Custom Solution 1U Fanless Dual Node IPCv4



Blue Line A/S | Kappa 8 | 8382 Hinnerup, Denmark
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Highlights

Custom Solution Blue Line 1U Fanless Dual Node IPCv4
The customer needed a compact, low power industrial computing solution with two independent nodes in a single chassis. Blue Line delivered the 1U Fanless Dual Node IPCv4, offering reliable mission critical performance in a small footprint with support for multiple operating systems and flexible connectivity for complex industrial operations.

How do you maximize computing power in a compact rack unit?

Our customer required rack mounted units that delivered strong and stable performance with very low power consumption in the smallest possible footprint.

They needed dual independent computing nodes in a single chassis that could operate reliably around the clock in rugged civil defense environments while supporting communication across multiple platforms.

Previous systems struggled to meet evolving operational demands which created the need for a fully optimized and compact solution.

With a custom 1U fanless dual node system

In close collaboration with our customer Blue Line designed a dual node solution tailored precisely to their requirements.

By integrating two independent computers into a single fanless chassis we delivered efficient low power operation and high reliability in a minimal footprint.

The solution was engineered for seamless operation in demanding conditions with robust construction flexible connectivity and the ability to evolve as operational needs change.

A repeatable, high-performance platform designed for mission critical use

Through regular meetings and close communication the customer received a fully embedded solution that fit perfectly for their operational needs.

The platform reduced rack space increased operational stability and delivered predictable long term reliability.

Continuous collaboration allowed ongoing improvements ensuring the solution could adapt to new requirements without costly redesigns.

- Intel Atom x6413E processor
- Fanless design for silent, reliable operation
- Support for Windows 10, Windows 11, and Linux

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- Five USB ports
- Two 2.5 GbE network interfaces
- Two HDMI and audio outputs
- Easy access disk bay
- Short depth chassis at 397 millimeters
- Long product life cycle for industrial use

Specifications

Model Type

Rack PC

Form Factor

1U dual node (Configuration below is pr. node A & B)

Construction

Heavy duty cold rolled steel

Cooling

Fanless design

Environment

Operating temperature	0°C to 60°C	(Option for -20°C to 70°C w/wide temp. Grade SSD & MEM)
Storage temperature	-30°C~70°C	
Humidity	10% to 90% @ 40°C, non-condensing (Operating)	5% to 95% @ 40°C, non-condensing (Storage)
Vibration	IEC 60068 (Report after first sample)	
Shock	IEC 60068 (Report after first sample)	

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Certification

CE

Standard

RoHS

REACH

Processor

Intel Atom x6413E (Elkhart Lake)

1.5GHz Base Frequency, 3.0GHz Burst Frequency, 4Cores/4Threads, 1.5MB L2 Cache (TDP 9W)

Chipset

Intel SoC

Intel UHD graphics engine for 10th Gen Intel Processors (Support DirectX 12.1 & OpenGL 4.5)

Security

Insyde UEFI BIOS w/Secure boot

Intel AES-NI

TPM 2.0 Infineon SLB9670, v7.85 Hardware module

Watchdog Timer Software Programmable supports 1 to 255sec. System reset

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