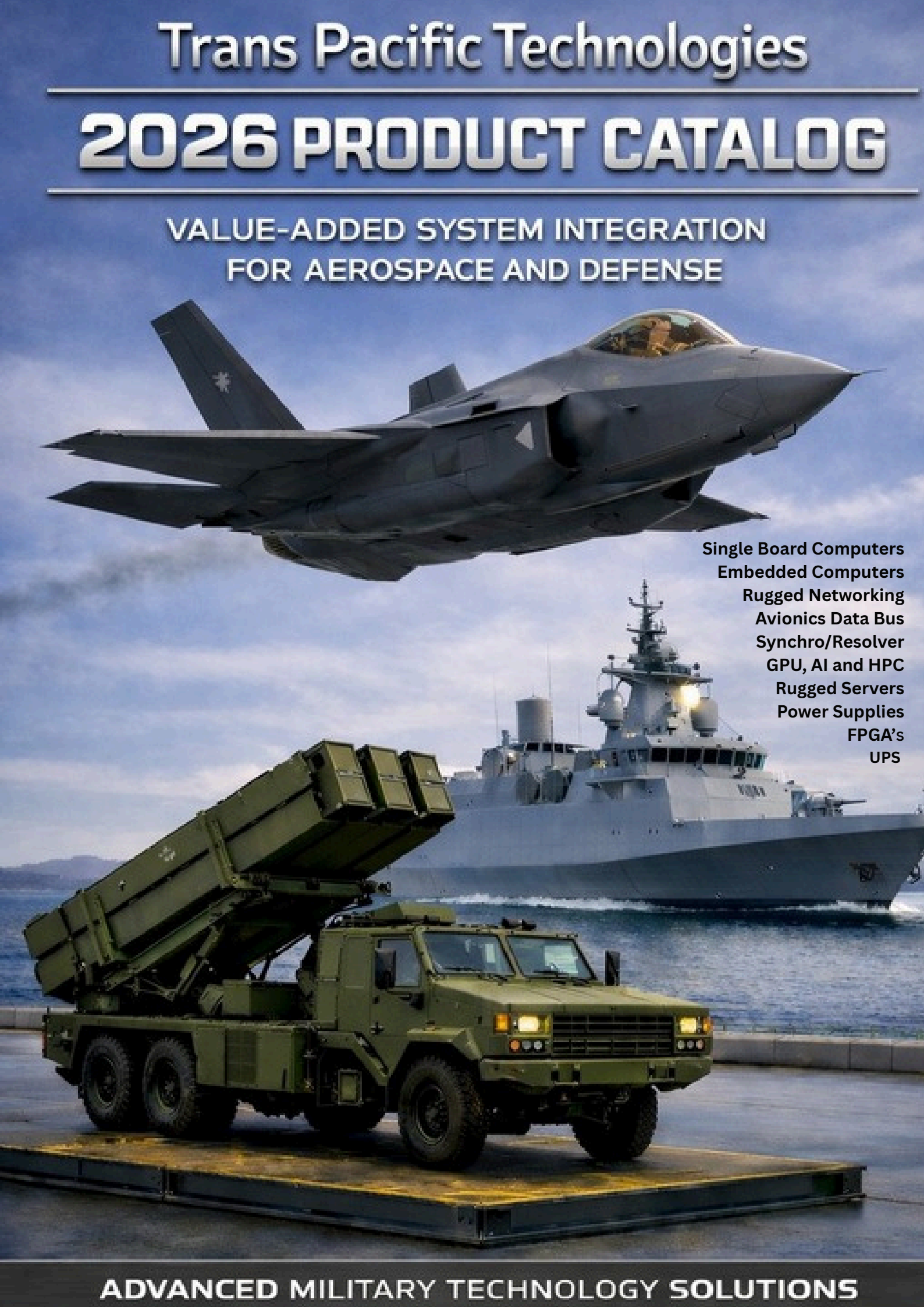
Trans Pacific Technologies

2026 PRODUCT CATALOG

VALUE-ADDED SYSTEM INTEGRATION FOR AEROSPACE AND DEFENSE



Single Board Computers
Embedded Computers
Rugged Networking
Avionics Data Bus
Synchro/Resolver
GPU, AI and HPC
Rugged Servers
Power Supplies
FPGA's
UPS

