This is a simple switching regulator. It produces 1.8V at >500 mA at about 90% efficiency. A simple low dropout linear regulator would be a cheaper alternative at the expense of power. A linear regulator would dissipate about 0.75 watts max. This switching regulator dissipates about 0.10 watts max.

This linear regulator is used to assure that the +1.8v rail quickly passes the 0.5v threshold at powerup, thus minimizing noise and oscillations. Further testing and characterization of the DSP is required to determine if this linear regulator is in fact required.
These two mounting holes are located at the "back" of the CM-2, near the main interface connectors.

AC Signal Return Path Caps

Note: To avoid AC signal noise path caps must be included into the motherboard near the connection.

Power Decoupling Caps

Title: Host Interface Connector
connector.sch
PN: 600-00181-01

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The secondary Ethernet MAC and connector are optional. If it is not required then all parts on this page can be depopulated (or removed entirely from a new design based on this circuit).

**Warning:** Failure to properly install and configure the aux. Ethernet signals can result in very bad things (i.e., fire, smoke, bad hair days). If power is supplied via the RJ-45 connector then only the ferrite beads are installed (not the resistors). If power is not supplied via the RJ-45 then the resistors are installed and the beads are not.