

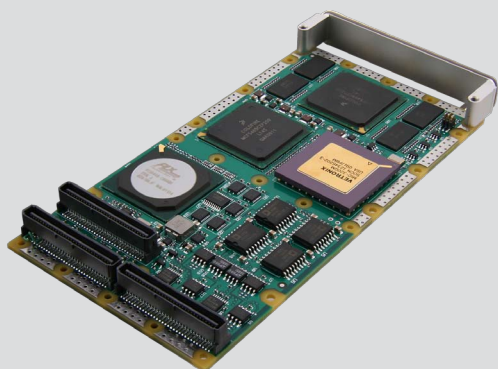
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General Dynamics  
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Fact Sheets



# SPMC/DPMC-214

CANbus, MilCAN, Utility Bus,  
and Discrete Digital I/O Module



The S/DPMC-214 is a highly capable CANBus or MILCan PMC providing a high performance PMC off loading the host card from the detailed protocol handling, thereby more overall processing power.

The SPMC/DPMC-214 is a fully compliant PMC mezzanine module, complementing Curtiss-Wright Controls Embedded Computings's line of high performance Single Board Computers (SBCs). It provides 4 CANBus or MilCAN ports along with the US Army standard Utility Bus (optional), and TTL I/O functionality for use in military and aerospace embedded computing applications. The PMC-214 is designed to off-load the host card from the detailed handling of the CANBus or MilCAN protocols by implementing the protocols in a highly capable on board processor, thereby providing more processing capacity on the hosting card for other applications. As a member of our comprehensive range of ruggedized PMC modules it is available in both air-cooled and conduction-cooled versions and is supported by Curtiss-Wright's commitment to long-term availability, provision of life-cycle management services and comprehensive after-sales technical support.

## Features

- ♦ CANBus/MilCAN implementation via Dual ColdFire MCF5485
  - Four independent CANBus interfaces compliant to the CAN Specification 2.0, Part B protocol (standard and extended message formats), ISO 11898:1993 CAN high-speed physical interface levels
  - Or four independent MilCAN interfaces compliant to MWG-MILA-001 Specification.
  - Galvanic isolated is provided between the CANBus physical interfaces and the power and ground planes of the main part of the 214 module.
  - CANbus speeds of 250-kbit/sec, 500-kbit/sec and 1-Mbit/sec are supported.

Learn More

Sales Info: [sales.cwembedded.com](mailto:sales.cwembedded.com)

Sales Email: [sales@cwembedded.com](mailto:sales@cwembedded.com)

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- ◆ The FlexCAN module of the ColdFire supports full implementation of the CAN protocol specification version 2.0B (not all are supported)
  - Standard data and remote frames (up to 109-bits long)
  - Extended data and remote frames (up to 127-bits long)
  - 0–8 bytes data length
  - Programmable bit rate up to 1MB/s
  - Content-related addressing
  - Up to 16 flexible message buffers of 0–8 bytes data length, each configurable as Rx or Tx, all supporting standard and extended messages
  - Programmable transmission priority scheme: lowest ID or lowest buffer number
  - Time Stamp based on 16-bit free-running timer
  - Global network time, synchronized by a specific message
  - Programmable I/O modes
  - Maskable interrupts
- ◆ PMC Bus
  - 32-bit, 66Mhz PCI Bus
  - 3.3V signaling, 5V tolerant
- ◆ Utility Bus Interface
  - Single MIC device from Vetronix Research Corporation
- ◆ I/O
  - 16 LVTTTL Discrete IO
  - Backwards compatible with S/DPMC-211
- ◆ BSP Support
  - VxWorks® 5.5.x/Tornado™ 2.2.1
  - VxWorks 6.3/6.5 Workbench 2.x
  - Linux®
  - Windows®
- ◆ Power
  - 5V only
- ◆ Available in a range of ruggedization levels
  - both air- and conduction-cooled

Figure 1: SPMC/DPMC-214 Architecture

