



Leaders in rugged, highly reliable embedded computing systems



Embed Success in Every Product

Embedded Computing Solutions Engineered for Long-Term ROI and Extreme Environments

Your solution—our engineering expertise

WINSYSTEMS' collaborative approach expedites product selection, capitalizes on the best technology and maximizes cost-effectiveness. Our seasoned hardware, software and application engineers adeptly address the unique nuances of designing small, rugged, highly reliable embedded solutions—from single board computers to data acquisition and processing, power supplies, networking and security.

We go beyond replicating component reference designs to meet the unique challenges of our customers. Our application engineers carefully evaluate the system-level requirements to design the most effective embedded platform. Then, they help you identify the right product, adapt off-the-shelf components or develop a custom computing solution that satisfies your product specifications, desired service life, quality standards, production schedule and budget.

Minimize risk—maximize success

At WINSYSTEMS, we understand the risk, uncertainty and costs that come with introducing new products. By relying on our experience and capabilities in embedded computing technologies, you can concentrate on creating solutions that differentiate your business through unique features and advanced functionality. Avoid the added stress and resources involved in sifting through myriad options and developing your own custom boards. Instead, focus on your product's critical design elements and get it to market faster.

WINSYSTEMS—The Proven Source for Powerful Solutions

When time to market, performance and your reputation are on the line, entrust your embedded computer requirements to the recognized authority: WINSYSTEMS. For 38 years, we have designed and manufactured highly reliable solutions for customers around the world. In that time, we have supplied tens of thousands of embedded computer systems that enable long-lasting, dependable operation of products in every type of environment—from outer space to the sea floor, and everywhere in between.

WINSYSTEMS is consistently on the forefront of embedded solution development. Regardless of application or industry, we are committed to delivering value through exceptional platform design, communication, service and support to assure our customers' ultimate success. With products delivering superior uptime, life cycles up to 15 years, and faster delivery, our customers achieve increased value for long-term ROI.



From Industrial SBCs to Complete Embedded Systems

Technology solutions that transcend boards

WINSYSTEMS' embedded technology solutions extend from single board computers and I/O modules to touch-panel PCs, industrial Ethernet switches, and turnkey embedded systems.

Expect well-engineered solutions that deliver exceptional performance and operational efficiencies. We support and promote open hardware and software standards such as PC/104, EBX, EPIC, 3.5-in, ITX and COM Express®. Leveraging our commercial off-the-shelf (COTS) designs enables us to quickly adapt custom solutions providing high reliability and extended product life cycles. We also help engineer cost-effective solutions based on customers' existing technology while positioning them for future upgrades.

Ultra-reliable in any application or environment

Our engineers design extreme durability and reliability into every product while minimizing maintenance requirements. During product development, WINSYSTEMS uses multiple environmental chambers and test racks to qualify components and product designs, ensuring they meet the required specifications. Rigorous performance testing and quality control processes assure maximum uptime.

WINSYSTEMS is a recognized trailblazer in engineering rugged computers with extreme temperature resistance. Most of our standard products offer operating temperature ranges from -40 to +85 degrees Celsius. Coupled with superb shock and vibration resistance, they stand up to the harshest, most demanding environments. Our systems also feature low power requirements and a multiyear warranty. WINSYSTEMS is certified to ISO 9001:2015.



Valued Specialists in Embedded Computing

Flexible processing architectures and expansion options

WINSYSTEMS' embedded computing systems align with the most relevant CPUs and software resources. Our reliable, versatile Arm-based products fulfill diverse application requirements and deliver a remarkable power-to-performance ratio. We also offer multiple PC-compatible products to improve performance and integrate with most software ecosystems.

Experienced Design and Manufacturing

Centrally located U.S. headquarters speeds product development

WINSYSTEMS' new and expanded headquarters is located in Grand Prairie, Texas, USA, between Dallas and Fort Worth. Our campus houses all the departments necessary to efficiently design, manufacture and deliver embedded computer systems from project initiation to production ramp. We are more agile and responsive to customers because our operations are tightly integrated: Product manufacturing is collocated with engineering and testing, and it's easier to get fast, well-informed answers from our application engineers at any stage.

In-house manufacturing supports faster prototyping to production and quick-turn production cycles. And, having testing equipment onsite as well positions WINSYSTEMS to consistently maintain higher quality standards.

