

SPECIFICATIONS

The specifications below are for a set of plug-in units consisting of an electrical circuit board and an aluminum enclosure that will connect to a backplane that provides DC voltages and ground lines. Within the plug-in units the termini of the electrical traces on the circuit board will be solder points. The backplane will be contained within a rackmount chassis with an internal AC to DC power supply.

Enclosure Specifications

Materials: Aluminum, FR4 circuit board

Size: 3U height, 1 to 2 inch width, 6 to 7 inch depth

Mechanical Requirements: An alignment system shall be provided to ensure proper mating to the backplane. One of the sides of the enclosure must be removable to facilitate placement of components and other work within the enclosure. A front panel must be present on the enclosures.

Power Requirements: 5VDC, 4A; 15VDC, 0.25A; -15VDC, 0.25A. All traces must be of sufficient width to carry 1A of current.

Interface: Enclosure module must be a backplane plug-in unit that is hot swappable. Electrical leads internal to enclosure must be available for solder connection for wires up to size 20 AWG.

Thermal Management: The enclosure shall have openings at the top and bottom to facilitate airflow.

Chassis Specifications

Size: 4U height, standard 19 inch rackmount width, no more than 18 inch depth, must be able to accommodate 8 of the enclosures specified above.

Mechanical Requirements: An alignment system shall be provided to ensure proper mating to the backplane. All mounting hardware for standard 19 inch racks shall be included.

Power Requirements: Must accept 120 VAC input via standard power cable. Backplane must be able to supply power for up to 8 of the enclosures specified above. The power spectral density of the noise on all DC voltage lines shall not exceed -150dBm over the frequency range of 100kHz to 100MHz.

Thermal Management: Either DC or AC fans will be included with the airflow in the vertical direction. The temperature internal to the chassis may not exceed 55C.