

Navy relies on ATCA embedded computing system for upgrading Aegis weapon system



Headlines

- Wind River again again independent
- Rolls-Royce restructuring – 4,600 to go
- Extend Your ETX based System's Life
- New Super VME Board from Kontron
- Smart Panel from Prototype to Solutions
- Defense & Aerospace International News

In this Edition

- < Extend Your ETX-based System's Life Cycle with A New Intel-based ETX Module
- < General Micro Systems Launches Dual Xeon® OpenVPX Blade with Highest Compute Density of Any Server Available Today
- < ADLINK's Smart Panel Expedites Prototype to Solution of Innovative Smart Devices
- < Rolls-Royce confirms restructuring – 4,600 employees to go
- < Navy relies on ATCA embedded computing system from Artesyn for upgrading Aegis weapon system
- < ATCA-7540 Dual-Star 40G Server Blade, DUAL Intel® Xeon® Scalable processors
The ATCA-7540 provides a migration path and future-proof platform for defense applications in air/shipborne data centers, ground control stations, network data analytics, ad-hoc mobile networks and other C4ISR tasks
- < High-Value Fanless Embedded Computers with Windows 7 support, rich and flexible I/O configuration, and superior graphics performance
- < Miniature SoM with ultra-multimedia performance DART-MX8M : NXP i.MX8M - Starting from \$67
- < VME for Ever
New Kontron VM6062 Server Class Blade Computer brings Performance and Secure Technology to VME legacy Applications - June 2018
- < Machine Condition Monitoring System
- < TPG completes takeover of Wind River, Intel bought Wind River 10 year ago
- < Gartner Says Worldwide Semiconductor Revenue Grew 21.6 Percent in 2017 as Samsung Takes Over No. 1 Position
- < Defense & Aerospace International News
- < Embedded Computing Boards Overview:
Qseven, SMARC, PC/104, COM Express, VPX, CompacPCI, AdvancedTCA (ATCA), AMC, MicroTCA, Industrial Motherboard, Mini-ITX, PCIe, PXI / PXIe

Daniel Dierickx
CEO & co-Founder
at e2mos
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Extend Your ETX-based System's Life Cycle with A New Intel-based ETX Module

ETX-BT, possibly the last ETX module you will ever need!

2018, May 2nd

ADLINK Technology, Inc., a designer and manufacturer of products for embedded computing, test & measurement, and automation, demonstrates with the ETX-BT module its continued commitment and support to customers who have designs based on the ETX® computer-on-module form factor.

ETX is one of the earliest computer-on-module form factors. After more than two decades, its popularity is only second to COM Express® when it comes to installed user base. With the recent discontinuation of the hugely popular Intel Atom® processor N270, many customers are searching for an ETX module replacement to keep their systems up and running. They are in need of an ETX drop-in solution at both hardware and software levels (Intel-to-Intel) with equivalent or improved performance and a better thermal envelope to simplify the transition. The problem is that customer's current module suppliers may not have ETX on their roadmaps anymore. Since ETX is no longer a viable choice for completely new designs, many earlier manufacturers have moved on and dropped out of the ETX market.

ADLINK's business model has always been to support legacy designs as long as customers need it. This is why ADLINK has the right product for those who want to migrate to a new long-life ETX module for their existing systems. ADLINK's solution is the ETX-BT, based on the Intel Atom® processor E3800 series SoC (formerly Bay Trail). This Intel Atom® product family is possibly the last processor that can fully support all ETX legacy interfaces: PATA IDE, ISA bus, PCI bus, serial/parallel ports, VGA and LVDS (Hsync/Vsync mode). The ETX-BT is available in both commercial (0°C to 60°C) and Extreme Rugged (-40°C to +85°C) versions and has a life cycle of 10 years, keeping in line with Intel's warranted life cycle for the Intel Atom® processor E3800 series of 15 years from release.

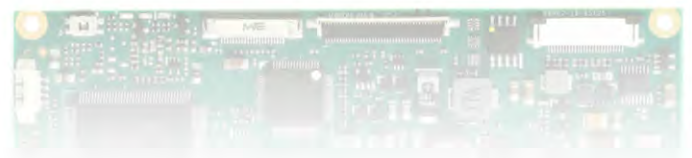
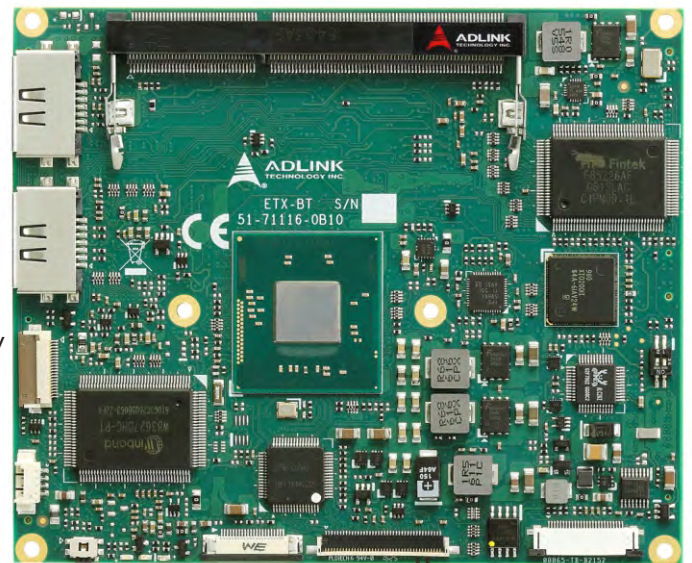
"ETX-BT is possibly the last ETX module you will ever need," explained Alex Wang, Product Manager for both ETX and COM Express at ADLINK. "ADLINK has already supported many of its customers making a successful transition from another vendor's EOL'd (EOL = End Of Life) ETX module to the ETX-BT. We go out of our way to support customers with system bring-up, backporting of software, BIOS modifications and whatever is needed to make the changeover to this new module as smooth as possible.

