

Products & Solutions

2023

Hardware, components
and complete systems
for industrial use



Table of contents

Table of contents	2	AI Transportable Systems	22
About us	3	GPU Servers	23
Embedded Box PCs	4	GPU Expansions	23
Compact Edge Computers	5	AI Transportables in Comparison	24
Hardware with GPUs / MXM / SoM	6	PCIe Expansions	26
Box PCs with PCIe / PCI slots	6	PCIe Expansion Systems	27
Vehicle Computers	7	PCIe Components	27
DIN-Rail / Wall Mount PCs	7	PCIe Expansion Kits	27
19-Inch Industrial PCs	8	Industrial Flash Storage	28
1U Systems	8	Industrial SSDs and Modules	28
2U and 4U Systems	9	Industrial Memory Cards	29
Panel PCs & Touch Displays	10	Form Factors at a glance	29
Chassis Type Solutions	11	Medical Hardware	30
Panel Mount Solutions	12	SEAL Panel PC series	30
Open Frame Solutions	13	Medical Box PCs	31
Rugged Tablets & Handhelds	14	Medical Tablets	31
Comprehensive Accessories	14	Medical Device Servers	31
SCORPION Fields of Application	15	Unified Communications	32
All Models in Direct Comparison	16	FonComfort™ Telephony Suite	32
Industrial IoT Hardware	18	Sangoma UC Solutions	33
Cellular Routers	18	Sangoma Switchvox	33
Digi Remote Manager	18	Sangoma PBXact	34
Digi XBee® Ecosystem	19	Voice-over-IP Gateways	34
System-on-Modules	19	Session Border Controller	34
USB Connectivity	20	Telephony Cards	35
Serial Connectivity	20	Hardware for Microsoft® Teams	35
Ethernet Switches	21		

About us

*As a customer, you benefit from the high-quality products which BRESSNER Technology has been offering you for **over 25 years** as a system integrator and value-added distributor **for industrial IT.***

*Our range of services serves all industries that require industrially usable hardware solutions. With our **many years of experience and in-depth know-how**, we are the ideal contact for your company.*



As one of the leading IT providers and value-added distributors in the field of industrial IT, we are facing new challenges arising from digital trends such as Artificial Intelligence (AI) and Industrial IoT (IIoT). The demand for more powerful computer systems in various sectors is increasing year by year.

To keep up with the dynamics of digitalization, it is crucial to use customized hardware for machine automation, production, or for logistics & transportation. Companies without expansion strategies suffer setbacks in terms of productivity and profitability, which has a negative impact on their level of competitiveness.

For this reason, we support companies of all sizes and industries with products as well as customized tailor-made solutions. To meet the needs of our customers, we continuously expand our partner network and are able to cover the following core product segments:

- › **Fanless embedded computers**
- › **Industrial 1U to 4U 19-inch systems**
- › **Panel PC and touch display solutions**
- › **Rugged tablets and industrial handhelds**
- › **Industrial flash storage and DRAM modules**
- › **GPU computers and high performance computers**
- › **PCIe / PCI expansion systems and backplanes**
- › **IIoT hardware and industrial network solution**
- › **Embedded PCs, panel PCs and tablets with industry-specific approvals such as railway, medical, or the defense sector**

Due to our hardware, small and medium-sized enterprises as well as large corporations see themselves at an advantage. Accelerating the digitization of your company not only increases efficiency, but also maintains competitiveness.

Martin Stiborski
Managing Director



Embedded Box PCs

Embedded Box PCs are designed for industrial applications and are characterized by their modularity and compact design. Typical application fields for Embedded Box PCs include the automotive industry, traffic engineering, as well as production and manufacturing technology. Embedded PCs are available in different performance classes, sizes, protection classes and with various interfaces and expansion options. The powerful hardware takes on tasks such as control, regulation or monitoring functions as well as data and signal processing.

With increasing computing power, the systems are now also finding their way into areas such as artificial intelligence, autonomous vehicles and complex machine learning functions. We offer customers not only the latest technologies and components, but also a complete service package ranging from pre-sales to post-sales. Embedded

systems are the core of modern industrial applications and can also be equipped with individual mainboards, memories, or processors through our professional production facility.

We offer the following **features and services** for embedded PCs:

- > Passively cooled fanless design with heat dissipator
- > Ultra-sturdy exteriors up to IP67 certification
- > High performance processors (12th/13th Gen.)
- > Comprehensive PCIe / PCI expansion interfaces
- > GPU support up to 250W (NVIDIA®)
- > Single board computers in a small form factor
- > Wall and DIN rail mounting options
- > Individual configurations



INTEL® CORE™ 12TH/13TH GEN. PERFORMANCE



Nuvo-10208GC



Nuvo-9160GC



BOXER-6646-ADP

Compact Edge Computers

Compact embedded hardware is essential to the success of AI-driven applications and services. Edge computing provides a powerful platform for AI capabilities by enabling data processing closer to the source, reducing latency and improving performance. Our edge hardware allows large amounts of data to be processed quickly while providing real-time operational insights to maximize efficiency. We offer a variety of customizable, modular edge computers equipped with security features that protect sensitive data from malicious attacks.

The embedded PCs ensure reliable operation when connected across networks with varying degrees of reliability or bandwidth availability. In addition, we provide you with contemporary hardware including current technologies such as NVIDIA® Jetson Orin™ or Intel® Core™ 12th and 13th generation processors.

AI BLOX

NVIDIA® JETSON ORIN™ EDGE COMPUTING SYSTEMS



AI-BLOX - Modular edge intelligence solution

Interface module

The flexible interface modules by AI-Blox allow you to connect various sensors and peripherals. The following I/Os are available for you to choose from:

- › MIPI module for up to six MIPI cameras
- › USB 3.0 module with up to four ports
- › Ethernet module with four internal MAC's connected with two USB 2.0 (internal)
- › **We build custom modules with your individual I/O interface as an option**

Processor module

The AI-Blox platform currently supports eight different NVIDIA® Jetson™ modules. An additional **7-inch touch display** is available as an option.

- › NVIDIA® Jetson Nano™
- › NVIDIA® Jetson™ TX2 NX
- › NVIDIA® Jetson Xavier™ NX
- › NVIDIA® Jetson Orin™ NX (starting Q1/2023)
- › NVIDIA® Jetson Orin Nano™ (starting Q2/2023)

Communication module

Use different network protocols for device communication such as Gigabit Ethernet, Wi-Fi or cellular. We offer the following modules:

- › Gigabit Ethernet module up to IP67
- › Gigabit Ethernet + Wi-Fi module incl. Bluetooth
- › Wi-Fi module (802.11 a/b/g/n/ac) incl. Bluetooth
- › Gigabit Ethernet + LTE module with GNSS
- › **We build custom modules with your individual network interface as an option**



NRU-220S



BOXER-8640AI

Hardware with GPUs / MXM / SoM

Our range of embedded systems with built-in GPUs and expansion slots enables fast and efficient data processing. In addition, we offer hardware that can be upgraded at any time with GPUs from NVIDIA® (e.g. RTX-3070, RTX-3080 and Quadro) or AMD (e.g. Radeon RX Vega 8 / 10). This flexibility enables additional performance boosts for edge computing applications and makes our product even more valuable for customers in all industries.

- › **GPUs:** Single / double width up to 250W
- › **MXM:** Mobile PCI Express modules for additional DisplayPorts via P1000 / P2000 GPUs
- › **System-on-Modules:** Compact mini PCs based on Jetson™ AGX Xavier or Orin™



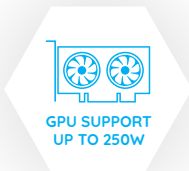
MVP-6120-MXM



Supported GPUs

NVIDIA® RTX-4000, RTX-A4000, RTX-A5000, RTX-3080, RTX-3070, RTX-3070 x2, RTX-3060Ti, RTX-3060, GTX-1660, GTX-1650, Tesla T4, Quadro P2200

AMD Radeon RX Vega 8, Vega 10



Nuvo-9160GC



BOXER-6710



Box PCs with PCIe / PCI slots

- › **Up to 7 expansion slots** in a single box housing
- › **Bus system:** PCIe Gen5, Gen4 or Gen3 as well as PCI in a combination of x16, x8, x4 or x1 lanes
- › Expansion slots support **USB connections, CAN bus, Power-over-Ethernet, frame grabber cards, MIPI connections, M12 connectors** and many other interfaces

PUMA-VCO-6131E-4M2



Vehicle Computers



Nuvo-7100VTC

As an IT expert for automotive applications, we know that collecting and processing vehicle data can be complex and tedious. The best tools for the job are vehicle computer and automotive on-board controllers. These ruggedized devices offer stable mounting options, e.g. in the trunk of the vehicle, and are suitable for various applications such as measurement technology or autonomous driving. Thus, each area can be individually designed and optimized.

In addition, there are optional PCIe expansion modules, that include Wi-Fi, 3G to 5G mobile communications or

GPS, which can help with on-board communications. The passively cooled, in-vehicle systems withstand extreme shocks and vibrations as well as temperature fluctuations during transportation. With this technology, you have all the options to manage your vehicle in the best possible way, both in the interior and exterior.

