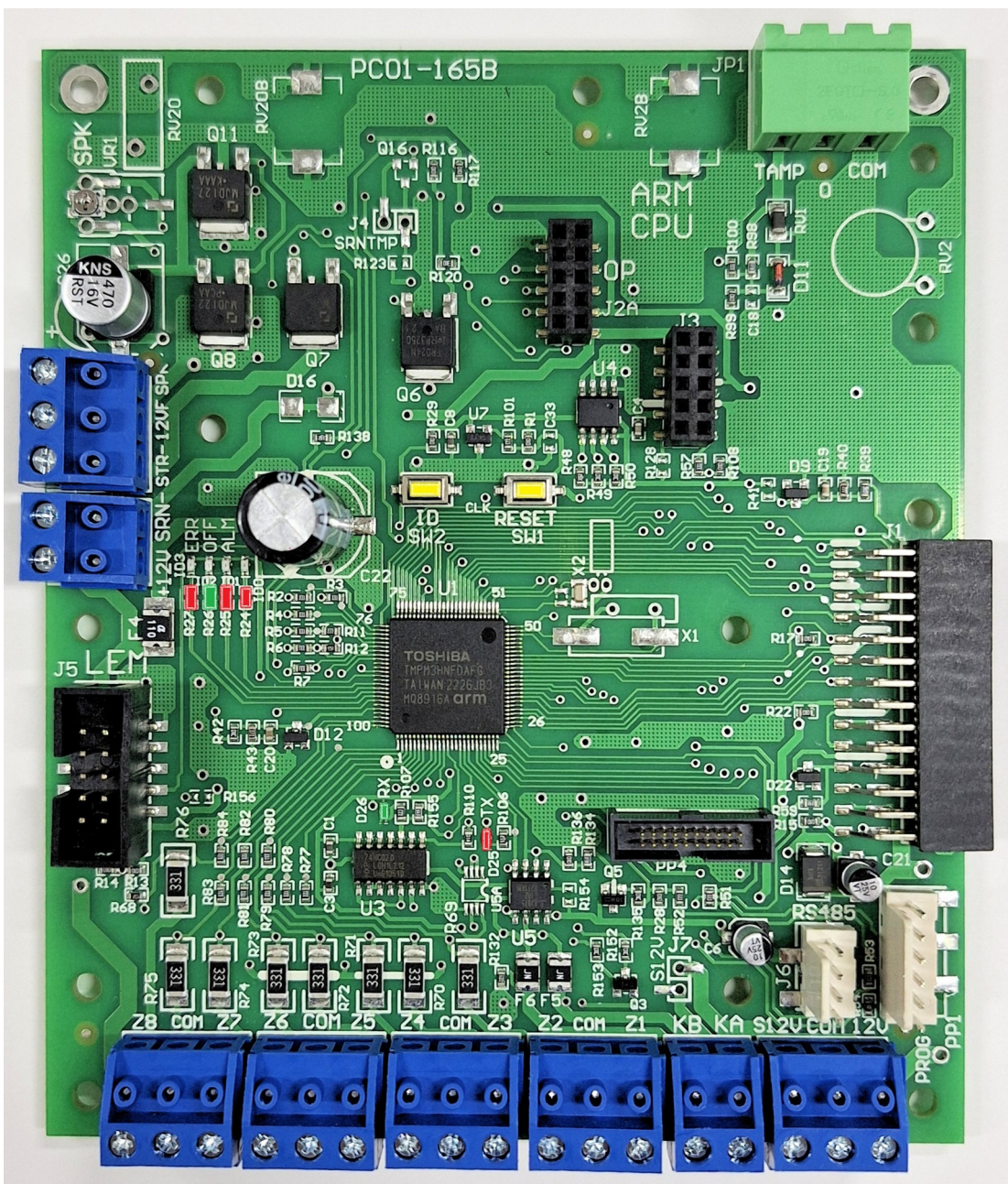
CM9001 Arm Product Information

Introduction

The ARM CORTEX M3 versions of CM9001, Slave. and UCM will replace the Toshiba 16-bit processor versions of the same products. Initially the functions of the ARM versions will be the same as the older version in order to ensure that the effort in migration are fully tested to be compatible. In future it will be easier to add functions or introduce new products with the new platform

ARM CPU/ Slave SEM

The CPU (Left) part of the CM9001 will be replaced by the Arm CPU board while the right DSP Board will remain the same. Hence both versions of the CPU board are compatible with the current DSP Board.



