FORTEC
INTEGRATED
EMBEDDED
POWERFUL.PRECISE.DIRECT.
Your technology competence partner for Embedded Solutions.

STRONG IN THE FORTEC GROUP

THE GROUP

FORTEC GROUP

- FORTEC INTEGRATED
- FORTEC POWER
- FORTEC SWITZERLAND
- FORTEC UNITED KINGDOM
- FORTEC UNITED STATES
- FORTEC BENELUX
- FORTEC EGYPT
- FORTEC CZECH REPUBLIC

WHY FORTEC INTEGRATED?

Our particular strength lies in designing, developing, and producing exactly the right embedded solution you are looking for. Everything from a single source.

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QUALITY

Precisely tailored:
Performance, dimensions, connections – everything is customized and tailored to customer requirements

Powerful:
Latest-generation industrial PCs and Edge AI platforms for demanding applications

Industrial grade:
Industrial components, ready for 24/7 operation

FLEXIBILITY

Customized:
Embedded Solutions – tailored precisely to your requirements

Design freedom:
From boards to complete, certified systems

Software and firmware:
Customized operating system and BIOS adaptations, ready for use

OUR PRODUCTION AREAS

Monitors

- Fire Protection | IoT
- Rugged | IP Protection
- High Bright | Touch
- Special formats | Braille

Components

- Displays | Controller
- Touchscreens
- Kits | Accessories

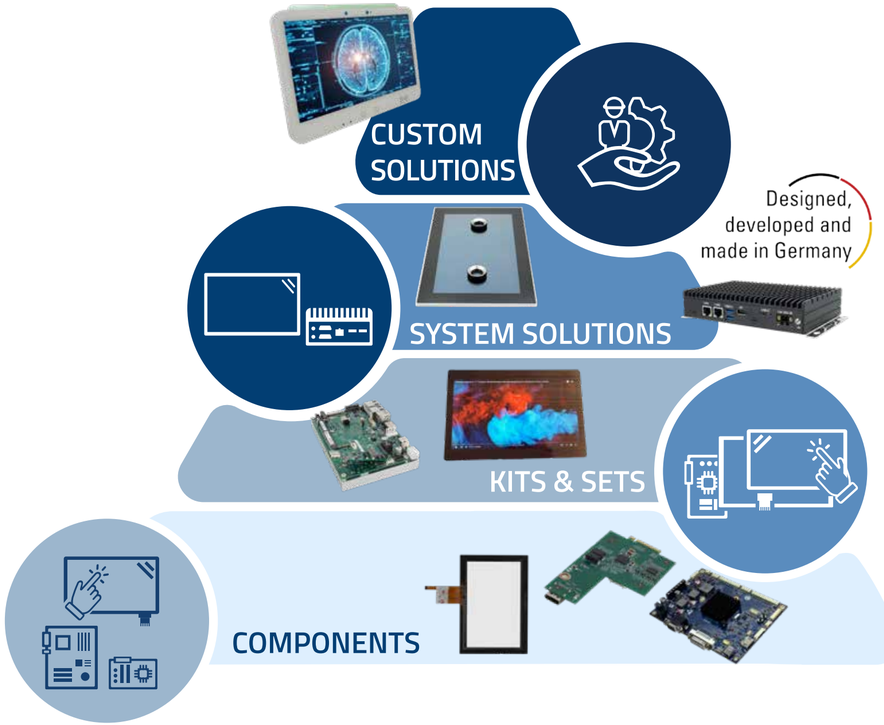
Embedded

- Customized Systems
- Edge AI | Box PCs
- COM Modules
- SBCs | Motherboards

Individual

- Customized Solutions
- Bonding | Glass
- Touchs | Embedded
- Services

VERTICAL SCOPE OF PRODUCTION



TERMINOLOGY EMBEDDED SOLUTIONS

DEFINITION OF TERMS

EMBEDDED SYSTEM

An embedded system is a specialized electronic system that is permanently integrated into larger devices or systems. Unlike universal computers, they perform specific control, regulation, or monitoring tasks.

Features:

- Invisible when installed in machines, vehicles, and production facilities
- Specially adapted hardware and software for efficient and reliable processes
- Designed for continuous operation and low energy consumption

Typical applications:

- Automated control in factories
- Intelligent building technology

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EMBEDDED SOLUTION

Embedded solutions are specialized hardware-software combinations that are integrated directly into industrial systems. They automatically perform tasks such as control, monitoring, and regulation – tailored to specific requirements. Embedded solutions increase process efficiency through low resource consumption, short latency, and high reliability, even under difficult conditions.

