

TSMIU Wireless Bridge Installation and Configuration

EPM Software must be 7.6.0.16 or greater and latest 750-E700B MIU code

Hardware Installation

1. To install wireless bridge / bracket assembly and antenna, the MIU must be turned off and the motherboard removed. Please note how the wires are connected for re-assembly.
2. While the motherboard is out, a $\frac{1}{2}$ " hole must be made in the top of the shell. It should be $5\frac{1}{2}$ " from the hinge side and $2\frac{1}{2}$ " from the front flange (door open). Please see picture.

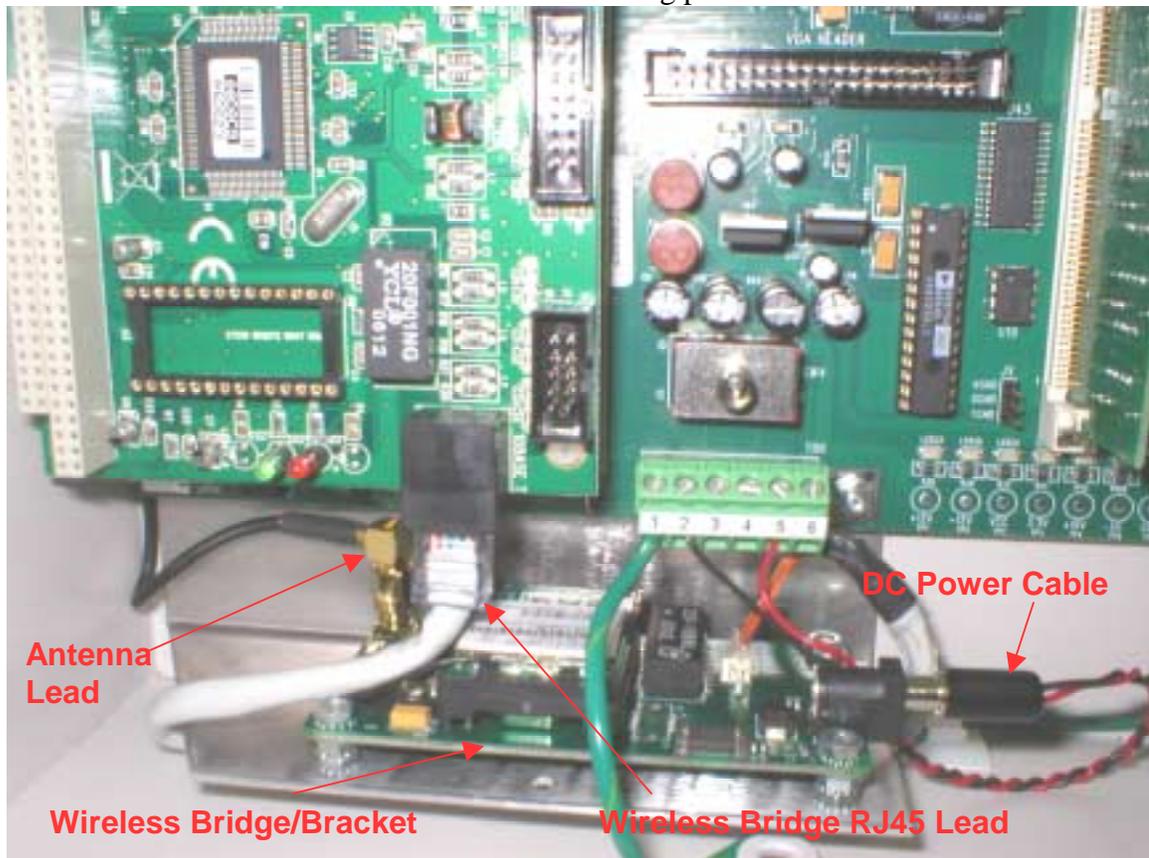


3. Remove the nut and lock washer from antenna mount and insert from inside of shell. Secure antenna mount with the lock washer and nut ($\frac{9}{16}$ "). Install the antenna finger tight. Twist only the knurled metal ring at the base of the antenna.
4. Remove the lower left and center motherboard mounting standoffs. Place the bracket/bridge assembly on the two studs and secure with provided $6-32 \times \frac{1}{4}$ " standoffs. While the motherboard is removed it is easier to connect the antenna lead to the bridge. Use a $\frac{5}{16}$ " wrench to tighten the antenna lead connector.
5. Replace the motherboard and route the antenna lead around the left side. Reconnect all previously removed cables.

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6. If needed install the network card on top of the video card. Ignore if the network card is already installed. The pin header on the network card MUST align with the header on the video card. **Damage will occur if the MIU is powered on while the network card is installed incorrectly.**
7. Connect the power cable for the wireless bridge to the MIU power connector TB6. The red wire is +5 volts and the black wire is common.
8. Route the RJ45 lead from the wireless bridge around and under the bracket and plug into the network card.
9. The final installation will look like the following picture.