Therefore, you not only have a modern solution to efficiently handle data collection, but equally achieve significant added value in the operation of cars, trucks, buses or trains.



WALL MOUNTS OPTIONAL



POC-451VTC

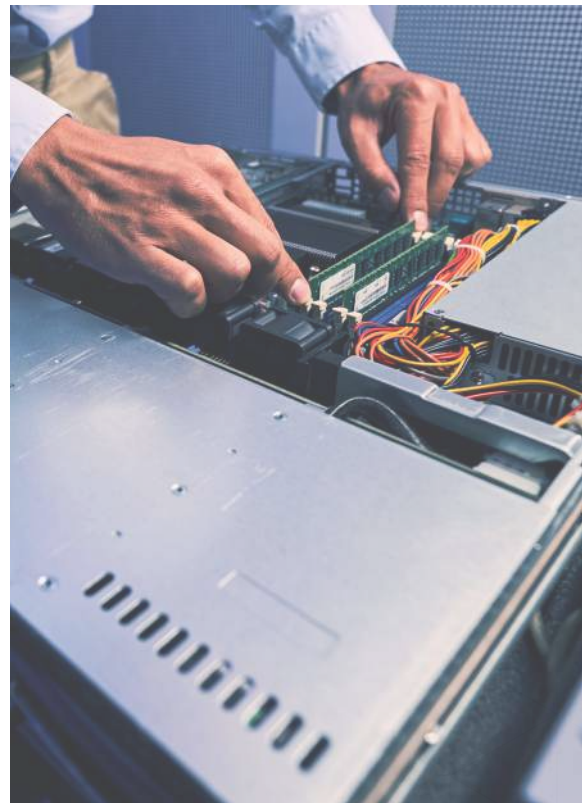
DIN-Rail / Wall Mount PCs

Our DIN-rail / wall mount PCs are the ideal solution for production facilities and warehouses. They offer a sturdy and reliable platform that can be easily integrated into any existing infrastructure due to their compact size. Our extensive portfolio of DIN rail enclosures allows you to find the best hardware for your specific application scenario. With our durable and low-maintenance designs, these devices are ideally suited to ensure a stable operation for decades - giving you more time to focus on the essentials in production!

19-Inch Industrial PCs

Engineers and system integrators are aware of the significance of industrial 1U to 4U 19-inch servers. These servers provide a powerful platform suitable for a wide range of compute-intensive use cases. The industrial PCs can be integrated into a variety of environments for scalable performance while providing cost-saving benefits. Our 1U to 4U 19-inch industrial computers feature a robust design with high fail-safety, specifically optimized for long-term use in server rooms.

In addition, each model type has sufficient storage capacity (both internal and external) for all your data storage needs. In addition to superior processor performance, the hardware also offers individual configuration options. A customization service allows you to make customer-specific adjustments to the housing, motherboard, processor, RAM as well as storage capacity. The 19-inch industrial-grade servers are an ideal solution for companies of any size looking for more efficient IT without having to cut back on services.



1U to 4U



Fanless



Intel® Core™ i9 / i7 / i5 / i3
or Intel® Xeon®

1U Systems

1U 19" Leopard III



Our industrial 1U 19-inch servers offer a powerful and reliable solution tailor-made for your needs. Due to the high-quality components built into each server, you get a reliable, high quality system. The individual customization of our products means we can create the perfect server for flexible use cases - whether it's a web server, file server or application server. Our sales and customer service team will be happy to answer any questions you may have regarding installation and commissioning.

- > **Processors:** Intel® Core™ i9 / i7 / i5 or XEON® CPU
- > **Chipset:** Intel® Q370
- > **Memory:** DDR4 SO-DIMM up to 32GB
- > **Storage Capacity:** 2.5" SSD up to 512GB as well as two 2.5" SATA HDD/SSD easy swap trays, RAID 0,1
- > **Video:** 3x DisplayPorts up to 4096x2304 resolution
- > **Power Supply:** AC or DC power input
- > **Cooling:** Passive without fan
- > **Individual customization** options available

2U and 4U Systems

- > Intel® Xeon® or 12th/13th Gen. Core™ i9 / i7 / i5 / i3
- > ATX-Q670A mainboard with LGA1700 socket processor
- > DDR5 DRAM support, 4800MHz, up to max. 128GB
- > Windows 10 IoT Enterprise LTSC 64-bit (supports Windows 11 installation)
- > Connect up to **four independent displays**:
2x HDMI 2.0, 2x DisplayPort, 1x VGA header
- > **Dual Intel® Gigabit Ethernet** (optional 1x LAN3 i225LM)
- > **Built-to-order** as well as plug-and-play solutions

SERVICES WITH INTEL® CORE™ 12TH/13TH GEN. CPUs



2U 19" PANTHER

CUSTOMIZABLE

4U 19" TIGER



Basic configurations at a glance

	Entry	Basic	Pro	Ultra
Rack Unit	2U (88.90mm) or 4U (177.80mm)			
Processor	Intel® Core™ i3-12300, Intel® Core™ i3-10300 Intel® Core™ i3-9300	Intel® Core™ i5-13500, Intel® Core™ i5-12500, Intel® Core™ i5-10500, Intel® Core™ i5-9500	Intel® Core™ i7-13700, Intel® Core™ i7-12700, Intel® Core™ i7-10700, Intel® Core™ i7-9700	Intel® Core™ i9-13900, Intel® Core™ i9-12900, Intel® Core™ i9-10900, Intel® Core™ i9-9900
RAM	8GB DDR5 4800MHz or DDR4 2666MHz (up to max. 128GB)	16GB DDR5 4800MHz or DDR4 2666MHz (up to max. 128GB)	32GB DDR5 4800MHz or DDR4 2666MHz (up to max. 128GB)	64GB DDR5 4800MHz or DDR4 2666MHz (up to max. 128GB)
Storage	incl. M.2 SSD 256GB and 2.5" SSD 512GB	incl. M.2 SSD 500GB and 2.5" SSD 1TB	incl. M.2 SSD 500GB and 2.5" SSD 1TB	incl. M.2 SSD 1TB and 2x 2.5" SSD 2TB
Mainboard	ATX-Q670A with Intel® 12 th Gen. Core™ LGA1700 socket processor, MAX-Q470A with Intel® 10 th Gen. Core™ LGA1200 socket processor, ATX-Q370A-A20-2L with Intel® 8 th /9 th Gen. Core™ LGA1151 socket processor			
OS	incl. Windows 10 IoT Enterprise LTSC 64Bit, Linux or server operating system as an option, Supports Windows 11 installation			

Panel PCs & Touch Displays

Industrial panel PCs and touch displays with screen sizes ranging from 5.7 inches to 65 inches are innovative human-machine interfaces suitable for a wide variety of applications. These devices offer a high level of flexibility for fulfilling specific visualization tasks in industrial environments. They are powerful, sturdy, and durable enough to withstand the harsh conditions of automation processes or multimedia applications.

Our industrial panel PCs offer modular card slots for optional features such as WLAN, Bluetooth, GPS, and wireless connectivity via mobile networks (GPRS/EDGE), as well as readers such as barcode scanners or magnetic strip readers. Additionally, there are other options such as RFID, webcams, or printer connection possibilities that can

be added to the configuration as needed. The PCAP multi-touch screens come with Windows 10 IoT Enterprise or Linux installed, providing better system handling without neglecting the required room for accessories such as the mouse and keyboard.

In addition to the sturdy aluminum enclosures, we also offer explosion-proof panel PCs with ATEX certification. Along with industrial automation, controlling complex machines and interactive kiosk systems, the display solutions can be used for hazardous areas.

OPTIONAL CUSTOMIZATION



Panel PCs with Intel® Core™ 12th/13th Gen. CPUs

TOUCAN panel PCs

- > **Display Sizes:** 10.1" to 21.5"
- > **Resolution:** 1,366 x 768 up to max. 1,920 x 1,200
- > **Processor:** Intel® Core™ 12th/13th Gen. CPUs
- > **Touchscreen:** True-flat PCAP multi touch
- > **Operating System:** Windows 10 IoT Enterprise or Linux
- > **IP-Rating:** IP65 (front)
- > **Enclosure:** Aluminium with 48mm depth
- > **Cooling:** Passive without fan



	Fanless		PCAP multi touch
	WLAN b/g/n		Bluetooth 4.0
	Front IP65		Front camera

Chassis Type Solutions



Display sizes
from 5.7 to 65-inch

Aluminium enclosure

Our panel PCs and touch displays with aluminum housings are rugged and durable solutions for industrial applications. The aluminum casing provides high-quality and protection against dust and moisture. It also allows for efficient heat dissipation, extending the device's lifespan and preventing failures. The touch display offers intuitive operation and the ability to enter or retrieve data directly on the screen. Panel PCs also provide the ability to perform data processing and storage on site and enable easy integration into existing systems. Overall, these devices offer a powerful and reliable solution for industrial applications while maintaining their robustness and longevity.