So far, we have seen many refresh projects in industrial automation, transport, medical and test and measurement. One customer, heavily invested in several ETX designs, went as far as designing a new ETX carrier board to keep their module supply line as simple as possible. **Their combined production is projected grow to requiring around 40,000 ETX modules per year," said Mr. Wang.**

ADLINK was a pioneer in the ETX form factor computer-on-module market, and continues to support its users in sustaining and extending the life of their existing ETX-based system. Please contact your local ADLINK representative to find out how we can help rejuvenate and upgrade your ETX products.

For more information, please visit:

https://emb.adlinktech.com/en/Computer_on_Modules_ETX.aspx





GENERAL MICRO SYSTEMS, INC.
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Introducing the VPX450

General Micro Systems Launches Dual Xeon® OpenVPX Blade with Highest Compute Density of Any Server Available Today

Shrinks Entire Server to Dual Xeon® Processor
Single 6U OpenVPX Blade for Rugged, Deployed Installations

RANCHO CUCAMONGA, Calif., April 25, 2018 – Rackmount servers have their place, yet already-deployed defense platforms and the world's militaries often prefer tried-and-true OpenVPX-style systems for legacy card- and system interoperability. Until now, upgrading those systems with the best “rack style” server compute engine wasn't possible using OpenVPX. General Micro Systems (GMS) today changed this entirely with the launch of a 6U, dual-CPU OpenVPX server blade with two of Intel's best Xeon® processors—plus the rest of the server, including storage—all on one blade.

Key Benefits of VPX450 Single-Blade OpenVPX Server

- Dual-server performance is now available on OpenVPX, no longer forcing military systems to choose unreliable, short-life commercial servers
 - An *entire* server comes on one 6U blade saving incredible size, weight and power
 - Two CPUs of Intel's fastest 2.2 GHz, 22 core server Xeon E5's reduces two rackmount servers to 1/12 size
 - Rugged reliability, designed ground-up for high-rel military applications means higher MTBF and trusted open standards
 - 80 Gen 3 PCI Express lanes provide excess I/O bandwidth to all cards in the OpenVPX backplane, assuring system-wide low latency and high throughput
 - Onboard 1 and 40 Gb Ethernet alleviates the need for separate Ethernet card
- Designed for VITA 46 and VITA 65 compliant chassis, and VPX 48 (REDI) convection environmental specifications.

MORE ABOUT THE VPX450: [CLICK HERE](#)

WHAT IS SCADA

SCADA (supervisory control and data acquisition)

Posted by: Margaret Rouse WhatIs.com

<https://whatis.techtarget.com/definition/SCADA-supervisory-control-and-data-acquisition>

SCADA (supervisory control and data acquisition) is a category of software application program for process control, the gathering of data in real time from remote locations in order to control equipment and conditions. SCADA is used in power plants as well as in oil and gas refining, telecommunications, transportation, and water and waste control.

SCADA systems include hardware and software components. The hardware gathers and feeds data into a computer that has SCADA software installed. The computer then processes this data and presents it in a timely manner. SCADA also records and logs all events into a file stored on a hard disk or sends them to a printer. SCADA applications warn when conditions become hazardous by sounding alarms.

Continue Reading About SCADA (supervisory control and data acquisition)

- [The Geospatial Information and Technology Association is a non-profit resource center for information about SCADA applications.](#)
- [Control Microsystems offers SCADAPack, an application for monitoring and controlling power plants.](#)

ADLINK's Smart Panel Expedites Prototype to Solution of Innovative Smart Devices



Reduced time to market and total cost of ownership with optimum flexibility, industrial-grade ruggedness and long life support

22-June-2018 -- ADLINK Technology, a global provider of leading edge computing solutions that inspire creative user experience across industries, is pleased to introduce its SP (Smart Panel) solution, driving innovation in smart device development. The all-in-one open frame panel PC offers flexible configuration with a high level of modularization. Coupled with ADLINK's unique Function Module (FM) design, the SP speeds prototyping based on application requirements with reduced time, effort and cost.

System integrators, integrated solution providers, and brand vendors can all achieve project success in transportation, retail, hospitality, industrial automation, healthcare, and gaming applications, and more.



To accelerate TTM, lower TCO, and enhance design flexibility, ADLINK's Smart Panel exceeds common application demands with a modular design, enabling custom selection of touch panel type, display size, mainboard, I/O interface, and heat sink. To empower application-specific features, function enhancement and I/O expansion are fully supported through ADLINK's FM board or I/O boards from partners and clients. "ADLINK's Smart Panel provides a flexible embedded building block solution, enabling users to fast-track development, verification, and validation of smart devices while enjoying significant savings in time, money and resources," explained Emma Liu, Product Manager of ADLINK's Embedded Platform and Modules Business Unit.

The newly released SP-AL fulfils the modular design ethic, offering choices of 7-inch to 21.5-inch 16:9 displays, P-CAP or resistive touch panels, mainboards powered by Intel Atom® x5-E3930/x7-E3950 processors, support for Windows 10, Linux and Android operating systems, and wide-ranging built-in I/O interfaces. To accommodate I/O expansion needs, FM boards can be customized to cater to vertical applications and connect to external power supply to support power-hungry modules such as graphics cards.

To maintain long-term reliable operation, SP-AL features robust construction, meeting or exceeding rigorous industry standards. The mainboard supports a wide operating range from -40°C to 85°C, rugged SODIMM, wide DC input voltage range, overvoltage protection (OVP) and undervoltage protection (UVP). The preloaded Smart Embedded Management Agent (SEMA®) utility allows remote monitoring of system performance and status to allow predictive maintenance. For environments in which excessive moisture and contaminants are possible, Smart Panel can provide IP65-rated resistance without adhesives. The SP-AL further provides long life support, with the proven stability of Intel® processors and display modules, alleviating concerns for long term supply availability.

ADLINK offers the Smart Panel Starter Kit to help validate fundamental elements and provide a complete guide to design selection.

For more information, please visit:

https://www.adlinktech.com/Products/Panel_PCs_Monitors/SmartPanel/SP-AL_Series?lang=en

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Rolls-Royce confirms restructuring – 4,600 employees to go

14-June-2018

Rolls-Royce is looking to create a simpler, leaner and more agile organisation. The company is now announcing the next stage in its push to create this new business with a proposed restructuring that aims to deliver improved returns, higher margins and increased cash flow.

