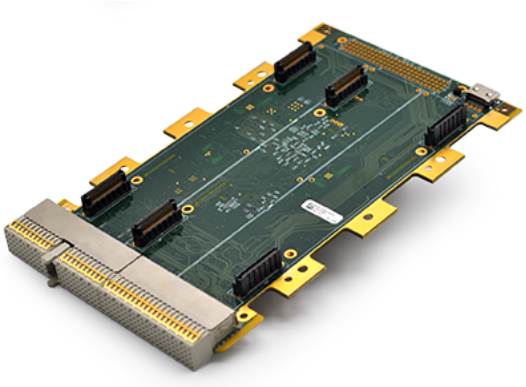
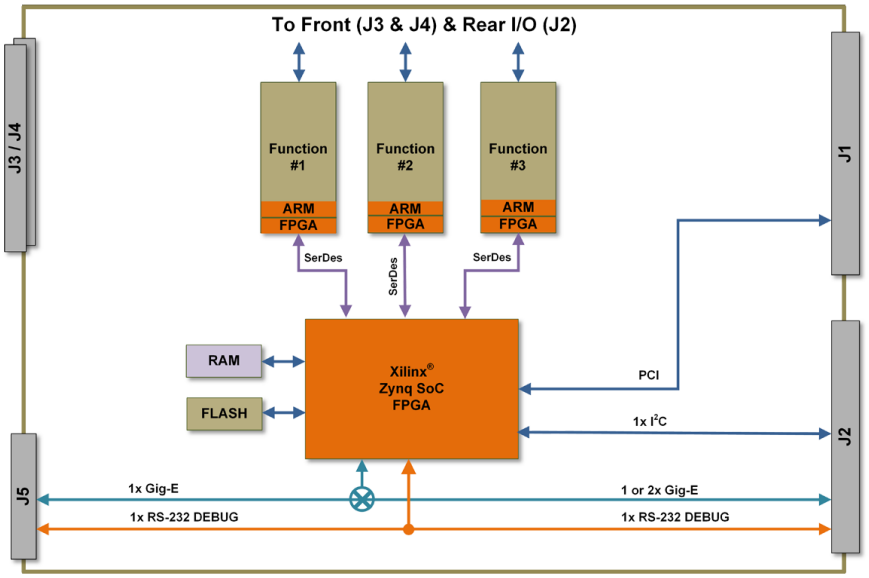
75G5 3U cPCI Multifunction I/O Boards

3U cPCI Multifunction I/O Board

Eliminate man-months of integrated with a configured, field-proven 3U cPCI board from NAI.

NAI's latest generation 3U cPCI Multifunction I/O and Communication Board, the 75G5, can be configured with up to three smart function modules. Ideally suited for rugged military, industrial, and commercial applications, this low-power/high-performance board delivers off-the-shelf solutions that accelerate deployment of SWaP-optimized systems.





Features

- **Up to 3 independent smart I/O function modules supported**
- **Front and/or rear I/O**
- **Commercial or rugged applications**
- **< 5 W MB power dissipation**
- **Independent x1 SerDes interface to each function module slot**
- **2x 10/100/1000 Base-T Ethernet; 2 to rear or 1 to rear and 1 to front I/O**
- **Continuous Background Built-in-Test (BIT)**
- **Intelligent I/O library support included**
- **COSA® Architecture**
- **VICTORY Interface Services (Contact factory)**
- **Operating temp: 0° C to +70° C or Rugged -40° C to +85° C**

Select up to 3 independent functions for your application

Measurement & Simulation Modules

Function	Module	Description
AC Reference	AC2	2 CH. AC Reference Source, 47 Hz - 20 KHz, ± 3% Acc, 2 – 28 Vrms, 3 VA (Max/Ch) Power
	AC3	2 CH. AC Reference Source, 47 Hz - 2.5 KHz, ± 3% Acc, 28 – 115 Vrms, 3 VA (Max/Ch) Power
LVDT RVDT Measurement and Simulation	LD1	4 CH. LVDT/RVDT to Digital, 2-28 Vrms Input, 2-115 Vrms Exc, 47 Hz -1 KHz Freq
	LD2	4 CH. LVDT/RVDT to Digital, 2-28 Vrms Input, 2-115 Vrms Exc, 1 KHz - 5 KHz Freq
	LD3	4 CH. LVDT/RVDT to Digital, 2-28 Vrms Input, 2-115 Vrms Exc, 5 KHz - 10 KHz Freq
LVDT RVDT Measurement and Simulation	LD4	4 CH. LVDT/RVDT to Digital, 2-28 Vrms Input, 2-115 Vrms Exc, 10 KHz - 20 KHz Freq
	LD5	4 CH. LVDT/RVDT to Digital, 28-90 Vrms Input, 2-115 Vrms Exc, 47 Hz - 1 KHz Freq
Thermocouple and RTD Measurement	RT1	8 CH. Resistance Temperature Detectors (RTD), 2, 3, or 4 wire, 16 Bit Res, 16.7 Hz/Ch
	TC1	8 CH. Thermocouple, 4.17 - 470 Hz, ±100 mV A/D
Strain Gauge Measurement	SG1	4 CH. Strain Gauge, 4.7 Hz - 4.8 KHz, Measurement, Conventional 4-Arm Bridge

