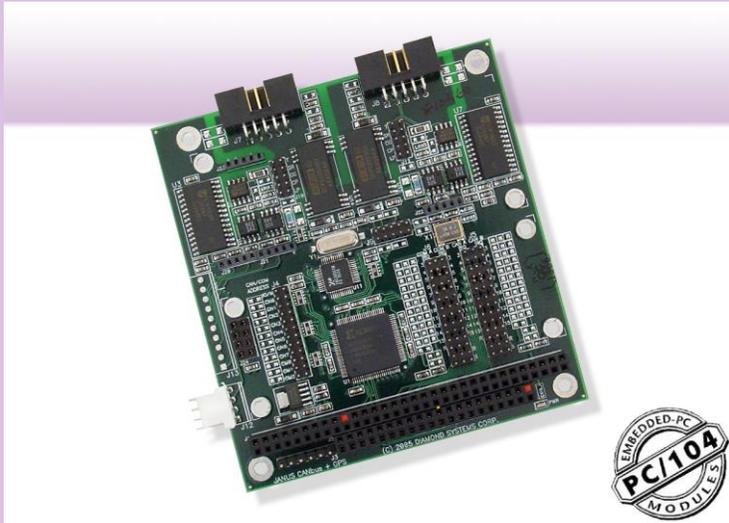


JANUS-MM



Dual CAN Port PC/104 Module

Plus a Carrier for Wireless and GPS Plug-in Modules



Highly Integrated Communications Board

The Janus-MM combines dual CAN interfaces with sockets for wireless communications and GPS to create a complete I/O subsystem.

Configuration Flexibility

To best meet the requirements of your application, Janus-MM can be ordered with any combination of the desired I/O: dual CAN, GSM/GPRS socket modem, Lassen Condor GPS.

Noise Immunity

Each port is independently isolated from the system to eliminate sensitivity to noise and ground shifts in the network.

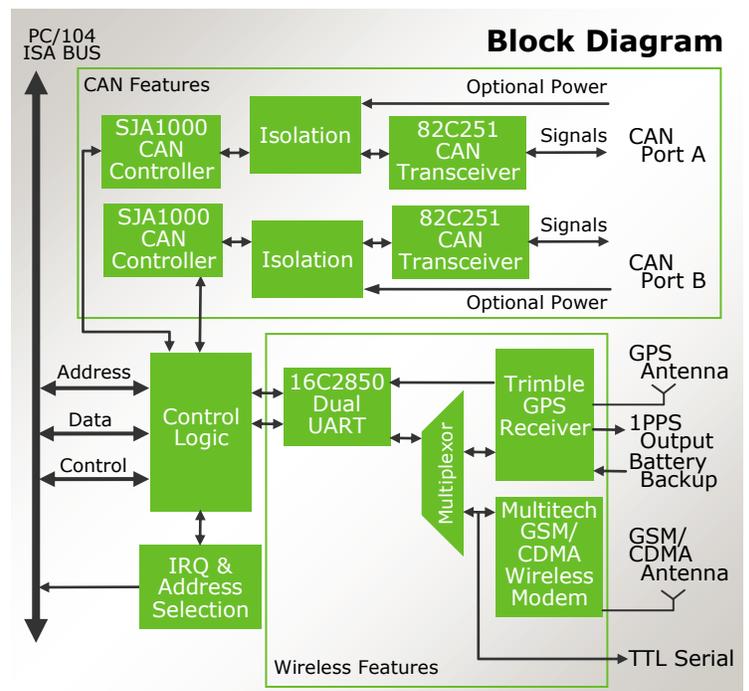
Rugged Design

Janus-MM was designed for rugged applications such as automotive or on-vehicle. Extended temperature operation of -40°C to +85°C is tested and guaranteed. Also, 0Ω jumper-bypass resistors can be installed in any configuration.

Shortened Development Time

Diamond offers CAN drivers for Windows CE and Linux. These drivers enable you to develop your application software quickly.