LEDS

The LEDS used in the ARM CPU board are high efficiency Surface mount types and are not easily seen when they are off. Their locations are indicated in the above photo with green or red highlights ID0 to ID3 indicate ID for Slaves(SEM)

- RX Green – Blinking Indicates RS485 Receive/ Reply from RS485 IDs
- TX Red – Blinking Indicates RS485 Transmit. CM9001 polling of RS485 IDs
- OFF (ID3) Green – Solid ON means Security Off. Blinking means Trouble (Zone Trouble, RS485 Communications Failure, AC Fail, Battery Low)
- ALM (ID2) Red – Solid ON means System Armed, Blinking means Alert or alarm state
- ERR (ID1) Red – Not used at Present
- ID0 Red – For ID only

Switches

- RESET (Highlighted in Yellow) - Reset Button. Press to reset CM9001 without changing the configuration or programming
- ID (Highlighted in Yellow)- Change ID for Slave. Press and Hold until ID0 to ID3 LEDS indicate the ID of the Slave, Press to increment ID. Has no effect I nCM9001.

CM9001 and Slave Models and File Systems

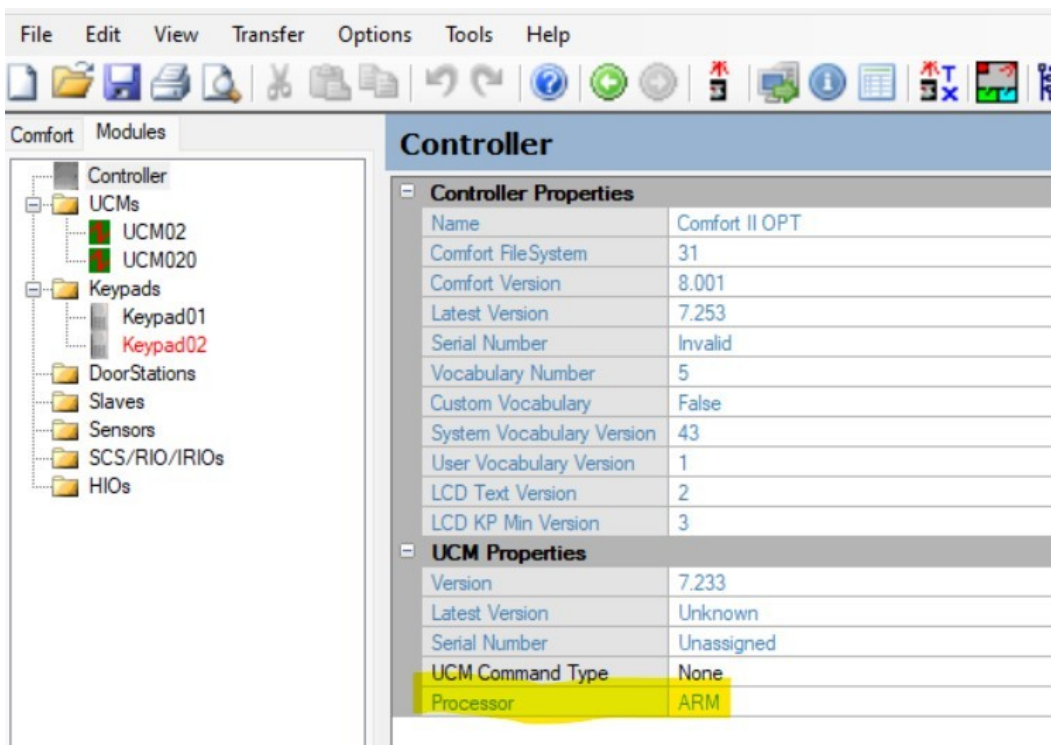
The new CM9001 models will be denoted by a suffix A, eg CM9001-ULT/A, CM9001-OPT/A. CM9001-EMS/A, CM9001-EX/A, LGXA01. They will use the same file system as the old models so the cclx file and program should be unaffected if the hardware is upgraded to the new version The Slave model is SEM01/A with power supply Board, SEM02/A without Power supply Board. UCMA/Logic is the ARM version of UCM/Logic

