

## RETROFITTING MIRADOR / SITE MANAGER CPU I AND CPU II TO CPU III

### DESCRIPTION

This application note is intended for the technicians who proceed with the CPU1-2 to CPU3 upgrade.

#### Important Note:

If you have analog cards in your system and the software version **is lower than 1.32**, you will lose the calibration values of these cards when installing the new CPU3 card. In that case, you must proceed as explained below (extra installation steps) to record these values **before removing the original CPU1 or 2 card**.

1. To verify the software version of the analog cards installed in the Mirador system, press the "Config" button located on the Mirador front panel, then press the "Syst" button. If the software version is lower than 1.32, you will have to use a personal computer connected to a Mirador communication port by launching a Terminal session.
2. If you use the Hyperterminal software to communicate with the Mirador, you may use the Capture Text function available on this software to record and save the communication between the computer and the Mirador in a text file. Once this setup is done, you can initiate a session with the proper communication parameters, enter the password (if required) and enter the "calibration3" command. It will then display a calibration report for each selected analog card. You must record the values of the entire analog cards since each real analog channel has its own calibration value.
3. When all the calibration values are saved, you can continue the installation of the new CPU3 card using the standard procedure provided with the CPU1-2 to CPU3 kit. However, the values that you have recorded will have to be re-entered in the Mirador at the end of the installation since all these values will be lost and returned to the factory default when the CPU3 will be initialized.
4. To restore these calibration values, you will need to initiate another communication session with the Mirador and enter the "config" command, then the "calibration" command. Then, select the number 2 item to enter the zero and gain values for each real channel of each analog card by referring to the text file that you have previously saved.

## RETROFITTING MIRADOR / SITE MANAGER CPU I AND CPU II TO CPU III

### DESCRIPTION

Systems originally equipped with CPU I and CPU II cards can be retrofitted with a CPU III card, thus permitting older systems to have the benefit of simultaneous Ethernet and Modem connections as well as a myriad of other advantages offered by the new, more powerful CPUIII card.

### WARNING

CPU I and CPU II .csv configuration files are not directly compatible with the new CPUIII. Contact Multitel for information on converting configuration files. The MIRADOR/SITE MANAGER`S text interface may be used to configure the system if your CPUIII did not come pre-configured. Refer to the new Mirador/Site Manager CPUIII user manual for details on commands and system capabilities.

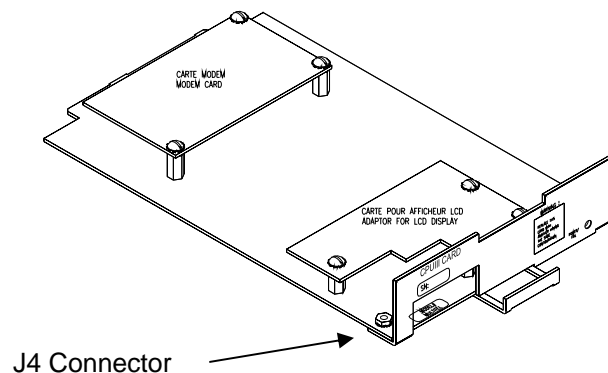
### RETROFITTING CPU II TO CPU III

Ensure that the CPUIII package you have received is equipped with the following material:

1. LCD display ribbon cable (CMT133)
2. LCD display card (assembly BMT202-A), required for the LCD interface (factory-assembled).
3. 26-pin connector present on CPU III card (J4)
4. Warning label

Moreover, make sure the CPU III kit you have received contains the user's manual for the Mirador/Site Manager CPU III. Refer to figure 1 to locate the components.

