CHAPTER THREE

Configuring the Multimedia Hub

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(Combines LAN & T1 Traffic)

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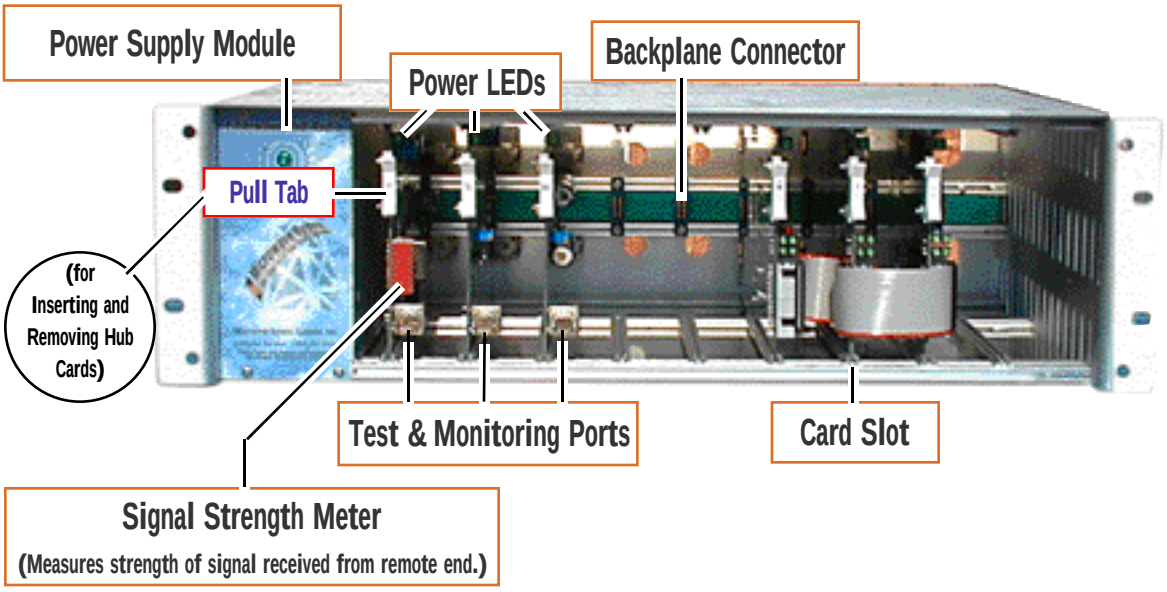
Detail of the Multimedia Hub



The Multimedia Hub has three main functions: 1) it provides power to the outdoor Radio Heads; 2) converts the radio signal (to baseband) to a format that may be used for data, voice or video;and,3) provides test and monitoring ports and other diagnostics.

Each Hub comes with one Power Supply Module and three main radio cards:

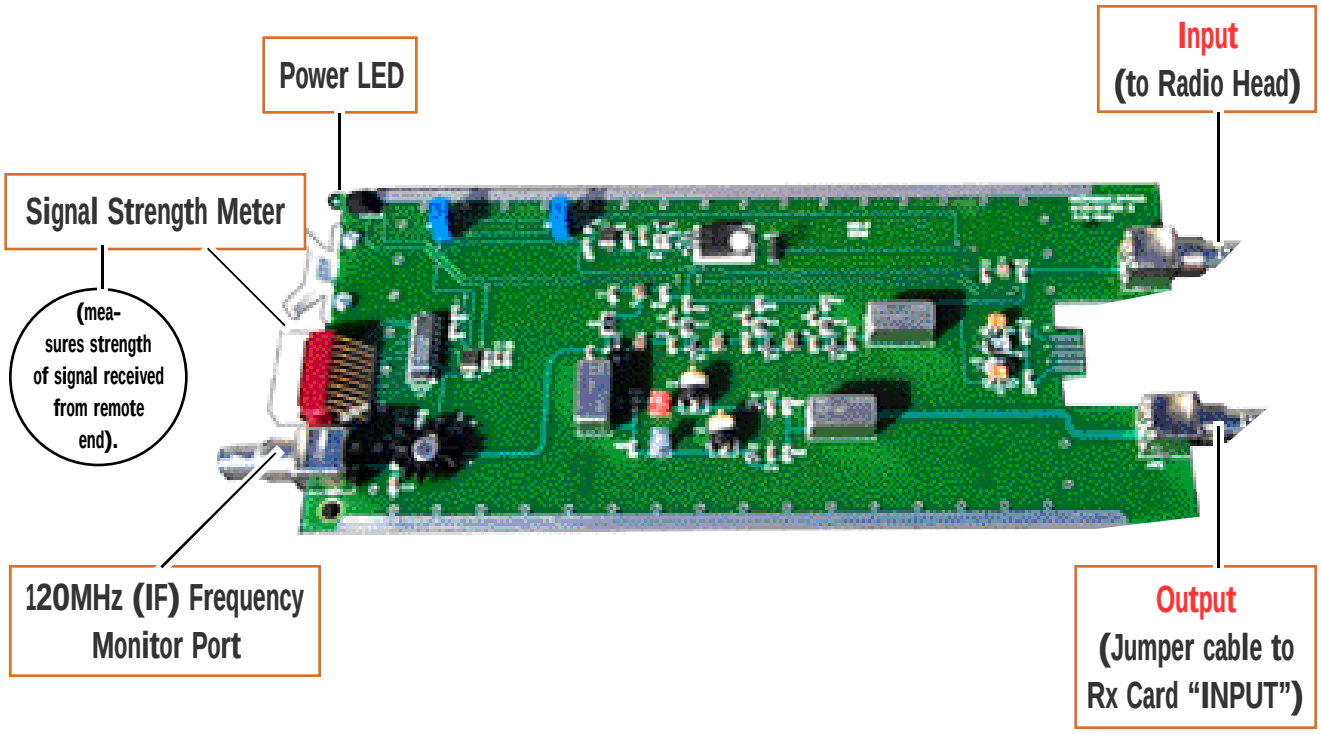
- The "IF"or Frequency Demodulator Card
- The "Tx"or Transmit Card
- The "Rx"or Receive Card

W A R N I N G !

TO PREVENT EQUIPMENT DAMAGE, POWER OFF THE MULTIMEDIA HUB BEFORE INSERTING OR REMOVING A MODULE OR CARD. FAILURE TO DO SO MAY VOID YOUR WARRANTY.