“Following the announcement in January that we will simplify the Group into three customer-focused business units, this proposed restructuring will create smaller and more cost effective corporate and support functions and reduce management layers and complexity, including within engineering,” the company writes in a press release.

What this means is that over the next 24 months, Rolls-Royce expects that the proposed restructuring will lead to the reduction of around 4'600 roles, predominantly in the UK where the majority of our corporate and support functions are based. **Around a third of these roles are expected to leave by the end of 2018.**

The programme is expected to gain further momentum through 2019, with full implementation of headcount reductions and structural changes by mid-2020.

“The creation of a more streamlined organisation with pace and simplicity at its heart will enable us to deliver on that promise, generating higher returns while being able to invest for the future,” says Chief Executive, Warren East, in the press release.

“We have made progress in improving our day-to-day operations and strengthening our leadership, and **are now turning to reduce the complexity that often slows us down and leads to duplication of effort.**

It is never an easy decision to reduce our workforce, but we must create a commercial organisation that is as world-leading as our technologies. To do this we are fundamentally changing how we work,” Warren East continues.

While the company is laying off 4'600 employees, Rolls-Royce says that it does not anticipate that this will lead to any reduction in the skills and capabilities it require to support its current programmes.

“We will continue to support our current ramp-up in Civil Aerospace engine production and will remain focused on our management of the current in-service issues with the Trent 1000,” the release reads..

The total cash cost of the restructuring is expected to be GBP 500 million which includes the cost of redundancies and required systems investments to facilitate the programme. These cash costs will be incurred across 2018, 2019 and 2020. Full year net cost savings from this restructuring are expected to reach a run rate of GBP 400 million per annum by the end of 2020.

SOURCE: <https://evertiq.com/news/44300>



Editor Note

First of all Rolls Royce is a great world-class company, take a look at their Products & Services <https://www.rolls-royce.com/products-and-services.aspx>

- Civil Aerospace
- Defence Aerospace
- Power Systems
- Marine
- Nuclear

But sorry to repeat it, there is no option you must adapt on time, because beside the cost of re-organization there is a bigger figure « Missed Opportunities » and time to recover. Companies must improve drastically the added value of their middle-management.

Daniel Dierickx mgt@e2mos.com
... together we are stronger but everyone must contribute, and execution is the Go/No-Go

Navy relies on ATCA embedded computing system from Artesyn for upgrading Aegis weapon system

Here is an excellent [article](#) published by John Keller, Editor at Aerospace Defense Electronics

AUSTIN, Texas – U.S. January 25, 2018 -- Navy shipboard weapons experts needed embedded computing for upgrading the Aegis weapon system for Navy cruisers and destroyers. They found their solution from Artesyn Embedded Technologies in Tempe, Arizona.

Navy experts are ordering the Artesyn [ATCA-7480 Quadstar 40G packet processing server blade](#) for the latest efforts in upgrading processing capability in the Aegis weapon system being installed in new Arleigh Burke-class guided missile destroyers, says Robert Persons, senior presales architect for embedded at Artesyn.

The Artesyn ATCA-7480 is going into the Aegis Block III upgrade in an AdvancedTCA (ATCA) 14-slot chassis. The computer board has the dual-processor Intel Xeon E5-2648L microprocessor version 3. The system is specially hardened for shock and vibration for the shipboard electronics application. It runs the RedHawk Linux software operating system.

In the future this architecture is under consideration for backfits to existing Aegis systems aboard existing Arleigh Burke-class destroyers and Ticonderoga-class cruisers, says Persons, who made his comments this week in an interview at the Embedded Tech Trends conference in Austin, Texas.

The Aegis combat system uses powerful computers and radar to track and guide weapons to destroy enemy targets, including incoming ballistic missiles. More than 100 Aegis-equipped ships have been deployed in five navies worldwide. Aegis, not an acronym, refers to the shield of the mythical Greek God Zeus.

[Related: Navy looks to ATCA embedded computing architecture for upgrades to Aegis shipboard weapon system](#)

Aegis was developed by the Missile and Surface Radar Division of RCA, which after a series of acquisitions became part of the Lockheed Martin Corp. Mission Systems and Training segment in Moorestown, N.J. in 1995.

The Navy originally awarded the job to provide embedded computing for the Aegis upgrade to Artesyn in 2015, and qualified the system for installation on Navy warships in 2016, Persons says. This Aegis upgrade job could last as long as six years.

Navy officials also are considering the Artesyn ATCA embedded computing architecture for future embedded computing upgrades to the Ship Self Defense System, as well as the Surface Electronic Warfare Improvement Program (SEWIP).

Bladed Server Chassis for Defense: AXP1440-D

Datasheet: [CLICK HERE](#)

White Paper: [CLICK HERE](#)

VIDEO youtube: [CLICK HERE](#)



For the Aegis upgrade, **the Navy is swapping out IBM BladeCenter embedded computers for the Artesyn ATCA-7480 ATCA system.** Navy officials expect to requalify next-generation Xeon-based Artesyn computer boards for future Aegis technology insertion, Persons says.

[Related: Lockheed Martin to upgrade Aegis computer equipment on Navy cruisers and destroyers](#)

Using ATCA for Aegis is part of an Artesyn project to adapt the Network Equipment-Building System (NEBS) design guidelines for the shipboard electronics in Navy surface warships.

Artesyn's Aegis-related work involving ATCA and NEBS is through the Navy and is not specifically tied to Lockheed Martin, Persons says. Managing the Navy's Aegis systems are officials of Naval Sea Systems Command in Washington.

The shipboard electronics environment is particularly demanding for its shock and vibration. Ship electronics must be able to withstand the effects of vibration from engines and other onboard systems, and must be able to withstand the intense shock of missile and torpedo hits.

Navy relies on ATCA embedded computing ... from previous page

Navy officials refresh Aegis electronics on a schedule of about every four years. Previously designers had relied on the non-standard IBM BladeCenter architecture for Aegis designs, but wanted to move toward the kind of open-systems architecture with ATCA that they previously used years ago with VME. Aegis has been deployed by the Navy since the 1980s.