Contact us for specific products or an engineered solution custom-tailored to particular functionality, connectivity, storage or I/O-expansion requirements.

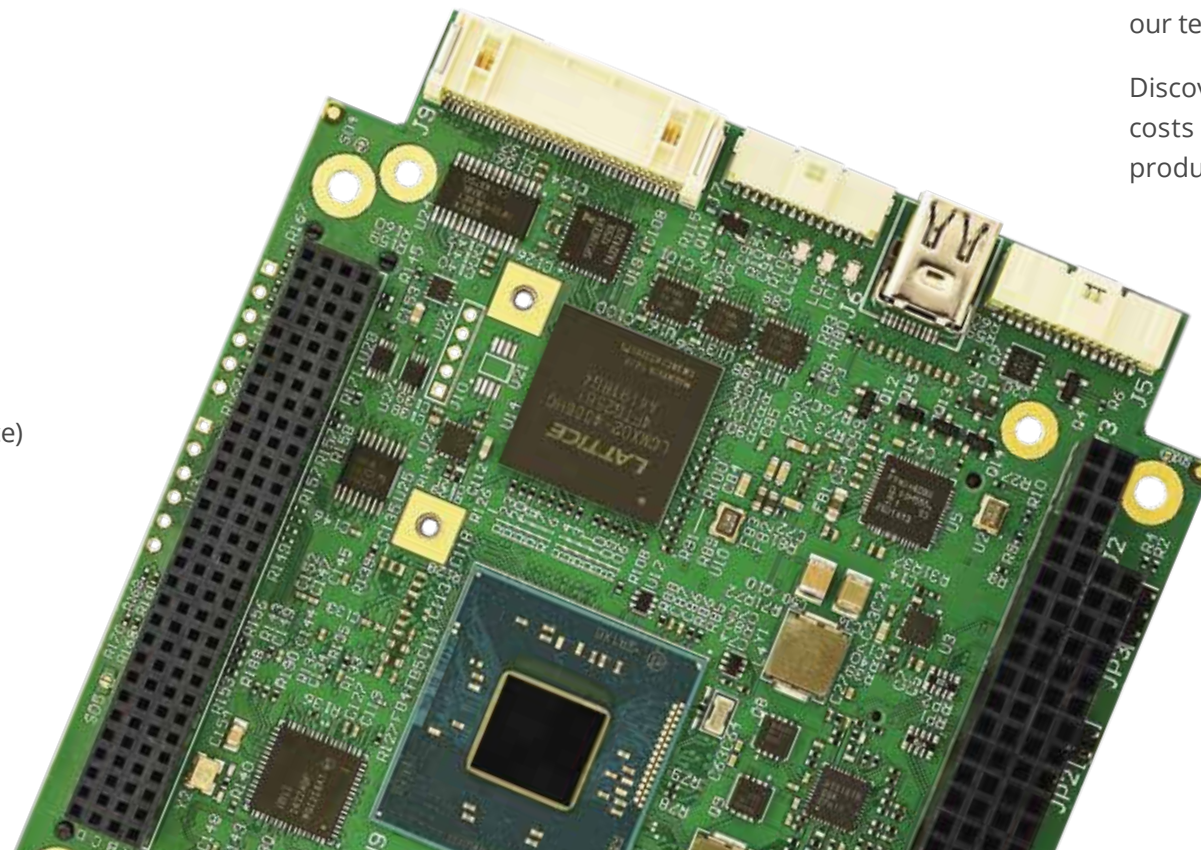


Broad and deep domain expertise

WINSYSTEMS provides solutions to disparate OEM customers across the globe. While their unique products and requirements may vary, they all depend on our rugged and highly reliable computing platforms engineered for performance and long life—regardless of environment.

WINSYSTEMS has particular expertise serving the following industries:

- Energy Management
- Industrial Automation
- Industrial IoT (IIoT)
- Transportation Management
- Aerospace and Defense
- Medical Diagnostics
- Unmanned Systems (submersible, marine surface, ground, air and space)
- Digital Signage
- Security



Unrivalled Quality and Support

WINSYSTEMS' expertise in embedded computer design and integration assures that your products are built on a highly reliable computer system. All of our solutions are backed by world-class customer service and responsive technical support from knowledgeable application engineers every step of the way.