ADVANCED MILITARY TECHNOLOGY SOLUTIONS

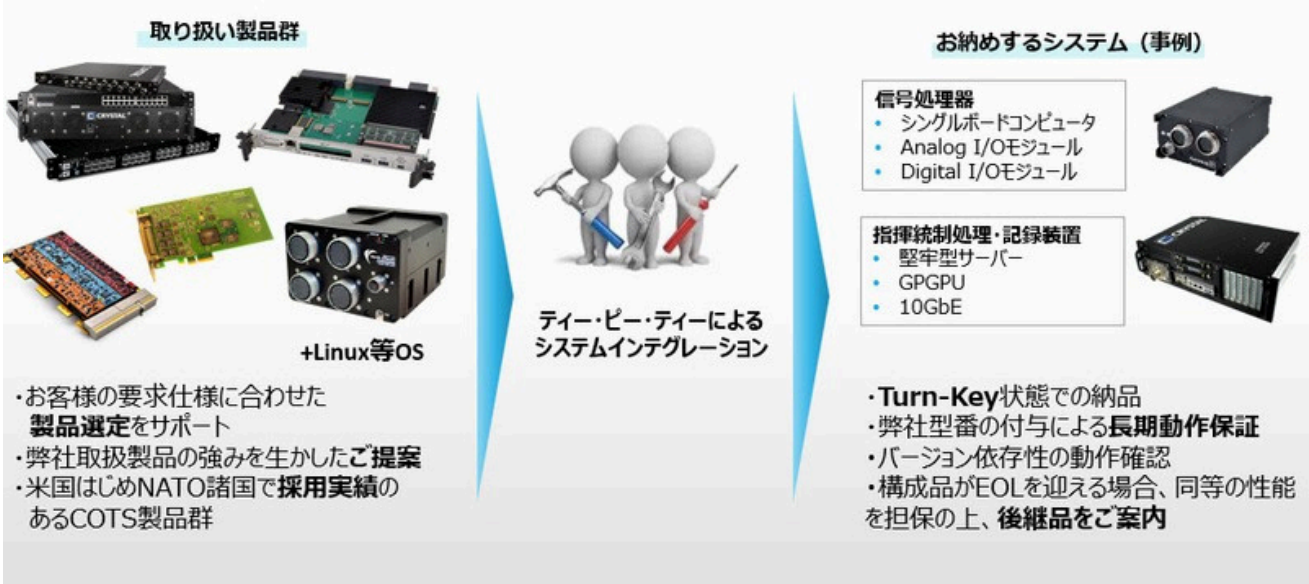
Value Added System Integration for Aerospace and Defense

Trans Pacific Technologies can provide a Turn Key Solution for your next requirement.
Contact our staff at info.t@tptech.co.jp

About Us

Trans Pacific Technologies (TPT), founded in 1991, is an authorized distributor and system-level integrator supporting embedded computing, mission-critical electronics, and test-and-measurement solutions for advanced system development across the Asia-Pacific region.

TPT K.K., established in Tokyo in 1995, provides comprehensive Value-Added System Integration services tailored to aerospace and defense program requirements. Our sales engineers work closely with our technical specialists to accurately interpret system needs, propose optimal architectures, and provide ongoing technical support throughout the design, integration, and validation phases.



Value-Added System Integration Supporting a Wide Range of Embedded and Test Solutions

Single Board Computers

3U VPX

Intel

68INT6

- i7-1185GRE

Security / Cybersecurity (Option)

- Up to FIPS 140-3 Level 3
- Crypto-key storage
- Secure Boot
- Anti-tamper / Tamper
- Detect & Erasure/Sanitize
- Support for 2 modules

ARM

68ARM4

- NXP LX2 Processor Family up to 1.9 GHz w/ 8, 12 or 16 Cortex-A72 CPU Cores; 32 GB DDR4 SDRAM

Security / Cybersecurity (Option)

- Up to FIPS 140-3 Level 3
- Crypto-key storage
- Secure Boot
- Anti-tamper / Tamper
- Detect & Erasure/Sanitize
- Support for 2 modules