[Related: Lockheed Martin nets another order to upgrade Aegis computer gear on Navy surface warships](#)

To adapt ATCA and NEBS building blocks to the Aegis Combat System, Artesyn engineers first stiffened an ATCA chassis sides and back, after having adapted the chassis top and bottom to the Aegis shock-isolated rack, Persons says.

Company experts also were able to screw boards into the chassis to resist the effects of shock and vibration. Navy officials say they would like to use this architecture aboard surface warships for eight years or more before considering new technology insertion approaches.

The Artesyn ATCA architecture for Aegis is particularly useful for adapting third-party embedded computing products, which can be modified easily for this architecture, Persons says.

For more information contact Artesyn Embedded Technologies online at www.artesyn.com, Naval Sea Systems Command at www.navsea.navy.mil, or the Embedded Tech Trends conference at www.embeddedtechtrends.com.

ATCA-7540 Dual-Star 40G Server Blade DUAL Intel® Xeon® Scalable processors

The ATCA-7540 provides a migration path and future-proof platform for defense applications in air/shipborne data centers, ground control stations, network data analytics, ad-hoc mobile networks and other C4ISR tasks.

Built around commercial off-the-shelf (COTS) technologies, Artesyn's ATCA technology has been selected for a range of centralized compute systems on board ships, aircraft or in transit cases for command and control tents.

The Artesyn Embedded Technology [ATCA-7540](#) COTS server blade brings the Intel® Xeon® Scalable processors (codename Skylake) to ATCA®, extending both performance and longevity over existing server blades.

- The use of the next generation Intel Xeon Scalable processors (codename Skylake) provides a performance and longevity improvement over existing blades
- Adherence to the ATCA specification ensures compatibility with existing infrastructure
- I/O and crypto offload options future-proof designs
- OS & I/O options help ensure a seamless upgrade path from existing systems and provides the tools & flexibility necessary for new deployments

ATCA is an open standard under PICMG® with a rich ecosystem of both blades and systems from many vendors. With its rugged design, **5-nines high availability (99.999%)** and shallow footprint, ATCA has a strong history of deployment in both telecommunications central offices as well as shipborne and land-based defense applications.

FEATURES:

- Two Intel® Xeon® Scalable processors (codename Skylake)
- Scalable performance range/core count
- Up to 384GB main memory DDR4 via 12 VLP DIMM sockets with speeds of 2400 MT/s
- Dual-star 40G Ethernet fabric
- Choice of compatible rear transition modules for I/O and storage options
- Dual on-board M.2 SSD sites
- Optional configuration with crypto offload
- Linux support
- DPDK-ready



ARTESYN
EMBEDDED TECHNOLOGIES

ADLINK Introduces MXE-1500 Series of High-Value Fanless Embedded Computers



Windows 7 support, rich and flexible I/O configuration, and superior graphics performance

Taipei, Taiwan -- 20-April-2018

ADLINK Technology, a global provider of leading edge computing solutions, today launched the MXE-1500 Series of fanless embedded computers. The successor to ADLINK's best-selling MXE-1300 Series, the MXE 1500 offers richer I/O interfaces, and more flexible I/O configurations in the same compact enclosure. Intel® Celeron® (Braswell) processors, Intel's last generation of CPU to support Windows 7, power the MXE-1500 to a 90% increase in image processing capabilities over the previous generation, and support three independent displays, altogether delivering an unequalled price/performance ratio and making the MXE-1500 an ideal choice for industrial automation applications and mass transit operators.



By featuring Intel® Celeron® N3160/N3060 processors, the latest generation of processors to support Windows 7, the MXE-1500 is able to power upgrades of existing control systems, while maintaining compatibility with existing software, benefiting a wide variety of operating environments.

For industrial applications with limited space that still demand rich I/O connectivity, the MXE-1500 Series' compact footprint offers flexible configuration that dramatically simplifies deployment. Standard interfaces include four COM ports, three LAN ports, six USB (two 3.0 and four 2.0), and one internal USB 2.0 dongle. Users can flexibly choose LVDS or DP ports, and expand up to six COM ports, select optional amplifier, or add TPM2.0 according to specific requirements. This market-leading flexibility fully serves the needs of diverse industrial applications such as factory, machine, and logistics automation, enroute information systems, station gate controls, ticket vending machines, and many others. The MXE-1500 can further be quickly configured with isolated modular DC power supply to satisfy application requirements for maritime computers.

Based on the Intel® Celeron® N3160/ N3060 processor, the MXE-1500 series can support three independent displays. In addition, the graphic performance of quad core N3160 SoC processor has increased by 90% compared to the previous generation Intel Atom® E3845 processor and the computing power has increased by 20%. As for mass transit operators, the MXE-1500 is definitely the ideal choice offering great performance at value price.

"The market for compact fanless embedded computers is highly competitive, and the MXE-1500's flexible I/O expandability meets not only the basic operational requirements, but also takes competitive price point into consideration," said Kerry Huang, Product Manager of ADLINK Embedded Platform and Module Business Unit. "Providing optional TPM 2.0, for example, handily satisfies the requirements of IoT-centric applications as well as banking industry and police and government installations with major data encryption priorities, while the optional LVDS display port answers the high-integration demands of industrial automation applications."