- > PCAP multi touch or resistive
- > IP65 or IP66 rating (front)
- > Maritime certification



TOUCAN PRO 21.5"



- Anodized housing
for improved corrosion protection
- Magnetic I/O cover
Protective cover for connectors

Stainless steel chassis

Panel PCs with stainless steel chassis are the perfect choice for applications in areas such as food and pharmaceutical production, as well as in the medical field. SUS304 standardized stainless steel and a full-flat touch panel are included in the standard equipment of our food-grade panel PCs. The brushed stainless steel protects the devices from oxidation and corrosion by water or acidic and alkaline liquids. Furthermore, it hinders the spread of germs and bacteria, which is particularly beneficial for industries with high hygiene standards.

For some application cases (such as in chemical plants) where strong acids or solvents are used, we also offer the option to use SUS316 housing.

Depending on requirements, there are fully IP67-protected stainless steel solutions available, such as our ORCA series, which can even achieve up to IP69K through configuration and adjustments to the housing structure. This maximum upgrade allows the operator terminals to withstand even high-pressure cleaning devices.



ORCA PRO series



Up to
IP69K



Resistive or PCAP
multi touch

Panel Mount Solutions



Display sizes
from 5.7 to 32-inch

Panel mount panel PCs, also known as front installation panel PCs, are specially designed computer systems that can be integrated into an existing machine or system. They provide an elegant and space-saving solution for industrial applications where process control or monitoring is required.

A key feature of panel mount panel PCs is their separate housing for the computing unit. They typically have a slightly larger depth than traditional panel PCs, which is significantly reduced by the cutout mounting in control cabinets or flush-mounted boxes. The devices are protected against dust and moisture by a silicone seal on the housing edge. This allows for easy integration into most applications and machines.

Another important feature of Panel Mount Panel PCs is their ability to operate in harsh environments. They are

often equipped with high protection and a wide operating temperature range to ensure they can work in extreme environments.

Our panel mount solutions can be equipped with various types of touchscreens, from resistive to projective-capacitive. Some models also have an IP65 or higher protection to protect them from water and dirt particles.

In conclusion, our panel mount systems provide a sturdy and reliable solution for industrial applications where space-saving, reliability, and performance are critical. They enable businesses to control and monitor their machines and systems without wasting space for additional devices.

Minimal ventilation slots
against dust and water



External tray
for 2.5" SSDs / HDDs



Modular flush mounted panel PCs



EAGLE A.I. series

- > **Display Sizes:** 15" to 24"
- > **Resolution:** 1,024 x 768 up to max. 1,920 x 1,080
- > **Processor:** Intel® Core™ Coffee Lake-S i7 / i5 / i3 or AMD Ryzen™ V1605B
- > **Touchscreen:** Full flat resistive or PCAP multi touch
- > **Operating System:** Windows 10, Windows 11 Ready
- > **IP-Rating:** IP66 (front) / IK05
- > **Enclosure:** Aluminium with modular trays
- > **Cooling:** Passive without fan



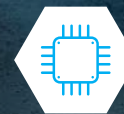
Fanless



Resistive or PCAP
multi touch



Front IP66



Intel® Core™ 9th Gen.
or AMD Ryzen™



Wi-Fi



Optional PCIe slot

Open Frame Solutions



Display sizes
from 5.7 to 42-inch



*Resistive, SAW, PCAP multi touch
or without touch feature*



*Optional high brightness
version available*

OF Display series

- > **Resolution:** 640 x 480 up to max. 1,920 x 1,080
- > **Aspect Ratio:** 4:3, 16:9: 16:10
- > **Touchscreen:** Resistive, SAW or PCAP multi touch
- > **Brightness:** 250 up to max. 1,000 nits
- > **Enclosure:** Open metal frame
- > **Video Ports:** VGA, HDMI
- > **Power Consumption:** 15W up to max. 180W
- > **Cooling:** Passive without fan

Open Frame (OF) touch solutions are a special type of HMI system which are defined by their open frame structure. They are supplied without their own housing and can be integrated into existing switch cabinets or systems. These types of devices are particularly suitable for applications where space savings and easy integration into existing systems are of utmost importance. This enables even touch surfaces and external dimensions to be achieved.

The control of the industrial monitors is completely done in the metal housing behind the installation wall, ensuring power supplies and other cabling remain hidden. Our OF monitors have a compact form factor and are made of

robust aluminum, which makes them more resistant to use in harsh industrial environments.

We also offer the option to install various types of touchscreens for these displays. If customers prefer input via keyboard and mouse, the displays can also be supplied without touch feature. This enables intuitive operating options and the ability to take control of different applications via the control panel. Some models offer an increased screen brightness for a crisp image, even in direct sunlight.

Rugged Tablets & Handhelds

Our rugged tablets and handheld solutions are robust mobile devices designed for use in harsh environments and conditions. All devices in the SCORPION series are equipped with at least IP65 protection, which protects the inner workings from dust and moisture.

Another key feature of our SCORPION models is MIL-STD-810G certification, which preserves the integrity of the mobile devices in case of shocks and drops from up to 1.2 meters. This durability makes the rugged tablets and handhelds ideal for applications in automation technology, mechanical engineering, transportation or the oil and gas industry.

SCORPION 
RUGGED TABLET & HANDHELD SOLUTIONS

[DOWNLOAD BUYERS GUIDE](#)



SCORPION 10" SLIM Android

- > **Display:** 10.1" (25,65cm) with 1,920 x 1,200 resolution
- > **Processor:** MT8788 Octa-Core (Quad-Core Cortex A73 / Quad-Core Cortex A53)
- > **Touchscreen:** PCAP multi touch
- > **Operating System:** Android 11
- > **IP-Rating:** IP65
- > **Battery:** 10,000mAh (hot swap)
- > **Scan Module:** 1D/2D

Comprehensive Accessories

For our SCORPION rugged tablets and handhelds, we offer a huge variety of accessories and components which are optional for each model. The following accessories are available for you to choose from:

- > Scan modules for reading 1D/2D codes
- > Office docking charging stations for multiple devices
- > Spare batteries for continuous operation
- > Keyboards with magnetic docking mechanism
- > Active vehicle mounts with charging function
- > Mounting kits and attachments for forklifts
- > Carrying straps and shoulder straps
- > Pistol grip with integrated trigger for handhelds
- > Power adapters and vehicle charging cables
- > Touch pens for simplified operation

SCORPION 6" with carrying strap



SCORPION Fields of Application



INDUSTRIAL

- › Control terminal for construction machinery
- › Control of mining machines
- › Automated processes in production halls
- › Multimedia tool in handicraft enterprises



DRONE CONTROL

- › Remote control by radio link
- › Exploration of impassable or dangerous terrain
- › Data acquisition via camera or sensors



LOGISTICS

- › HMI display for construction site vehicles
- › Forklift terminal
- › Barcode scanner for warehouse goods
- › Vehicle display for transportation



AGRICULTURE

- › Progress recording on agricultural land and construction sites via camera
- › GPS-controlled precision farming
- › Mobile data terminal for field operations



EMERGENCY VEHICLES

- › Management of deployment plans for fire trucks
- › Document scanning and verification in police cars
- › Data transfer in rescue vehicles



MILITARY

- › GPS localization in field operations
- › Data transmission to operations center
- › Ruggedized operation terminal with good readability in direct sunlight



Sunlight readable
touch displays with
min. 800 nits



All Models in Direct Comparison

Model	SCORPION 12"	SCORPION 10" SLIM Android	SCORPION 10X Android
			
Display Sizes	12.2-inch (30.98cm)	10.1-inch (25.65cm)	10.1-inch (25.65cm)
Resolution	1,920 x 1,200	1,920 x 1,200	1,280 x 800
Touchscreen	10-point capacitive	10-point capacitive	Capacitive multi-touch screen, supports glove and rain mode
Brightness	280 nits	400 nits (min.)	1,000 nits (sunlight readable)
Processor	Intel® Skylake Core™ m3-6Y30	MT8788 Octa-Core (Quad-Core Cortex A73 2.0GHz / Quad-Core Cortex A53 2.0GHz)	Qualcomm Cortex-A53 64-bit Octa-Core processor, 1.8GHz
Memory	4GB LPDDR3 (up to 8GB for projects)	4GB LPDDR 4X	4GB LPDDR3
Storage Capacity	128GB up to 512GB M.2 SSD	64GB / 128GB	64GB
Operating System	Windows 10 IoT	Android 11.0	Android 9.0
Interface	1x RJ-45 LAN 2x USB 2.0, 1x USB 3.0, 1x USB Type C 1x HDMI 1.4a Type C 1x RS-232 (COM1), 1x RS-2485 (COM2) 1x micro-SIM slot 1x microSD slot 2x Speakers + Audio-Out	1x USB Type A, 1x USB Type C 1x Micro HDMI Mode 1: 2x Nano SIM, Mode 2: 1x Nano SIM + microSD 1x Speaker + 2x Microphone 1x microSD slot	1x USB Type C Compatible with USB 3.0 (for data transmission; supports OTG) 1x micro-SIM slot 1x microSD slot 1x Speaker + Audio-Out
Barcode Reader	1D / 2D (optional)	1D / 2D (included)	1D / 2D (included)
Camera	2MP (front) / 5MP (rear)	8MP (front) / 13MP (rear) or 21MP (optional) with flash light	5MP (front) / 16MP (rear)
Battery	6,300 mAh, 7.4 Volt, (hot swap) + 1,000 mAh, 7.4 Volt (internal)	10,000 mAh, 3.8 Volt, hot swap, 1,000 mAh, internal	8,000mAh, 3.7V, removable (warm swap)
Operating Temp.	-10° ~ 50°C	-10° ~ 50°C	-10° ~ 65°C
Certifications	IP65 + MIL-STD-810G	IP65	IP67 + MIL-STD-810G
Accessories (Option)	Dockable keyboard, spare battery, 1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, shoulder strap, backstrap	Multi I/O docking, office docking, hand strap	Included in delivery: 1D/2D scanner, active vehicle mount, mounting arm, hand strap, power adapter