The Three Main Radio Cards

1 of 3: The Frequency "IF" Card



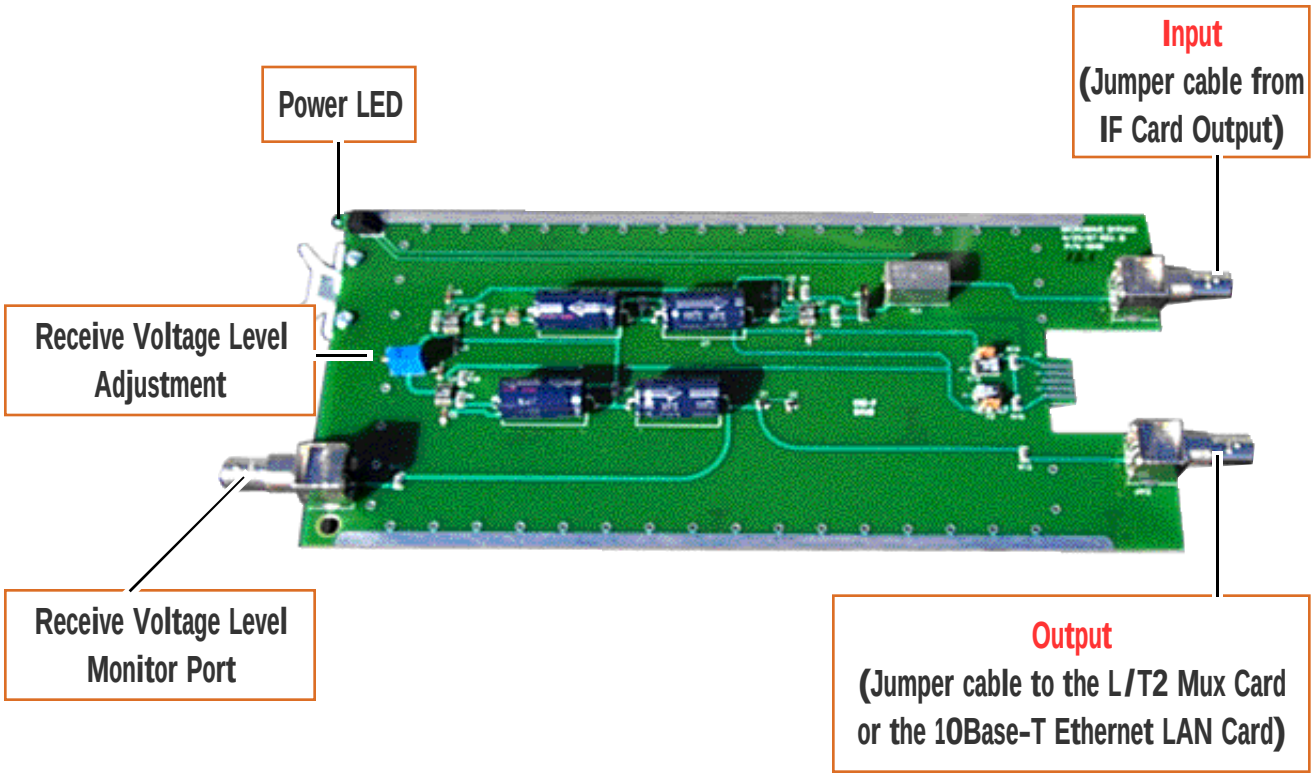
The IF board has two main functions: 1) to amplify the 120MHz intermediate frequency ("IF") signal coming down from the Radio Head and 2) to demodulate that signal to a format ("baseband") that may be used for Ethernet, T1 or video transmission.

READ ME!

The IF Card should occupy the FIRST slot to the right of the Multimedia Hub's power supply module.

The Three Main Radio Cards

2 of 3: The Receive ("Rx") Card



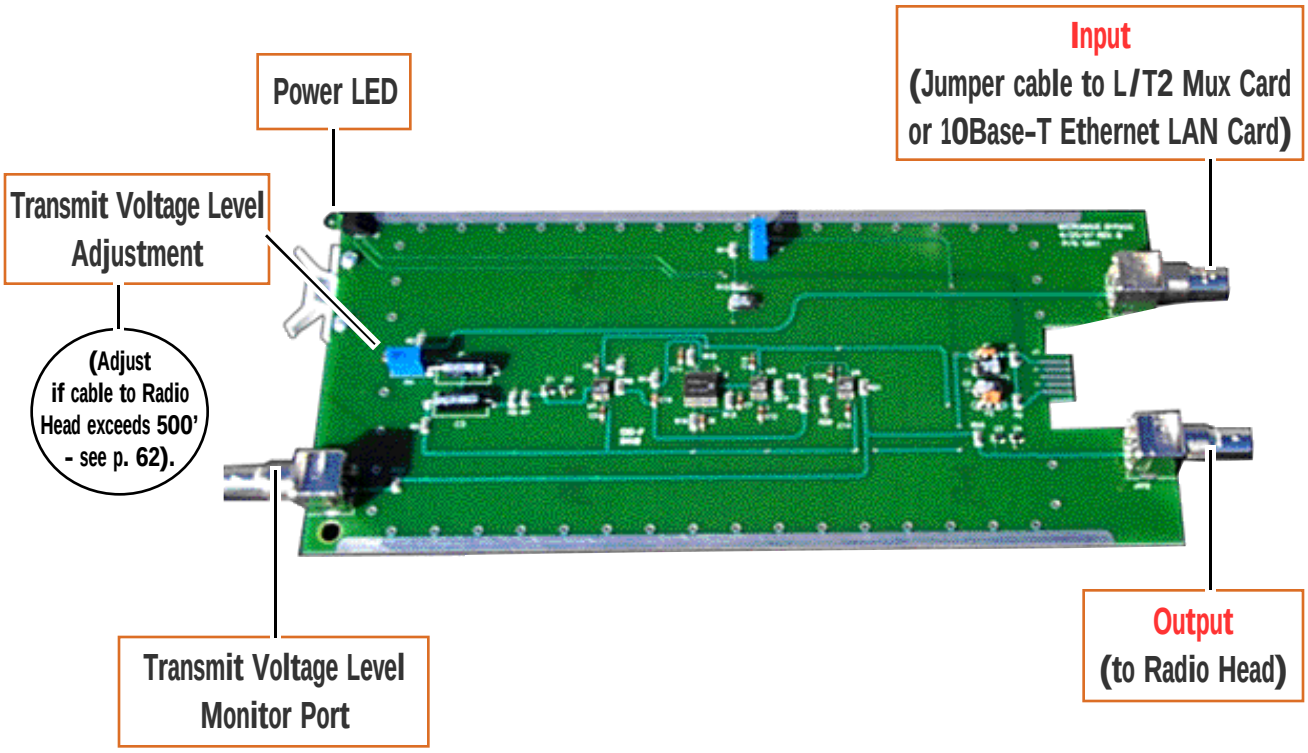
The receive board amplifies the receive signal after it is demodulated by the IF Card and provides a baseband signal to the L/T2 Mux Card or 10Base-T Ethernet LAN Card.

