BittWare a molex company

250-E1S

EDSFF Computational Storage Processor

Preliminary Product Info

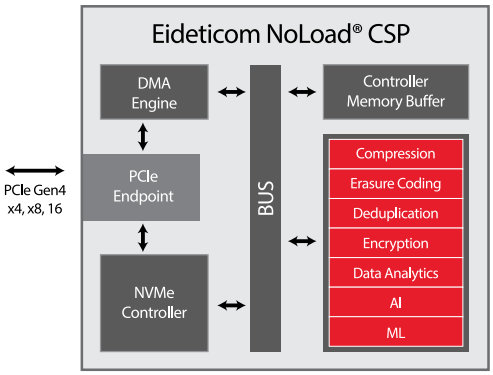
Eideticom NoLoad CSP on 250-E1S EDSFF

Enterprise-class Computational Storage Processor

Eideticom's NoLoad®, preconfigured on BittWare's 250-E1S, is a Computational Storage Processor (CSP) conforming to the E1.S SFF-TA-1006 EDSFF specification. This energy-efficient, flexible compute node is intended to be deployed within EDSFF NVMe storage platforms delivering accelerated instances of:

- Erasure Coding and Deduplication
- Compression, Encryption, and Hashing
- String/Image Search and Database Sort/Join/Filter
- Machine Learning Inference

The 250-E1S is front-serviceable in a 1U chassis and can be mixed in with storage units in the same server, allowing users to mix-and-match storage and acceleration.

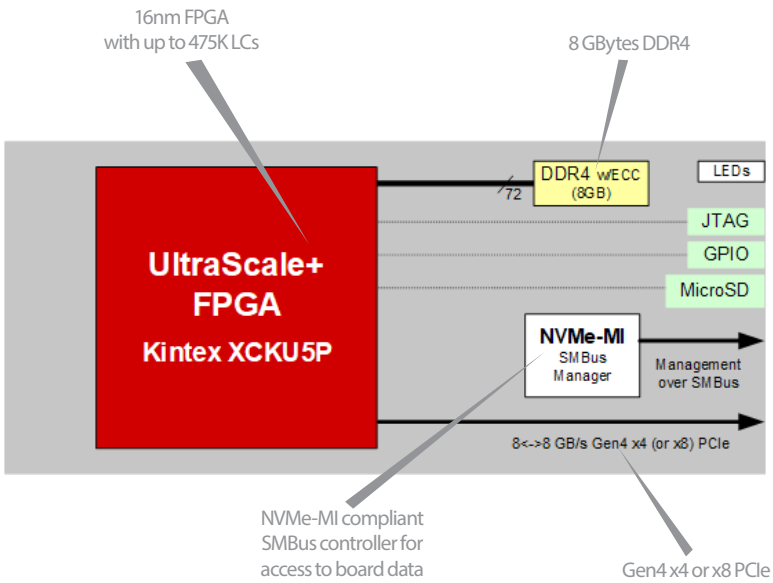


key features

Ideal for NVMe EDSFF storage servers and arrays

Peer-to-Peer CPU memory bypass

Composability via **NVMe-oF**



EIDETICOM

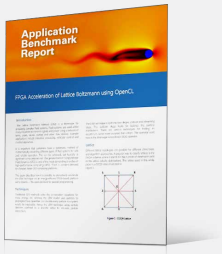
Order your 250-E1S pre-configured with Eideticom's NoLoad:

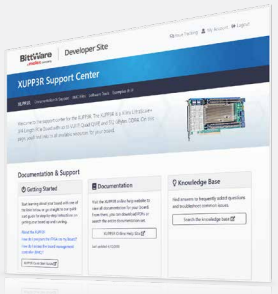
- Plug-and-play solution
- NVMe compatible and standards-based with no OS changes
- Reduced TCO/TCA - lower power and reduced IO
- CPU offload improves QoS up to 40x
- Disaggregates compute and storage into independently scalable resources
- CPU agnostic
- Reconfigurable accelerators, enabling scalable compute architectures

Learn more at www.eideticom.com

Additional Services

Take advantage of BittWare's range of design, integration, and support options





Customization

Additional specification options or accessory boards to meet your exact needs.

Server Integration

Available pre-integrated in our TeraBox servers in a range of configurations.

Application Optimization

Ask about our services to help you port, optimize, and benchmark your application.

Service and Support

BittWare Developer Site provides online documentation and issue tracking.

Specifications

FPGA	• Xilinx Kintex UltraScale+
	  • KU5P in B784 package
	  • Core speed grade -2
	• Contact BittWare for additional FPGA options

On-board DDR4 SDRAM	• One bank of DDR4 SDRAM x 72 bits • 8GB bank (16GB version also available) • Transfer Rate: 2400 MT/s
Host interface	• EDSFF Connector • Compliant to SFF-TA-1002
Datacenter deployment	• On-board NVMe-MI compliant SMBUs controller (Spec. 1.0a) • Field flash update via software or SMBus • SMBus FPGA flash control: anti-bricking, fallback and multiboot • SMBus access to unique board data and temperature sensor
Back panel features	• User LEDs accessible • Reset switch to restore factory settings
Development features	• JTAG connector for access to the FPGA, flash and debug tools • GPIO connector • MicroSD connector
Power supply monitoring & reporting	• Voltage monitoring • Temperature monitoring • Fault condition reporting to FPGA

Cooling	• EDSFF E1.S drive case optimized for cooling with passive heatsink • 25mm asymmetric enclosure (available with choice of alternative enclosures)
Electrical	• Hot swapping tolerant • On-card power derived from EDSFF supplies • Power dissipation is application dependent • Board designed to deliver up to 25W power consumption using asymmetric enclosure
Environmental	• Operating temperature: 5°C to 35°C • Cooling: air convection
Quality	• Manufactured to ISO9001:2015 IPC-A-610-Class III • RoHS compliant
Form factor	• Enterprise and Data Center SSD Form Factor (EDSFF) • Available in a choice of thicknesses • Standard product delivered with 25mm asymmetric enclosure • 118.75 mm x 33.75mm x 25.00mm (LxWxH)

Deliverables

- 250-E1S EDSFF FPGA Accelerator
- Built-In Self-Test (BIST)
- Eideticom NoLoad pre-installed
- 1-year hardware warranty
- Contact BittWare for extended warranty and support options

To learn more, visit **www.BittWare.com**

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