

ControlSafe™ IOU-CAN Module

4-port Controller Area Network (CAN) Module for the ControlSafe™ Computer

Data Sheet

The Artesyn IOU-CAN Module provides Controller Area Network (CAN) input and output processing for the ControlSafe™ Computer

KEY FEATURES:

- 4 High Speed (HSCAN) Ports
- RTM connectivity for Wayside Applications
- PeliCAN mode support
- Compatible with ISO 11898-2
- 500V isolation
- Certified as an Interference Free Communication Module



PRODUCT DESCRIPTION:

The Artesyn IOU-CAN module extends the capability of the ControlSafe™ Computer Platform to interface with up to four High Speed Controller Area Network busses (HSCAN). With rear RTM access I/O it is perfect for wayside applications requiring CAN connectivity to devices or external I/O boxes, for use in applications such as Computer Based Interlocking (CBI), Automatic Train Protection (ATP), Automatic Train Operation (ATO), and Positive Train Control (PTC).

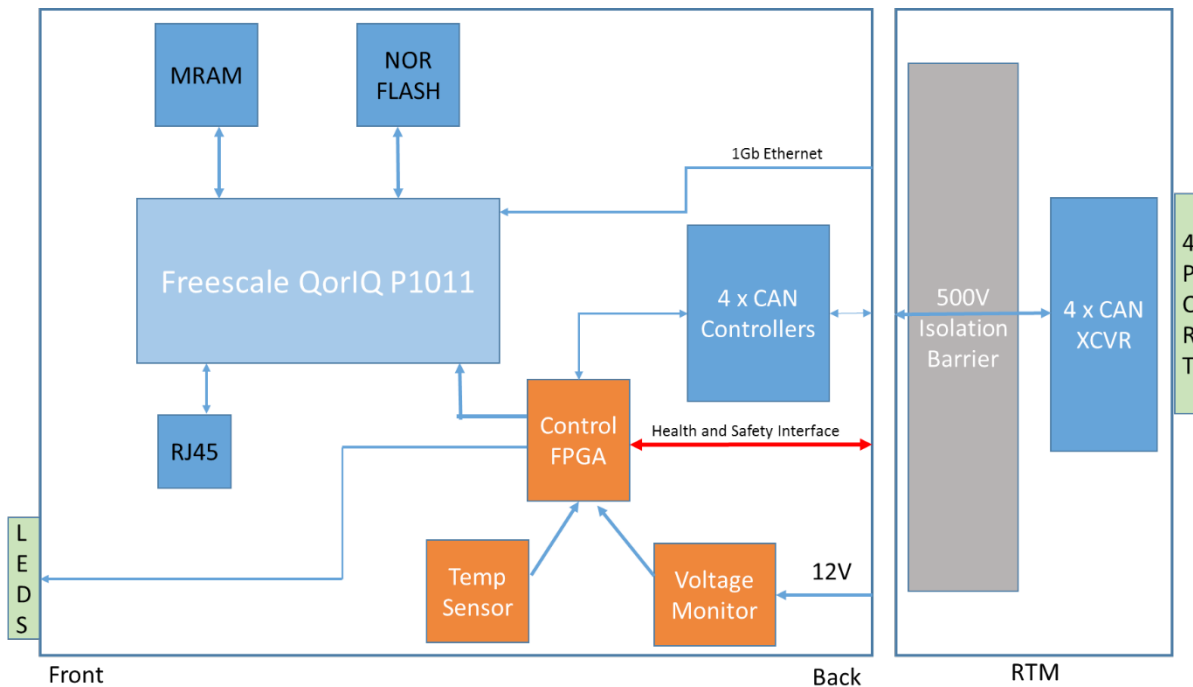
This module packetizes and transmits all incoming CAN traffic (using the Ethernet fabric) to the application on the CPU module. Similarly, the CPU module will packetize and transmit any outgoing CAN frames to the IOU-CAN module for transmission over the CANbus. This module also supports a port mirroring function, which allows both Active and Standby CPUs to access CAN traffic simultaneously.

The following bit rates and cable lengths are supported.

BIT RATE	MAXIMUM
50 kbit/s	1 kilometer
125 kbit/s	500 meters
250 kbit/s	250 meters
500 kbit/s	100 meters
1 Mbit/s	25 meters



The IOU-CAN is certified to be interference free according to EN 50126 for reliability, availability, maintainability and safety (RAMS) processes; EN 50128 for safety-related software; and EN50129 for safety-related electronic systems with long term availability.



Technical Specifications

Processor	NXP P1011 QorIQ @533MHz	
Operating System	VxWorks 653 2.4.0.1	
Software Support	Application development and runtime software / firmware package. Includes: <ul style="list-style-type: none"> • Bootloader / POST boot image • OS binaries implementing the Can ↔ Eth protocol converter / forwarder. • API libraries to create custom IOU-CAN application/OS runtime images. For CAN port configuration and statistics gathering. • Demo/sample CPU application source to exercise IOU-CAN with loopback data. 	
Memory	512 MB DDR3 with ECC support	
Flash	2 x 64MB NOR	
MRAM	1 x 2MB MRAM	
SEEPROM	1 x 8KB	
Maintenance Ports	RS-232 onboard header	
Data Fabric	1 GigE link to backplane	
4 RTM Ports	Port 0-3	PeliCAN Input/Output ISO 11898-2 compatible
Port Isolation	500V	
Module Management	Voltage and temperature sensors	
Operating Temperature	-40 °C to 50 °C	in open rack or other environment with low impedance to convection cooling
	-40 °C to 70 °C	with a required airflow measured at the intake to the bottom of chassis; or with an optional integrated fan cooling solution
Power	12V@~9W typical	
Vibration	Compliant with EN 61373, Category 1, Class B (EN 50155 12.2.11)	
Shock	Compliant with EN 61373, Category 1, Class B (IEC 60068-2-27)	
Conformal Coating	ST1 rating for EN 50155 Section 12.2.10 (Salt Mist Test)	
Standards	Designed in accordance with EN50121, EN50124, EN50155, EN50126, EN50128, EN50129, EN55024, EN60529, EN60571, IEC61508. See documentation for specific compliances.	
Safety Certificates	Certified as Interference Free	

Ordering Information

Part Number	Description
CSP-CSC-CAN-01	CAN I/O Board for ControlSafe Platform
CSP-CSC-CAN-01-M	CAN I/O BOARD FOR CONTROLSAFE PLATFORM - BARE METAL FRONT PANEL
CSP-CSC-CAN-RTM-01	Rear Module for ControlSafe Platform High Speed I/O CSP-CSC-CAN-01
CSP-CBL-CAN-01	2 BREAKOUT CABLES FOR CAN I/O MODULE OF CONTROLSAFE PLATFORM
CSP-CSC-CAN-<Rel>-<Date>	IOU-CAN and CPU application development, runtime SW / FW upgrade package. (Download, available to HW customers)

WORLDWIDE OFFICES

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