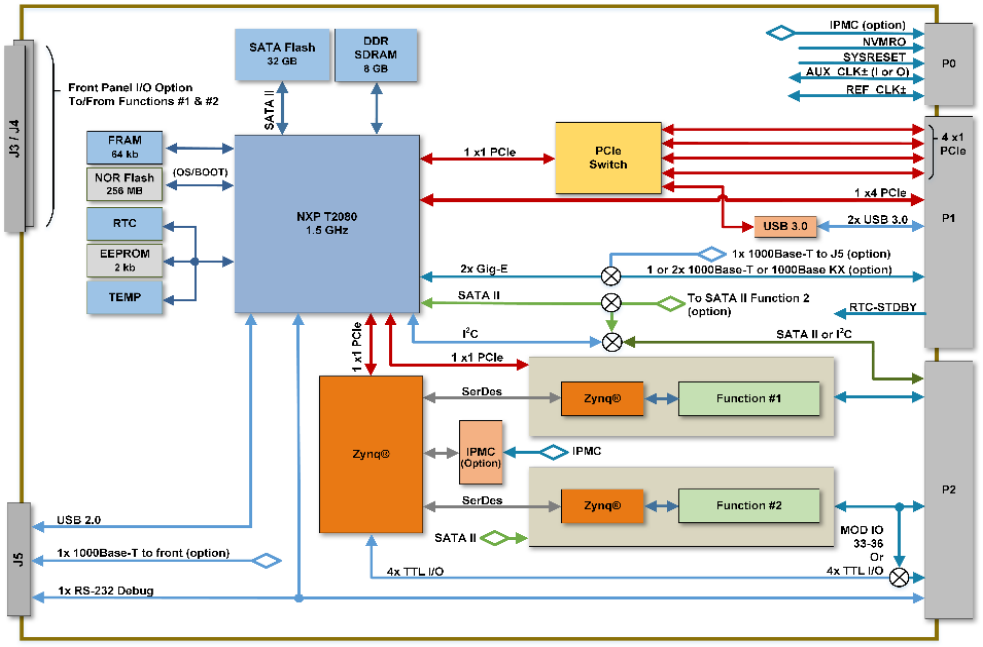
68PPC2 3U OpenVPX™ SBC with Two I/O Function Module Slots

Over 70 different functions to choose from

Configure to Customize

The 68PPC2 is a 3U OpenVPX™ NXP® PowerPC based Single Board Computer that can be configured with up to two NAI smart I/O and communications function modules. Ideally suited for rugged Mil-Aero applications, the 68PPC2 delivers off-the-shelf solutions that accelerate deployment of SWaP-optimized systems in air, land and sea applications.



Features

- Slot Profile: SLT3-PAY-2F2U-14.2.5
  - Data plane: 1x4 & 4x1 PCIe
  - Control plane: 2x 10/100/1000 Base-T or 2x 1000 Base-KX
- NXP QorIQ® T2080 Quad Core e6500 Processor @ 1.5 GHz
- 8 MB DDR3 SDRAM
- 32 GB SATA II NAND Flash
- < 20 W power dissipation (est./typ.) (not including module power)
- Up to 2 independent smart I/O function modules supported
- PCIe interface to function slot #1 (e.g. for 2 additional Gig-E ports option)
- SATA II interface to function slot #2 (e.g. for 256 GB expansion function option)
- Front and/or rear I/O
- 1x USB 2.0, to front maintenance J5
- 2x USB 3.0, to rear I/O
- I²C bus to rear I/O
- 1x RS-232 console port; to front maintenance J5 and rear I/O
- 4x TTL I/O to rear I/O (option)
- External SATA II interface (option)
- IPMC Support (configured option)
  - VITA 46.11 Tier-2 compatible
- Wind River®, VxWorks® or Linux® BSP/OS support
- Continuous Background Built-in-Test (BIT) (as applicable)
- COSA® Architecture
- Intelligent I/O library support included
- VICTORY Interface Services (Contact factory)
- Commercial or rugged applications operating temperature
  - Commercial: 0° C to 70° C
  - Rugged: -40° C to 85° C
- Mechanical Options
  - Air Cooled; 0.8” & 1.0” pitch
  - Conduction Cooled; 0.8” pitch

68PPC2
3U OpenVPX™ Single Board Computer

Select up to 2 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. Measurement)
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. (Measurement)
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. (Simulation)
Isolated Discrete	0 to ±80 VAC or VDC; 16 Ch.	Digital-LVDT/RVDT	16-Bit; Up to 3 VA; 1-3 Ch. (Simulation)
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 Interface*	2x 10/100/1000 Base-T		
Time Triggered Ethernet (TTE)*	Single Port, Triple Redundant; TTE SAE AS6802, ARINC664 Part 7/AFDX or IEEE 802.3 (best effort)		

***Function slot 1 only**
****Function slot 2 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 68PPC2 includes BSP and SDK support for Wind River® Linux and VxWorks®. 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