READ ME!

The default setting from the factory has the "Rx" card in the **second** slot from the Power Supply Module.

The Three Main Radio Cards

3 of 3: The Transmit ("Tx") Card



The transmit board amplifies the signal coming from the L/T2 Mux Card or 10Base-T Ethernet LAN Card and sends it up to the Radio Head.

READ ME!

The default setting from the factory has the "Tx" card in the **third** slot from the Power Supply Module.

The Ethernet LAN Card (10 megabits per second)

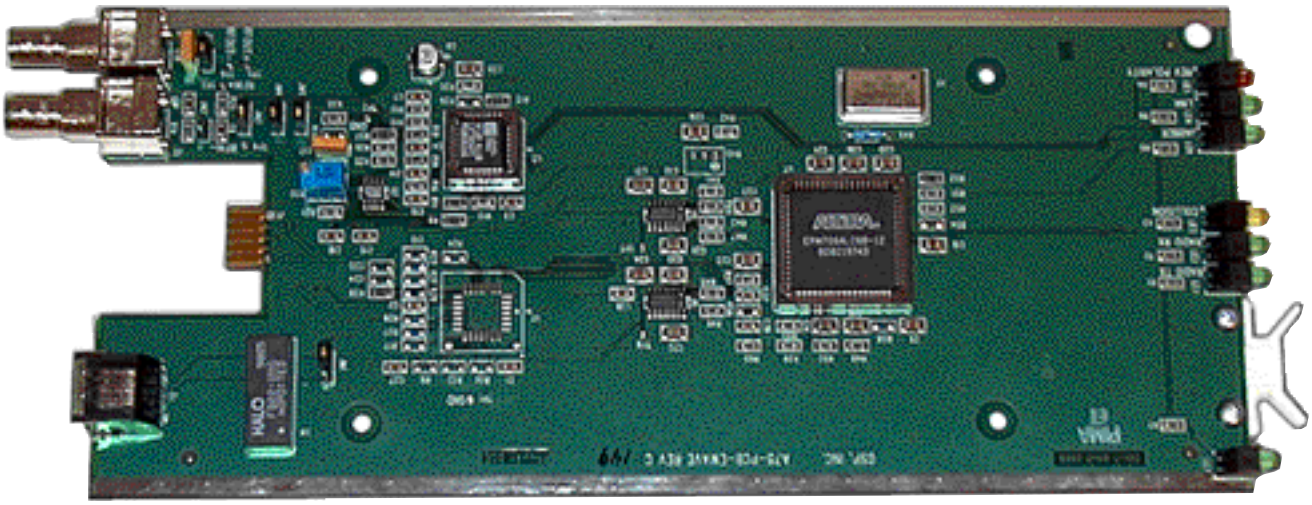
Description

The Ethernet LAN card comes in half "HDX LAN"(10 megabit/second) or full duplex "FDX LAN" (20 megabit/second) versions. These cards are in fixed configurations and are not switch selectable between half and full duplex.

