CORE 5 Ultra

Industrial PC with AI acceleration for machine vision & control

The CORE 5 Ultra - our robust AI edge computer was specially developed for demanding applications in the edge computing industry. With an integrated NPU (11 TOPS), it is ideal for predictive maintenance AI, machine vision, process automation and industrial control.

The industrial PC offers maximum flexibility for modular expansions: Integrate additional memory, LTE/5G modems, WLAN modules or expand the AI computing power with up to two additional AI accelerators. With the Hailo-8 module, you can achieve a total of up to 52 additional TOPS for high-performance edge AI applications.

Suitable for industrial use in the harshest conditions: The CORE 5 Ultra is designed for use at temperatures from -10 to +40°C and works reliably in industrial environments - whether in production halls, vehicles or decentralized control units. The fanless, passive cooling design guarantees maintenance-free operation without moving parts.

Technical Data

[To the white paper "AI at the Edge"!](#)

System

CPU	Intel® Core™ Ultra 5 125U, 12 cores (2x Performance Core, 8x Efficient Core, 2x Low Power Efficient Core), 15W TDP, integrated NPU (up to 11 TOPS)
GPU	Intel® Xe-LPG graphics (up to 8 Xe cores)
RAM	16 GB DDR5-5600, up to 96 GB (2x SO-DIMM)
SSD	512 GB M.2 NVMe SSD, up to 2 TB

I/Os

Front	1 x USB 3.2 Gen2 1 x USB-C with DisplayPort Alt Mode 1 x Power Button Audio: Mic In / Line Out

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I/Os

Back	2 x DisplayPort 1.4a
	1 x COM RS-232
	1 x USB 3.2 Gen2
	1 x Thunderbolt 4
	1 x Intel i219LM (1GbE, iAMT)
	1 x Realtek RTL8126 (5GbE)

Environment / Mass

Dimensions (W x D x H)	148 mm x 165 mm x 35 mm
Ambient temperature (operation)	-10 °C to +40 °C
Cooling	Active
Idle power consumption in W	approx. 10-15 W (depending on configuration)

Extensions

M.2	Key M – 2230/2242/2280 Key M – 2230/2242 Key B – 2242 Key A-E – 2230

Miscellaneous

Operating system	Win 11 (IoT) Ubuntu 24.04
PSU	
Standards & Certificates	CE, FCC Class A
Special features	Optional: Up to 2 Hailo-8 M.2 AI acceleration modules (26 additional TOPS each)When using more than one video output, the maximum resolution is limited to 4K per port.
Class A warning	The device is intended for use in industrial environments. Operation of this device may cause radio interference in residential areas.
Warning for 802.11a use	If you want to use the WLAN module according to 802.11a in the 5 GHz range: Use in the 5150 MHz – 5350 MHz frequency range is only permitted indoors!

spo-comm GmbH
Otto-Kraus-Strasse 4c
D-90411 Nürnberg

Phone : +49 (0) 911 / 23 98 37 - 0
Fax : +49 (0) 911 / 23 98 37 - 19
E-Mail: info@spo-comm.de

Representation by
CEO
Sporrer Michael

Do you need consultation?
vertrieb@spo-comm.de
+49 (0) 911 - 23 98 37 - 0