For more information on solutions, please visit ADLINK's website:

https://emb.adlinktech.com/Products/Industrial_PCs_Fanless_Embedded_PCs/IntegratedFanlessEmbeddedComputers/MXE-1500_Series?lang=en

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Miniature SoM with ultra-multimedia performance DART-MX8M : NXP i.MX8M - - Starting from \$67

- 4K video
- HEVC/H265/H264/VP9 decode with HDR
- High-quality audio
- Camera input
- OS include: Linux Yocto and Android

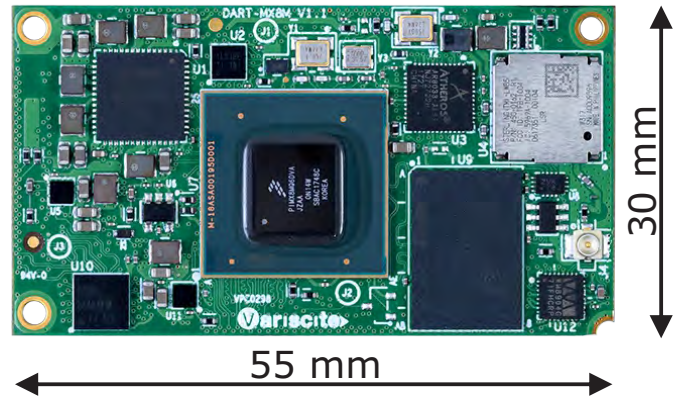
The DART-MX8M offers an ideal solution for embedded systems that require high-end multimedia applications in a small form factor, as well as portable and battery operated products.

This tiny 30mm x 55mm ARM SoM is based on NXP i.MX8M Quad 1.5GHz ARM Cortex-A53 plus 266MHz Cortex-M4.

The high multimedia performance spec encompasses 4K video HEVC/H265/H264/VP9 decode with HDR, high-quality audio, 4K display support, 2D/3D graphics acceleration, with a variety of interfaces and connectivity options: Certified dual-band Wi-Fi 802.11 ac/a/b/g/n, BT 4.2/BLE, GbE, dual USB3, dual PCIe and UART.

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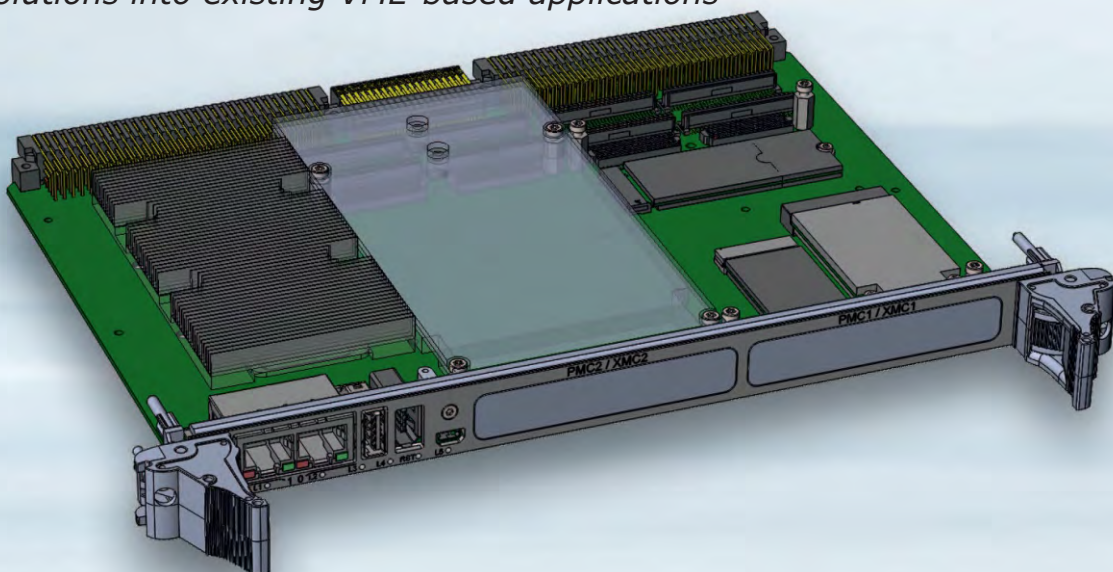
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VME for Ever

New Kontron VM6062 Server Class Blade Computer brings Performance and Secure Technology to VME legacy Applications - June 2018

New VM6062 extends Kontron's 6U VME portfolio of commercial-off-the-shelf (COTS) single board computers (SBCs) with a fully featured I/O Blade Server PC - Technology insertion of modern cutting edge high-performance computing architecture - Up-to-date security solutions into existing VME-based applications



Augsburg, Germany / Toulon, France, 12.06.2018 – In line with its strategy of ensuring customers to upgrade their existing application with the latest technology and security solutions, Kontron, a leading global provider of IoT/Embedded Computing Technology (ECT), today announced the availability of the VM6062. The new 6U VME SBC features an Intel® D1508 processor, which is a member of the Intel® Xeon® Processor D-1500 family.

MORE: [CLICK HERE](#)

ADLINK's New MCM-100 Machine Condition Monitoring System



Simple Connection, Configuration, and Operation in all-in-one MCM Edge Platform

26-Apr-2018

ADLINK Technology, Inc., a global provider of advanced Edge Computing products, today announced the release of its new MCM-100 machine condition monitoring edge platform, highlighting continuous 24/7 data collection and vibration measurement with maximized precision and sampling rates for rotating machinery and equipment. Integrating data collection, vibration analysis algorithms, computation, and network connection tasking in a single system, the MCM-100 enables rotating machinery, tooling, and plant and automation equipment operators to easily overcome challenges inherent in conventional equipment maintenance.



"Lifting devices, vacuum pumps, air compressors, and other rotating equipment are indispensable in manufacturing and processing operations. Accordingly, unexpected machine failure, which can cause 2-3 days production shutdown or even more, can easily result in huge losses" Tim Juan, Director of ADLINK's IoT Solutions & Technology said "ADLINK's intelligent machine monitoring solution replaces conventional manual inspection methods, providing 24/7 online monitoring and failure prediction, accurate control of machine status, and responsive maintenance in real time."

Complete Data Acquisition, Analysis, and Upload in a Single System

ADLINK's ultra-compact MCM-100 features high 24-bit resolution (compared with conventional 12-bit to 16-bit solutions) and captures high-frequency signals at a very high 128kS/s, dramatically improving on conventional solutions' 20kS/s or less, delivering significantly more vibration data for analysis. Benefiting from high performance Intel Atom® x7-E3950 processors, the MCM-100 delivers edge-based data acquisition, domain algorithm, data analytics, machine status conversion, usage trends, alarms, and more, for distribution. In addition, a LAN port and optional wireless Wi-Fi module support deliver seamless data connectivity.