In half duplex, the LAN card passes native 802.3 Ethernet, conforming to CSMA/CD specifications for collision detection. The half duplex card provides in/output BNC connections to the microwave radio and a 10-BaseT (RJ-45) transceiver connection to any hub port,switch,bridge,router or repeater.

READ ME!

The 10Base-T Ethernet card acts as a standard Ethernet transceiver so it **cannot** be plugged directly into another transceiver.



The Duplex Ethernet Card (20 megabits per second)

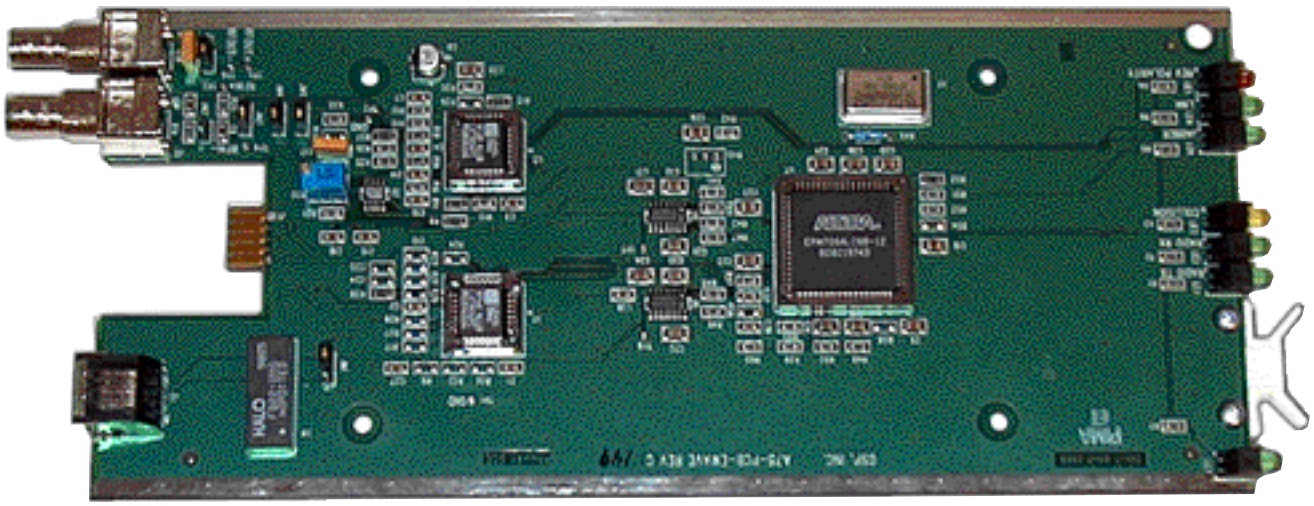
Description

The Ethernet Card comes in half "HDX LAN" (10 megabit/second) or "FDX LAN" full duplex (20 megabit/second) versions. These cards are in fixed configurations and are not switch selectable between half and full duplex.

In full duplex, the Ethernet card passes a physically separate 10 megabit/second data stream in each direction thereby avoiding collisions across the link. Depending on network load and the rate of collisions, you may experience an increase in throughput of up to 60%.

READ ME!