Wireless Bridge Software Configuration

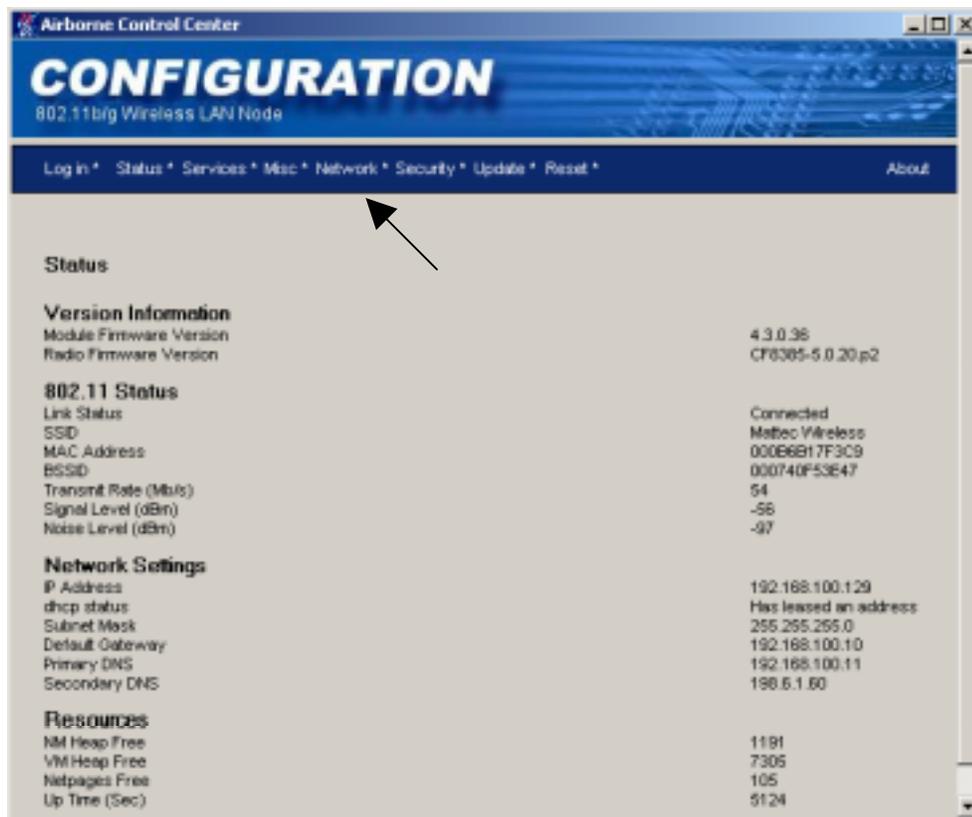
1. In the event WEP or WPA wireless security is not turned on and the MIU will obtain its IP address automatically, there is no software configuration for the wireless bridge. Configure Ethernet communication at the host and everything should work. Note that in the host configuration a MAC address must be specified. The wireless bridge will pass the MAC address of the

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network card plugged into the MIU. The MIU will show its MAC address in the “Comm Info” area. Access Comm Info from the service display. The TSMIU Service Display must be set appropriately for “Host Type”, “Host Name/IP”, “Host Port”=3708, and “DHCP”. DHCP is found on Comm Info page.

2. To turn on wireless security and insert a WEP or WPA key the Airborne Control Center must be used. The Airborne Control Center will also allow the entry of static IP information if that’s needed. Use the provided CD and install the Airborne Control Center on a computer. It is recommended that a small Ethernet 10/100 hub or switch be used for this configuration. During testing the bridge would not link with a 10 mb hub but had no problems with a 10/100 switch. Unplug the wireless bridge RJ45 lead from the network card and plug it into the hub. Connect the hub to the network that the Airborne Control Center pc is connected to. Please see the following screen shot of the Airborne Control Center. The network tab is where WEP or WPA keys are entered. Static IP info is also entered there.



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3. Power up the wireless bridge. There are LED's that will show the status of the wired connection as well as the wireless connection or lack there of. Here is a table that shows what should be seen from the LED's:

	Start of configuration	Wireless configured, MIU off	Wireless configured, MIU on
D4	Green	Green	Green
D3	Red Blinking	Green	Green
D2	Red	Off	Red Blinking

For more information about the LED see pg 11 of the AirborneDirect Ethernet Bridge User's Guide. The guide is included on the CD. The guide shows packaging that is not use in the MIU application. The MIU application uses only the circuit board assembly.

4. On the network tab enter the information needed, be it WEP, WPA, or Static IP. All are on the Network tab. Once the information is entered click on the save button at the bottom of the page. Airborne Control Center will prompt you to send a "Reset" click OK.
5. Go to the MIU and disconnect the wireless bridge from the hub and reconnect it to the MIU. Route the cables as shown above. Cycle power to the bridge using the power connector. Wait to see if the LED's go into the state shown in the middle column above. When they do, turn on the power to the MIU. The LED states will change but will settle into the states shown in the right column.
6. Things can go wrong and you may not be able to reconnect with the Airborne Control Center. In this case a hardware reset must be done. There is a reset button on the bottom of the wireless bridge. This will reset to the factory defaults. The button must be held down while power is applied. You will see LED D4 flicker. Allow the bridge to stay on for a minute after the flicker. It should be reset to the factory defaults and configuration can restart. A reset can be sent by the Airborne Control Center if it can connect to the bridge.

Host Software Configuration

1. In System Configuration under the Site heading create a new channel. Name it appropriately and set the channel type to "Mattec Ethernet" and the setup string to 3708. Save and exit the site configuration.
2. In System Configuration modify the Machine Configuration for the machine where the wireless or Ethernet was installed. Select the "Ethernet" channel configured in step 1. Enter the MAC address in the "MAC Address" box. The MIU MAC address will be shown at the TSMIU in the Comm Info" area.

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3. The services must be restarted for the changes to take affect. Once the services have been restarted go to the TSMIU and cycle it's power. Please note that the wireless bridge must be manually unplugged to cycle the power.