SCORPION 10X Windows	SCORPION 10" PLUS	SCORPION 8" PLUS	SCORPION 6"
			
10.1-inch (25.65cm)	10.1-inch (25.65cm)	8.0-inch (20.32cm)	6.0-inch (15.24cm)
1,280 x 800	1,280 x 800	1,280 x 800	1,280 x 720
10-point capacitive	10-point capacitive (Windows) 5-point capacitive (Android)	10-point capacitive (Windows) 5-point capacitive (Android)	5-point capacitive
1,000 nits (sunlight readable)	280 nits (Windows), 400 nits (Android)	320 nits (Windows), 450 nits (Android)	430 nits
Intel® Atom™ Cherry Trail x5-Z8350	Intel® Atom™ Cherry Trail Z8350 (Windows) or MSM8953, 2.0 GHz (Android)	Intel® Atom™ Cherry Trail Z8350 (Windows) or MSM8953, 2.0 GHz (Android)	Intel® Atom™ Cherry Trail Z8350 (Windows) or Qualcomm MT8735B Quad-Core Cortex A53, 1.45GHz (Android)
4GB LPDDR3	4GB LPDDR3	4GB	4GB (Windows) or 2GB (Android)
64GB	64GB	64GB	64GB (Windows) or 32GB (Android)
Windows 10 IoT	Windows 10 IoT or Android 9.0	Windows 10 IoT or Android 10.0	Windows 10 LTSC 2019 or Android 10.0
1x USB 3.0 + 1x USB Type C 1x HDMI 1.4a Type C 1x micro-SIM slot 1x SDHC/SDXC slot 1x Speaker + Audio-Out	1x USB 2.0 + 1x microUSB OTG (Windows) 1x USB 2.0 + 1x USB Type C (Android) 1x HDMI 1.4a Type C 1x RJ-45 LAN + 1x RS-232 1x micro-SIM slot 1x microSD slot 1x Speaker + Audio-Out	1x USB 2.0 + 1x microUSB OTG (Windows) 1x USB 2.0 + 1x USB Type C (Android) 1x HDMI 1.4a Type C 1x SIM slot 1x microSD slot 1x Speaker + Audio-Out	1x microUSB OTG 1x micro-SIM slot 1x microSD slot 1x Speaker + Audio-Out
1D / 2D (optional)	1D / 2D (optional)	1D / 2D (optional)	1D / 2D (included)
2MP (front) / 5MP (rear)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 13MP (rear) - (Android)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 13MP (rear) - (Android)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 8MP (rear) - (Android)
10,000 mAh, 3.7 Volt, removable	10,000 mAh, 3.7 Volt, removable (Windows) 8,500 mAh, 3.7 Volt, removable (Android)	8,500 mAh (for LTE: 7,800 mAh), 3.7 Volt, internal (Windows) 8,500 mAh, 3.7 Volt, internal (Android)	5,000 mAh, 3.7 Volt, removable (Windows), 5,000 mAh, 3.7 Volt (Android)
-10° ~ 50°C	-10° ~ 50°C	-10° ~ 50°C	-10° ~ 50°C
IP65 + MIL-STD-810G	IP65 + MIL-STD-810G	IP65 + MIL-STD-810G	IP67 + MIL-STD-810G
Spare battery, 1D/2D scanner, power adapter and cable, office dock, active vehicle mount, vehicle charging cable, stylus, shoulder strap, backstrap	Spare battery, 1D/2D scanner, power adapter and cable, office dock, active vehicle mount, vehicle charging cable, stylus, shoulder strap, backstrap	1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, touch pen	Spare battery, power adapter and cable, office docking, multi-docking cradle, pistol grip, active mount, active pistol grip mount, vehicle power supply, touch pen, shoulder/belt pouch, 1D/2D scanner (incl.)

Industrial IoT Hardware

Industrial Internet of Things (IIoT) refers to the use of Internet of Things (IoT) technologies in the industrial sector. IIoT hardware includes sensors, actuators, gateways, routers, and other devices that are used in industrial plants to collect, monitor, and control data.

An important aspect of IIoT hardware is its ability to convert data from the physical world into digital information. Sensors are used to collect data such as temperature, pressure, humidity, and motion, and then transmit this data to gateways via routers, which convert it into digital formats and send it to the cloud or to on-premise applications. Configuration is usually done through remote management software.

Through our trusted partnership with long-time collaborator Digi International, we are able to design more efficient and sustainable networks for complex applications. These include industrial plants, communities, building automation, surveillance, smart cities, and big data. Additional applications of our IIoT hardware include production, energy generation, manufacturing, and logistics.

In addition to machine-to-machine networking (M2M), the use of our Digi IIoT hardware helps improve the efficiency and performance of industrial plants and reduce costs. It also allows for the real-time monitoring and control of processes, providing greater transparency and flexibility.

Cellular Routers

- Transportation Routers:** Public and private data communication with onboard routing, GPS and passenger Wi-Fi
- Industrial Routers:** Secure communication in outdoor areas and in extreme weather conditions
- Enterprise Routers:** Cellular extender for business environments with features such as GbE, Digi SureLink™ and failover.



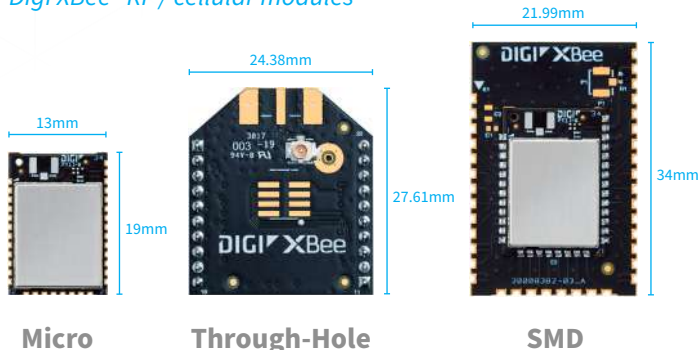
Digi Remote Manager

- > Industry-leading cloud and edge tools for rapid device deployment and easier asset management
- > Monitor IoT devices, asset performance, and security with two-way communications
- > Automate bulk firmware and software updates to improve functionality and scale your deployment
- > Access data from edge devices
- > Integrate device data via open APIs to gain deeper insights from third-party vendors
- > Get detailed reports and real-time alerts on network and device health

Get your 90-day trial for free

Digi XBee® Ecosystem

Digi XBee® RF / cellular modules



Digi XBee® Industrial Gateway series



The XBee module is a globally recognized product and part of a family of cellular modems and RF modules that offer IoT application developers ultimate flexibility with three programmable form factors and a range of common wireless protocols. This includes IoT gateways and management tools to connect, monitor, and manage the XBee network. With Digi XBee, developers can create robust and powerful networked products faster and more efficiently and bring them to market on their schedule. The Digi XBee ecosystem includes modules, code libraries, the award-winning Digi XBee Tools tool suite, IoT gateways, and Digi Remote Manager to connect the XBee network

to the internet and perform ongoing monitoring and management.

These resources simplify and accelerate prototyping, coding, and range testing to quickly add features like GPS services and Bluetooth connectivity, incorporate edge features with MicroPython, perform mass firmware updates, and more. Pre-certified modules save time and costs in certification. And if support is needed in development and design, Digi Wireless Design Services can help.

System-on-Modules

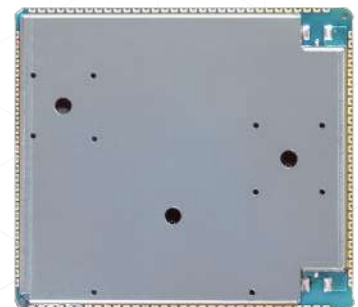
System-on-Modules (SOMs) are small computer modules which are mounted on a printed circuit board and contain a variety of functions and components that are required for most embedded systems. Our partner Digi International is a leading manufacturer of SOMs that are used for a variety of applications in areas such as automation, medical technology, traffic engineering, and robotics.

The SOM solutions from Digi International are designed to accelerate the development and deployment of products. They provide a highly integrated hardware and software platform that allows engineers to quickly and easily develop embedded systems. The solutions also include a complete suite of tools and resources that facilitate design scalability and simplify maintenance.