Fast, Simple Whole-System Setup with No Downtime

ADLINK's MCM-100 all-in-one design simplifies setup, with a minimal footprint enabling quick and easy installation in proximity to equipment, reducing wiring costs and effort, while integrated function and rugged construction guarantee the MCM-100 full operability in harsh industrial environments. Compelling features include built-in IEPE 2mA excitation current source on each channel requiring no additional signal conditioning, and the included accelerometer attaches magnetically, allowing easy relocation to any test point, avoiding the cost and effort of non-adjustable tapping meters.

Learn more: Intelligent Machine Condition Monitoring Solution

https://emb.adlinktech.com/eDM/20180424_MCM_Solutions/index.html

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TPG completes takeover of Wind River Intel bought Wind River 10 year ago The question is « **What was the real reason** »



Tuesday 26 June 2018 | 16:39 CET | News | telecompaper

TPG Capital has completed its acquisition of IoT software specialist Wind River from Intel, as [first announced in April](#). The newly independent company will be led by Wind River President and now CEO Jim Douglas. Nehal Raj, partner and Head of Technology investing at TPG, will serve as chairman of the company's board of directors.

From TPG website - April 2018

Wind River to be Acquired by TPG -- Source: [CLICK HERE](#)

ALAMEDA, Calif. – April 3, 2018 – Wind River® today announced that global alternative asset firm TPG will acquire the company from Intel. Wind River President, Jim Douglas, and his existing executive management team will lead the newly independent Wind River after the transaction closes.

“Our technology team is focused on backing strong, market-leading companies in growing industries,” said Nehal Raj, Partner and Head of Technology investing at TPG. “We see a tremendous market opportunity in industrial software driven by the convergence of the Internet of Things (IoT), intelligent devices and edge computing. As a market leader with a strong product portfolio, Wind River is well positioned to benefit from these trends. We are excited about the prospects for **Wind River as an independent company**, and plan to build on its strong foundation with investments in both organic and inorganic growth.”

For nearly 40 years, Wind River has helped the world's technology leaders power generation after generation of the safest, most secure devices in the world. The company's software runs the computing systems of the most important modern infrastructure, including manufacturing plants, medical devices, aircraft, railway, automobiles, and communications networks. Wind River's products and solutions enable engineers, developers, manufacturers, and system integrators to build intelligent connected devices, sensors, gateways, and networks that unlock machine data and connect it to cloud and IT environments.

“This acquisition will establish **Wind River as a leading independent software provider** uniquely positioned to advance digital transformation within critical infrastructure segments with our comprehensive edge to cloud portfolio,” said Jim Douglas, Wind River President. “At the same time, TPG will provide Wind River with the flexibility and financial resources to fuel our many growth opportunities as a standalone software company that enables the deployment of safe, secure, and reliable intelligent systems.”

“This move is designed to sharpen our focus on growth opportunities that align to Intel's data-centric strategy,” said Tom Lantzsch, senior vice president and general manager of the Internet of Things Group at Intel. “Wind River will remain an important ecosystem partner, and we will continue to collaborate on critical software-defined infrastructure opportunities to advance an autonomous future. We expect this transition will be seamless for our mutual customers and partners.”

The transaction, for which Allen & Company LLC served as financial advisor to Intel, is expected to close in the second quarter of 2018. The terms of the agreement are not being disclosed.

REMEMBER !

Intel and TPG to Collaborate to Establish McAfee as Leading Independent Cybersecurity Company Valued at \$4.2 Billion, Back in September 2016 (2016)

See full story in [Embedded Systems World March-April 2018](#) Page 5

ABOUT The question is « **What was the real reason** »
Please send your opinion to the Editor: mgt@e2mos.com

Gartner Says Worldwide Semiconductor Revenue Grew 21.6 Percent in 2017 as Samsung Takes Over No. 1 Position

Booming Memory Market Overshadows High Growth in Other Segments

STAMFORD, Conn., April 23, 2018

Driven by strong growth in the memory market, worldwide semiconductor revenue totaled \$420.4 billion in 2017, a 21.6 percent increase from 2016 revenue of \$345.9 billion, [according to final results by Gartner, Inc.](#)

"2017 saw two semiconductor industry milestones — revenue surpassed \$400 billion, and Intel, the No. 1 vendor for the last 25 years, was pushed into second place by Samsung Electronics," said George Brocklehurst, research director at Gartner. "Both milestones happened due to rapid growth in the memory market as undersupply drove pricing for DRAM and NAND flash higher."

The memory market surged nearly \$50 billion to reach \$130 billion in 2017, a 61.8 percent increase from 2016. Samsung's memory revenue alone increased nearly \$20 billion in 2017, moving the company into the top spot in 2017 (see Table 1). However, Gartner predicts that the company's lead will be short-lived and will disappear when the memory market goes into its bust cycle, most likely in late 2019.

Table 1. Top 10 Semiconductor Vendors by Revenue, Worldwide, 2017 (Millions of U.S. Dollars)

2017 Rank	2016 Rank	Vendor	2017 Revenue Millions US\$	2017 Market Share (%)	2016 Revenue Millions US\$	2016-2017 Growth (%)
1	2	Samsung Electronics	59,875	14.2	40,104	49.3
2	1	Intel	58,725	14.0	54,091	8.6
3	4	SK hynix	26,37	6.3	14,681	79.6
4	5	Micron Technology	22,895	5.4	13,381	71.1
5	3	Qualcomm	16,099	3.8	15,415	4.4
6	6	Broadcom	15,405	3.7	13,233	16.4
7	7	Texas Instruments	13,506	3.2	11,899	13.5
8	8	Toshiba	12,408	3.0	9,918	25.1
9	17	Western Digital	9,159	2.2	4,17	119.6
10	9	NXP	8,75	2.1	9,314	-6.1
		TOTAL TOP 10	243,192	57.9	186,206	30.6
		Others	177,201	42.1	159,645	11.0
		Total Market	420,393	100.0	345,851	21.6

Source: Gartner (April 2018)

The booming memory segment overshadowed strong growth in other categories in 2017. Nonmemory semiconductors grew \$24.8 billion to reach \$290 billion, representing a growth rate of 9.3 percent. Many of the broadline suppliers in the top 25 semiconductor vendors, including Texas Instruments, STMicroelectronics and Infineon, experience high growth as two key markets, industrial and automotive, continued double-digit growth, buoyed by broad-based growth across most other end markets.

