When time to market, performance, ROI and your reputation are on the line, entrust your embedded computer requirements to the recognized authority: WINSYSTEMS. For 37 years, we have designed and manufactured highly reliable solutions for customers around the world. In that time, we have supplied thousands of embedded computer systems that enable long-lasting, dependable operation of their products in every type of environment—from outer space to the sea floor, and everywhere in between.

Distinguished by longevity—and customer loyalty
Since our founding in 1982, WINSYSTEMS has earned the trust of customers for the quality, performance and endurance of our embedded computing solutions. As a result, we have been rewarded with long-standing customer relationships—some lasting for over 30 years. We remain committed to delivering value through exceptional design, communication, service and support to assure our customers’ ultimate success.

Engineering-driven
Our staff blends accomplished engineers who possess decades of in-depth experience with bright, fresh talent. This generates novel, well-engineered industrial hardware designs, embedded software, and rugged mechanical solutions.

WINSYSTEMS goes beyond replicating component reference designs to meet the unique challenges of customers in diverse industries. Our team helps you identify the right product, adapt off-the-shelf components or develop a custom embedded computing approach that satisfies your specific product goals and requirements.

Minimize risk—maximize success
At WINSYSTEMS, we understand the risks and challenges that come with bringing new products to market. Rely on our experience and capabilities in embedded computing technologies to lower the risk and costs of new-product development. Avoid the uncertainty, added resources and stress involved in sifting through myriad options and developing your own custom boards. Instead, focus on your product’s unique design elements and get it to market faster.

Our seasoned hardware, software and application engineers are adept at addressing the unique challenges of designing small, highly reliable embedded solutions—from CPU to power supply to sensing, control and security.

Further, WINSYSTEMS offers supplier stability, proven product roadmaps, and a long-term approach to building customer relationships. Our world-class customer and technical support extends from solution development through design, production, volume ramp up, quality control and beyond.
A Proven Consultative Approach

Your design—our engineering expertise

WINSYSTEMS takes a consultative approach to ensure that we arrive at the optimal solution for enabling your product. Our application engineers carefully evaluate the system-level requirements to design the most effective embedded platform—whether off-the-shelf products, customized solutions or application-specific designs. This collaboration expedites the product-selection process, capitalizes on the best technology and maximizes cost-effectiveness.

Our engineers specialize in embedded computer boards and system-level products, along with accessories and software that are well-aligned with our high-reliability and industrial focus. By depending on our expertise in these areas, you can focus your resources on creating solutions that set your business apart from the competition with unique features and best functionality.

Enhanced capabilities through strategic partnerships

As a long time leader in the embedded computing industry, WINSYSTEMS has developed strategic affiliations with technology partners who fully align with our high standards of quality and precision. As your single point of contact, we efficiently manage the end-to-end process from engineering to prototyping, quality-assured manufacturing and testing, to delivery and technical support. As a result, this helps you deliver performance-driven applications with superior quality and longer life cycles in less time.

From Industrial SBCs to Complete Embedded Systems

Technology solutions that transcend boards

With 37 years on the forefront of embedded solution development for performance-driven applications, WINSYSTEMS is highly qualified to support your project needs. We provide complete embedded computing systems to satisfy your product specifications, expected service life, quality standards, production schedule and budget. From single board computers and I/O modules to turnkey solutions, our embedded computing solutions draw on a variety of proven products. We also offer many compatible accessories that can be seamlessly integrated into customer designs.

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 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 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 accommodate temperature ranges that extend 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, responsive technical support and a multiyear warranty. WINSYSTEMS is certified to ISO 9001:2015.
Valued Specialists in Embedded Computing

Flexible processing architectures and expansion options

WINSYSTEMS focuses on embedded computing systems driven by the most relevant CPUs and software resources. We offer multiple Arm-based and PC-compatible product designs. Our Arm-based products are reliable yet versatile to meet a variety of application requirements, with a remarkable power-to-performance ratio, while our PC-compatible products offer improved performance and software ecosystems. Our application engineers will guide you to the best solutions for your design.

We can also include compatible cables and other accessories to complete the design. WINSYSTEMS’ selection of expansion cards, power supplies and solid-state drives provides additional options to enhance and extend functionality. Add data acquisition, serial communications, network, location and other features via PC/104, I060 or MiniPCIe interfaces. Specialty power supplies allow for a wide range of DC inputs, Power over Ethernet (PoE) support and UPS capabilities. Our industrial flash storage keeps data safe and secure, and the operating system running in harsh environments.

Shorter delivery times

Whether you need to meet a tight project schedule or minimize downtime, depend on WIN SYSTEMS for fast delivery. Our methodologies and capabilities accelerate the product development process, saving time and money. Readily available components speed proof of concepts, while 3D printing supports rapid prototyping. This low-risk approach also allows for quick turnarounds on the hardware design and enables software development to begin immediately with existing hardware. What’s more, our expanding portfolio of solutions serves as proven building blocks to make our customers’ products successful—without having to become embedded computing experts themselves.