The Digi Connectcore® SOMs are robust and designed for use in industrial environments. They feature the integrated Digi TrustFence®, which increases the security and integrity of the systems. With advanced open systems software and device management tools, Digi's embedded solutions enable OEMs to reduce total cost of ownership and successfully bring their products to market.

Digi ConnectCore® 8X

Digi ConnectCore® 8M Nano



Digi ConnectCore® MP1



Processors: ST STM32MP1, NXP i.MX93, NXP i.MX 8M Nano, NXP i.MX 8X, NXP i.MX6UL, NXP i.MX6

Form factors: Low-Profile Digi SMTplus™

Pre-certification: 802.11 a/b/g/n/ac and Bluetooth® (4 or 5)

Digi TrustFence®: Embedded device security framework

USB Connectivity

Our partner Digi International is a leading manufacturer of USB connectivity solutions for embedded systems. These solutions allow users to connect their devices to a variety of computers and other devices that support USB interfaces.

These include the **USB-over-IP hardware** Digi AnywhereUSB® Plus, which allows USB peripheral devices to be connected anywhere on a local area network (LAN) without the need for a locally attached host computer. They provide flexible and scalable USB 3.1 multiport connectivity for USB devices that are connected from external or virtualized hosts.

Digi also offers switched **USB expansion hubs** that enable instant connection of multiple peripheral devices. This allows customers to easily add up to 14 USB connections to a PC, server, or thin client.

The Digi Edgeport **USB-to-serial converters** are simple out-of-the-box solutions for I/O expansion with a variety of configurations. These devices send or receive serial data from a computer or other device over a USB connection and provide maximum flexibility and scalability. Serial devices, such as microcontrollers, can be connected to a computer to send or receive data.



Digi AnywhereUSB® Plus 2

Digi AnywhereUSB® Plus 8

Digi AnywhereUSB® Plus 24

Serial Connectivity

Our terminal servers and serial servers connect network-critical IoT devices to applications and provide serial-to-Ethernet options. Administrators have multiple networking options, for example, using Digi's RealPort driver or TCP / UDP sockets.

- › **Serial Ports:** RS-232 or RS-232/422/485
- › **Number of Ports:** max. 32 ports
- › **Gigabit Ethernet:** 10/100/1000Mbit/s
- › **Protocols:** TCP/UDP, PPP, DHCP/RARP/ARP-Ping, Telnet, Reverse Telnet/ SSHv2/SSL, Modbus to Modbus, IPv4/IPv6

Your benefits at a glance

- › Integration of devices across multiple protocols
- › Next-generation terminal servers support GB Ethernet and IPv6 networks
- › Hardened options for hazardous conditions
- › Models with selectable RS-232/422/485 serial ports for connecting a variety of serial devices over IP networks
- › Patented COM port redirector allows multiple connections to multiple ports over a single TCP/IP connection



Digi Connect EZ series

Ethernet Switches



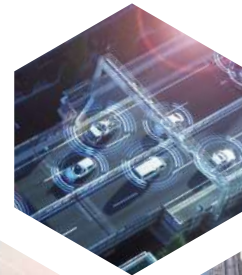
Our Ethernet switches are best suited for applications that require high bandwidth and field communications. They provide excellent EFT and ESD protection, even with irregular voltage inputs. The power redundancy feature, achieved through a dual current input with reverse polarity protection, makes the devices especially reliable. Thanks to bracket mounting, the metal housings of the switches can be easily attached to a DIN rail. Our product range also includes shock- and vibration-resistant Ethernet M12 and Gigabit Ethernet ports that are X-coded and A-coded with PoE options. All industrial M12 Ethernet switches are

housed in a rugged IP67 metal enclosure preventing dust and water ingress.

- › **Ethernet Switches:** Unmanaged, managed, Power-over-Ethernet switches and media converters
- › **Ethernet Ports:** Up to 28 (M12, PoE, SFP or SFP+ ports optional)
- › **Bandwidth:** 10 Gigabit, 1 Gigabit or 10/100Mbit/s
- › **Protection Class:** IP30 or IP67 protection (for M12)
- › **Operating Temperature:** -40° to 75°C

INDUSTRIAL ETHERNET

FOR | AUTOMATION.
SMART CITIES.
POWER ENGINEERING.
AUTONOMOUS VEHICLES.
OIL AND GAS PRODUCTION.
MECHANICAL ENGINEERING.



AI Transportable Systems

The technological advancements in high performance computing (HPC) over the last decade, such as the increased role of GPUs in calculations, have led to a surge of acceptance for machine learning and artificial intelligence applications. While computing technologies in data centers have evolved significantly, the same capabilities have been slower to be deployed in edge/transportable environments.

To address this, we have developed AI Transportable systems, uncompromising platforms with data center capabilities that can be deployed in the same edge environments as embedded solutions. Through PCIe expansion, the GPUs running the compute engine have direct high-speed bus connections to equally fast NVMe storage, NIC add-in cards, and FPGA data capture. This PCIe design supports the latest AI system architectures

for direct memory transactions in a disaggregated workflow. AI Transportable systems meet the stringent MIL-STD requirements for shock and vibration, extended operating temperature ranges, altitude, humidity, and redundant power.

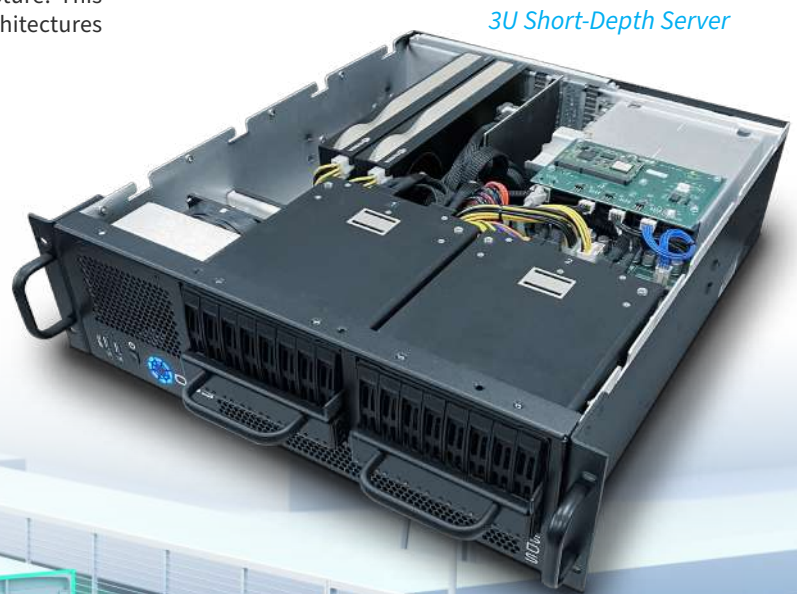
The AI Transportables industry represents the niche market between the latest advances in high-performance computing and edge (transportable) applications. According to MarketsandMarkets, the edge computing market is expected to grow to \$15.7 billion by 2025 at an average annual growth rate of 34 percent.



3U to 4U GPU servers & PCIe expansions



PCIe Gen5 / Gen4 bandwidth



3U Short-Depth Server

**HIGH END PERFORMANCE
FOR MOBILE APPLICATIONS**

Empowered by
Hardware Solutions

DOWNLOAD BUYERS GUIDE

GPU Servers

Our GPU servers have been specifically designed to maximize the performance of artificial intelligence. They support a variety of applications, from deep learning to machine learning processes. With a single root complex, all GPU clusters can be used efficiently to focus on large learning processes, leaving the CPU for smaller tasks. By using a dual root complex, the CPU can take on more tasks and distributed learning processes can be optimally controlled between the GPUs.

By using GPU servers that are compatible with open-source AI frameworks, companies can save costs while remaining flexible. The use of open-source tools and algorithms makes it easier to develop AI models and applications for simulations, autonomous vehicles, and intelligent process optimization. Developers can focus on their core competencies while also enjoying the benefits of AI.



Rigel Edge Supercomputer

- › **Processor:** AMD EPYC 7003 processor single socket SP3 (LGA4094)
- › **GPUs:** 4x NVIDIA® A100 SXM GPUs, 320GB GPU storage, 3rd Generation NVLink, 2.4 TB/s
- › **Expansions:** 4x PCIe Gen4 x16 expansion slots
- › **Memory:** 8x ECC DDR4 RDIMM/LRDIMM
- › **Enclosure:** Aluminium frame (black anodized)



Half rack



MIL-STD-461E

GPU Expansions

We offer GPU appliances and hardware systems which are designed to expand existing servers with GPU slots. They allow up to ten GPUs to be connected to a single server, significantly increasing the performance of applications that rely on parallel computing. This includes artificial intelligence and machine learning, which greatly benefit from processing large datasets with multiple graphics cards for training and inference processes. Scientific calculations and simulations also benefit from the additional computing power provided by GPU expansions.

The HPC systems are also suitable for the media and entertainment industry, as well as data analysis and visual representation of large datasets. The latter is used in many fields, such as finance, retail, healthcare, and the oil and gas industry.

