ReliaCOR 54-13

AI PC - Intel Core - GPU - Expandable



- **Versatile Vision and Inference**
- **Industrial Grade**
- **Up to 13th Gen Intel Core i9**
- **Designed to support 1x NVIDIA RTX-4000 ADA or 1x NVIDIA L4**
- **Removable Storage Bay, Many Expansion Options**
- **Configuration Service**

Features

Data Vision and Inference : Designed for data acquisition and processing, with support for AI workloads and a range of factory options, such as Field buses (CAN, etc.), frame grabbers, etc.

Designed for Industrial Environments : Meets the most demanding requirements of Industrial environments: select components and rigorous testing to ensure reliable operation; DC, industrial grade power supply for seamless deployment

Powerful Data Aggregation and Accelerated AI : With an Intel Core 13th Gen CPU, one NVIDIA L4 GPU or 1x NVIDIA RTX-4000 ADA or 1x NVIDIA RTX-2000 ADA and many expansion options, supports a large variety of workloads, including general purpose computing, data logging, data acquisition, fusion and filtering

Removable Storage : One storage bay for 2.5" SATA drives that offer the convenience of easy access and removal

Many Expansion Options : Provides support for up to 3 PCIe cards (2x PCIe x16 Slot Gen4 + 1x PCIe x4 Gen3)

Best in Class Cybersecurity : ISA/IEC 62443-4-1/-4-2 SL2 (Hardware plus Software), always on and power independent antitampering monitor and logger, TPM 2.0 and full hardware hardening

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

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

Description

The ReliaCOR 54-13 is a versatile platform that offers a very balanced combination of computational performance, storage capacity and network bandwidth for workloads that include data acquisition and fusion, AI inference and data logging.

Designed for Industrial use cases, it offers reliable operation thanks to industrial grade ruggedization and a robust power supply. Very compact and power efficient, the ReliaCOR 54-13 can be deployed in dense installations; an optional mounting accessory further increases its versatility.

The ReliaCOR 54-13 features a 13th Generation Intel Core i9 CPU, to deliver power efficient computational crunch, and provides AI acceleration thanks to a high-end NVIDIA L4 GPU or one NVIDIA RTX-4000 ADA or NVIDIA RTX-2000 ADA (depending on the configuration). Connection to the factory floor IP network and sensors is enabled by two 2.5 GbE interfaces that support TSN for deterministic Ethernet; use cases requiring Fieldbus interfaces towards assets (such as CAN/CAN-FD, isolated RS-232/422/485) are optionally available as a Professional Service.

With three PCIe slots (availability depends on starting configuration), the ReliaCOR 54-13 allows great flexibility in adding features to meet any use case.

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The ReliaCOR 54-13 is also a capable storage server, supporting one removable bay for 2.5” SATA drives in RAID 0/1 configurations to provide high speed data recording and to offer extra protection to valuable information.

The ReliaCOR 54-13 offers best in class Cybersecurity: it leads the market with IEC 62443-4-1/-4-2 SL2. Protection starts at the hardware level, with full support for TPM 2.0, Secure Boot and an always-on physical antitampering monitor/logger that is active even when the system is removed from power. For most demanding customers, special production-only images can be configured with full hardware hardening (interface disabling) to further reduce the attack surface.

Eurotech configuration management service allows fine tuning the ReliaCOR 54-13 to meet and exceed your project requirements; examples of personalized configurations include customer branding (with logo and custom colors) and can go to deep customization with a range of options for project specific requirements (such as frame grabbers, choice of internal components, etc.): call us for more information on configuration management options.

The ReliaCOR 54-13 comes with Everyware Software Framework (ESF), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT Edge Gateways. Distributed and supported by Eurotech, ESF supports ready-to-use field protocols (including Modbus, OPC-UA, S7), MQTT connectivity, web-based visual data flow programming and deep configuration. ESF is also integrated with Everyware Cloud (EC), Eurotech IoT Integration Platform (separately available), enabling advanced diagnostics, provisioning, and full remote device access and management.

The device can be optionally configured with Everyware GreenEdge (EGE), IoT edge software solution qualified for AWS IoT Greengrass V2. EGE reduces onboarding time with just a few clicks, provides factory-generated trusted identity, seamless southbound connectivity, easy cloud integration and device management while consolidating IoT costs into one AWS bill.