Nvidia

THOR-CX7-SBC

- Embedded Blackwell GPU, with 2560 CUDA cores and 96 Gen 5 Tensor cores
- 14-core ARM® Neoverse®-V3AE CPU, 2.6GHz
- 128 GB ECC LPDDR5X 256-bit memory at 273 GB/s
- ConnectX-7, provides up to 100GbE, PCIe Gen5
- Module power: configurable from 70W – 150W

VME ARM

64ARM

- ARM® Cortex®-A9 Dual Core 800MHz Processor; 512 MB DDR3 SDRAM
- OS: Wind River®, VxWorks® and Xilinx®PetaLinux OS support
- Support for 6 independent smart I/O and communications modules
- Operating Temperature: Commercial: 0°C to +70°C; Rugged: -40°C to +85°C

Multifunction I/O

3U VPX

6U VPX

68G6

- Support for up to 3 smart function modules
- Operating temp: -40° C to +85° C
- 2x 10/100/1000 Base-T Ethernet
- Background Built-In-Test (BIT) monitors the health of each channel
- Software Support Kits (SSKs) and drivers available
- Over 100 modules to choose from

67G6

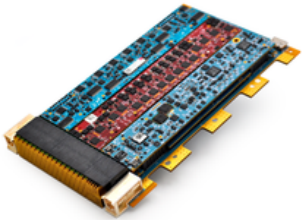
- ARM® Cortex®-A53 Processor (option): Provides access for local I/O processing, 2 GB DDR4 + ECC / 32 GB SATA
- Up to 6 independent Intelligent I/O function modules supported
- 24 Channels programmable Discrete I/O (option): 0 to 60 VDC; Sink, source or push/pull
- Independent x1 SerDes interface to each function module slot
- Continuous Background Built-In-Test (BIT)
- RS-232 console/maintenance port
- Intelligent I/O library support included
- Operating temp: -40° C to +85° C

Reduce the number of cards with high-functional-density modules.
Each module includes Built-In Test (BIT) with extensive programmable options.
More than 100 module configurations are available

Input/Output
A/D & D/A
Discrete/PWM
Isolated Discrete/PWM
Differential Discrete
TTL
Relays
Chip Detect/Fuzz Burn
Variable Reluctance
Video

Measurement/Simulation
Synchro/Resolver-to-Digital
Digital-to-Synchro/Resolver
LVDT/RVDT-to-Digital
Digital-to-LVDT/RVDT
AC Ref./Exc.
RTD/Thermocouple
Strain Gauge/Accelerometer
Encoder (SSI/A-Quad-B)
GPS/IRIG/Pulse Timer Receiver & Generator

Communications
MIL-STD-1553/1760
RS-232/422/485
ARINC-429/575/708A-3
CAN bus
Firewire
Profibus
Ethernet Switch
Ethernet Dual NIC
TSN/TTE/AFDX/ARINC664p7



System Products

NAI's system chassis range from compact single-function solutions such as the NIU1A (up to 24 channels) to high-density systems like the SIU36S, which supports up to six 3U OpenVPX boards and 18 smart modules—providing as many as 1,440 channels. With a library of more than 100 pre-integrated function modules, the number of available configurations is extensive, greatly increasing the likelihood of an off-the-shelf solution that meets specific program requirements.

