

DynaCOR 40-36

Rugged HPEC Server - 237TFLOPS Deep Learning Performance



- Edge Inference and Training
- Traditional and GPU Workloads
- High Performance Storage and Networking
- Rugged, with Automotive Certifications
- Liquid Cooled
- Customizable

Features

Edge Inference and Training : Powered by dual NVIDIA GV100 GPUs (dual NVIDIA V100S factory option) with up to 237 TFLOPS performance at Deep Learning Precision and 14.8 TFLOPS dual precision

Traditional and GPU Workloads : Offers a 16 core Xeon CPU, interfaces for speed, high frame rate cameras, CANBus, USB, Serial to support traditional workloads and peripherals

High Performance Storage and Networking : Provides up to 32TB of high speed NVME and dual 100GbE to allow multiple sensor and stream ingestion

Automotive Certifications : Certified for Automotive applications and designed for heavy duty applications

Liquid Cooled : Completely fanless and requiring no airflow, with a very compact size to allow easy deployment

Customizable : Personalization and full customization options are available, ranging from branding (“skins” and color) to deep HW/SW configurations

Description

The DynaCOR 40-36 is a very compact and rugged unit that features one 16 core Intel Xeon D-2183IT with 64GB ECC DDR4 RAM and up to two NVIDIA GV100 GPUs each providing 32GB HBM2 RAM.

With up to 10240 CUDA cores and 1280 Tensor cores, the DynaCOR 40-36 offers unprecedented performance for a fanless system: up to 237 TFLOPS for Deep Learning precision, up to 29.6 TFLOPS for single precision and up to 14.8 TFLOPS for double precision.

The DynaCOR 40-36 offers very high performance networking, with a dual 100GbE, quad 10GbE and two GbE ports that provide a high bandwidth, low latency feed for advanced sensors and to allow implementing clustered architectures.

Storage capabilities include up to four high speed NVME units, that can provide up to 32TB of aggregated capacity and support RAID configurations; one additional 512GB NVME is used to host the OS.

Connecting the DynaCOR 40-36 to cameras, the vehicle, other peripherals and Edge devices is made simple thanks to a high performance frame grabber, CAN, USB3 and Serial interfaces.

With an automotive grade power supply (24VDC; 12 and 48VDC factory option), and certifications for automotive and heavy-duty use cases (ISO 16750-2, EN60068-2-27) the DynaCOR 40-36 is suitable for operation under the most demanding conditions, including extreme operating temperature. Thanks to liquid cooling, the system is largely decoupled from environmental temperature and can be installed in recesses with little or no ventilation.

The DynaCOR 40-36 is a liquid cooled unit that is compatible with the other Eurotech HPEC systems, including the [DynaCOR 40-35](#) (high performance data logger), [DynaNET 100G-01](#) (100GbE spine switch) and the [DynaNET 10G-01](#) (10GbE leaf switch).

For customers seeking a tailored product, Eurotech offers a range of personalization and full customization options, ranging from branding (“skins” and color) to deep HW/SW configurations.

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Ordering Code: DYCOR-40-36-XX

	XX	-13	-14
CPU MODULE	CPU	Xeon D-2183IT - 2.20GHz (3.00GHz), 16 Cores	
	RAM	64GB DDR4-ECC Soldered-down	
	Storage	512GB, NVMe (1TB Factory Option)	
	Ethernet	4x 10GbE (1x QSFP+), 2x 1GbE (2x RJ45)	
	USB	1x USB 3.0 (USB Type A), 2x USB 2.0 (USB Type A)	
	Serial	1x RS-232 (9 Wires), 1x RS-233 (2 Wires) - System Management	
	Video Ports	VGA (DVI factory option)	
	Consumption	180W	
GPU MODULE	GPU	1x Tesla GV100 (V100S Factory Option)	2x Tesla GV100 (V100S Factory Option)
	RAM	1x 32GB HBM2	2x 32GB HBM2
	Video Ports	4x DP 1.4 (N/A with V100S Option)	8x DP 1.4 (N/A with V100S Option)
	Consumption	250W	500W
NVME MODULE	Capacity	2x 7.68TB U.2	4x 7.68TB U.2
	RAID	Factory Option	
	Consumption	24W	48W
NETWORK MODULE	I/O Interfaces	Dual 100GbE (2x QSFP28)	
	Consumption	25W	
OTHER	High Speed Frame Grabber	N/A	2-port GMSLv2 (up to 6Gbps), 4x Fakra Z connector (2x in, 2x out pass-through)
	CANBus	Dual CAN-FD (2x D-Sub)	
	GNSS	Factory Option	
SYSTEM MANAGEMENT MODULE	Supervisors	1x Subsystem BMC, 1x System Controller	
	IPMI	Version 2.0; System Power Cycle, Subsystem Reset	
	Management Interface	BMC Ethernet, System Serial Port	
	Display	1x Display OLED (Integrated)	
COOLING	Coolant	Nominal Flow: 240lph @35°C Tinlet, 30% v/v Glycol Coolant - Max Inlet Temperature: +45°C	
	Filter	Removable Mesh Protection Filter	
	Protection	Eurotech Protection Systems: Anti-Condensation, System Watchdog, Flow Rate/Temp. monitoring, Overheating protection, Humidity monitoring, Input Voltage/Current/Energy monitoring; Inrush protection	
POWER MODULE	Input	24VDC (12VDC, 48VDC Factory Option), with Ignition Key Sense	
	Consumption	1KW (Max)	
ENVIRONMENT	Operating Temperature	+5 to +45°C (Factory Option: Wider Ranges)	
	Storage Temperature	- 20 to +70°C (Without Liquid Coolant)	
CERTIFICATIONS	Regulatory	CE (FCC Factory Option)	
	Vertical	ISO 16750-2 (24VDC), ISO 16750-3, EN60068-2-27 Designed for (factory option): E-Mark, ELT VDA320 (48VDC), LV-124-1 (12VDC)	
	Safety	EN 62368-1	
	Environmental	RoHS3, REACH	
Mechanical	Size	177 x 495 x 196 mm (L x D x H)	
	Weight	<15Kg	
	Installation	Quick Docking Option	

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