The combined revenue of the top 10 semiconductor vendors increased by 30.6 % during 2017 and accounted for 58 % of the total market, outperforming the rest of the market, which saw a milder 11.0 percent revenue increase.

M&As are taking longer

2017 was a slower year for closing mergers and acquisitions (M&As), with roughly half the deal value and number of deals compared with 2016. However, the semiconductor industry continues to see escalating deal sizes with greater complexity, which are becoming more challenging to close. Avago set a record in its acquisition of Broadcom for \$37 billion in 2016, and this record should soon be broken by Qualcomm's acquisition of NXP Semiconductors for \$44 billion.

The IoT is starting to pay vendor dividends

Growth in the Internet of Things (IoT) is having a significant impact on the semiconductor market, with [application-specific standard products \(ASSPs\)](#) for consumer applications up by 14.3 percent and industrial ASSPs rising by 19.1 percent in 2017. Semiconductors for wireless connectivity showed the highest growth with 19.3 percent in 2017, and topping \$10 billion for the first time, despite reduced component prices and the static smartphone industry.

More detailed analysis is available to Gartner clients in the report "[Market Share Analysis: Semiconductors, Worldwide, 2017.](#)"

China first domestically made aircraft carrier (1031)

From: Defense Industry Daily

<http://www.globaltimes.cn/content/1095467.shtml>

On March 27, 2018 China announced that its first domestically made aircraft carrier prepares for sea trial. This news comes one day after two senators pressed President Donald Trump in a letter to allow the sale of either F-35B short take-off and vertical landing (STOVL) variant or of F-16V Fighting Falcon aircraft to Taiwan to fend of Chinese aggression. The United States sold Taiwan 150 F-16s in 1993. Taiwan currently has 144 F-16 fighters. Of these, 15 are in the United States for training and an additional 24 will be offline on a rolling basis in an ongoing upgrade program that runs through 2023. Taiwan has flagged continued interest in the Lockheed Martin F-35 fighter jet, possibly as part of an upcoming new round of arms purchases from the United States. Taiwan sees the F-35B and its STOVL capabilities as a way to offset the threat of a first strike by China, allowing the island to retain the ability to generate air power in the event of its runways being disabled.



PICTURE: China's first home-built aircraft carrier at a shipyard in Dalian, Northeast China's Liaoning Province

Air Force Risks Losing Third of F-35s If Upkeep Costs Aren't Cut

From: Bloomberg

https://www.bloomberg.com/news/articles/2018-03-28/air-force-risks-losing-third-of-f-35s-if-upkeep-costs-aren-t-cut?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%203.28.18&utm_term=Editorial%20-%20Early%20Bird%20Brief

The U.S. Air Force may have to cut its purchases of Lockheed Martin Corp.'s F-35 by a third if it can't find ways to reduce operations and support costs by as much as 38 percent over a decade, according to an internal analysis.



MBDA deal may lead to British drone, Apache helo carrying Brimstone missile

From: Defense News

https://www.defensenews.com/industry/2018/03/27/mbda-deal-may-lead-to-british-drone-apache-helo-carrying-brimstone-missile/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%203.28.18&utm_term=Editorial%20-%20Early%20Bird%20Brief

Missile-maker MBDA has secured a £400 million (U.S. \$568 million) capability sustainment program with the U.K. government, which will extend the service life of the country's Brimstone air-to-surface missile. The deal could also lead to the weapon's use on British attack helicopters and drones.



DARPA to use artificial intelligence to help commanders in 'gray zone' conflicts

From: Military Times

https://www.militarytimes.com/news/your-army/2018/03/27/darpa-to-use-artificial-intelligence-to-help-commanders-in-gray-zone-conflicts/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%203.28.18&utm_term=Editorial%20-%20Early%20Bird%20Brief

Across the military branches, commanders are looking at how artificial intelligence can be used to fly better aerial routes, insert robotic vehicles into formations and process vast amounts of data in the information-dense battlefields of the near future.

The new COMPASS program is seeking experts in artificial intelligence, machine learning, game theory, modeling and simulation, control systems and other related fields. COMPASS, short for Collection and Monitoring via Planning for Active Situational Scenarios, aims to develop software that would discern an adversary's intentions. (Staff Sgt. Kelvin Green/Army)



Here's what the next generation of drones could do

From: C4ISRNET

https://www.c4isrnet.com/show-reporter/global-force-symposium/2018/03/27/heres-what-the-next-generation-of-drones-could-do/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%203.28.18&utm_term=Editorial%20-%20Early%20Bird%20Brief

The Department of Defense expects to operate in significantly more complex environments and that means its technologies must be able to survive against high end, threats from countries such as China and Russia.



Switzerland names contenders in \$8 billion 'Air 2030' program

From: Defense News

https://www.defensenews.com/land/2018/03/27/switzerland-names-contenders-in-8-billion-air-2030-program/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%203.28.18&utm_term=Editorial%20-%20Early%20Bird%20Brief

Swiss officials have unveiled details of their envisioned reboot of the country's air-defense complex, setting the stage for purchases of aircraft and ground-based missiles totaling more than \$8 billion.



PICTURE: Switzerland's existing fleet of decades-old F-5 jets is considered too outdated to defend its skies.