UCM Models

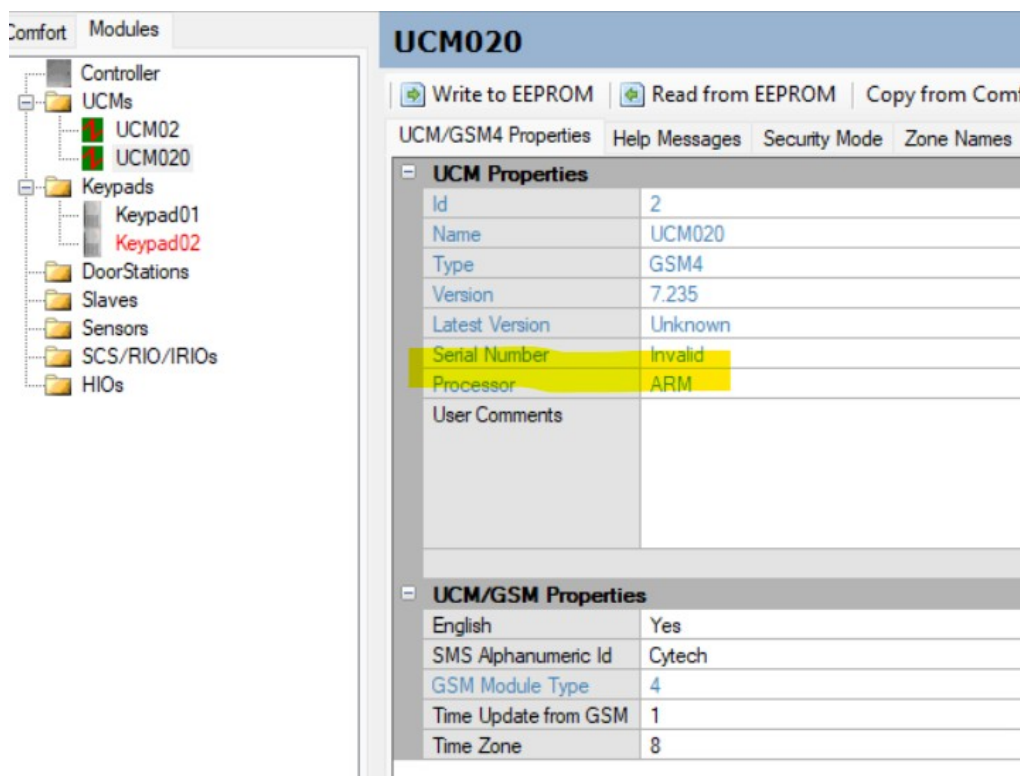
The UCM Models are also appended with an A suffix after UCM eg UCMA/KNX, UCMA/Modbus, UCMA/4G, UCMA/Modbus, UCMA/Cbus.

