ARES-5320

Fanless, robust in-vehicle computer with multi-PoE connections and Intel® Atom™ processor

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Features

- Intel® Atom™ x6425RE CPU
- 1x DDR4 SODIMM RAM, up to 32 GB
- 3x 2.5GbE (2x with PoE, according to IEEE 802.3af)
- Supports up to 8x COM & 16bit digital I/O
- Operating temperature: -20 ° ~ 70 °C

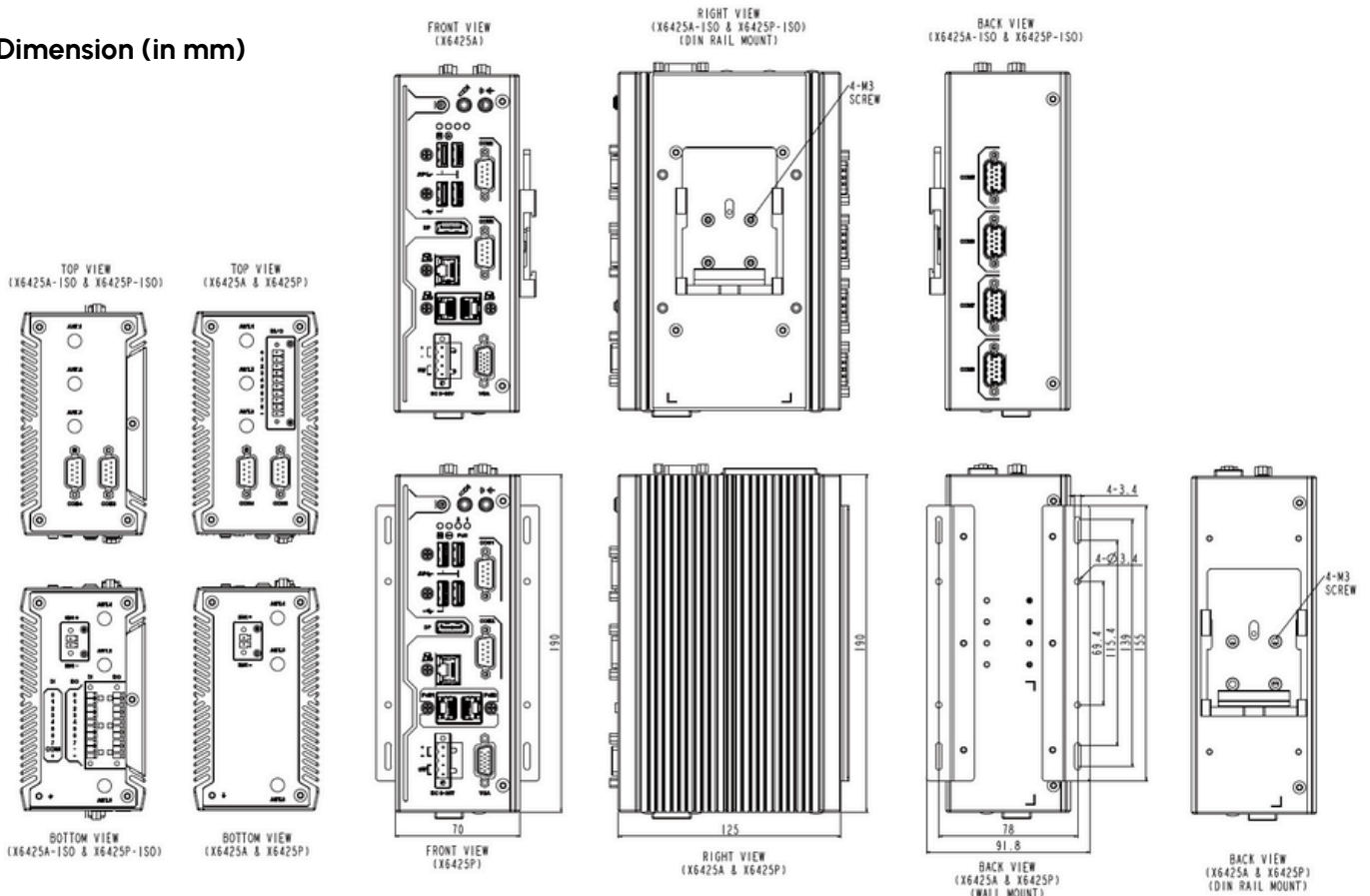## ARES-5320 - Powerful fanless DIN-rail embedded PC with Intel® Elkhart Lake Atom™ processor

Are you looking for a reliable and robust solution for vehicle applications? Arbor presents the new ARES-5320, a compact embedded system specifically designed for use in-vehicle. With its Intel® Elkhart Lake Atom x6425RE quad-core processor, the ARES-5320 offers outstanding performance and reliability in demanding environments.

Comprehensive connectivity and interface options
The ARES-5320 has outstanding performance features that make it the optimal choice for in-vehicle applications. Equipped with a powerful Intel® Atom™ x6425RE quad-core processor, the system offers reliable and robust performance in demanding environments. It supports comprehensive connectivity options, including 3x 2.5GbE LAN or 2.5GbE LAN with 2x 2.5GbE PoE, for fast and reliable data transfers.

In addition, the ARES-5320 has advanced I/O interfaces with up to 8 COM ports and 16-bit digital I/O, providing versatile connectivity options for a wide range of devices and sensors. These features make the ARES-5320 a robust and flexible solution for vehicle applications, including fleet management, telematics and monitoring. Discover the power of the ARES-5320 and its ability to meet the most demanding requirements in vehicle environments.