Rugged COTS Systems					
Nano Interface Units (NIUs)	Dimensions w/ Connectors (w x h x d)	Weight / lbs. (fully populated)	Function Module Slots (Max.)	Board Slots	Board Formats
NIU1A	6.8" x 1.5" x 2.5" (CC*)	~ 1.2 lbs. (CC*)	1	N/A	Integrated
NIU2A	7.3" x 3.1" x 2.7" (CC*)	~ 2.7 lbs. (CC*)	2	N/A	Integrated
NIU3A	7.2" x 5.5" x 3.2" (CC*)	~ 5.4 lbs. (CC*)	3	N/A	Integrated
NIU3E	7.2" x 7.1" x 3.2" (CC*)	~ 7.7 lbs. (CC*)	1	N/A	Integrated
Sensor Interface Units (SIUs)	Dimensions w/ Connectors (w x h x d)	Weight / lbs. (unpopulated)	Function Module Slots (Max.)	Board Slots	Board Formats
SIU33	4.7" x 4.8" x 8.7" (CC*)	~ 5.5 lbs. (CC*)	9	3	cPCI
SIU35	7.1" x 4.8" x 8.7" (CC*)	~ 7.5 lbs. (CC*)	15	5	cPCI, OpenVPX
SIU34	5.7" x 5.9" x 9.4" (CC*)	~ 9.7 lbs. (CC*)	12	4	OpenVPX
SIU36	9.0" x 5.0" x 9.5" (CC*) 9.0" x 6.4" x 9.5" (AC**)	~ 13.2 lbs. (CC*) ~ 14.4 lbs. (AC**)	18	6	OpenVPX
SIU32S	6.0" x 4.6" x 9.5" (CC*) 6.2" x 4.8" x 9.5" (AC**)	~ 6.6 lbs. (CC*) ~ 6.9 lbs. (AC**)	6	2	OpenVPX SOSA™-aligned
SIU34S	6.0" x 4.6" x 9.5" (CC*) 6.0" x 7.2" x 9.5" (AC**)	~ 9.2 lbs. (CC*) ~ 9.7 lbs. (AC**)	12	4	OpenVPX SOSA™-aligned
SIU36S	10.0" x 5.1" x 9.5" (CC*) 6.1" x 9.5" x 9.5" (AC**)	~ 13.2 lbs. (CC*) ~ 14.4 lbs.(AC**)	18	6	OpenVPX SOSA™-aligned

*** Conduction-Cooled (CC)**
**** Air/Convection-Cooled (AC) Versions**

NAI's Modular Open Systems Approach (MOSA) delivers MIL-qualified, mission-critical embedded processing solutions that reduce program risk and lifecycle cost. Built on the COSA® architecture, our SOSA™-aligned COTS portfolio includes Single Board Computers (SBCs) featuring Intel® i7, Xeon®, Tiger Lake and ARM® Cortex®-A53/-A72 processors. All SBCs support operating temperatures from −40°C to +85°C and are designed to meet MIL-STD-1275, MIL-STD-704 (50 ms holdup), MIL-STD-461, and MIL-STD-810 requirements.

High Performance Computing Solutions for Demanding Applications

At New Wave Design, we specialize in delivering precise, tailored solutions for mission-critical applications. As a high-performance FPGA computing company, our team comprises industry experts in FPGA coprocessing, high-speed serial interface hardware, IP cores, and SOSA aligned/openVPX system-level products designed for embedded and test systems. In addition to our comprehensive range of off-the-shelf products, we offer expert hardware design services.

The key applications for New Wave Design are:

- Radar Processing
- Electronic Warfare (EW)
- Signal Intelligence (SIGINT)
- Aerospace & Defense Embedded Communication Systems

Product	Information	Form Factor
V6069	Versal® Premium Adaptive SoC FPGA Optical I/O Module with QMC Sites	3U VPX
V6065	Rugged optical and electrical high-speed IO	3U VPX
V6063	Versal ACAP FPGA Optical I/O Module	3U VPX
V6061	Versal ACAP FPGA + Ethernet Offload Optical I/O Module	3U VPX
V1141	Quad-Port FPGA Card	XMC
V1152	12-Port FPGA Card	XMC
V1162	Dual-Port Programmable 100G Rugged Ethernet XMC ASoC Card	XMC
V1163	12-Port Rugged Adaptive SoC Module	XMC

Power Supplies

Leading provider of VPX power supplies for the rugged embedded market. Our products meet open standards including VITA 62 with SOSA™-aligned options available. We offer an enormous range of off-the-shelf configurations and our product architecture allows us to quickly adapt to meet additional customer needs upon request.





VPX				
Product	**Input**	**# Outputs**	**Watts**	**Form Factor**
VPX55H-3	+28 VDC	6	500	3U
VPX55HS	+28 VDC	6	725	3U
VPX68	+28 VDC	6	400	3U (Hold up Optional)
VPX55-32HS	+ 28 VDC	1	100	3U VPX(Short Profile)
VPX56H-6	3 Phase AC	5	1,000	6U
VPX56H2-6	3 Phase AC	5	1,400	6U

NAI's high-altitude option VPX power supplies extends our product capabilities up to 70,000 feet. Available for 3U and 6U form factors with a maximum output of 1,400 watts.