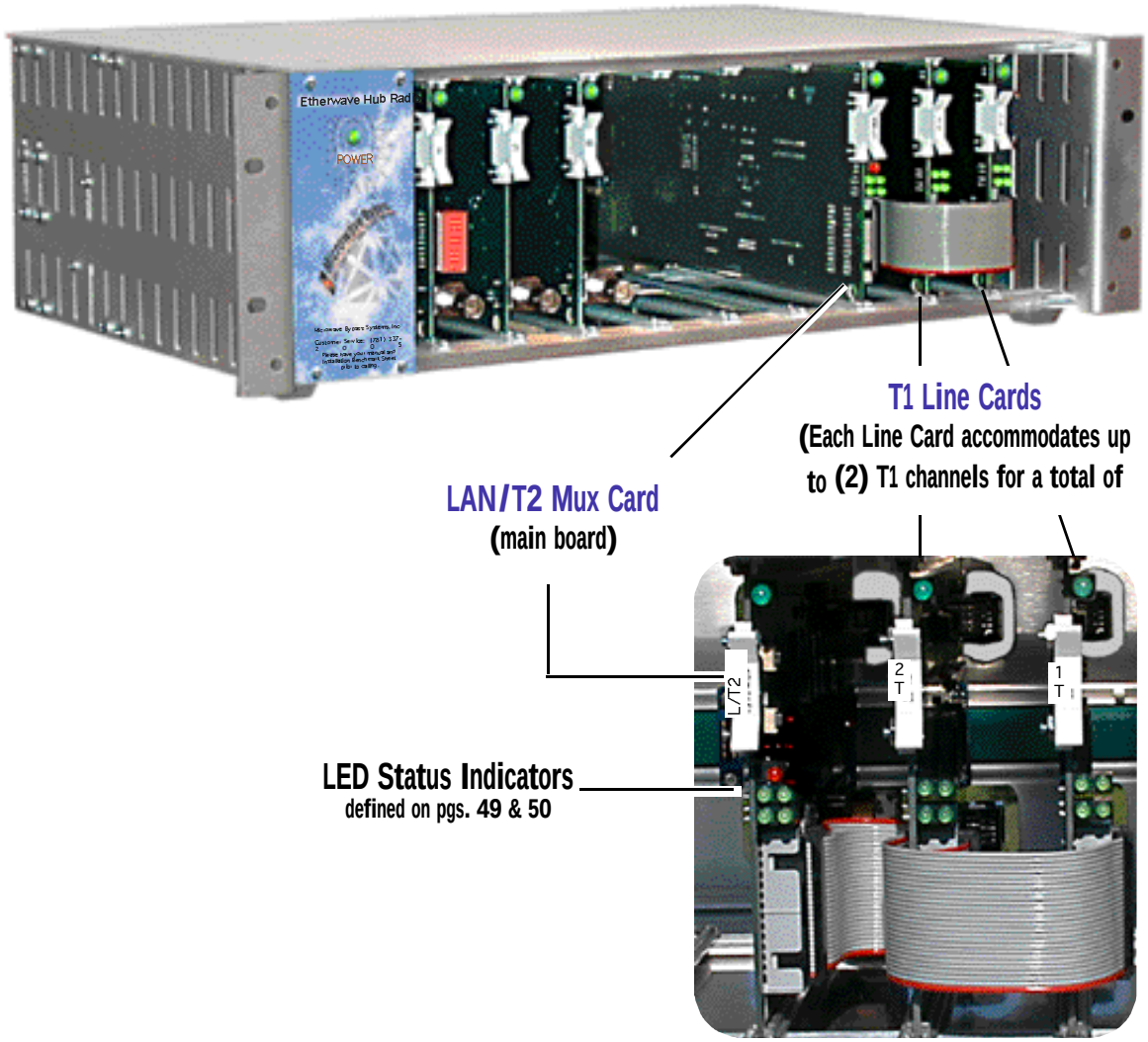
The Duplex Ethernet Card must be connected to a "Full-Duplex" or "Duplex" SPECIFIC RJ-45 port on your switch, router, bridge or hub. The Card will not function properly if it is plugged into a standard "802.3" or "Half Duplex" port. Only trust a port that is actually labeled "Duplex"or one that is switch selectable to Full Duplex.



The LAN/T2 Multiplexor

The LAN/T2 Multiplexor accommodates 10/20 megabit Ethernet, along with up to four T1 channels (4 x T1 = T2) across the same microwave link.

It consists of a main LAN/T2 Mux Card that takes the radio signal and separates it into Ethernet and T-1 signals. The Ethernet signal outputs via a 10Base-T transceiver connection at the rear of the LAN/T2 Mux Card to your network interface (e.g., switch or router). The T1 signal goes to the T1 Line Card(s),each of which handles up to two T1's and outputs to your PBX via a standard RJ-48 jack.



Video with Stereo Audio

(Full Motion NTSC)