From initial consultation through production—and even questions once your product is in the field—our team is there to help.

Discover for yourself how WINSYSTEMS' embedded solutions can cut your product development costs and time to market while reducing the burdens and risk associated with launching new products. Contact us to request a consultation.



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SAMPLE PRODUCT OVERVIEW



SINGLE BOARD COMPUTERS

HIGHLIGHTS

COTS, modified and custom Designs
High-reliability/ industrial grade
Shock- and vibration-resistant
Flexible I/O expansion
Various form factors
IA64, X86, and Arm expertise
Extended temperature range:
-40°C to +85°C

FORM FACTORS

PC/104
3.5-Inch
EPIC
EBX
Nano-ITX
Pico-ITX
Femto-ITX

PROCESSORS

Intel®
NXP®
Arm
DM+P



EBC-C413
EBX Industrial SBC with Intel® Atom™ E3800 Series Processor



EPX-C414
EPIC Industrial SBC with Intel® Atom™ E3800 Series Processor



SBC-C398Q
Quad-Core NXP® i.MX 6Q Cortex®-A9 Industrial Arm SBC



PPM-C412
PC/104-Plus DMP® Vortex86DX3® SBC with Dual Ethernet



ITX-N-3900
Nano-ITX SBC with Intel® Atom™ E3900 Series Processor



PX1-C415
PC/104 OneBank SBC with Intel® E900 Series Processor

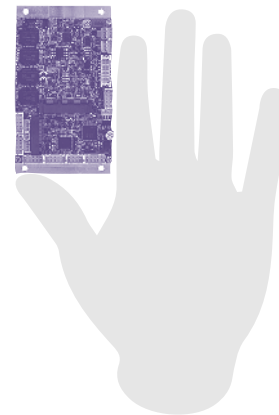
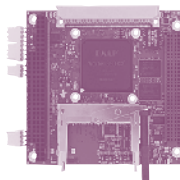
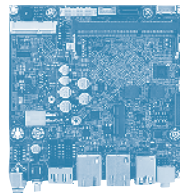
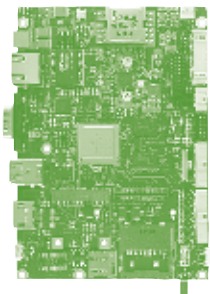
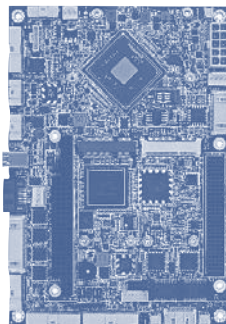
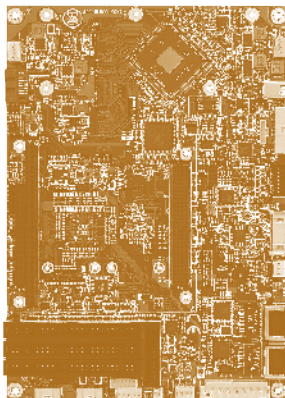


ITX-P-444
Pico-ITX SBC with NXP® i.MX8M Low-Power Processor



ITX-F-3800
Femto-ITX SBC with Intel® Atom™ E3800 Series Processor

SBC FORM FACTOR SIZE COMPARISON



EBX	5.75 x 8 in (146 x 203 mm)
EPIC	4.5 x 6.5 in (114 x 165 mm)
3.5-Inch	4 x 5.7 in (101 mm x 146 mm)
Nano-ITX	4.72 x 4.72 in (120 x 120 mm)
PC/104	3.6 x 3.6 in (91.4 x 91.4 mm)
Pico-ITX	3.9 x 2.8 in (100 x 172 mm)
Femto-ITX	3.31 x 2.17 in (84 x 55 mm)

INDUSTRIAL ENCLOSED COMPUTERS

HIGHLIGHTS

COTS, modified and custom designs

High-reliability/ industrial grade

Shock- and vibration-resistant

Extended temperature range:
-40°C to +85°C

Fanless performance

Low-Power

Versatile I/O

FORM FACTORS

PC/104
3.5-Inch
EPIC
EBX
Nano-ITX
Pico-ITX
Femto-ITX

SYSTEMS

x86
Arm



SYS-405Q

Rugged Intel® Atom™ E3800 Series Processor
Quad-Core SBC with Dual Ethernet and USB 3.0