Gen5 4U Pro GPU accelerator



Up to 10 GPU slots

AI Transportables in Comparison

Rugged GPU Servers

Model	3U Short Depth Server	Rigel Edge Supercomputer	GAS-R
			
CPU	Intel® Xeon® Ice Lake or AMD EPYC™ 7003 Dual or Single	AMD EPYC™ 7003 processor Single socket SP3 (LGA4094)	AMD Epyc™ 7002 up to 64 cores or Dual Intel® scalable processors
GPU	Full-Height, Full-Length	4x NVIDIA® A100 SXM GPUs 320 GB GPU storage 3. Generation NVLink 2.4 TB/s aggregated total bandwidth	8x NVIDIA® A100 SXM4 GPUs (NVLink 3.0)
Memory	DDR4 RAM up to max. 4TB	8x ECC DDR4 RDIMM/LRDIMM slots (support modules up to 128 GB)	Up to 4TB DDR4 ECC RAM
Storage Capacity	12GB SAS-3 or 6GB SATA III 32GB NVMe x4	PCIe 4.0 x4 NVMe M.2 slot	Up to 200TB U.2 PCIe 4.0 NVMe flash
PCIe Expansions	4x PCIe 4.0 x16 FH 1x PCIe 4.0 x16 FH, Half-Length	4x PCIe 4.0 x16 HHHL slots	4x PCIe 3.0 x16 HH/FL Double-Width 2x PCIe 3.0 x16 HH/HL Single-Width 1x PCIe 3.0 x4 HH/HL with physical x8 connector 32x PCIe 3.0 x8 HH/HL (removable)
Interface	2x USB 3.2 1x USB 3.1 Gen 2 (Type C)	4x RJ-45 10/100/1000 (rear) 3x RJ-45 Unified Baseboard Management (rear) 2x USB-C 1x VGA	2x RJ-45 (10-Gigabit Ethernet) 4x Ethernet & Infiniband up to 200GB/s 4x FibreChannel up to 32GB 5x USB 3.0, 2x rear, 2x front, 1x internal 4x USB 2.0 (2x rear, 2x internal)
Enclosure	Lightweight aluminium frame (3U) Black anodized outer case	Lightweight aluminium frame (4U) Black anodized outer case	Black anodized aluminium chassis (8U)
Cooling	92mm fan, 40mm fan	2x 80 x 80mm high CFM PWM controlled GPU fans 4x 80 x 28mm PWM controlled server fans	80mm fan, 92mm fan, 80dB(A) at 1-meter distance
Power Supply	Single/Dual AC 1600W, 110-240VAC Single/Dual DC 1600W, 48VDC Single/Dual AC 2600W, 110-240VAC	90-264VAC (47-63Hz) 110VAC (400-800Hz) 3Ø 180-300 VDC 48 VDC	100-250VAC (47-63Hz or 400Hz) 200-370VDC 2+1, hot swap power supply up to 1600W
Temperature	Operation: 0° ~ 35°C Storage: -40° ~ 71°C	Operation: 0° ~ 35°C Storage: -40° ~ 71°C	Operation: 0° ~ 35°C Storage: -40° ~ 71°C
Humidity	10% ~ 90%	0% ~ 95%	5% ~ 95%
Weight	20.4kg (45.0 lbs)	22.7kg (50.0 lbs)	60.3kg (132.9 lbs)
Dimensions	482.6 x 177.8 x 469.9mm	177.8 x 218.4 x 678.1mm	368.3 x 431.8 x 622.3mm
Regulations	FCC, CE, CISPR 22, MIL-STD-810G	FCC, ICES-003, CE, CISPR 22, RoHS 6 of 6, WEEE, MIL-STD-461E	MIL-STD-810G, MIL-STD-461E, MIL-STD464A, MIL-STD-704E, IEC 61000-4-2

GPU Accelerators and Storage Systems

EB4400	Centauri	FSA n-4	
			
-	-	Dual Intel® Xeon® Skylake, Cascade Lake, Cascade Lake-X, LGA 3647	CPU
-	-	Half-Height, Full-Length, GPU connectors on rear side	GPU
-	-	Up to 4TB DDR4 ECC RAM	Memory
-	Up to 8x U.2/U.3 PCIe 3.0 or 4.0 NVMe SSDs with 128TB per 3U system (15.36TB NVMe drives)	Supports 32x PCIe 3.0 x8 HH/HL PCIe NVMe flash, up to 400TB usable	Storage Capacity
Backplane Dual OSS-538: 1x Single-Width PCIe 4.0 x16 FHFL 4x Dual-Width PCIe 4.0 x16 FHFL Backplane Dual OSS-521: 1x Single-Width PCIe 4.0 x16 FHFL 6x Single-Width PCIe 4.0 FHFL 1x Dual-Width PCIe 4.0 x16 FHFL	1x PCIe 4.0 x16 SFF-8644 host uplink for connecting several Centauri systems	4x PCIe 3.0 x16 HH/FL Double-Width, 2x PCIe 3.0 x16 HH/HL Single-Width, 1x PCIe 3.0 x4 HH/HL with physical x8 connector 32x PCIe 3.0 x8 HH/HL (removable)	PCIe Expansions
1x PCIe 4.0 x16 host-to-target uplink kits (32Gbit/s) 2x PCIe 4.0 x16 host-to-target uplink kits (64Gbit/s) SmartNIC host	2x RJ-45 Ethernet ports (for web server GUI access)	2x RJ-45 (Intel® X550) 10-GbE slots 5x USB 3.0, 2x rear, 2x front, 1x internal	Interface
Rackmount steel chassis (4U)	Aluminium chassis (3U)	Rackmount aluminium chassis (4U)	Enclosure
3x 92mm (180CFM) fan standard PWM controlled Optional IPMI system monitoring Optional Quadrafoam 45 PPI removable fan filters	BMC and fan control	4x 70 x 38mm PWM hot swap fan	Cooling
Single / Dual AC 2600W power supply Single / Dual AC 1600W power supply Single / Dual DC 1600W power supply	Dual 1600W redundant power supplies: 100-240VAC full range 48VDC 50/60Hz	Power input rear: 100-250VAC (47-63 or 400Hz) or 200-370VDC 2+1, hot swap power supply up to 1600W	Power Supply
Operation: 0° ~ 35°C; short-term: -5° ~ 40°C Storage: -40° ~ 71°C	Operation: 10° ~ 50°C Storage: -40° ~ 71°C	Operation: 0° ~ 35°C Storage: -40° ~ 71°C	Temperature
5% ~ 95%	5% ~ 95%	5% ~ 95%	Humidity
11.3kg (24.9 lbs) - w/o GPUs	5.9kg (13.0 lbs)	31.8kg (70.1 lbs) to 38.6kg (85.1 lbs)	Weight
271.8 x 177.8 x 470mm	215.9 x 133.4 x 508mm	431.8 x 177.8 x 609.6mm	Dimensions
FCC Class A, CE, UL, cUL, RoHS3	FCC Class A, ICES-003, UL/IEC 60950-1, CE, CISPR 22, WEEE & RoHS 3	MIL-STD-810G, MIL-STD-461E, MIL-STD-464A, MIL-STD-704E	Regulations

PCIe Expansions

PCIe bandwidths

PCIe	Bandwidth per lane	PCIe x1	PCIe x4	PCIe x8	PCIe x16	Encoding
1.0 / 1.1	2.5 GT/s	0.25 GByte/s	1.0 GByte/s	2.0 GByte/s	4.0 GByte/s	8b10b
2.0 / 2.1	5 GT/s	0.50 GByte/s	2.0 GByte/s	4.0 GByte/s	8.0 GByte/s	8b10b
3.0 / 3.1	8 GT/s	0.97 GByte/s	3.9 GByte/s	7.8 GByte/s	15.8 GByte/s	128b/130b
4.0	16 GT/s	1.90 GByte/s	7.8 GByte/s	15.8 GByte/s	31.5 GByte/s	128b/130b
5.0	32 GT/s	3.90 GByte/s	15.8 GByte/s	31.5 GByte/s	63.0 GByte/s	128b/130b
6.0	64 GT/s	7.50 GByte/s	30.3 GByte/s	60.5 GByte/s	121.0 GByte/s	PAM-4

The importance of PCIe for AI Transportables

The latest version of PCI Express (PCIe) is Gen5, (PCIe 5.0), which was released in July 2017. PCIe 5.0 supports a data rate of up to 256 Gbps per lane, transmitting twice as fast as PCIe 4.0. PCIe 5.0 is backward compatible with all previous PCIe versions and can be used in existing systems.

PCIe 5.0 enables AI Transportable systems to use twice the bandwidth of the previous generation, which is critical for this application where sensor technology continues to increase the amount of data collected for inference models. In addition, PCIe 5.0 supports lower latency, which is important for real-time applications where every millisecond counts.

Centauri Storage Expansion



Hot swap cartridge
for tool-less replacement of up to eight U.2 SSD hard drives

AI TRANSPORTABLES

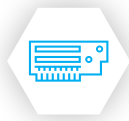
FOR | AUTONOMOUS VEHICLES.
MEDIA & ENTERTAINMENT.
AGRICULTURAL MACHINES.
SEA & AIRCRAFTS.
HEALTHCARE.
MILITARY.