Forward-Looking Solutions for Wide-Ranging Needs

Our offerings span diverse single board computers in ever-smaller form factors, I/O cards, touch-panel PCs and high-reliability embedded computer systems. These platforms include evolving packaged solutions and CPU technologies. In addition, we consult on and supply data acquisition modules and multiple options for industrial networking.

With products delivering superior uptime, life cycles of up to 15 years, and faster delivery, our customers achieve increased value for long-term ROI.

Broad and deep domain expertise

WIN SYSTEMS provides solutions to disparate OEM customers across the globe. While the products, requirements and environment may vary, all depend on high-reliability computing platforms engineered for high performance and long life.

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

Centrally located U.S. headquarters speeds product development

WINSYSTEMS is headquartered in Arlington, 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. With product manufacturing collocated with engineering and testing, our operations are tightly integrated. This allows us to be more agile and responsive to our customers. It’s easier to communicate with our application engineers at any stage and get fast, well-informed answers.

Our in-house manufacturing supports faster prototyping to production and quick-turn production cycles. Further, having testing equipment onsite with manufacturing positions WINSYSTEMS to consistently maintain higher quality standards.

As an established, dynamic technology center, this region also offers a diverse, well-educated talent pool, along with ready access to international and local electronics supply, support and manufacturing companies. Contact us for specific products or an engineered solution custom-tailored to particular functionality, connectivity, storage or I/O-expansion requirements.
**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

**SBC FORM FACTOR SIZE COMPARISON**

<table>
<thead>
<tr>
<th>Form Factor</th>
<th>Dimensions</th>
</tr>
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<tbody>
<tr>
<td>EBX</td>
<td>5.75 x 8 in (146 x 203 mm)</td>
</tr>
<tr>
<td>EPIC</td>
<td>4.5 x 6.5 in (114 x 165 mm)</td>
</tr>
<tr>
<td>3.5-inch</td>
<td>4.3 x 5.7 in (109 x 146 mm)</td>
</tr>
<tr>
<td>Nano-ITX</td>
<td>4.7 x 4.7 in (120 x 120 mm)</td>
</tr>
<tr>
<td>PC/104</td>
<td>3.6 x 3.6 in (91.4 x 91.4 mm)</td>
</tr>
<tr>
<td>Pico-ITX</td>
<td>3.9 x 2.8 in (101 x 72 mm)</td>
</tr>
<tr>
<td>Femto-ITX</td>
<td>3.35 x 2.17 in (84.4 x 55 mm)</td>
</tr>
</tbody>
</table>
INDUSTRIAL ENCLOSED COMPUTERS

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-M-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

PPC658-1X
Sealed, IP65-Compliant Quad-Core Fanless Panel PC with Intel® Atom™ E3845 Processor

PPC658BP-1X
Sealed, IP65-Compliant Panel PC with Intel® Atom™ E3845 Processor and P-CAP Touchscreen

PPC-12-427-3900
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
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

PANEL PCS

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

PPC65B-1X
Sealed, IP65-Compliant Quad-Core Fanless Panel PC with Intel® Atom™ E3845 Processor

PPC65B-1X
Open Frame, Dual-Core ARM® Panel PC with NXP® i.MX 6DL Cortex®-A9 Processor
I/O EXPANSION MODULES

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

IO60-M410
Data Acquisition Module

IO60-DIO48
48 GPIO Module

PCM-U096B-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

PPM-GIGE-2-POE
PC/104-Plus Dual Gigabit Ethernet Module with POE

IO60-M410

IO60-DIO48

PCM-U096B-G

PCM-G-COM8

PPM-GIGE-2-POE

PX1-4416
OneBank MiniCard Expansion Module
NETWORK SWITCH

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
COTS, modified and custom designs
Industrial grade
TSN Capable
Remote PoE-PD Device

TYPE
Networking

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

**HIGHLIGHTS**

- Industrial grade
- Shock- and vibration-resistant
- Extended temperature range: -40°C to +85°C

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**CFAST CARD**
16G Industrial SLC CFast Card

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**CFFLASH CARD**
Industrial Temperature SLC CompactFlash

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**MSATA FLASH DRIVE**
128GB Industrial MLC mSATA SSD

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**Unrivaled quality and support**

WINSYSTEMS’ expertise in embedded computer design and integration assures customers that their products are built on a highly reliable computer system. Our single board computers and embedded systems are backed by world-class customer service and responsive technical support from knowledgeable application engineers at every step from initial consultation and throughout production.

Discover for yourself how WINSYSTEMS’ embedded computing 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.
EMBED SUCCESS IN EVERY PRODUCT

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ASK ABOUT OUR PRODUCT EVALUATION PROGRAM

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