SYS-ITX-P-3845

Pico-ITX-Based Computer with
Intel® E3800 Series Processor



SYS-ITX-N-3900

Fanless NANO-ITX SBC with Intel® E3900 Series
Processor, Dual Ethernet and USB 3.0



SYS-427-3900

Industrial Computer with Intel® E3900
Processor, Flexible Power Inputs and Expansion

PANEL PCS



PPC65B-1X

Sealed, IP65-Compliant Quad-Core Fanless
Panel PC with Intel® Atom™ E3845 Processor



PPC65BP-1X

Sealed, IP65-Compliant Panel PC with Intel®
Atom™ E3845 Processor and P-CAP Touchscreen



PPC12-427-3900

Industrial 12.1" Panel PC with Intel® E3900
Processor, Dual Ethernet and Expansion



PPC-10W-398D

Open-Frame, Dual-Core ARM® Panel PC
with NXP® i.MX 6DL Cortex®-A9 Processor

HIGHLIGHTS

Industrial grade

Shock- and vibration-resistant

Extended temperature range:
-40°C to +85°C

Fanless performance

Low-power

Versatile I/O

PROCESSORS

Intel®
NXP®

TYPE

Sealed
Open Frame

I/O EXPANSION MODULES



IO60-M410
Data Acquisition Module



IO60-DIO48
48 GPIO Module



PCM-UIO96B-G
PC/104 Digital I/O Module with 96-Line
Digital I/O (GPIO) and Event Sense



PCM-G-COM8
Eight-Channel RS-232/422/485 Serial
PC/104 Module



PX1-I440
PC104 OneBank Data Acquisition Module
with Eight Differential Analog Inputs



PX1-I416
OneBank MiniCard
Expansion Module

HIGHLIGHTS

COTS, modified
and custom designs
Industrial grade
Shock- and
vibration-resistant

**Extended
temperature range:**
-40°C to +85°C

TYPE

Serial
Data Acquisition
Special Function
Ethernet

I/O EXPANSION MODULES

NETWORK SWITCH

HIGHLIGHTS

COTS, modified and custom designs
Industrial grade
TSN capable
Remote PoE-PD device

TYPE

Networking



NET-429-10-00
Industrial Gigabit Network Switch with Remote Operation and POE-PD Support for Distributed Networks

POWER SUPPLIES



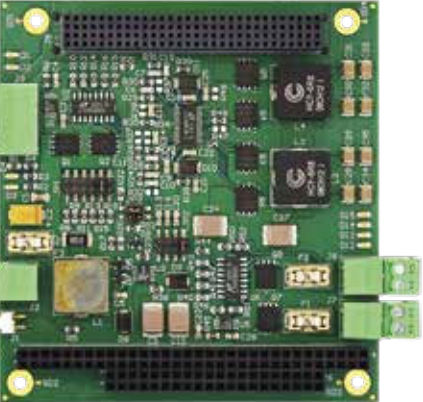
PPM-DC-ATX-P
PC/104-Plus Power Module, Five Regulated DC Voltages from Common DC Input



PPM-PS397-POE
25W, PC/104-Plus, PoE PD, 802.3af/at-Compliant Power Supply



PPM-PS402-512
PC/104-Plus Quad Output DC/DC Power Supply Module



PPM-PS394-533
Dual Voltage PC/104-Plus DC/DC with Battery Charger

HIGHLIGHTS

Industrial grade
Shock- and vibration-resistant
Extended temperature range: -40°C to +85°C
Fanless performance
Low-power
Versatile I/O

SSDs



CFAST CARD
16G Industrial SLC CFast Card



CF CARD
Industrial Temperature SLC
CompactFlash Card



MSATA FLASH DRIVE
128GB Industrial MLC mSATA SSD

HIGHLIGHTS

Industrial grade
Shock- and
vibration-resistant

**Extended
temperature range:**
-40°C to +85°C





EMBED SUCCESS IN EVERY PRODUCT

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ASK ABOUT OUR PRODUCT EVALUATION!

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arm

AMD



PC/104
Consortium Member

COM Express®