PCIe Expansion Systems

PCIe expansion systems are specialized hardware expansions that enable multiple PCIe cards to be installed in a 4U chassis. They are primarily used in data centers and other industrial applications where many expansion cards are required, and space is limited.

These expansion systems can also be used in portable AI systems that require the performance boost of GPUs for machine learning. Other applications, such as automated factories, power plants, scientific measurement and simulations, medical devices, or military operations, also benefit from this technology.



Up to 16 PCIe expansion slots per box

EB4400



PCIe Components

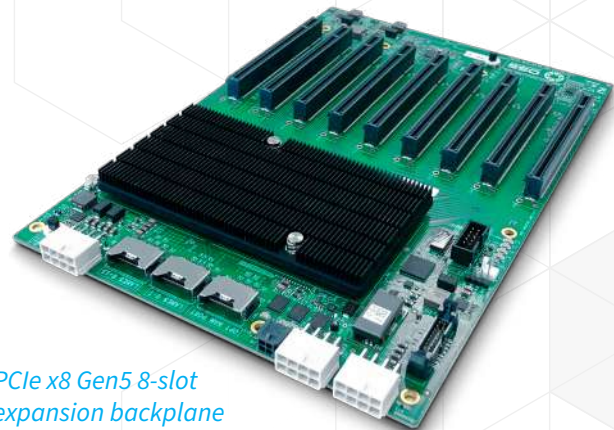
We provide customers with a comprehensive range of different expansion components that can be effortlessly integrated into existing facilities and infrastructures.

- > **PCIe Adapter and Adapter Cards:** x1, x4, x8 or x16
- > **PCIe Cable:** up to 300 meters length, with PCIe or Mini-SAS connector (Gen4)
- > **Expansion Backplanes:** up to eight PCIe Gen5 slots (x8) or Gen4 slots (x4, x8 or x16)



PCIe Gen5 backplanes available

PCIe x8 Gen5 8-slot expansion backplane



PCIe Expansion Kits

You can choose from a combination of PCIe adapter cards and cables to connect computers and end devices locally via host-to-target. Our expansion kits consist of two adapter cards and a PCIe cable. Alternatively, you can assemble your individual expansion kits depending on your requirements.

- > Host-to-target cable adapters with adapter cards and PCIe / Mini-SAS cables
- > Supports PCIe Gen4 with up to 256GBit/s data transfer rate

PCIe x16 Gen4 host-to-target expansion kit





Industrial Flash Storage

SECURE DATA TRANSFER
FOR DATA CENTERS AND
INDUSTRIAL APPLICATIONS



Industrial SSDs and Modules



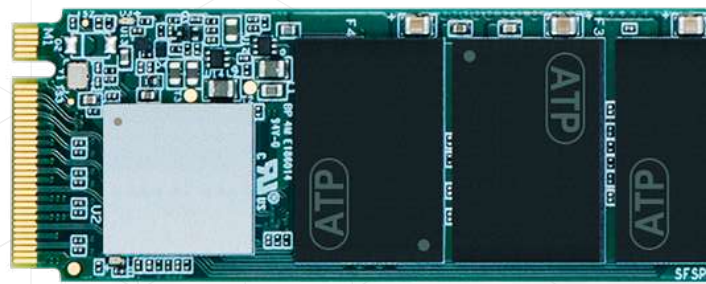
Fixed BoM (Bill-of-Materials)

Through our partner ATP Electronics Inc., we are able to offer specifically designed storage solutions for use in harsh industrial environments. The SSD hard drives are particularly robust and ensure data integrity even during power outages due to patented emergency power mechanisms.

An important benefit of our industrial SSDs is their ability to operate in areas with extreme temperatures, high humidity, and strong vibrations. They offer high data transfer rates and long lifecycles, making them

ideal for applications such as real-time data acquisition and processing, medical imaging, and industrial automation. In addition, they are well suited for use in logistics and transportation, data centers, and the oil and gas industry.

We offer a wide range of industrial SSD modules, which have been designed for integration into embedded systems and include space-saving storage options. These modules are available in various form factors such as mSATA, CFast, and M.2.





Industrial Memory Cards












ATP's industrial flash memory cards are a practical and powerful solution for storing data in harsh industrial environments. With their high capacity and reliability, they guarantee a secure storage of valuable data. Designed for a variety of applications, including automotive, automation, networking, and healthcare, their compact design and additional features, such as lifetime monitoring, make them a versatile option.

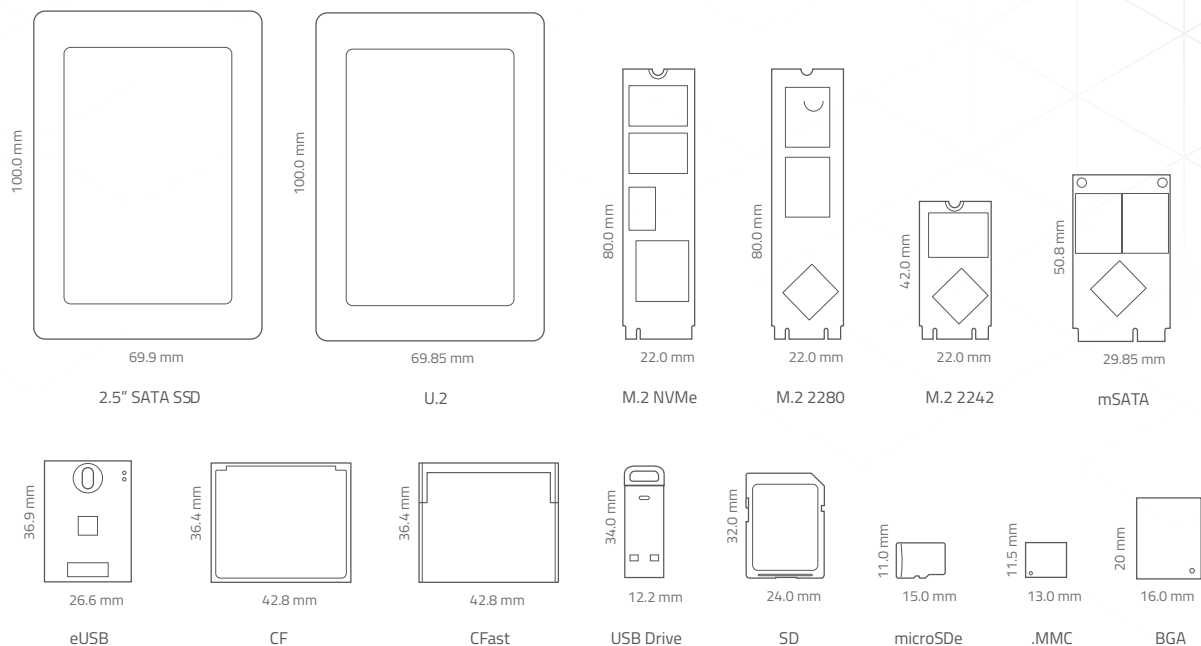
The memory cards are available in different form factors, offering a flexible and space-saving option for

data storage in demanding industrial applications. With their comprehensive features and high-performance characteristics, they ensure safe and reliable data storage and are perfect for critical applications where failure is not an option.

- › **Storage Capacity:** Up to 256GB
- › **Flash Type:** SLC, MLC, pSLC, TLC or 3D TLC
- › **Form Factor:** SD, microSD, Compact Flash (PATA) and CFast (SATA III)

 AutoRefresh - Error Bit Monitoring	 Life Monitor / S.M.A.R.T.	 Industrial Operating Temperatures
 Advanced Wear Leveling	 System in Package Component Protection	 Hardware-based Power Loss Protection
 Secure Erase without Data Remnants	 TCG Opal 2.0 - Self-encrypting Drives	 Dynamic Data Refresh

Form Factors at a glance



Medical Hardware

We offer medical-grade computer hardware for use in the healthcare industry. The devices have been developed and tested to the highest technical standards to ensure safe and reliable performance in highly sensitive medical applications. Our product portfolio includes certified embedded PCs, panel PCs, tablets, and device servers.

The hardware is commonly used in hospitals, healthcare facilities, medical imaging and diagnostic systems, patient monitoring systems as well as mobile hospital IT systems. The devices can also be used for applications in laboratories and research facilities where highly reliable and contamination-free computing systems are required.

Specialized panel PC hardware is particularly used for the visualization of medical findings. To maintain a sterile environment in laboratories, hospitals, or medical practices, this hardware must also meet the applicable standards. These requirements are met through an antibacterial casing and a fanless design.