**Figure 1 – CPUIII card for retrofitting CPU II installations  
(Including optional modem)**

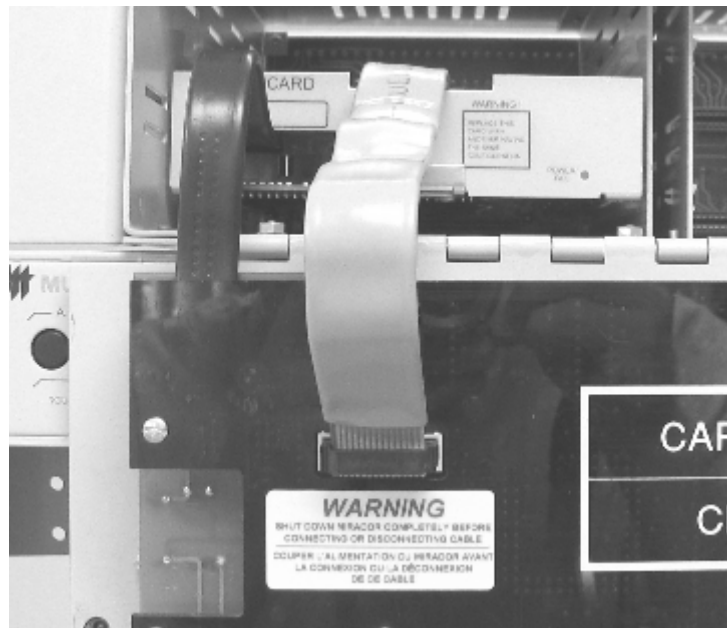


### PROCEDURE (CPU II TO CPU III):

Beforehand: Once removed from its protective pouch, use an antistatic wristband when manipulating the CPU card. The antistatic wristband should be grounded to the Mirador's chassis.

1. Open the front panel.
2. Partly remove the CPU II card.
3. Disconnect both ribbon cables from the CPU II card.
4. Disconnect the ribbon cable from the front panel (display side).
5. Completely remove the CPU II card.
6. Insert partially the CPU III card in the designated area. (Ensure that you don't push it all the way in)
7. Connect the DB-25 connector on the ribbon cable to the CPU III card (J4 connector), making sure to run the cable through the hole in the front of the CPU III card.
8. Connect one end of the LCD display's new ribbon cable (CMT133) to the back of the LCD card.
9. Connect the other end of the LCD display's ribbon cable (CMT133) to the card located in the centre of the LCD display (BMT 202-A) (J1 connector). The new ribbon cable runs through the space above the CPU III card.
10. Insert the CPU III card all the way in.
11. Apply the warning label next to the connector on the LCD display (see figure 1 or 5 for ideal placement).
12. Replace the front panel.

**Image 1 – CPU III card installed as replacement for CPU II card**



The system can take a few minutes to completely power up depending on how many acquisition cards are configured in the system. Once the CPU III is configured correctly, and the system is completely power up, the POWER/FAIL LED on the CPU III and on all the acquisition cards should be solid green.

Before leaving the site test the LCD display to make sure that it responds correctly. We strongly recommend that all alarm points be tested once the retrofit is complete.

### **RETROFITTING CPUI TO CPUIII**

Ensure that the CPUIII package you have received contains the following:

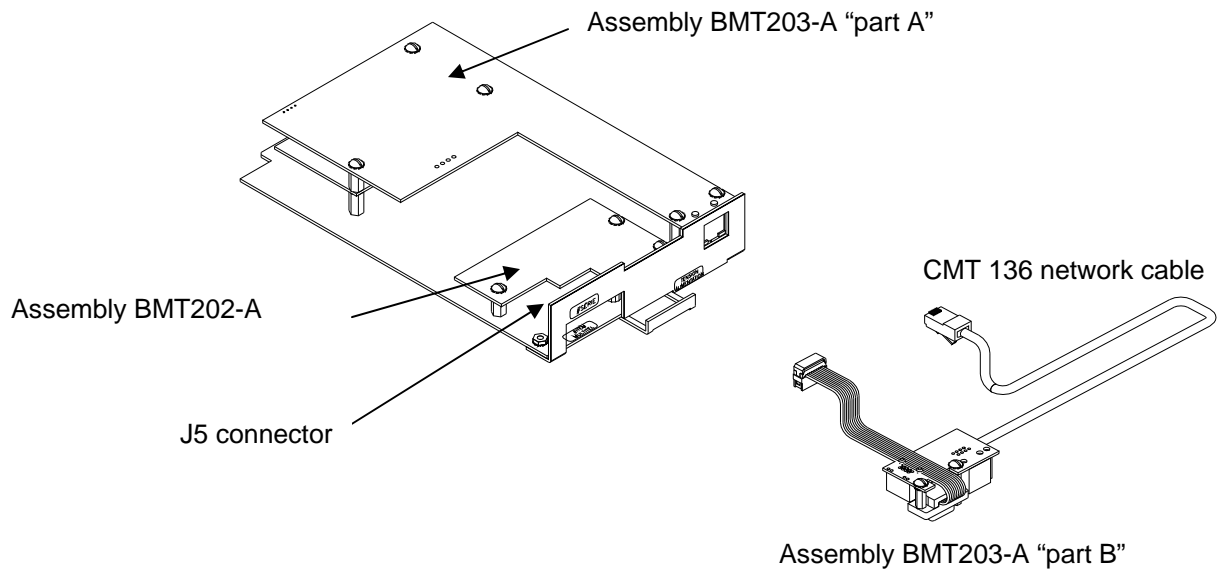
1. DB9/RJ-45 assembly (BMT203) with screws
2. Short network cable
3. LCD display ribbon cable (CMT133)
4. L-shaped 'piggy back' board BMT203 PART A (Ethernet Adaptor Card) that brings the Ethernet connector to the RJ-45 on the CPUIII's faceplate
5. LCD display card (assembly BMT202-A), required for the LCD interface (factory-assembled).
6. 10-pin connector present on CPU III card (J5)
7. Warning label

Also ensure that the CPUIII is equipped with BMT202 the 'piggy back' board that is needed for interfacing the LCD display and the new Mirador/Site Manager CPUIII user manual.

### **TOOLS NEEDED:**

1. Nutdrivers 3/16"
2. Flathead screwdriver
3. Long nose pliers

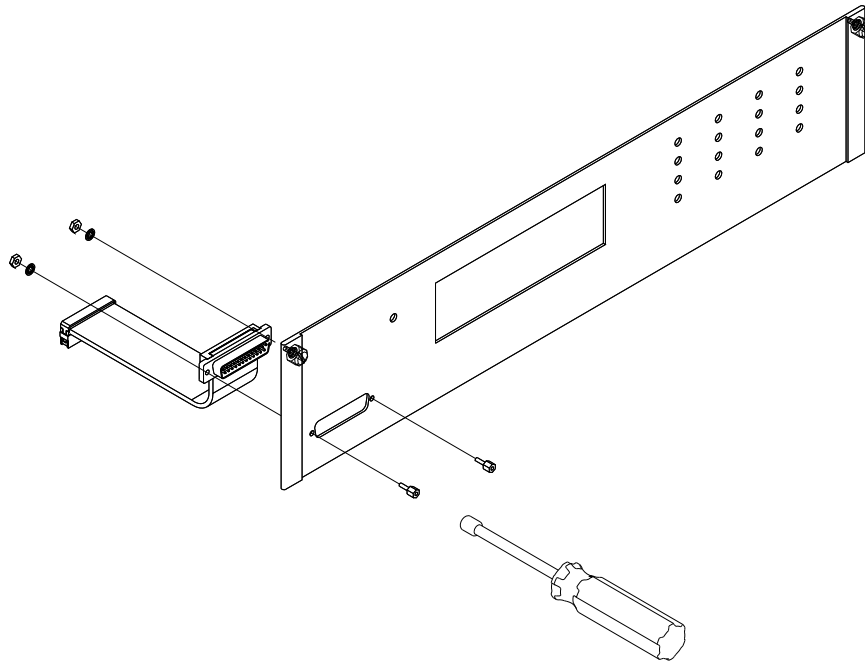
**Figure 2 – CPU III card to replace CPU I card  
(shown here with optional modem and assembly BMT203-1, part A.**