Dimension (in mm)

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Specifications	ARES-5320
SYSTEM	
CPU	Intel® AtomTM x6425RE-Processor
Chipset	SoC
Graphics	Intel® UHD graphics for 10th generation Intel® processors
RAM	1x 260-pin DDR4 SODIMM, supports 3200MHz SDRAM up to 32 GB
Storage	1x integrated 64G eMMC 1x full-size mSATA slot (combined with mPCIe) 1x 2.5" SSD/HDD slot (for A & P ver.)
TPM	dTPM 2.0
Watchdog	1~255 Level reset
Expansion	1x full-size mPCIe slot (USB2.0, with mSATA)/ 1x full-size mPCIe slot (PCIe [x1] + USB2.0) 1x half-size mPCIe slot (PCIe [x1] + USB2.0)
Operating Systems	Windows 10 IoT Windows 11 IoT Ubuntu
INTERFACE	
Ethernet	3x Intel® i226LM chipset: 3x 2.5GbE (for A & A-ISO ver.) or 1x 2.5GbE + 2x 2.5GbE PoE (IEEE802.3af) (for P & P-ISO ver.)
USB	3x USB-A 3.2 Gen1 (5Gbps) 1x USB-A 2.0
COM	2x RS-232(standard)/422/485 2x RS-232 4x 2kV isolated RS-232/422/485 (For -ISO ver.)
Digital I / O	8x DI/O (for A & P ver.) 8x DI & 8x DO both with 2kV isolation (for -ISO ver.)
Video	1x DP++, up to 4096 x 2160@60Hz 1x VGA, up to 1920 x 1200@60Hz
Audio	1x Jack for Line-out & Mic-in
Power	1x 4-pin terminal block
Other	1x Nano-SIM slot
ENVIRONMENTAL	
Chassis	Metal + aluminum alloy
Cooling	Fanless
Power adapter	DC input 9~36V (4-pole terminal strip: V+, V-, SW+, SW-) 1x 2-pole terminal strip (IGN+, IGN-) Power consumption max. 65W
Operating Temperature	-20° ~ 70°C, with AirFlow
Storage Temperature	-40˚C ~ 80˚C
Vibration / Shock Resistance	Vibration: 5~500Hz 3 Grms X,Y,Z axis with eMMC, according to IEC 68-2-64 Shocks: 10G peak acceleration (11 m sec. duration), in operation, according to IEC 68-2-27 30G peak acceleration (11 m sec. duration), in non-operation, according to IEC 68-2-27
Humidity	10 ~95% @ 70°C, non-condensing
Dimensions	70 (W) x 125 (D) x 190 (H) mm
Weight	1.9 kg
Mounting	DIN rail (standard) Wall mounting (optional with CTOS BKT, but not supported for -ISO ver.)
Certifications	CE/FCC Class A, E-Mark

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Ordering Information	ARES-5320
MODEL NO.	
ARES-5320-x6425A	ARES-5320 w/ 3x 2.5GbE, 4x COM, 4x USB, 1x DP, 1x VGA, 8x DI/O, 64G eMMC & 1x 2.5" SSD/HDD Tray
ARES-5320-x6425P	ARES-5320 w/ 2x 2.5G PoE + 1x 2.5GbE, 4x COM, 4x USB, 1x DP, 1x VGA, 8x DI/O, 64G eMMC & 1x 2.5" SSD/HDD Tray
ARES-5320-x6425A-ISO (BTO)	ARES-5320 w/3x 2.5GbE, 8x COM(4x isolated), 4x USB, 1x DP, 1x VGA, 8x isolated DI, 8x isolated DO & 64G eMMC
ARES-5320-x6425P-ISO (BTO)	ARES-5320 w/2x 2.5G PoE + 1x 2.5GbE, 8x COM(4x isolated) , 4x USB, 1x DP, 1x VGA, 8x isolated DI, 8x isolated DO & 64G eMMC
STANDARD ACCESSORIES	
DRK-002	DIN Rail Mounting Kit for ARES Series
OPTIONAL ACCESSORIES (*CTOS KIT)	
PAC-60W6A-FSP-ES	12V/5A, 60W AC/DC Adapter Kit (For A & A-ISO ver.)
PAC-120W6B-FSP-ES	19V/6.32A, 120W AC/DC Adapter Kit (For P & P-ISO ver.)
WIFI-AT4550	Atheros QCNFA324 mPCIe Wi-Fi+BT Module Kit (w/ 2x 30cm RF Cable)
ANT-D11	1x Wi-Fi Dual-band 2.4G/5G Antenna Kit
ANT-H11	1x 2dBi HSUPA Antenna Kit
LTE-4450	Quectel EG25-G mPCIe LTE Cat 4 Module Kit (for Global, w/ 1x 25cm RF Cable)
GPS-mPCIE w/ UDR	Antzer ANNA-F00U0 mPCIe GPS Module Kit (Untethered Dead Reckoning, w/ 1 x 15cm RF Cable)
ANT-G11	1x 27dBi 3000mm Square Active GPS Antenna Kit
MK-4C-4G/8G/16G DIMM Memory	4G/8G/16G DDR4 Memory Kit (w/ Heatsink)
WMK-1973	Wall Mounting Bracket Kit for ARES Series

*CTOS means Configure-to-Order Service.