



# SIU35 Rugged COTS Systems

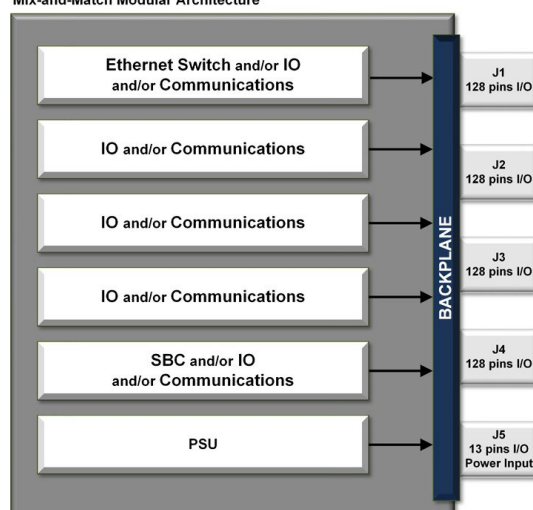
## 3U cPCI Sensor Interface Unit - SIU35

**Configure with up to 15 I/O and communication function modules—  
Over 100 different modules to choose from**

The SIU35 is a highly configurable rugged system or subsystem ideally suited to support a multitude of Mil-Aero applications that require high-density I/O, communications, Ethernet switching and processing. The SIU35 leverages NAI's 3U boards to deliver off-the-shelf solutions that accelerate deployment of SWaP-optimized systems in air, land and sea applications.



Mix-and-Match Modular Architecture



### Features

- **COSA® Architecture**
- **5x 3U cPCI or OpenVPX™ Card Slots**
  - Supports up to 15 I/O and/or Communication smart functions
  - 100+ modules to choose from
- **SBC-less stand-alone operation supported via Ethernet connection to your mission computer**
- **Processor Options: Freescale PowerPC™ QorIQ® P2041, Intel® Core™ i7 or ARM® Cortex®-A9**
- **COTS/NDI Sense & Response system**
- **Fast Boot Capability**
- **Customer Configurable I/O, Communications and Processing**
- **Reduced SWaP Footprint**
  - Conduction-Cooled (CC):
    - 7.1" (W) x 4.8" (H) x 8.7" (D)
    - ~7.5 lbs. (unpopulated)
  - 3U cPCI CA Weight
    - 1.4 lbs for PSU
    - 1.25 lbs. SBC or I/O CCA
  - 28 VDC input
- **Wind River® Linux, VxWorks®, Xilinx® PetaLinux and Windows® Embedded Standard 7 OS support**
- **Continuous Background Built-In-Test (BIT)**
- **Specifications**
  - Operating temp: -40°C to +71°C @ thermal interface, conduction cooled
  - Environmental/EMI
    - MIL-STD-461\*
    - MIL-STD-810
    - MIL-STD-1275
    - MIL-STD-704

\*MIL-STD-461F requires properly shielded cables and system grounding practices.

## Select up to 15 independent functions for your application with up to 5 card slots

I/O Boards and Single Board Computers					
Type	Model	Description	Type	Model	Description
Single Board Computers	<a href="#">75ARM1</a>	3U cPCI ARM Cortex-A9 Based Single Board Computer	Multifunction I/O Boards	<a href="#">75D4</a>	cPCI-3U Multifunction I/O with Integrated High Speed Serial (RS-232/422/423/485) and Discrete I/O
	<a href="#">75INT2</a>	3U cPCI Intel i7 Based Single Board Computer		<a href="#">75G5</a>	3U cPCI MFIO Board
	<a href="#">75INT6</a>	3U cPCI SBC with NAI-COSA Module	Single Function I/O Boards	<a href="#">75DL1</a>	cPCI-3U Digital-to-LVDT Simulation Motherboard
	<a href="#">75PPC1</a>	3U cPCI PPC 2041 Based Single Board Computer		<a href="#">75DS1</a>	cPCI-3U Digital-to-Synchro/Resolver Simulation Motherboard
Multifunction I/O Boards	<a href="#">75C3</a>	cPCI-3U Multifunction I/O Board		<a href="#">75DS2</a>	cPCI-3U Digital-to-Synchro/Resolver/LVDT Simulation Motherboard
	<a href="#">75C5</a>	cPCI-3U Multifunction I/O Board	Rugged Power Supplies	<a href="#">75PS4</a>	Power Supply Unit, 3U cPCI
Smart Function Module					
Type	Module Category		Type	Module Category	
Combination Modules	<a href="#">A-to-D &amp; D-to-A</a>		Communication Modules	<a href="#">MIL-STD-1553B</a>	
	<a href="#">MIL-STD-1553B &amp; ARINC-429/575</a>			<a href="#">MIL-STD-1760</a>	
	<a href="#">MIL-STD-1553B &amp; Prog. Discrete IO</a>			<a href="#">Serial Communications</a>	
	<a href="#">Serial Communications &amp; Digital I/O - Differential Transceiver</a>			<a href="#">Time Sensitive Networking</a>	
Measurement & Simulation Modules	<a href="#">AC Reference</a>			<a href="#">Time-Triggered Ethernet</a>	
	<a href="#">IRIG Timecode Receiver and Generator</a>		I/O Modules	<a href="#">Analog-to-Digital</a>	
	<a href="#">LVDT RVDI Measurement and Simulation</a>			<a href="#">Chip Detector and Fuzz Burn</a>	
	<a href="#">Pulse Timer Receiver and Generator</a>			<a href="#">Digital IO - Differential Transceiver</a>	
	<a href="#">Strain Gauge Measurement</a>			<a href="#">Digital IO - TTL/CMOS</a>	
	<a href="#">Synchro Resolver Measurement and Simulation</a>			<a href="#">Digital-to-Analog</a>	
	<a href="#">Thermocouple and RTD Measurement</a>			<a href="#">Discrete IO - Multichannel, Programmable</a>	
Communication Modules	<a href="#">ARINC Communications</a>			<a href="#">Relay</a>	
	<a href="#">CANBus Communications</a>		<a href="#">Variable Reluctance</a>		
	<a href="#">Ethernet NIC Interface</a>		Chassis Management (ChM)	<a href="#">Chassis Management</a>	
	<a href="#">Ethernet Switch</a>		Storage	<a href="#">SATA Solid State Drive (SSD)</a>	
	<a href="#">IEEE 1394 (FireWire)</a>				

### 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.

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