Rugged Video Modules

WOLF's products include advanced NVIDIA GPUs and Xilinx FPGAs, providing video capture, video output, image and data processing, and video encoding.

3U VPX				
Product	**GPU**	**Cuda Cores**	**Video Outputs**	**Video Inputs**
BW5000E-CX7	Blackwell RTX5000	10496	HPEC	
Orin-CX7-FGX2-SBC	Orin, ConnectX-7, FGX2	2048	DisplayPort, HDMI, 2 SDI	2 SDI
THOR-SBC	Blackwell GPU	2560	DisplayPort, HDMI	

XMC graphics cards for video capture, process, encode and display. WOLF XMC video graphics boards can include an embedded NVIDIA GPU and/or Xilinx FPGA. Rugged air cooled and conduction cooled options are available for WOLF's XMC modules.

XMC				
Product	**GPU**	**Cuda Cores**	**Video Outputs**	**Video Inputs**
AD2000E-FGX2-IO	Ada RTX2000E	3072	2, 4 SDI	4 SDI, 2 CVBS
A2000E-VO	A2000E	2546	3 Rear, 2 Front	

VNX+ isn't limited to the obvious use cases of handheld or small UAV systems. With the right chassis, it becomes a versatile building block that can be embedded wherever designers need rugged, open-standard computing power — whether tucked into a sensor pod, integrated into a satellite payload bay, or hidden inside the narrow confines of a missile body.

VNX +				
Product	**GPU**	**Cuda Cores**	**Video**	**Note**
VNXP-ORIN-NX	Ampere	1024	DisplayPort or HDMI	Embedded 8-core NVIDIA Cortex ARM64 CPU, 2GHz
VNXP-FGX2-VIO	WOLF Frame Grabber		Four SDI In/Out	4K Video Capture/Transmit

Rugged Servers

Crystal Group applies a no-compromise approach to developing rugged computing solutions tailored to specific operational requirements. The company consistently accepts challenging environmental and performance demands, delivering the predictable, mission-ready reliability needed to operate in the world's most severe conditions.

Size	Product	CPU	Memory	Depth (in.)	Weight (lbs)	Notes
1U	FG2 1100	4th Gen. Intel Xeon	16GB–4TB	19	23-26	AI, C4/ISR processing
1U	RS112PS18M	Intel® i7, i9 processors	Up to 64GB	18	10.5 - 15	Ultra light weight carbon fiber chassis
2U	RS2301S8F	8th/9th Gen i3/i5/i7	Up to 32GB	8	11.1	Short Depth, vital cybersecurity features
2U	FG2 2600	5th Gen Intel Xeon Scalable	16GB–2TB	19	32 - 38	Up to 16 SATA or SAS SSDs or Up to 8 U.2/U.3 NVME SSDs
3U	RS363SF	Intel® Xeon® Scalable processors	16GB–1TB	15	35 - 40	Three removable 3.5" HDDs or five 2.5" SATA or SAS bays, Front I/O
3U	FG2 3700	4th Gen. Intel Xeon	16GB–4TB	19	38 - 42	Up to 4 high-performing GPUs and either Intel® Xeon® Scalable or AMD EPYC™ processors

Module Options

Modules provide easy customization and decreased footprint

Crystal Group FORCE™ rugged servers deliver high performance computing with flexible options that converge storage, networking, cybersecurity and audio; eliminating separate systems and reducing power, space and cooling. Crystal Group FORCE servers can be tailored to meet unique application needs of today and easily reconfigured for tomorrow.

