North Atlantic Industries

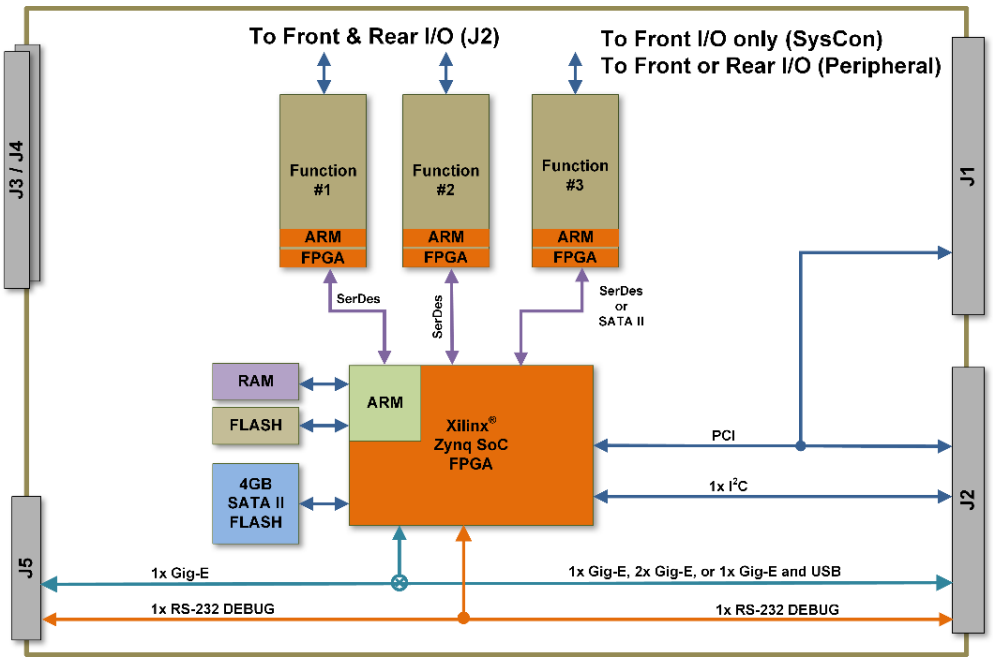



75ARM1 3U cPCI SBC with Three I/O Function Module Slots

Over 70 different functions to choose from

Configure to Customize

The 75ARM1 is a 3U cPCI ARM® Cortex®-A9 based Single Board Computer that can be configured with up to three NAI smart I/O and communications function modules. Ideally suited for rugged Mil-Aero applications, the 75ARM1 delivers off-the-shelf solutions that accelerate deployment of SWaP-optimized systems in air, land and sea applications.



Features

- ARM® Cortex®-A9 Dual Core 800MHz Processor
- 512 MB DDR3 SDRAM
- Up to 32 GB SATA II NAND Flash (256 GB expansion option in slot #3)
- < 5 W MB power dissipation
- Up to 3 independent smart I/O function modules supported
- System Controller (SysCon) or Peripheral option
- Front and/or rear I/O
- 70+ modules to choose from
- Commercial or rugged applications
- 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
- 1x RS-232 to front or rear I/O
- I²C Bus to rear I/O
- Wind River® Linux, VxWorks® and Xilinx® PetaLinux OS support
- 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

110 Wilbur Place, Bohemia NY 11716
Tel: 631.567.1100
www.naii.com

75ARM1
3U cPCI Single Board Computer

Select up to 3 independent functions for your application

I/O		Measurement & Simulation	
A/D	±1.25 VDC to ±100 VDC or 0-25 mA; 16 or 24-Bit; 12 or 16 Ch	Synchro/Resolver-Digital	16-Bit; ±1Arc-Min accuracy; 4 Ch
D/A	±1.25 VDC to ±80 VDC or ±25 mA to 100 mA; 16-Bit, 4-16 Ch	LVDT/RVDT-Digital	16-Bit resolution; 4 Ch
Discrete	0 to 60 VDC; Sink, source or push/pull; up to 24 Ch	Digital-Synchro/Resolver	16-Bit; Up to 3 VA; 1-3 Ch
Isolated Discrete	0 to ±80 VAC or VDC; 16 Ch	Digital-LVDT/RVDT	16-Bit; Up to 3 VA; 1-3 Ch
Relay	SPDT; 4 Ch	AC Reference	2 to 115 V_{RMS}; Up to 6 VA; 1 Ch
TTL	0 to 5.5 VDC; 24 Ch	RTD	16-Bit; 2, 3 or 4-wire; 8 Ch
Differential Transceiver	Up to ±12V; 422/485 Pulse Gen/Meas; 16 Ch	Thermocouple	J, K, T, E, R, S, B, N; 4 Ch
Communications		Strain Gage	16-Bit; 4 Ch
MIL-STD-1553	Quad Ch Dual Redundant; Transformer or Direct	**Memory Expansion**	
RS-232/422/423/485	4 Ch	**SATA II Flash****	Up to 256 GB
ARINC 429/575	12 Ch		
CANBus	8 Ch		
Ethernet Switch*	12 Ports; Layer 2/3 Management		

***Occupies 2 slots**
****Function slot 3 only**

Architected for Versatility

NAI's Configurable Open System Architecture™ (COSA®) offers a choice of over 70 smart I/O, communications, or Ethernet switch functions, providing the highest packaging density and greatest flexibility of any 3U SBC in the industry. Preexisting, fully-tested functions can be combined in an unlimited number of ways quickly and easily.

Board Support Package and Software Support

The 75ARM1 includes BSP and SDK support for Wind River® Linux, VxWorks® and Xilinx® PetaLinux tools. In addition, software support kits are supplied, with source code and board-specific library I/O APIs, to facilitate system integration. Each I/O function has dedicated processing, unburdening the SBC from unnecessary data management overhead.

Background Built-In-Test (BIT)

BIT continuously monitors the status of all I/O during normal operations and is totally transparent to the user. SBC resources are not consumed while executing BIT routines. This simplifies maintenance, assures operational readiness, reduces life-cycle costs and– *keeps your systems mission ready.*

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 in the U.S. and optimized for high-mix/low volume production runs and extended lifecycle support.

Product Lifecycle Management

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

Made in the USA
Certified Small Business