

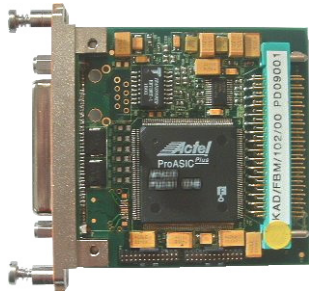


ACRA KAM-500

CONTROL

FBM/102

FireWire bus monitor



FEATURES

- IEEE 1394 compliant
- Monitors IEEE 1394a and 1394b at signaling rates of 100Mbps, 200Mbps and 400Mbps
- Coherent parsing of traffic
- Transaction level tagging (time, count, status, info)
- Maximum payload size of 2kByte per packet
- Triple buffering of parsed packets
- Discards bus configuration packets and PHY packets
- Provides transaction counters and error detection

APPLICATIONS

- FireWire bus monitoring

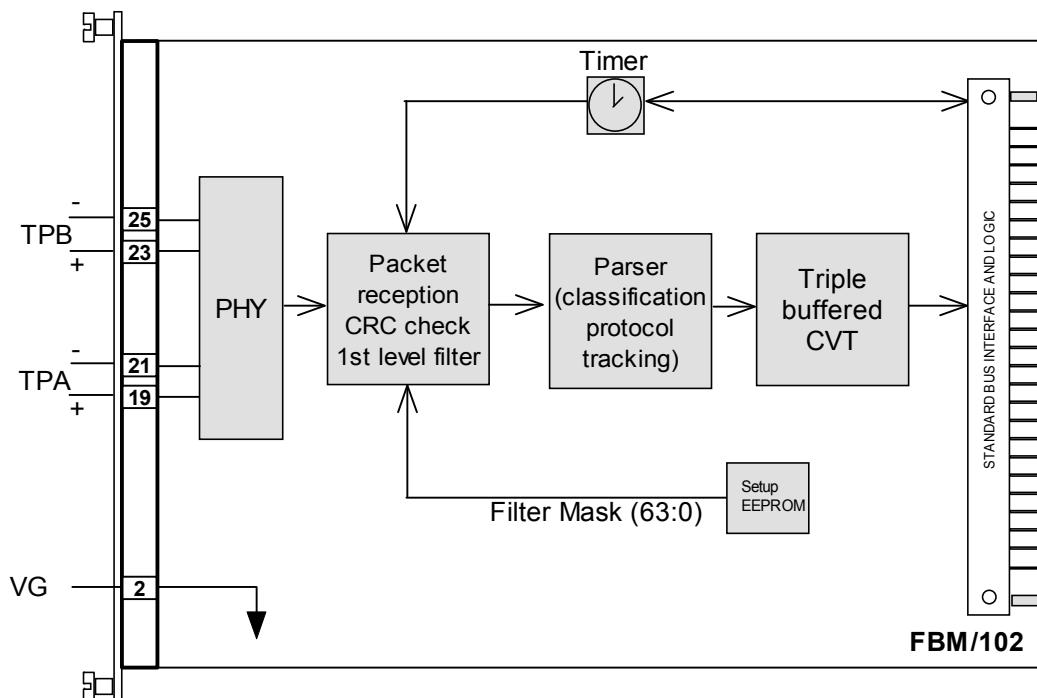
DESCRIPTION

The FBM/102 is designed to monitor IEEE 1394 (FireWire) traffic, parse and tag packets, and distribute the monitored packet contents to other KAM-500 modules. The FBM/102 acts as a leaf in the FireWire bus topology. To all other nodes on the bus the link layer and transaction layer appear to be deactivated.

The bus monitor triple buffers up to 64 isochronous channels or asynchronous stream packets, with associated tags, i.e. the attributes which the bus monitor associates with each parsed packet (time, count, status and information words).

Each buffer contains up to 1036 16-bit words, i.e. 1030 words of packet content, 3 words of timestamp, 1 word containing transaction number, 1 word containing information tag (INFO), and 1 word containing packet size. Triple buffering supports concurrent access to the packet being read, packet being received, and an interim packet. The INFO word tag associated with each packet is used to indicate whether the packet is STALE (buffer has been read before) or SKIPPED (buffer has been overwritten).

Data selection and content is based on a 64-bit filter mask, which allows the selection of each individual isochronous channel for parsing. Only traffic with transaction code 0xA is recognized. Bus configuration traffic, PHY packets, and asynchronous transactions are ignored. The FBM/102 is available only with a 52-way double density connector.



FireWire interface of the FBM/102

Selection guide and ordering information

Selection Paths

Airborne Data Acquisition → KAM-500 → Modules → Bus → Firewire

Ordering Information

Part Number	Mating Connector	Description
KAD/FBM/102	CON/KAD/002/CP	FBM/102 module, with 52-way double density module top connector

By default, the standard mating connector above is included with each module in the shipment. Its part number will be added to the Confirmation of Order unless an alternative option is specified (see *Cables* data sheet).

Revision History

Revision	Differences	Status
FBM/102	FireWire bus monitor, operates in bilingual mode	Recommended for new programs

In this data sheet FBM/102 refers to both the KAD and KAM version of the module.

Related Products

Module	Details
KSM-500	This module is supported by the KSM-500 suite of software tools.
KSM-2	This module is supported by KSM-2 software.

Related Documentation

Document	Details
DOC/MAN/018	KSM-500 Databook
DOC/HBK/002	Environmental Qualification Handbook
DOC/DBK/001	KAM-500 Databook