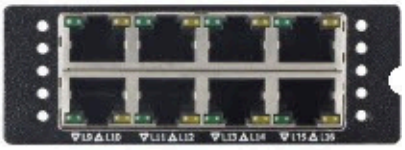

Circuit breaker

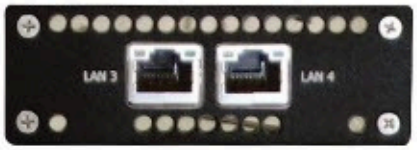

Serial port


CMOS battery tray

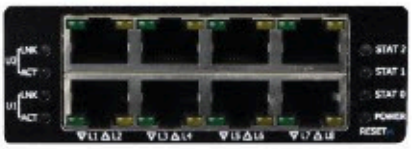

Dual drive

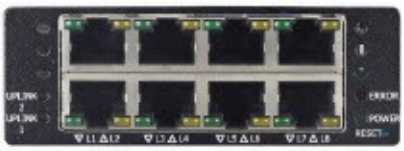

Triple drive





2-port GbE LAN


8-port GbE switch

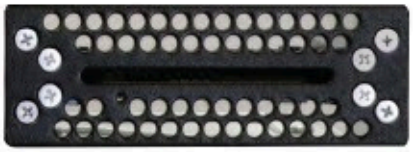

16-port GbE switch


USB sound card


USB audio device with speakers

2x USB 3.0


Data sanitize


Card reader

Embedded Computers

Feature-rich embedded computer systems are powerful, compact and rugged. Easily configurable to meet program-specific requirements, our embedded products boast advanced thermal management, carbon-fiber chassis and are field tested to withstand shock and vibration, extended temperature ranges, harsh elements and extreme environments.



Product	CPU	Memory	Weight (lbs)	Note
RE1739	Accommodates multiple micro-ATX motherboard/processor configurations	Six SATA/SAS 2.5" SSD (externally removable)	18–30	
RE1900	AI edge processors, NVIDIA Ampere architecture.	1TB NVMe storage	Lightweight	IP68 sealed and shock resistant
RE3423M	Up to 20 cores, 150W TDP at 65°C	Up to 512GB	33	Ground vehicles with high vibration and rain exposure, Aircraft in unmanned areas of heavy humidity and condensation, Naval applications with high humidity and salt atmosphere.

Rugged Switches

Equipped with secure, ultra-low latency, our rugged networking appliances ensure reliable, real-time data transmission to demanding applications in any domain or operating environment. All of our high-performance switches and firewalls are housed in rugged, lightweight, compact enclosures, such as transit cases or 19-inch racks with strain-hardened aircraft aluminum built to survive extreme temperatures, humidity, shock and vibration, dust, sand and salt fog.


Size	Product	CPU	Uplink ports	Weight (lbs)
1U	RCS7550	-C (24/48x 24 RJ-45 10/100/1000 Mbps -F (24/48x 24 SFP+ 1/10 Gbps)	Options - 1-port 100GbE QSFP28, 2-port 40GbE QSFP+, or 4-port 1/10GbE SFP	13.5 - 16.3
1U	RCS8200	-C (24x 10/100/1000 Mbps RJ-45) -F (24x 100/1000 Mbps SFP)	-C (4x 1/10/25 Gbps SFP/SFP+/SFP28) -F (4x 1/10/25 Gbps SFP/SFP+/SFP28)	7.5-7.9

Rugged Power Solutions for Mission-Critical Applications

Acumentrics, the leader in ruggedized power solutions supporting a wide range of demanding military applications, introduces their 1000W Rugged Half Rack UPS™ (Uninterruptible Power Supply) with industry leading SWaP-C, providing the warfighter with a new level of power-portability for mission-critical applications. At just 12lbs, Acumentrics' Rugged Half Rack™ UPS features an industry leading power density of 83W per pound and is just one-third the size of a 1000W full-size chassis.