I/O Modules

Function	Module	Description
Analog-to-Digital	AD1	12 CH. A/D, ±10 V, Dedicated, 256 kHz (max), Sigma-Delta
	AD2	12 CH. A/D, ±100 V (max), Dedicated, 256 kHz (max), Sigma-Delta
	AD3	12 CH. A/D, ± 100 V, Dedicated, 200 KHz, Sigma-Delta
	AD4	16 CH. A/D, ± 10 V, Multiplexed, 500 KHz Agg / 8 Ch, SAR
	AD5	16 CH. A/D, ± 50 V, Multiplexed, 500 KHz Agg / 8 Ch, SAR
	AD6	16 CH. A/D, ± 100 V, Multiplexed, 500 KHz Agg / 8 Ch, SAR
Digital-to-Analog	DA1	12 CH. D/A, ± 10 V, 25 mA Per Channel, Current or Voltage Control
	DA2	16 CH. D/A, ± 10 V, 10 mA Per Channel, No Current Control
	DA3	4 CH. D/A, ±25 V, ±100 mA, Voltage or Current Out
	DA4	4 CH. D/A, ± 20 to ± 80, 10 mA, Voltage Control Only
Digital IO - Differential Transceiver	DF1	16 CH. Differential I/O, Input: -10 V to +10 V (422), -7 V to +12 V (485) Output: -.25 V to +5 V
Digital IO - Differential Transceiver	DF2	16 CH. 16 Channel Enhanced Differential I/O
Discrete IO - Multichannel,Programmable	DT1	24 CH. Discrete I/O, 0-60 VDC Input/Output, Max Iout 500 mA - 2 A, Source/Sink (out)
	DT2	16 CH. Discrete I/O, ±80 V Input/Output, Max Iout 600 mA, Isolated/Ch Switch (out)
	DT3	4 CH. Discrete I/O, ±100 V Input/Output, Max Iout 3A, Isolated/Ch Switch/Bridge
	DT4	24 CH. Enhanced DT1
	DT5	16 CH. Enhanced DT2
Relay	RY1	4 CH. Relay, 220 V / 2 A (Max), 60 W/62.5 VA, Non Latching
	RY2	4 CH. Relay, 220 V / 2 A (Max), 60 W/62.5 VA, Latching
Digital IO - TTL,CMOS	TL1	24 CH. TTL I/O, Standard Functionality, Programmable
	TL2	24 CH. TTL I/O, Enhanced Functionality, Programmable

Communication Modules

Function	Module	Description
ARINC Communications	AR1	12 CH. ARINC 429, 100 KHz or 12.5 KHz, RX/TX, 256 Word Tx/Rx Buffer
CANBus Communications	CB1	8 CH. CANBus, CAN 2.0 A/B, 16 K RX/TX Buffer, 1 Mb/s Max Data Rate
	CB2	8 CH. CANBus, J1939, 16 K RX/TX Buffer, 500 kb/s Max Data Rate
	CB3	8 CH. CANBus, CAN 2.0 A/B (CB1) or J1939 (CB2) protocol layer programmable per channel
Serial Communications	SC1	4 CH. Serial, RS-232/422/423 (MIL-STD-188C)/485, Non Isolated
	SC2	4 CH. Serial, RS-232/422/423 (MIL-STD-188C)/485, Isolated Per Channel and From Ground
	SC3	8 CH. RS-232/422/485 Async Serial Comms or GPIO, Programmable, Tx/Rx Only, Non Isolated
	SC7	4 CH. Serial, RS-232/422/423 (MIL-STD-188C)/485, Non-Isolated w/ (4) SYS-GND pins provided

Architected for Versatility

NAI's Configurable Open Systems Architecture™ (COSA®) offers a choice of over 100 smart I/O, communications, or Ethernet switch functions, providing the highest packaging density and greatest flexibility of ruggedized embedded product solutions in the industry. Preexisting, fully-tested functions can be combined in an unlimited number of ways quickly and easily.

One-Source Efficiencies

Eliminate man-months of integration with a configured, field-proven system from NAI. Specification to deployment is a seamless experience as all design, state-of-the-art manufacturing, assembly and test are performed - by one trusted source. All facilities are located within the U.S. and optimized for high-mix/low volume production runs and extended lifecycle support.

Product Lifecycle Management

From design to production and beyond, NAI's product lifecycle management strategy ensures the long-term availability of COTS products through configuration management, technology refresh and obsolescence component purchase and storage.