- Low power consumption for energy-efficient designs
- Fail-safe architectures with long-term serviceability
- Stable BOMs – minimizing redesign effort
- Flexibly adaptable
- Central component of modern automation and control systems
- Increase productivity and safety
- Reduce costs

YOUR BENEFITS

BETTER WITH FORTEC

EMBEDDED SOLUTIONS

Challenge complex integration processes:

Design-in support from the first concept to series production, including evaluation boards and technical consulting.

Challenge of discontinuation risk:

Ensure long-term availability with defined lifecycles and stable BOMs | minimizing redesign effort.

Challenge of high energy consumption:

Eco-design with low standby power consumption | energy-efficient, sustainable systems

Challenge of long development cycles:

Ready-to-use systems | pre-tested, certified, and reliable

HIGHLIGHTS

Customized design

Long-term availability

Certifications

Energy efficiency

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EMBEDDED SOLUTION SERVICES

OUR SERVICES

ONE PROJECT
ONE TEAM
ONE RESPONSIBILITY

EMBEDDED SOLUTIONS BY FORTEC

- Custom designs
- Box PCs, SBCs, carrier boards and HMI solutions
- Engineered for your application
- Complete all-round service
- Internal testing and certification
- Specialized project management team for custom designs
- Experienced HW and SW engineers
- Internal certification consultant
- Partnership with design houses

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Our experts from the product management Embedded Solutions:

Stefan Zieboll | Thomas Schrefel

PORTFOLIO EMBEDDED SOLUTIONS

SINGLE BOARD COMPUTER

Compact SBC and Carrier Boards

Functionality of a motherboard in the smallest possible space, as well as additional functionalities required for industrial applications

INDUSTRIAL MOTHERBOARDS

From Mini-ITX to ATX

Embedded motherboards are high-quality motherboards that are specially developed for industrial use.

COMPUTER-ON-MODULES

COM Express | COM-HPC | SMARC

All core motherboard functions on a compact module | scalable, upgradeable, future-proof.

EMBEDDED SYSTEMS

Box PCs and Edge AI

Specialized embedded systems for industrial use, including for extreme conditions and specific customer solutions

INDUSTRIAL SERVER & NETWORK

Server | Router | Switches

Server performance without data centers – it's possible with our offerings. Robust solutions in 19" format

EMBEDDED ACCESSORIES

Memory | Operating systems

Flash and memory storage as well as expansion cards, WINDOWS IoT Enterprise for embedded apps

BENEFITS

Maximum performance in minimum space:
x86 or ARM – according to your application requirements.

Integrate faster and eliminate wiring errors!

Our SBCs bundle all functions on a single board. We offer both architectures:

- x86 (Intel/AMD) for full Windows compatibility
- ARM for extreme energy efficiency

We provide transparency and expertise, you make the right decision.

more Info on this topic

Product overview

FEATURES

x86 (Intel/ AMD)

- Unbeatable performance
- Full Windows compatibility
- Complex controls

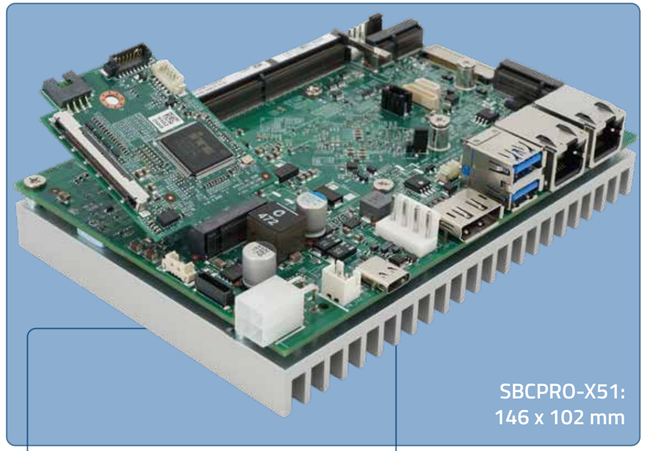
ARM (e.g. NVIDIA Jetson)