Product UPS	Input	Output	Weight (Lbs)
AWB1252-AC 2U ½ Rack	AC Voltage: 80-265 VAC, single phase Frequency:47-440 Hz AC Circuit Breaker Rating:20A DC Voltage: 20-32V	AC Continuous Power: 1250VA/1000W AC Voltage: 115VAC ± 5% AC Frequency: 60 or 50Hz ± 0.5Hz AC Waveform: Sinusoidal	20
AHB1001 1U ½ Rack	AC Voltage: 100-264 VAC, single phase Frequency:47-63 Hz AC Circuit Breaker Rating:20A	DC Continuous Power: 1000W DC Max Current: 35A DC Voltage: 20 – 29 VDC	12
ANG 1251	AC Voltage 80 - 265 V Frequency 47 - 440 Hz AC Breaker Rating 20 A DC Voltage 22-32 V Max DC Current 80 A	Continuous Power 1500 VA / 1250 W AC Voltage 115 or 230 V ± 5% AC Frequency 60 or 50 Hz	28 with LFP

Rugged Power Distribution Unit provides Mission-Ready Power Quality

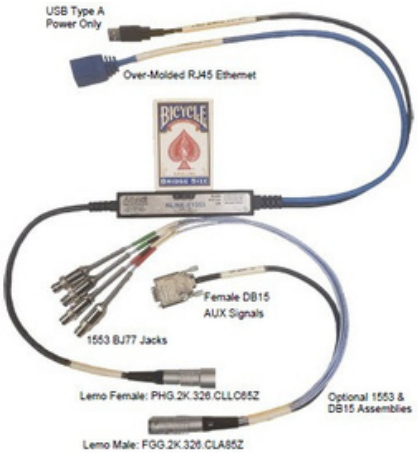
- Stabilizes voltage, frequency, and waveform for sensitive C4ISR, radar, and comms systems
- Eliminates brownouts, surges, spikes, sags, and noise common in tactical environments
- Ensures clean power for MIL-STD electronics, even with unstable generators

Product PDU	Description
APB3001	Complete Rugged Power Management Accessory - The unit offers maximum cable management, providing conditioned power for many combinations of circuit breakers, inputs and outputs.

Avionics Data Bus

- Widest Selection of COTS 1553, ARINC and Serial Interface Cards/Boards.
- Deployed on 1000s of Systems
- Lab->Rugged USB, Real-Time Ethernet Converters (ENETs), In-Line (NLINE) Products
- Independent Channels – Alta Unique!
- Signal Capture O-Scope on Most Products – Free!
- Windows Analyzer and Protocol Validation – AltaView
- 5 Year Warranty – Best In The Industry

1553, 1553b & ARINC Advanced Analyzer Tool for Windows



Amazing 1-10 Independent MIL-STD-1553 Channels for XMC (SBCs, VPX, VME, cPCI/PXI Systems)

429 and 1553			
Product	**Form Factor**	**Channels**	**Notes**
Analyzer 1553 and ARINC 429	Software		Auto Discovery and Sorting of of Network/Bus Traffic & ARINC Labels, Real-Time Displays of Data/Packets. Multi Windows of Real-TIme Displays
XMC-1553	XMC	1 - 10	• 1-10 Independent, Dual Redundant (A/B) MIL-STD-1553 Channels • Full TX Loop-Back Verification for BC and RT. Dual Temp Sensors • Dual Function Models: BC/Mon or mRT(1-32)/Mon • Full Function Models: BC/Mon and mRT(1-32)/ Mon
ENET2-1553	SFF	1 -2	Provides “remoting” of 1553 operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN)
MP2-1553	M.2	1-2	The MP2-1553 perfect for a wide range of applications, including flight control, mission computers, and mobile ground vehicle systems where space and weight are critical considerations.
PCIE4L-1553	PCIe	1-4	• Dual Redundant (A/B) MIL-STD-1553 Channels. • Dual Function (BC/Mon or mRT/Mon) or Full Function (BC/mRT/Mon) • One Mbyte of Memory per Channel • Commercial or Industrial Extended Temperature Parts
NLINE-E1553	In Line	1-2	• Dual Redundant 1553 Channels. Rugged NLINE Packaging. • 6 RX Avionics Discretes for General Use or 1760 RT Addressing • MIL-810G Shock/Vibe/Temp, 810-512.6 Water Immersion, and MIL-461F EMC Test Reports
XMC-MA4	XMC	1553 1 - 5 429 8	• 1-5 Independent, Dual Redundant (A/B) MIL-STD-1553 Channels and Optional 8 ARINC Channels • 8 ARINC Channels: 4 Shared RX/TX & 4 RX • Ideal for Advanced Test or Embedded Applications

Synchro/Resolver and Phase Angle Voltmeter

NAI's Simulator, Angle Position Indicator and Phase Angle Voltmeter instruments are field-proven over many years of use and have become the industry standard.