China positions to meet Thailand's future naval requirements

From: IHS Jane's 360

http://www.janes.com/article/78900/china-positions-to-meet-thailand-s-future-naval-requirements?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%203.28.18&utm_term=Editorial%20-%20Early%20Bird%20Brief

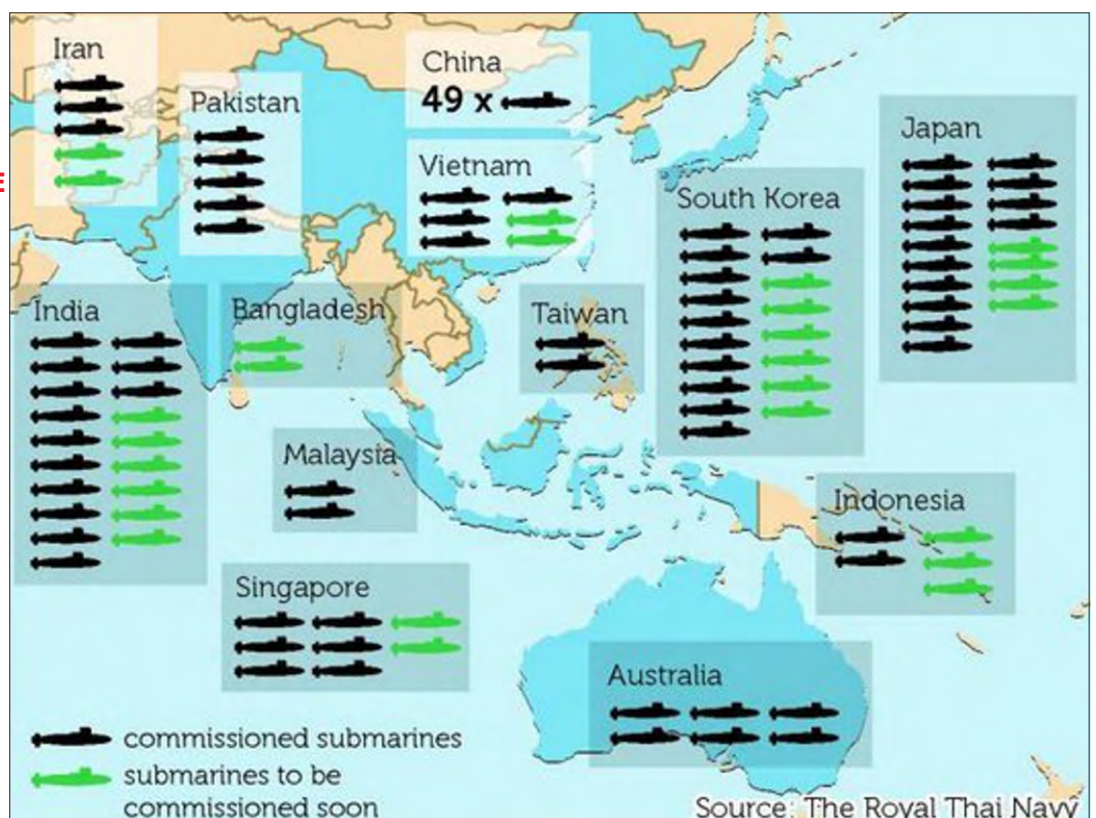
The state-owned China Shipbuilding Industry Corporation (CSIC) and the Royal Thai Armed Forces have agreed to collaborate on military equipment and technologies.

The agreement – signed on 26 March in Beijing – will see the two parties look to expand a partnership that has recently been strengthened through the Royal Thai Navy's (RTN's) order of an S26T (Thailand) **diesel electric submarine**.

UNDER THE PERISCOPE

This map shows the number of submarines in service throughout ASIA and in Australia

(POSTgraphics)



Source: The Royal Thai Navy

Embedded Computing Boards Overview

Direct Link Click on the Pictures



Qseven



Intel-based: several CPU 's
Standard Size (70 mm x 70 mm)

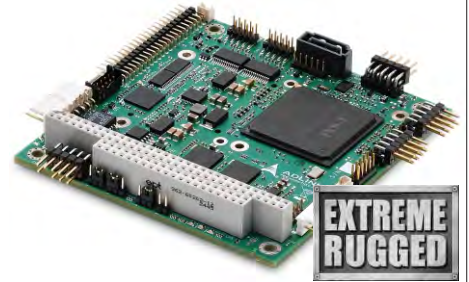
SMARC

Smart Mobility ARChitecture



Intel-based: several CPU 's
Short Size (82 mm x 50 mm)
Full Size (82 mm x 80 mm)

PC/104 PCI/104 Express



Intel-based: several CPU 's
PCI/104-Express (V3.0)
Size (117.4 mm x 96 mm)

COM Express



Intel-based: several CPU 's

Type 6

Basic Size (125 x 95 mm)
Compact (95 x 95 mm)

Type 7 - Intel Xeon-based

Basic Size (125 x 95 mm)

Type 10

Mini Size (84 x 55 mm)

Type 2

Basic Size (125 x 95 mm)
Compact (95 x 95 mm)

3U-6U VPX Conduction & Air-cooled



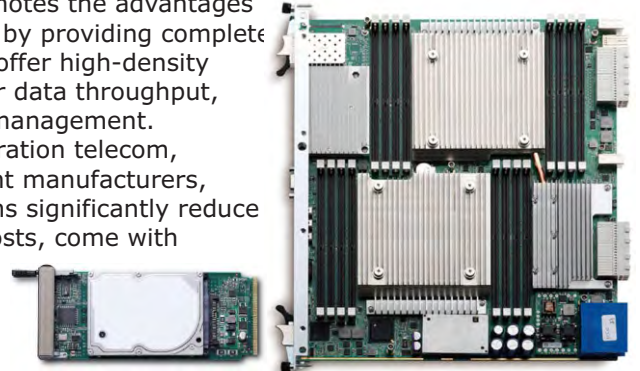
3U-6U CompacPCI, Plus & Serial



Conduction & Air-cooled

AdvancedTCA - ATCA - AMC - MicroTCA

ADLINK vigorously promotes the advantages of the ATCA technology by providing complete platform solutions that offer high-density processing power, faster data throughput, and intelligent system management. Designed for next-generation telecom, datacom, and equipment manufacturers, ADLINK's ATCA platforms significantly reduce over-all development costs, come with extended operating lifecycles, and speed up critical time-to-market.



Ind. Motherboards Mini-ITX



PCIe



Frame Grabbers
Video Capture Cards

PXI - PXIe