**PROCEDURE (CPU I TO CPU III):**

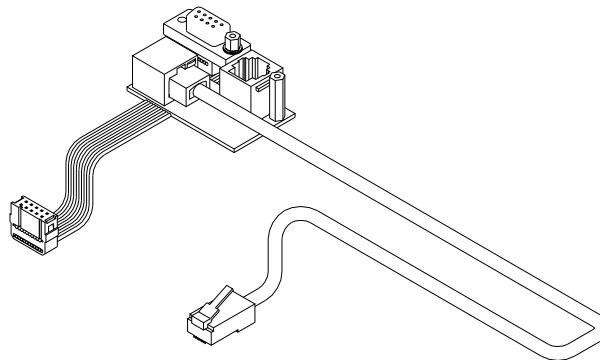
1. Open Front panel.
2. Partly remove the CPU I card.
3. Disconnect both ribbon cables from the CPU I card.
4. Disconnect the ribbon cable from the front panel (display side).
5. Remove the Plexiglas protection on the back of the LCD display with the screwdriver. Be careful not to drop the screws.
6. Completely remove the CPU I card.
7. Remove the cable's DB-25 connector from the front panel using the 3/16" socket heat screwdriver or the long nose pliers. Be careful not to drop any part (see figure 3).

**Figure 3 – DB-25 connector disassembly**



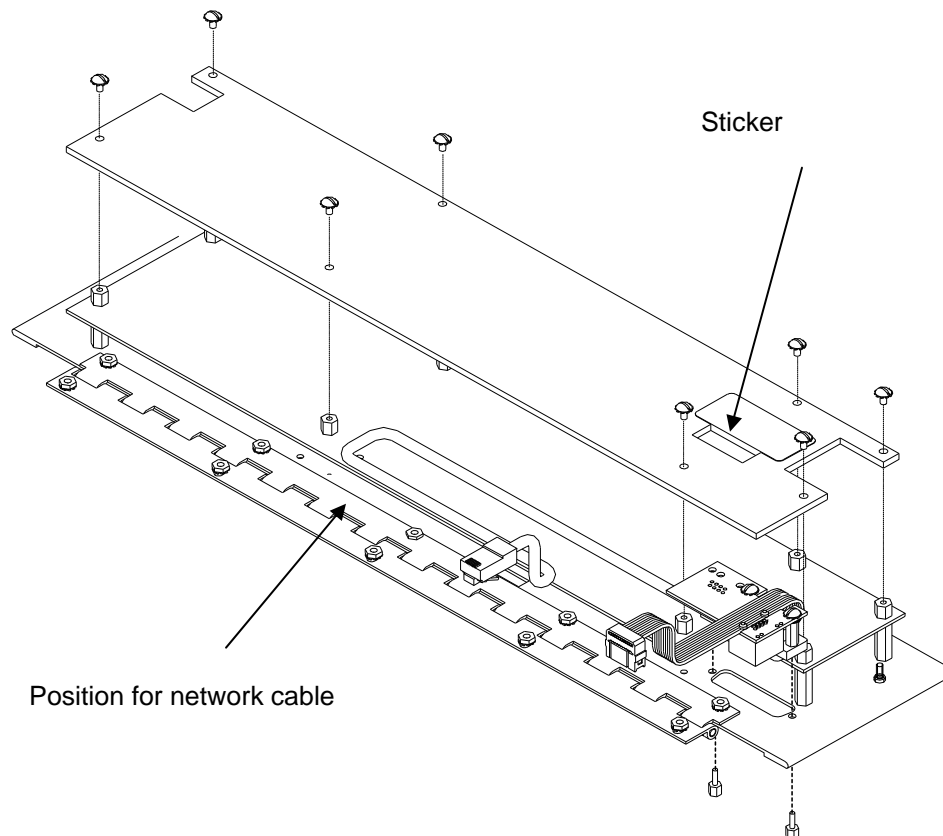
8. Connect one end of the short network cable (CMT 136) to the J2 connector from the RJ45 assembly circuit (assembly BMT203-A, part B) with the DB9 cable (see figure 4).