Instrument	Ch	Accuracy	Signal	Ref.	Frequency	Notes
5330A Synchro/Resolver Simulator	2	Up to ±0.005°	1 to 90 VL-L Auto Ranging	2 to 115 Vrms	47 Hz to 10 kHz	Two Speed Operation, Dynamic Angle Modes, Optional 6 VA Reference
8810A Synchro/Resolver API	2	Up to ±0.0015°	1 to 90 VL-L Auto Ranging	2 to 115 Vrms	47 Hz to 20 kHz	Two Speed Operation, Velocity & DC Angle Outputm, Optional 6 VA Ref.
2250A Phase Angle Indicator	1	Up to ±0.01°	50 MV to 500 Vrms	50 MV to 500 Vrms	10 Hz to 1 MHz	Phase Resolution - 0.0001°

Calibration and Repair

シンクロパネルメータ:	800, 801
角度表示機（API):	8025, 8525, 8300,8310, 8500, 8800,8810, 8810A
位相角電圧計（PAV):	212, 213, 214シリーズ
デジタルアナログボルトメータ:	225, 2250, 2250A, 2251
シンクロ・レゾルバシュミレータ（SIM):	5310, 5330, 5330A-10, 5330A-20
シンクロ・レゾルバブリッジ:	540, 540/20

Chassis




Model	Size	Slots	Notes
VPXD0500	3U VPX	Up to 8	The VPXD0500 open frame chassis, is ideal for testing and development of 3U VPX systems.
VPXD0800	6U VPX	Up to 8	The VPXD0800 open frame chassis is ideal for testing and development of 6U VPX systems.
VPXDC2500	3U VPX	4	Ideal for both internal prototyping/testing and as a show unit for customer demonstrations
ATR012/ATR014	ATR	5	1/2 or 1/4 ATR Chassis, Rear Loaded for 3U OpenVPX, Conduction Cooled

Design Win Examples

Type	Company	Product	Program	Notes
Space	Alta Data	eNet-1553	Space X	System testing
Space	NAI	SIU35	Orion	Launch Abort System
Air	NAI	NIU1A	Global Hawk	Multiple NIU1A's were configured to add a variety of I/O functions.
Air	NAI	SIU36	Bell 360 Invictus	Mission Computer
Air	Alta Data	ENETX	A/MH-6R	1553 communications between the mission computer and the aircraft's subsystems.
Air	Crystal	RS112	B-2	Mission-critical systems, like the B-2's Adaptable Communications Suite
Air	Crystal	RSS116F	P-8	Mission Computing
Air	Wolf	XMC-FGX2-SDI-4IO	X-59	NASA's Quiet Supersonic Transport - EXTERNAL VISION SYSTEM (XVS)
Ship	NAI	SIU35	LCAC-SSC	Data Acquisition and Control System
Ship	Crystal	RS378L24 RS255L24	LCS	Data Acquisition and Control System
Sub	NAI	SIU	Unmanned Sub (ACTUV)	20 Analog Input and 4 Analog Output channels; 12 RTD channels; 48 Discrete I/O channels
Ground	Wolf	Various XMC	Surveillance SystemS	ISR - Intelligence, Surveillance, and Reconnaissance
Ground	NAI	SIU33	Missile Launch Systems	Digital discretes and synchro analog outputs needed to activate, rotate, and point the gun system

【ご提供可能なソリューション】

- アビオニクスデータバス (1553, 429, AFDX, CANBus, TTE, TSN)
- シングルボードコンピュータ (Intel, PowerPC,ARM)
- 映像処理 (レーダ, AI, 監視活動)
- 堅牢型サーバ、スイッチ (高性能コンピュータ,サイバー防護機能付記憶媒体)
- 電源供給ユニット (3Uまたは6UのVPX)
- Synchro/Resolver、LVDT/RVDT 機器およびボード

ティー・ピー・ティー株式会社
〒110-0008
東京都台東区池之端1-6-13 境会館５階
TEL：03-5832-7350
e-mail：sales.t@tptech.co.jp

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