Data Sheet

DATALynx ATX4

Generation EP2, EP3 & SX2

4U / 19inch Vehicle Server

DATALynx, the b-plus series for high performance computing solutions, achieves the next level for in-vehicle applications. With a completely new designed b-plus 100A DC Power Supply and an extremely powerful and fully integrated liquid cooling setup, the DATALynx ATX4 enables maximum CPU and GPU performance from -10 °C to +60 °C operating without throttling.

Add-on PCIe

With several 1.5U Add-ons, the system can be scaled from a multi-I/O recording setup up to a deep learning and AI configuration with 5 high-power NVIDIA GPUs.

Add-on B2S

The dual B2S extension enables compatibility to BRICK2 STORAGE solutions including NVMe based cartridges up to 48 Gbit/s sustained write performance per device.

Highlights

- EP2: AMD EPYC™ 7002 series
- EP3: AMD EPYC™ 7003/2 series
- SX2: Intel® 2nd Gen Xeon® Scalable

- 1250 W DC Power Supply with 6 – 32 V IN
- Up to 2250W DC PSU max.
- 1600 W AC Power Supply optional
- Up to 768 GB DDR4-3200 ECC RDIMM
- All storage options exchangeable
- Liquid cooled CPU and Power Supply
- 60 °C operating temperature at full load
- µC based System control and monitoring
- Multiple Add-ons for extensions
- b-plus XTSS 802.1AS compatible

Specifications

	Generation EP2	Generation EP3	Generation SX2
Part Number	B16047-DLY-EP2-XXXX	B16047-DLY-EP3-XXXX	B16047-DLY-SX2-XXXX
Processor	AMD EPYC™ 7002	AMD EPYC™ 7002 or 7003	2nd Gen Intel® Xeon® Scalable
Mainboard	Supermicro H11SSL-i	Supermicro H12SSL-i	Supermicro X11DPH-T
Memory	8x 8-64GB DDR4-3200		12x 8-64GB DDR4-2933
USB	2x USB 2.0, 4x USB 3.0	6x USB 3.0	6x USB 3.0
LAN	2x 1000Base-T	2x 1000Base-T	2x 10GBase-T
Management	IPMI with 1x LAN, 1x VGA, 1x Serial		
3.5in Bay	OS storage swap rack: 2x SATA SSD 2.5” AHCI or RAID1		
5.25in Bay	Data storage swap rack: 8x 2.5” SATA, 4x U.2 NVMe, 1x 3.5” SATA or Cover		
PCIe Extensions	Industrial NVIDIA GeForce RTX 3000/4000 series, NVIDIA Tesla or NVIDIA Quadro/RTX Multiple PCIe extensions from Intel, Mellanox, HighPoint, StarCooperation, Solectrix, Vector, Peak, StarTech, Delock, …		
(g)PTP / XTSS	802.1AS compatible b-plus Quad-X550 (4x 10GBase-T) ethernet extensions with GPS, UART, NMEA and PPS in/out in base system or optional in Add-on XTSS		
Base Power Supply	DC: 6 - 32 V DC, 9 - 32 V permanent, 1250 W AC: 100 - 127 V / 60 Hz / 1000W and 200 - 240 V AC / 50 Hz / 1600W		
Add-on PSU	DC: optional 6 - 32 V DC, 9 - 32 V permanent, 500 W per Add-on PCIe AC: optional 100 - 127 V / 60 Hz / 750W and 200 - 240 V AC / 50 Hz / 750W per Add-on PCIe		
GPIO	Configurable Ignition/Terminal 15 CMOS Reset, 2x GPI trigger input (with Pwr/Rst Button function), 2x 5V/2A out, 2x 12V/1A out		
HMI	20x4 character LCD display für system control and monitoring		
SIODI	b-plus API and OS Tooling for component monitoring and I/O control incl. environmental sensors µC based system log and diagnostic		
OS	Ubuntu 20.04, Ubuntu 22.04 or Windows 10 IoT Enterprise SAC/GAC pre-installed		
Mechanics	Base: 4U, 19inch, 442 mm (W) x 475 mm (D) x 176 mm (H), ~23 kg without extensions Add-on: 1.5U, 19inch, 442 mm (W) x 475 mm (D) x 66 mm (H), ~ 6.5 kg without extensions		
Temperature	-10 °C to +60 °C operating, -35 °C to +85 °C non-operating for DC versions 0 °C to +40 °C operating, -20 °C to +70 °C non-operating for AC versions		
IP Class	IP20		
Humidity	max. 90% non-condensing		
Vibration	Approved according LV124 specification with 6.5 m/s^2 amplitude at full system load		
Approvals	CE – EN 55032 (Class A) / EN 55035, RoHS, REACH		
AC Variants	EN 61000-3-2, EN 61000-3-3		
DC Variants	ISO 7637-2, LV124 partly approved On request: FCC, VCCI, ECE R10, E1, E13		

System Add-ons

Add-on GPU

Add-on (top) with integrated liquid cooling, 850W extra DC Power Supply and PCIe 5.0 x16 interface for high power graphics >300W, e.g. RTX 4090

Add-on 5.25“

Mechanical Add-on for 2 additional 5.25” bays, e.g. 2x 3.5” HDD swap rack

Add-on B2S

Add-on (bottom) for two x-STORAGE slots. The add-on is actively cooled and includes a PCIe 3.0/4.0 switch, µC based FAN control and power management. It supports cartridge Hot-Add/Hot-Remove and OS disk services for storage exchange during operation for NVMe based solutions.

Add-on PCIe

Add-on (bottom) for PCIe extension cards. The add-on is actively cooled with µC based FAN control and an optional power supply. Possible slot configurations:

- 2x8: 2x dual slot PCIe 4.0 x8 1x Mainboard PCIe x16 BreakOut with 8+8 Bifurcation
- 4x4: 4x single slot PCIe 4.0 x4 1x Mainboard PCIe x16 BreakOut with 4+4+4+4 Bifurcation
- 4x8: 4x single slot PCIe 4.0 x8 2x Mainboard PCIe x16 BreakOut with 8+8 Bifurcation

Optional:

- Extra 500W DC or 750W AC Power Supply
- 802.1AS Extension