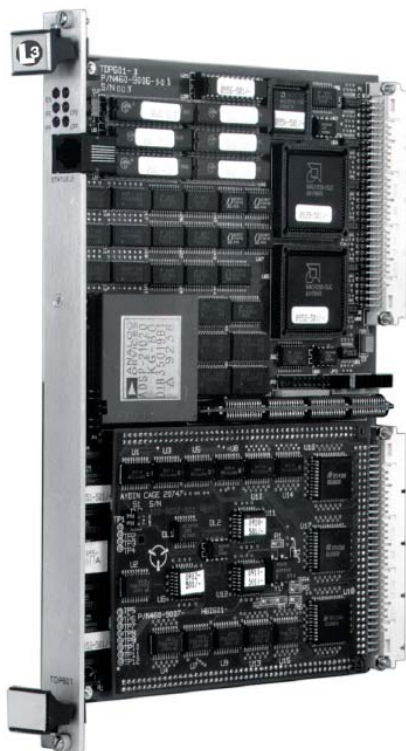




FEATURES

- VME 6U Card Outline
- Multi-Function S6200 Module
- Telemetry Data Processor
- Array Buffer Builder
- Industry Pack Carrier (2 Sites)
- Analog Devices 21160 Hammerhead Digital Signal Processor
- XILINX 600K Virtex FPGA
- Model 6200 HSBbus Compatible
- Model 6200 Time Code Interface

DESCRIPTION

The QFM601 is a high-speed processor module that includes two Industry Pack (IP) I/O that allows it to be configured for a variety of applications. The on-board processor is the Analog Devices 21160 Hammerhead that interfaces to the mezzanine slots, and performs a variety of processing functions. The processor operates at a clock rate of 80MHz and contains 4Mbit of internal RAM that contains program and data space.

The QFM601 utilizes a state-of-the-art Xilinx Field Programmable Gate Array (FPGA) Virtex device that contains more than 600,000 gates. This device replaces a large number of smaller discrete and PAL type devices, reducing the number of board traces and improving the reliability of the module. The programmability of this device allows the QFM to be tailored for many different applications.



communications

The QFM601 can perform one of three different functions.

- **Telemetry Data Processor.** In this mode, the module provides real-time data processing capabilities similar to the TDP601 module. It provides a full suite of algorithms for number system conversions, data compression, EU conversion, bit/field manipulations, arithmetic and logical processing, and special algorithms. The special algorithms include embedded 1553 and ARINC decommutation, Measurement List Processing (MLP), and data storage. Algorithms may be in a single serial chain, or parallel chains to accommodate complex functions. Processed results may be distributed immediately or saved for later combination to supply derived results.
- **Array Buffer Builder.** In this mode, the module captures selected measurements from the S6200 HSBbus and routes the data to one or more buffers. These buffers

are used to supply the data sets that are required to drive the S6200 system archive and output functions. In this mode, the module also provides a VME to HSB path that allows for playback from the system archive device, or manual data measurements to be injected onto the HSBbus.

- **Industry Pack (IP) Carrier.** In this mode, the module houses third party IP daughter cards to provide functionality that is not available in the S6200 family of modules. An example of the IP mezzanine modules that can be easily added to the S6200 System include 1553 Interfaces, ARINC Interfaces, Analog-Digital Converters, Digital-Analog Converters, and Digital I/O. The QFM601 also includes a S6200 compatible time code interface that allows the module to time stamp, with one microsecond resolution, acquired data from the IP application modules.