- ◆ 2-in-1 CAN plus Wireless/GPS board
- ◆ Dual CAN 2.0B interfaces
- ◆ Philips SJA1000T controllers
- ◆ Channel to channel and channel to system isolation
- ◆ CAN drivers available
- ◆ Socket for GSM/GPRS and CDMA wireless communication modules
- ◆ Socket for Condor C2626 GPS receiver module providing location tracking and timing data
- ◆ 1 pulse per second precision output from GPS receiver
- ◆ Connector provided to supply backup power for the GPS almanac
- ◆ 0Ω jumper-bypass resistors for ruggedized applications
- ◆ PC/104 form factor
- ◆ Extremely rugged -40°C to +85°C (-40°F to +185°F) operating temperature



JANUS-MM: Dual CAN + Wireless Carrier



Specifications

CAN CIRCUIT

CAN channels	2, 2.0B
Controller	Philips SJA1000T
Transceiver	Philips 82C251
Isolation	1500V channel to channel
Transceiver power	5V, on-board loop
Clock rate	16MHz
Data rate	1Mbps
Bus interface	Memory or I/O

WIRELESS MODULES

Manufacturer	MultiTech SocketModem	
Types	GSM/GPRS: F4 or F4-ED	CDMA: N1, N2, N3, or N11
Frequency	850/1900 or 900/1800MHz	800/1900MHz
Packet data	Up to 85.6kbps	Up to 153.6kbps
Circuit-switched data	Up to 9600bps	Up to 14,400bps
GSM Class	Class 1 & class 2 group 3 fax	Class 2 group 3 fax
SMS	SMS capability	
Antenna	MMCX antenna connector and SIM socket	
Operating temp	-30°C to +70°C	

GPS MODULE

Manufacturer	Trimble Navigation
Types	Condor C2626 receiver
Frequency	L1
Protocols	NMEA, SBAS (WAAS, EGNOS, MSAS), & aGPS
Update rate	Up to 5Hz
Output	1 pulse per second precision output
Battery backup	Battery backup option for faster warm start capability
Antenna	H.FL-R-SMT low-profile antenna connector
Operating temperature	-40°C to +85°C

GENERAL

Dimensions	PC/104 form factor 3.55" x 3.775" (90mm x 96mm)
PC/104 bus	16-bit stackthrough ISA bus
Power supply	+5VDC ±10% at 77mA (Janus-MM board only)
Operating temperature	-40°C to +85°C (-40°F to +185°F) (Janus-MM board only)
Weight	2.1oz (60g) (Janus-MM board only)
RoHS	Compliant

Key Features

Janus-MM's dual CAN ports use the Philips SJA1000T CAN controller and 82C251 transceiver, for full CAN2.0B functionality. Each port is independently isolated from the system to eliminate sensitivity to noise and ground shifts in the network. Jumper options include slew rate control, transceiver power source (on-board or loop power), address, and interrupt settings. Both memory and I/O addressing are supported. For ruggedized applications, 0Ω jumper-bypass resistors can be installed in any configuration.

Janus-MM includes sockets and support circuitry for GSM/GPRS and CDMA wireless communication modules from MultiTech, as well as the Condor C2626 GPS receiver from Trimble Navigation. A built-in dual UART circuit provides the necessary interface to the modules. A connector is provided to supply backup power for the GPS almanac. The add-on modules are available separately based on your desired configuration.

Wireless & GPS Add-on Modules

Janus-MM supports various add-on modules for location identification and wireless communications. One wireless module and one GPS module can be installed simultaneously on a single board. These modules are purchased separately and installed on the board with the included hardware kit. Transition cables are available to connect between the module and the enclosure wall.

Diamond Systems provides antennae and transition cables for both the wireless modem and GPS modules used on the Janus-MM board.



GPS Transition Cable



Wireless Antenna & Transition Cable



Condor C2626 GPS Module



GSM/GPRS SocketModem Module



Janus-MM with GPS and Wireless modem Modules Installed

Ordering Information

JNMM-COMBO-XT	Janus Dual CAN + Carrier PC/104 Module
JNMM-GPS26	Janus, Condor C2626 module, dual CAN
JNMM-CAN2-XT	Janus dual CAN ports only
6970005	Transition cable for Condor C2626 GPS module