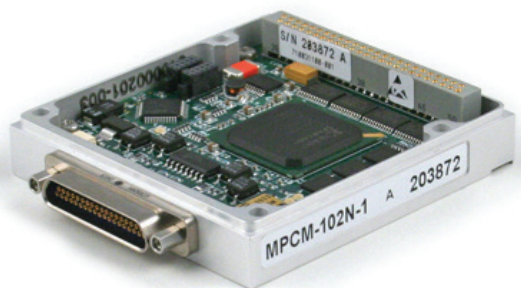


MPCM-102N

Dual-Channel PCM Interface Module for Miniature Network High-Speed Data Acquisition Unit

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Key Features

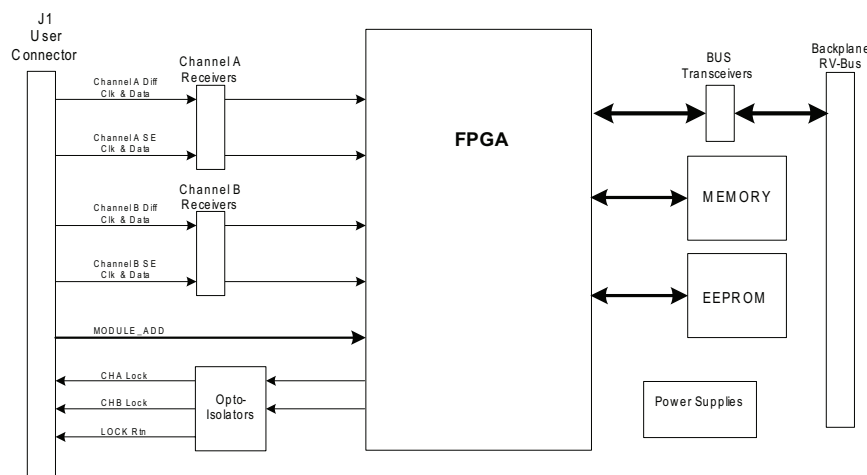
- For use in Miniature Network High-Speed Data Acquisition Unit (MnHSD-2000)
- Two independent PCM input channels
- Channels support RS-422 differential or single-ended TTL inputs
- Built-in programmable frame correlator for each input channel
- Operates up to 20 Mbps per channel (RS-422 differential inputs)
- Time tagging on minor frame basis per IEEE-1588
- Supports unpacked and throughput modes
- Frame lock output signals per channel
- Multiple MPCM-102N modules can be placed in a single stack
- Configurable using TTC's programmable software application

Applications

- Data acquisition systems
- Flight test data recording
- Flight test instrumentation
- Lab test

Overview

The MPCM-102N is a 2-channel, PCM Module for use in TTC's Miniature Network High-Speed Data Acquisition unit (MnHSD-2000). The module has two independent PCM channel inputs. Each channel accepts RS-422 differential inputs at rates up to 20 Mbps on a per-channel basis. Both channels are also selectable to allow input on separate single-ended TTL input pins (5 Mbps maximum). The two PCM data/clock interfaces are accessible at the MPCM-102N faceplate via a single 37-pin MDM connector. The total data bandwidth of all the input modules in a system should not exceed the maximum system bandwidth.



MPCM-102N functional block diagram

Specifications

General

- Supply current: +5V @ 300mA
- Power consumption: 1.5 Watts maximum
- Temperature:
 - + Operating Temperature: -40°F to +185°F (-40°C to +85°C) (box ambient temp)
 - + Storage Temperature: -67°F to +212°F (-55°C to +100°C)

Dimensions and Mechanical

- Compatibility: Operates in Miniature Network High-Speed Data Acquisition unit (MnHSD-2000)
- Dimensions (WxLxH): 2.49x 2.63x 0.40" (63.25 x 66.80 x 10.16mm)
- Weight: 2 ounces (57 grams) not including the mating connector
- Unit connectors: single MDM37S
- Mating connectors: MM212-037-161-45WD
- Backshells (optional): MM232-015-000-4100

Functionality

- Input channels: Two independent PCM input channels
- Input types: RS-422 differential or TTL single-ended
- Differential impedance: Programmable 120 Ohm terminator on each differential input
- Single-ended impedance: Fixed 10K Ohm pull-up on each single-ended input
- Max input data rate: 20 Mbps differential or 5Mbps single-ended
- Bits per word: Programmable from 8 to 16 (fixed word size)
- Bites per minor frame: Programmable up to 8K bits/minor frame
- Minor/major frames: 1 to 256
- Frame lock status: Opto-isolated locked indicator output for each channel
- Frame sync bits: Programmable up to 32-bits
- Frame sync mask: Programmable up to 32-bits
- Bit errors before lock drop: Programmable 0 to 15
- Bit slip window: Programmable 0, ±1, ±2, ±3
- Good frames before lock: Programmable 1 to 16
- Bad frames to drop lock: Programmable 1 to 16
- SFID word position: Any location within minor frame
- Bit clock: Programmable 0° or 180° phase selectable
- PCM data packing: Unpacked or throughput
- Time tagging: Per IEEE-1588 requirements
- PCM major frame sync modes supported: SFID, URC, or FCC
- Input data formats: Supports NRZ-L or RNRZ-L data formats

Ordering Information

Contact [Curtiss-Wright](https://www.curtisswright.com) for ordering information.