- Unbeatable efficiency
- Ideal for Edge AI, mobile, and fanless gateways

3,5" SBC (e.g.SBCPRO-X51)

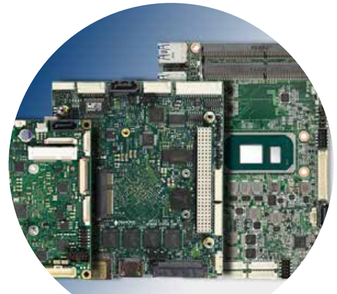
- The uncompromising industry standard
- Kits including display - with V-by-One

SBCPRO-X51: POCKET-SIZED POWER



3,5" SBC | Intel® Amston® Lake

- Maximum flexibility thanks to M.2 extensions:
  - USB-C M.2 display connection with DisplayPort, power supply, and touch signal via a single cable
  - V-by-One M.2 module for large-format 4K displays
- Compatible with Windows 11 IoT LTSC
- 24/7 continuous operation
- Very wide operating temperature range from -20 to +80 °C
- Two 2.5 Gbit Ethernet ports for fast and reliable network connection
- Supports Wi-Fi for wireless connectivity



BENEFITS

Your time is too valuable for unplanned redesigns – that's why our industrial motherboards offer you the security of defined parts lists for years to come.
We offer motherboards in ATX, Micro-ATX, and Mini-ITX form factors.

The form factor describes the mounting options and size of a motherboard.
Avoid long design and certification cycles with FORTEC boards and benefit from our additional services:

- **Absolute control –** high-quality components and guaranteed longevity
- **Compatibility –** legacy interfaces such as RS232/422/485, which are no longer available in current IT
- **Custom** – Board & BIOS adaptations
  – your system boots exactly as it is optimal for you

FEATURES

ATX

- Dimensions: 305 x 244 mm
- Up to 7 expansion slots

MICRO-ATX

- Dimensions: 244 x 244 mm | 25% smaller than ATX
- Compatible with ATX mounting points

MINI-ITX

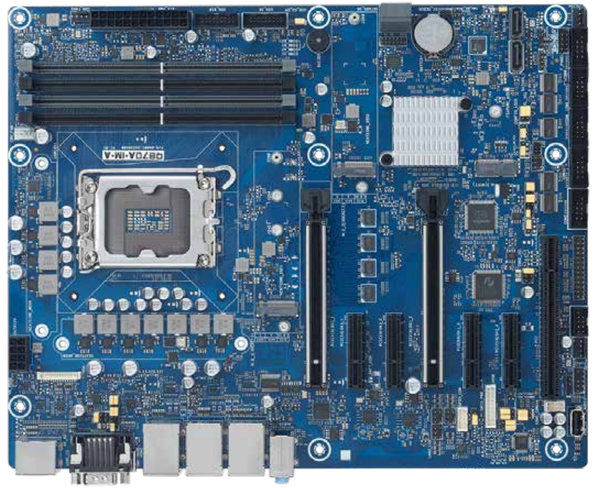
- Dimensions: 170 x 170 mm
- Thin Mini-ITX with reduced height

more Info on this topic

Product overview

INDUSTRIAL MOTHERBOARDS

EXAMPLE: MICRO ATX ASUS IOT | Q870A-IM-A



© ASUS IoT | Q870A-IM-A

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BENEFITS

The COM concept decouples rapid CPU development from expensive new developments.

Upgrade performance without redesigning mechanics, carrier boards. That is the core advantage of COM architectures.

Computer-on-Modules (COM), also known as System-on-Modules (SOM), already have the core functions of a motherboard, but require a carrier board to operate.
While the most important components such as the CPU, connection to the RAM, and standard interfaces are already located on the computer-on-module, customer-specific interfaces are defined on the carrier board.