**Figure 4 – RJ45 Assembly circuit (Assembly BMT203-A, part B) with DB9 Cable (Reverse)**



9. Using the DB9 cable, insert the RJ45 assembly circuit (assembly BMT203-A, part B) in the space previously used by the DB25 connector from the front panel. Use the new screws to secure the assembly. Be careful not to over tighten these screws (see figure 5).

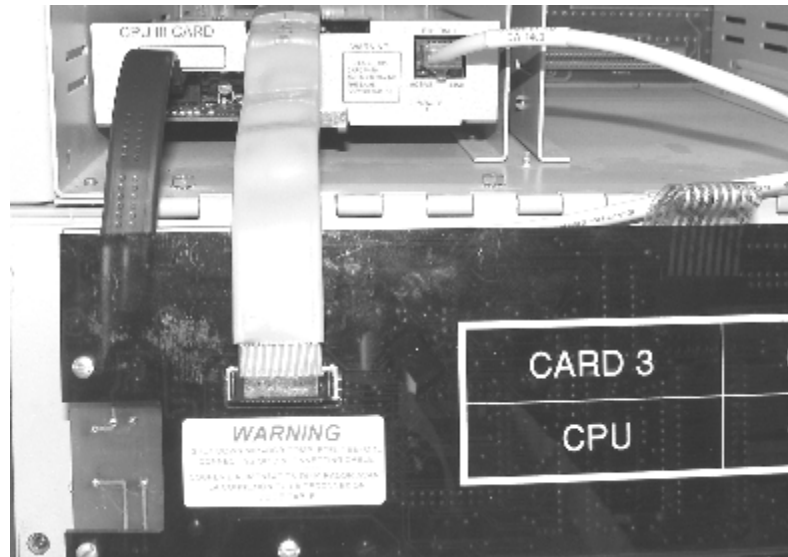
**Figure 5 – Component assembly**



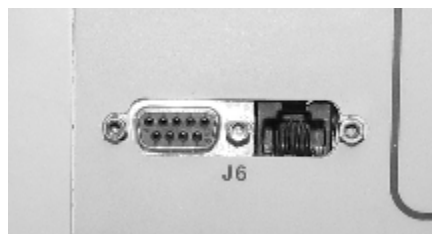
10. Replace the Plexiglas protection on the back of the LCD display circuit.
11. Partially insert the CPU III card in its designated slot. Make sure NOT to push it all the way in.
12. Connect the other end of the LCD display's new ribbon cable (CMT133) to the back of the LCD card.
13. Connect one end of the LCD display's ribbon cable (CMT133) to the LCD display card (BMT 202-A) on the CPU III (J1 connector). The new ribbon cable runs through the space above the CPU III card.
14. Connect the DB9 cable from the RJ45 assembly (assembly BMT203, part B) to the CPU III card (J5 connector), making sure to run the DB9 cable through the hole in the front of the CPU III card.
15. Run the network cable (CMT 136) as shown on figure 5. Connect the other end of the cable to the CPU III card (RJ-45 connector).
16. Push the CPU III card all the way in.
17. Apply the warning label next to the connector on the LCD display (see figure 5 for ideal placement)
18. Replace the front panel.

The system can take a few minutes to completely power up depending on how many acquisition cards are configured in the system. Once the CPUIII is configured correctly, and the system is completely power up, the POWER/FAIL LED on the CPUIII and on all the acquisition cards should be solid green. Before leaving the site test the LCD display to make sure that it responds correctly. We strongly recommend that all alarm points be tested once the retrofit is complete.

**Image 2 – CPU III card installed as replacement for CPU I card**



**Image 3 – RJ45 assembly (assembly BMT203, part B) installed**



#### **FOR MORE INFORMATION**

Don't hesitate to contact Multitel's Customer services should you require any assistance with the above. You can reach us at 1-888-685-8483 or [support@multitel.com](mailto:support@multitel.com).