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## **Instrument Backplane Description**

The Instrument Backplane (IB) is the circuit board that distributes power and digital signals in the subrack. It is designed to fit in a IEEE-1101 standard Eurocard chassis. The circuit board contains ten 96 pin 2mm connectors with 5 rigid flex sections going to 5 pcb mounted 100 pin MDM connectors. The rigid circuit board should be at least 0.100" thick with sufficient mounting screws to reduce circuit board flex when inserting and extracting cards.

This circuit distributes the cryostat signals on the 5 MDM connectors to the circuit boards in the chassis. The MDM connectors are mounted on a small filter circuit board which contains surface mount filter capacitors and a faraday cage brass enclosure. The brass enclosure has a conducting polymer gasket that provides a good electrical contact to the wall of the cryostat. The brass enclosure is also part of the connector mating structure. A mechanical prototype of the filter section and connector mating has been produced for evaluation.