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# QTM300CA USER'S GUIDE

## Cloning Adapter for the QT300 family QProx™ ICs

### Overview

The QTM300CA is a cloning adapter designed to interface between QT3xx family 8-pin QProx sensor ICs (QT300, QT310, QT320) and a PC or other host device.

This adapter permits the designer to upload settings from a PC into the target chip. The supplied cable allows the adapter to plug directly into the header strip of an E3A or E3B eval board.

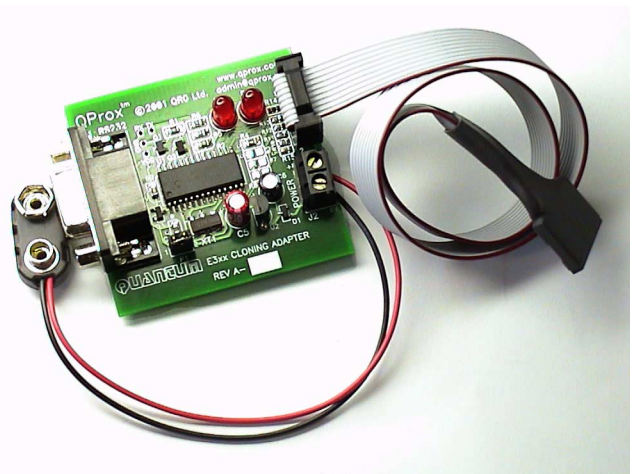
In production, the target PCB can also have a similar connector which allows the use of the QTM300CA to permit the uploading of settings on a production basis. The clone process takes under 1 second to complete.

The QTM300CA also has local eeprom memory and can be used as a stand-alone cloning adapter once it is programmed from a PC with the desired setups.

The cloning adapter can also be used to verify the settings in target QT3xx parts once they are programmed.

For the QT300 IC, the cloning adapter also provides the additional functionality of interfacing to that device's SPI port to download signal data, which can then be observed directly on the PC in real time.

The QTM300CA is designed to be used with QT3View PC software but can also be used with customer designed software.



### Materials Provided

- 1x QTM300CA
- 1x RS232 serial cable
- 1x 9V battery snap
- 4x Rubber feet
- 1x QT3View user guide
- 1x CD Rom with QT3View software (or download latest from the website)

**You will also need:** An 8 to 20V clean DC power supply (or a 9V battery), and a PC running any recent version of Windows (98, 98SE, NT4, 2000, XP) upwards, with a free serial port (Com 1 or Com 2).

## **Quick Start** To begin using the board right away

1. Connect the board to a PC using the RS232 serial cable (included). Make sure the serial port is not being used by any other application or driver.
2. Connect the board to the target board's cloning header (either E3A for QT300 or E3B for QT310 and QT320).
3. Run QT3View on the PC (found on the supplied CD or from our website).
4. Attach the 9V battery snap or other power leads to the board's power terminal block.
5. Turn on the target boards power.

Note that the cloning adapter is tolerant of power sequencing; it does not matter whether the cloning adapter or target is powered first.

## **Board Details**

### **Power Connector**

This screw terminal strip is used to power the board. The voltage should be between +8 and +20 volts DC. Power should be free from switching noise and short-term fluctuations for best performance. A 9V battery is ideal but make sure the battery does not drain to below 8V or erroneous operation can occur.

### **RS232 DB9 Connector**

This connector provides communications between the QTM300CA and the PC. It allows the user to upload or download setups from the cloning adapter to the target QT3xx device.

### **Cloning Cable**

The clone cable connects to the target board and can be connected whether or not the target is powered or not. The cable is striped and should not be inserted backwards; the stripe connects to pin 1 of the E3A or E3B board.