

uQPM Replacement Procedure

If you are replacing a malfunctioning Micro QPM (uQPM) there are two ways to do it, an easy way and a harder way. Start by trying the easy way (of course). The easy method assumes that the Flash drive on the original, malfunctioning uQPM is OK. If it ends up that the Flash drive on the malfunctioning uQPM isn't OK then you will figure that out once you try and boot up the replacement uQPM and it fails (although it could fail for some other reason as well). Anyway here we go.

Method #1 (easy):

- 1) Disassemble both the malfunctioning uQPM module and the replacement uQPM module such that you can get at the Flash drives on both boards (see Figure #2).
- 2) Remove both Flash drives from the processor boards
- 3) Install the Flash drive from the malfunctioning uQPM into the replacement uQPM.
- 4) Put the replacement uQPM module back together and it's ready to go.



Figure 1 - uQPM Module

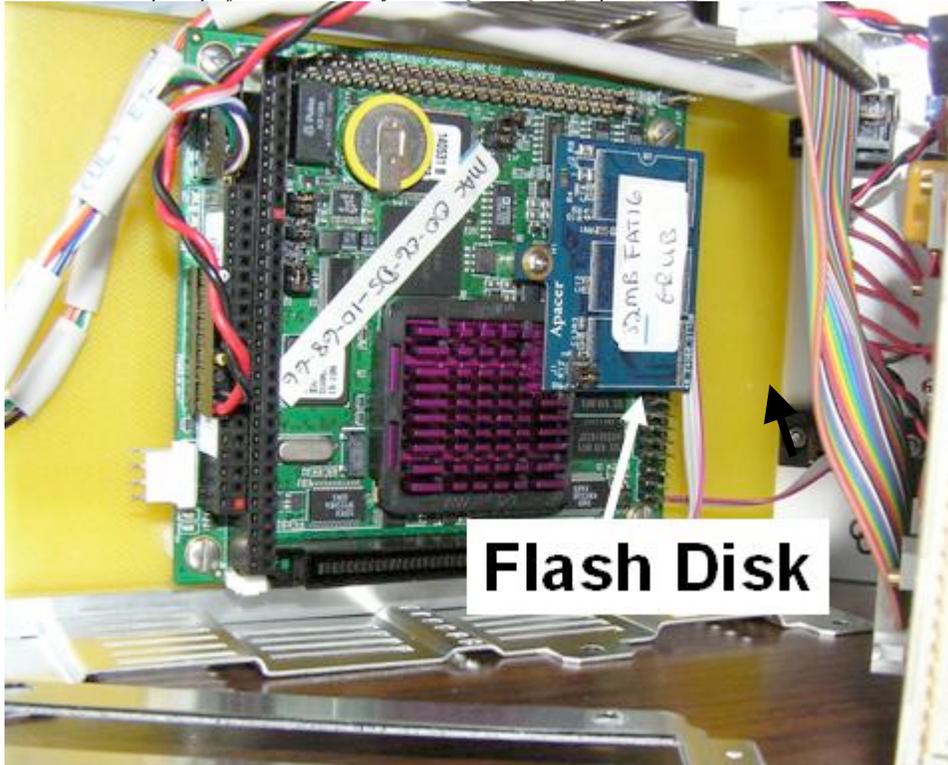


Figure 2 - uQPM Module disassembled showing Flash Disk card

Method #2 (harder):

- 1) Take the replacement uQPM and place it in a test stand and connect a serial cable to it from a PC.
- 2) Configure your terminal emulator (ex. HyperTerm) to be: 9600, N, 8, 1, No Flow Control.
- 3) Power the uQPM Module up and, assuming that the serial connection is setup correctly, wait until it finished booting up. The eCos RTOS should start and you should end up with a “#” prompt.
- 4) Enter the command “ls” (directory listing). You should see a list of file names and sizes.
- 5) We now need to edit the file, NTKWSTUP.DAT. This file contains network name and numbers that identify this node when it boots up.
- 6) Enter the following command to edit the file:
ed ntwkstup.dat
- 7) The ntwkstup.dat file contains one line of text that looks something like:
uqpm-f48 131.225.124.197 255.255.255.0 131.225.255.255 131.225.124.200
IP Name IP Number Subnet Mask Broadcast addr Gateway
- 8) Use the editor to modify the name and network numbers to be correct for the uQPM that this uQPM is replacing. ([eCos Shell Guide.doc](#))
- 9) When you are done connect the uQPM Module to the network (must be the proper VLAN) and reboot it.
- 10) Using LabVIEW start up the “eCos File rcp.vi” application. This application will be used to load the proper uQPM Configuration Data file into the replacement uQPM’s Flash Disk.
- 11) Select the proper uQPM Configuration Data file from the “//beamssrv1/eesupt.bd/projects/Embedded Systems\uQPM\uQPM Configuration Data Files” folder to be the local file. Then specify /uqpmprms.dat as the remote file. Run the application, select the proper uQPM IP name and then click “GO”.
- 12) When the file finishes uploading (it should only take 10 seconds or so) reboot the module and verify that it boots properly.
- 13) You are now ready to install the replacement uQPM Module.