Configurator

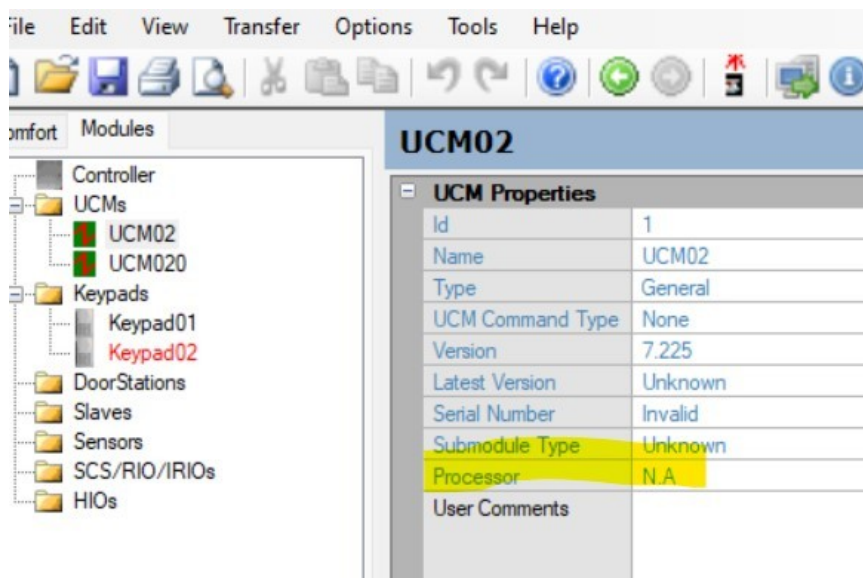
The minimum version of Configurator is 3.14.10 to support the new models. After Scanning for Modules, the Controller Properties will show the Processor Field as ARM.



The UCM Properties will also show the Processor Field



For the old models, the Processor Field will be N/A



UCMs for Programming and Upgrading

Both new ARM-based UCMs as well as the old processor UCMs are able to program the new Arm products as well as the older processor products, as long as their firmware meet the MINIMUM firmware requirements (see below)

Minimum Firmware Requirements

The minimum firmware in order to detect the Processor type and to Upgrade the firmware of CM9001, SEM and UCMs correctly are;

- UCM 7.225
- UCMA 7.225
- CM9001 Firmware 7,253
- CM9001 Arm Firmware 7.253

Please upgrade Comfort and UCM to the latest versions, which may be higher than the minimum versions above

Firmware Upgrading

Upgrading of CM9001, UCM and Slave Firmware is done in the usual way, by Right Clicking on the Module and selecting Check for Firmware Upgrades, see <http://www.comfortforums.com/forum92/3400.html>

This automatically selects the correct latest firmware to be upgraded. Remember that F0 must be pressed on any keypad to enable the firmware upgrade.

The other method of Firmware upgrading, by UCM Programming Cable is also possible, see <http://www.comfortforums.com/forum92/3400.html> However please make sure you select the correct firmware file eg ULTA7.253, ULT 7.253 may look similar. Configurator will not allow the wrong file to be upgraded, it will give an error message “Product Type or Number Does Not Match”. This is not the preferred method for Firmware upgrading, it is only used when the firmware is corrupted for any reason and the other method cannot be used to upgrade the firmware.

Battery and DC Voltage Measurement

Unlike the old CM9001, the Battery Voltage and Power Supply DC Voltage is measured by an Analog to Digital Convertor, so allowing accurate determination of the actual voltages. The query D? will return the value of the Battery and DC voltages for CM9001 Controller and Slaves (SEMs)

Query Format: D?nnTT

Query Reply D?nnTTVV

nn and VV are hexadecimal; numbers

nn = ID of the CM9001 or Slave. NN=01 for CM9001, or id of Slave

Slave ID = 0x21 to 0x25 for Slaves 1 to 5

TT = Type 01 for Battery Voltage, 02 for Power Supply Voltage

VV = Analog Voltage range 0x00 to 0xFF where 0xFF full scale is 15.5 Volts

The special command D?0000 will give a reply for CM9001 and SEMS for Battery and DC Voltage
eg

Query D?0101

Query CM9001 Battery Voltage

Reply D?0101E8

Battery Voltage = $232/16.42 = 14.12V$

Query D?0221

Query Slave #1 DC Voltage

Reply D?0102D1

DC Voltage = $209/13.96 = 14.97V$

The Battery Voltage is the voltage at the battery terminals, either when Charging by the DC supply or the battery voltage when the power supply is OFF

The DC voltage is the power supply voltage

Configurator 3.14.13 onwards will show the actual battery and DC voltages in the Properties Field.

History

12 July 2024 Initial Release

4 February 2025 Updated