- **Design-in support** – Custom carrier design in perfection

FEATURES

COM-HPC

- New performance standard for servers and client systems
- Meets the ever-increasing demands on performance

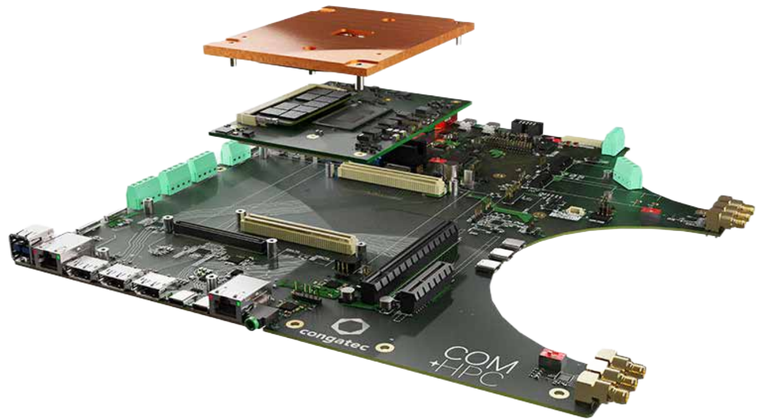
COM Express

- Offers the right solution for every application – from servers to credit card-sized systems

SMARC | OSM

- Cost-effective design
- Slim & robust

EXAMPLE:
CONGATEC COMPUTE-ON-MODULE WITH CARRIER



© congatec | Compute-on-modules

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BENEFITS

Box PCs and Edge AI – Fanless and maintenance-free.

Our hardware works. Permanently. Without maintenance. Our Box PCs are designed for harsh environments and are shock and vibration resistant.

We supply customized, preconfigured, and certified systems that meet all requirements.

- **Design-in support** – Perfect coordination of your board elements, from the adaptation of a standard solution to a customer-specific system.
- **Absolute control** – High-quality components and guaranteed longevity.

FEATURES

EDGE-AI

- Energy-efficient inference at the edge
- Often based on robust ARM platforms such as NVIDIA Jetson
- Real-time processing of data at the point of generation

HIGHLIGHT: BPCPRO-X51 - docks where others give up

- Amston® Lake Processor
- Single-cable solution via USB-C
- Compact computer for perfect integration into display systems
- Perfect for slim system solutions

more Info on this topic

Product overview

EMBEDDED SYSTEMS

EXAMPLE: BPCPRO-X51

USB-C SINGLE-CABLE SOLUTION

© Background AS

BENEFITS

Routers, gateways, and switches form the basis for seamless integration and functionality of IoT devices. They are important components of modern IoT networks.

Network products provide an efficient, secure, and scalable infrastructure for communication between different devices and to the cloud.

more Info on this topic

Product overview

FEATURES

SERVER

- On-Premise server for processing critical data
- ECC memory and redundant power supplies for maximum reliability

NETWORK

- Routers, gateways, switches
- secure IIoT connectivity
- guarantee stable 4G/5G connections even under critical conditions

INDUSTRIAL SERVER & NETWORK

EXAMPLE: Teltonika ATRM50 router
Robust. Fast. Railway certified.

© Teltonika

© AS

BENEFITS

Industrial-grade accessories are critical to system reliability. That's why we only offer validated components with long-term availability.

We offer validated components and services developed for industrial applications.

- Added value through integration into tested kits and systems
- Industrial quality
- High reliability
- Customized adaptations

more Info on this topic

Product overview

FEATURES

Flash & Memory

- Memory with fixed BOM, no silent chip replacement
- Long-term availability

Customized KITs

- Pre-configured solutions tailored to your requirements

Software and firmware services

- OS & software ready for immediate use
- WIN 10/11 IoT | Linux | Android
- BIOS adjustments

EMBEDDED ACCESSORIES

ADDITIONAL

RAM | SSD

BIOS

OS

SERVICES

KITS

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EMBEDDED

▼ PRODUCT | VENDOR ▶		Advantech	Asus IoT	Congatec	Diamond Systems	Fortec	iBase	Nexcom	Teltonica	Transcend
Box PC	Systems	●	●		●	●	●	●		
AI Solutions		●	●		●	●	●	●		
Server | Industrial PC		●	●				●			
Router | Switches | Gateway		●			●				●	
Panel PC | Monitor		●				●	●	●		
SMARC	Computer-on-modules	●		●				●		
COM-HPC		●		●						
COM Express		●	●	●			●	●		
Qseven		●		●			●			
QSM		●								
Carrier Board		●		●			●			
2.5" Pico-ITX	SBC	●	●	●			●			
3.5" SBC and others		●	●	●	●	●	●	●		
Mini-ITX | Micro-ATX | ATX	MB	●	●				●	●		
Flash	Accessories	●								●
Memory		●								●
Extension Cards		●	●		●		●	●		
Graphics Cards		●	●							

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