DynaCOR 44-11 - Edge AI and Data Acquisition

Versatile AI Server for Road Vehicle - 1 GPU, 2-bay Removable Storage, 2x 10GbE

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- **Versatile Acquisition and Processing**
- **Road Vehicles Grade**
- **Up to 18TFLOPS FP16 / 36TOPS INT8**
- **Intel Core i9, 10Gb/s Ethernet**
- **Dual Removable Storage Bays**
- **Compact and light**
- **Configuration Service**

Features

Data Acquisition and Processing : Designed for in-vehicle data acquisition and processing, with support for AI workloads and a range of factory options, such as vehicle buses (CAN, LIN), frame grabbers, etc.

Designed for Road Vehicles : Meets the most demanding requirements of Road Vehicle projects: selected components and rigorous testing to ensure reliable operation; automotive grade power supply with ignition key support for seamless on-board deployment

Powerful Data Aggregation and Accelerated AI : With an Intel Core i9 CPU, one NVIDIA A2 GPU and dual 10GbE interfaces, supports a large variety of workloads, including general purpose computing, data logging, fusion and filtering

Dual Removable Storage : Two storage bays for 2.5" SATA drives that offer the convenience of easy access and removal; RAID 0/1 to provide the speed and reliability required for intensive data ingestion

Simple to Deploy : Extremely compact to fit easily in dense installations; with user accessible filters to protect the system from airborne pollutants; custom mounting options to simplify the development in the vehicle and to provide additional protection from shock and vibration

Configuration Service : Highly modular design, allows for personalized configurations, ranging from personalization (branding, color) to deeper customization, to match complex project requirements

Description

The DynaCOR 44-11 is a versatile platform that offers a very balanced combination of computational performance, storage capacity and network bandwidth for in-vehicle workloads that include data acquisition and fusion, AI inference and data logging.

Designed for road vehicles, it offers reliable operation thanks to automotive grade ruggedization and an automotive power supply. Very compact and power efficient, the DynaCOR 44-11 can be deployed in dense installations; an optional mounting accessory further increases resilience to shock and vibration. User-serviceable filters offer the convenience of protection from airborne pollutants, such as dust and exhaust particulate, which are often found in road applications.

The DynaCOR 44-11 features a top-of line Intel Core i9 CPU rated at 35W, to deliver power efficient computational crunch, and provides AI acceleration thanks to a high-end NVIDIA A2 GPU. Connection to the vehicle IP network and sensors is enabled by two 10GbE and two GbE interfaces; use cases requiring interfaces towards the low-level vehicle bus (such as CAN/CAN-FD, FlexRay, LIN, etc.) are optionally available as a Professional Service.

The DynaCOR 44-11 is also a capable storage server, supporting two removable bays for 2.5" SATA drives in RAID 0/1 configurations to provide high speed data recording and to offer extra protection to valuable information.

Eurotech configuration management service allows fine tuning the DynaCOR 44-11 to meet and exceed your project requirements; examples of personalized configurations include customer branding (with custom logo and colors) and can go to deep customization with a range of option for project specific requirements (such as grabbers, choice of internal components, etc.): call us for more information on configuration management options.

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Ordering Code: DYCOR-44-11-XX		
XX		-05
PROCESSOR	CPU	Intel Core™ i9-10900T 10 Cores / 20 Threads, 1.90GHz / 4.60GHz; Turbo Mode Off
AI ACCELERATION	GPU	1x Nvidia® A2
	TP32 Tensor Core	9 TFLOPS; 18 TFLOPS (Sparsity)
	BFLOAT16 Tensor Core	18 TFLOPS; 36 TFLOPS (Sparsity)
	FP16 Tensor Core	18 TFLOPS 36; TFLOPS (Sparsity)
	INT8 Tensor Core	36 TOPS; 72 TOPS (Sparsity)
	INT4 Tensor Core	72 TOPS; 144 TOPS (Sparsity)
MEMORY	RAM	64GB DDR4
STORAGE	OS Disk	500GB MLC NVME
	Data	4TB TLC (2x 2.5" SATA) RAW; 2x Bays
	RAID	RAID 0/1 Software
I/O INTERFACES	Ethernet	2x 10GbE (RJ45), 2x 1GbE (RJ45)
	Timing Support on Ethernet	IEEE 1588 PTP
	USB	6x USB 3.2 Gen 1 (Type A); 2x USB 2.0 (Type A)
	Serial	2x RS-232/422/485 (DB9 Connector)
	Vehicle Bus	CAN/ CAN-FD, FlexRay, LIN, others (Factory Option)
	Frame Grabber	Factory Option
	Video Out	1x HDMI v1.4b; 1x DisplayPort v1.2; 1x DVI-D
	Audio	1x Line-in, 1x Line-Out, 1x Mic-In
RADIO INTERFACES	Internal Cellular	Factory Option
	SIM Slot	Factory Option
	GNSS	Factory Option
	Wi-Fi/BT	Factory Option
	Ext. Antennas	Factory Option
CYBERSECURITY (HARDWARE)	TPM	TPM 2.0 Support
EXPANSIONS	Internal Expansion	1x M.2 2230 Key E (CNVi), 1x M.2 2280 Key M (NVME), 4x SATA III; Expansion Availability Depends on Product Configuration
COOLING	Technology	Air Cooling
POWER	Input	Automotive Grade: 11 - 30VDC; 250Watt
ENVIRONMENT	Operating Temperature	0 to +50℃
	Storage Temperature	-20 to +70℃
	Humidity	10 to 90% Relative Humidity (Non-condensing) at +40℃
CERTIFICATIONS	Regulatory	EU/UK: CE, UKCA; North America: Factory Option; Japan: Factory Option; Other Countries (Factory Option)
	Cellular	Factory Option
	Safety	Low voltage safety (2014/35/EU); EN 62368, UL 62368 (§)
	Environment	RoHS3, REACH
	Ingress Ptotection	IP20
MECHANICAL	Enclosure	Material: Metal; Color: Black
	Dimensions	215 x 131 x 300 mm (W x H x D), Excluding Antennas

§ UL, NRTL listing Factory Option.

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SOFTWARE		
SOFTWARE	OS	Linux (Ubuntu LTS); Factory Option: Win 10/11/Server