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Ordering Code: RECOR-54-13-xx-yy					
Hardware Configuration (-xx)		-21	-23	-25	-15
PROCESSOR	CPU	Intel Core i5-13500TE, 35W	Intel Core i7-13700TE, 35W	Intel Core i9-13900TE, 35W	Intel Core i9-13900T, 35W
	Cores	14 Cores: 6 P-cores + 8 E-Cores	16 Cores: 8 P-cores + 8 E-Cores	24 Cores: 8 P-cores + 16 E-Cores	
	Threads	20 Threads	24 Threads	32 Threads	
	Frequency	1.30GHz/ 4.50GHz	1.10GHz/ 4.80GHz	1.10GHz/ 5.00GHz	
MEMORY	RAM	8GB DDR5	32GB DDR5	64GB DDR5	
AI ACCELERATION	GPU	1x NVIDIA RTX-2000 ADA	1x NVIDIA RTX-4000 ADA SFF	1x NVIDIA L4	
	Number of GPUs	1x			
	RAM	16GB GDDR6	20GB GDDR6	24GB GDDR6	
	TDP	70W		72W	
	Video Output	4x mini DisplayPort outputs		-	
STORAGE	OS Storage	512GB M.2 NVMe (PCIe x2), TLC			
	Data Storage (Removable)	-	1x 960GB, 2.5" SATA, TLC	1x 1920GB, 2.5" SATA, TLC	
	Internal Disk	Optional (1x Internal 2.5" SATA MLC or TLC)			
I/O INTERFACES	1GbE	4x 1GbE (RJ-45)		-	
	2.5GbE	2x 2.5GbE (RJ45, i226) – with TSN, WoL, PXE			
	10GbE	-		4x 10GbE (RJ-45)	-
	USB 2.0	2x USB 2.0 (internal)			
	USB 3.0	4x USB 3.2 Gen2 (10 Gbps), 5x USB 3.2 Gen1 (5Gbps, Internal), 1x USB 3.2 Gen1 header (5 Gbps, internal)			
	Serial	2x RS-232/422/485 (DB9)			
	CAN	Factory Option: 2x CANBus			
	Digital Output	8x Digital OUT (isolated)			
	Digital Input	8x Digital IN (isolated)			
VIDEO OUTPUT	DisplayPort	2x DisplayPort			
	DVI	1x DVI-I, support resolution 1920 x 1200			
RADIOS	5G	Factory Option			
	LTE 4G	Factory Option			
	GNSS	Factory Option			
	Wi-Fi/BT	Factory Option			
CYBERSECURITY (HW)	TPM	TPM 2.0			
COOLING	Technology	Active Air Cooling			
POWER	Input	9 ~ 48VDC (24VDC), Ignition Key			
ENVIRONMENTAL	Operating Temperature	-20°C to +70*C without GPU; 0°C to +50°C with GPU			
	Storage Temperature	-30°C to +85°C			
	Relative Humidity (Non-considering)	10 to 95%			
CERTIFICATIONS	Regulatory	CE, FCC, ISED			
	Cybersecurity	Secure Boot, Always-on Antitamper Monitor, TPM 2.0, ISA/IEC 62443-4-1/-4-2 SL2			
	Safety	UL 62368-1 (UL-Mark)			
	Cellular	Factory Option			
	Environmental	RoHS3 & REACH			
	Ingress	IP20			
MECHANICAL	Enclosure	Material: Extruded Aluminum with Heavy Duty Metal; Color: Black			
	Dimensions (WxHxD)	177 (W) x 340 (D) x 240 (H) mm; Excluding connectors and mounting brackets			

Ordering Code: RECOR-54-13-xx-yy								
Software Configuration (-yy)		-03	-05	-07	-08	-09	-11	-12
OS	Ubuntu LTS 22.04 or later	Yes			-	Yes		

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Windows 10 IoT Enterprise LTSC 2021	-		Yes	-			
IOT FRAMEWORK	Everyware Software Framework (Java/OSGi)	Yes	-	Yes	-	Yes	
SUITE AND SERVICES	Everyware GreenEdge (EGE)**	-		Yes	-		Yes
	Ignition Ready (IPCs)***	-	Yes		-	Yes	
SOFTWARE HARDENING	Hardening	-			Yes		

** IEC 62443-4-2 SL2 certification for AWS IoT Greengrass not included

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