Certifications:

- > **CE:** EN60601-1-2:2015 (V4.0)
- > **MDD:** EN60601-1:2006 / A1:2013 (V3.1)
- > **VCCI:** 2016-11, Class B (PSU/battery with PSE)
- > **FCC:** Part 18 Class
- > **BUL:** ANSI / AAMI ES60601-1:2012 (V3.1)
- > **CUL:** CAN / CSA-C22.2 No. 60601-1:2014, SO 14971 / IEC62133

SEAL 22C - Core™ i7 / i5



SEAL 19C - Core™ i7 / i5



SEAL 19C - Core™ i7 / i5



SEAL Panel PC series

- > **Display Sizes:** 15" to 24"
- > **Resolution:** 1,280 x 1,024 up to max. 1,920 x 1,080
- > **Processor:** Intel® Core™ i7 / i5 6th or 7th Gen.
- > **Touchscreen:** PCAP Multi-Touch
- > **Operating System:** Windows 10 IoT, Windows 10, Windows Embedded 8.1, Windows 8.1, Windows POSReady 7
- > **IP-Rating:** IP65 (front), IPX1 (total)
- > **Enclosure:** Antibacterial coating



With or without fan



PCAP multi touch



Front IP65



Antibacterial housing



Optional hot swap battery

Medical Box PCs

Our medical embedded box PCs are powerful computers with IEC-60601 certificate, which certifies the computers basic safety and essential performance characteristics of electrical systems with a connection to a supply network. According to the manufacturer's specifications, these are intended for diagnosis, treatment or monitoring of patients.

- › **Medical Certificates:** EN60601-1-2:2015
- › **Processor:** Intel® Core™ i7 / i5 / i3 Skylake
- › **Chipset:** Intel® Q170
- › **Memory:** Up to 32GB DDR4 2133MHz SO-DIMM
- › **PCIe Slot:** 2x Mini-PCIe x16 (optional)



Fanless design

WPC-766E



Medical Tablets

Our medical tablets have been developed specifically for inpatient or outpatient care. Their stable design and hygienic handling make them a valuable addition for medical professionals and nursing staff.

- › **Medical Certificates:** EN60601-1-2:2015
- › **Display Sizes:** 12.2" or 7.0"
- › **Processor:** Intel® Atom™ x5-Z8550
- › **Operating System:** Windows 10 (optional)
- › **Enclosure:** Antibacterial coating



Antibacterial housing

SEAL Medical Tablet - 12"



SEAL Medical Tablet - 7"

Medical Device Servers

Our medical device servers establish an Ethernet connection between serial devices and central data management systems. A 10/100MB/s network interface and optional Ethernet switch are used for this purpose.

Thanks to their galvanically isolated connections, the electrical integrity of the system is protected against voltage spikes. In addition, all ports are isolated from each other, ensuring that grounding of the terminal server or a connected device does not affect its operation.

- › **Medical Certificates:** IEC-60601 3rd Edition
- › **Ports:** Four or eight galvanically isolated RS-232

Digi Connect ES series



Digi Connect WS series

Unified Communications

We offer Unified Communications (UC) solutions for businesses of all sizes. These solutions integrate various communication channels, such as voice and video telephony, instant messaging, email, and fax, into a single application.

Our hardware and software solutions improve collaboration and communication within a company. By integrating all communication channels into a single application, employees can communicate quickly and easily with each other, without having to be in different applications or devices. In addition, users benefit from

faster and more efficient processing of customer inquiries via integrated communication solutions.

We also offer our customers the ability to integrate Unified Communications into existing infrastructures. We can currently offer software and hardware expansions for telephony clients such as Microsoft® Teams and Skype® for Business, telephony cards, IP phone systems, Session Border Controllers (SBCs), and Voice-over-IP (VoIP) gateways.

Our Unified Communications hardware solutions



SBCs



Gateways



PBXs



IP Phones



Zulu Softphone



Telephony Cards

FonComfort™ Telephony Suite

Expand your Skype® for Business phone client with essential call features

- › On-prem or server version available
- › Detailed presence and contact information for faster call handling
- › FonComfort™ call control window
- › Centralized administration via GUI
- › Manage individual call forwarding (by presence, time, date, calendar and more)
- › Compatible with Kuando Busylights



Sangoma UC Solutions

Our company is your go-to partner for communication solutions in the business sector. Both SMEs and large corporations can successfully conduct their business through our offerings. Additionally, we provide open-source toolkits to developers, enabling them to develop their own telephony applications. These applications include the necessary hardware and software for connections between

different networks and devices, as well as key components for IP-PBX, IVR, and UC solutions. Our partner Sangoma offers cost-effective UC solutions with modern functionality for better collaboration and productivity for all users. They are also characterized by a simple and understandable pricing model.



Sangoma Switchvox

Switchvox is designed specifically for your business. It combines all the benefits of modern UC tools, plus premium enterprise-grade features and award-winning design. With the all-inclusive pricing model, Switchvox is more than just another VoIP phone system, but an intelligent solution for your communication needs.

- > Comprehensive VoIP telephony, including telephony features
- > Intuitive web-based user interface
- > Collaboration tools, such as chat, video calls, etc.
- > Calls and messages via mobile devices
- > Extensible to meet the needs of your business
- > Compatibility with Microsoft® Teams



Cloud version available



On-premise version available

[SCHEDULE A DEMO NOW](#)



Sangoma PBXact

PBXact is a full-featured UC platform that includes advanced, integrated contact center capabilities that help small and medium-sized businesses serve their customers, improve their operations, and ultimately increase their bottom line.

- › Powerful UC platform for up to 5,000 users
- › Zero-touch provisioning for efficient configuration of Sangoma IP phones
- › Voice availability even in case of server failure
- › Available as hardware or software-only solution
- › Extensive PBX and call center features as well as Microsoft® Outlook integration, SMS, instant messaging, CRM or help desk
- › Full customization with software access for administrators and developers to integrate third-party applications
- › Built-in VPN features for remote users



Cloud version available

Voice-over-IP Gateways

Our Voice-over-IP gateways are the ideal solution to connect your current telephony infrastructure with VoIP infrastructure, taking into account security, business continuity and cost. Our broad customer base trusts our gateways, which are suitable for small businesses, corporations, contact centers and service providers. Not only do we offer the most fail-safe and resilient gateway on the market, but we are also becoming the most popular choice for interoperability with SIP trunks and major carriers.

- › Connect existing IP PBXs to VoIP infrastructure or to ISDN/analog networks
- › Up to 120 VoIP channels available
- › Easy installation and configuration
- › Connect up to 24 or 50 analog terminals over a distance of 8km



Digital T1/E1 and BRI gateways or analog FXS and FXO gateways

Session Border Controller

With a Session Border Controller (SBC), you can securely connect your field workers and SIP trunk(s) to your phone system without compromising security by automatically detecting VoIP threats and taking action.

- › Supports up to 4,000 simultaneous calls
- › Session-based licensing model with no hidden costs
- › Optional TDM/PSTN connection
- › Available as hardware or software-only solution
- › Connection to multiple VoIP/SIP trunks
- › Management of rules and security measures at the network border

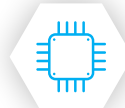


TLS and SRTP encryption between IP phones and IP PBX

Telephony Cards

Our telephony cards are a simple and cost-effective solution for companies that want to switch their traditional phone system to a VoIP solution. These cards allow users to connect analog and ISDN phones to a VoIP network, ensuring high-quality and reliable voice communication. We offer both hardware-based and software-based telephony cards, depending on the

individual requirements and needs of each company. These cards also include advanced features such as call forwarding, conference calling, voicemail support, as well as modem and fax capabilities.



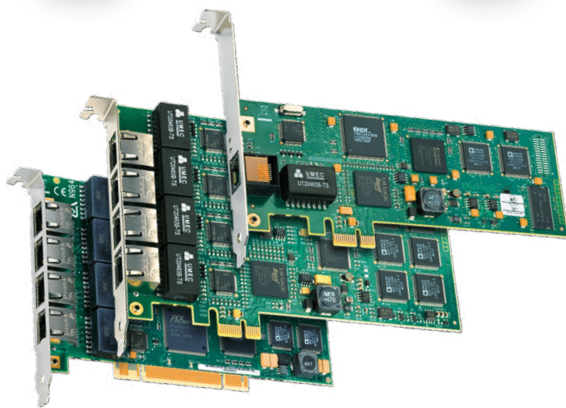
Integrated processor



Plug & play standard



Realtime voice transcoding



Dialogic® Diva BRI boards



Sangoma PSTN cards

Hardware for Microsoft® Teams

Our comprehensive hardware portfolio for Microsoft® Teams helps businesses achieve optimal collaboration and communication. Devices that are compatible with the Microsoft® Teams client range from specially designed IP phones, conference systems, wired and wireless headsets to optical-acoustic presence indicators such as Kuando Busylight.

Our phone accessories include a variety of features that enable users to achieve high-quality and seamless collaboration, including easy integration into the Teams client and user-friendly operation.



EPOS DW Pro 2ML

Busylight Alpha



Busylight Omega

EMEA

BRESSNER Technology GmbH
Industriestrasse 51
82194 Groebezell, Germany

Phone: +49 (8142) 47284-0
Fax: +49 (8142) 47284-77
E-Mail: vertrieb@bressner.de

USA

One Stop Systems Inc.
2235 Enterprise Street #110
Escondido, CA 92029, USA

Phone: +1 (877) 438-2724
Fax: +1 (760) 745-9824
E-Mail: sales@onestopsystems.com

Opening hours:

EMEA: Mo. - Fr. 8:00 AM - 17:00 PM (GMT+1)
USA: Mo. - Fr. 8:00AM - 17:00 PM (PST)

