

# ARES-1983H

Machine vision controller with Intel® 12th & 13th Gen. Core™ i7/i5/i3 processor

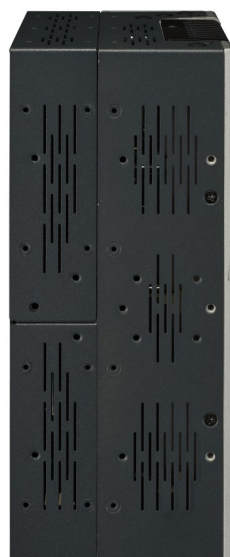
## Features

- › Socket LGA1700 for Intel® 12th/13th Core™ i7/i5/i3 processor
- › Fansink design—active cooling without internal dust accumulation
- › Modular design—easily expandable and customizable
- › Up to 6x USB and 7x LAN (4x w/ PoE) support
- › Dual display for 1x VGA and 1x DP
- › DI/DO with 1.5KV isolation protection
- › DI supports Cconnection of dry & wet contact devices
- › M.2 2242/2280 M-Key Slot support SATA & NVMe(Gen4 x4)
- › 2x Internal USB 2.0 type-A ports for HW license key & security

PRELIMINARY



ARES-1983H



ARES-1983H-MV

## Embedded controller with high-speed I/O

Introducing the ARES-1983H series, an advanced industrial embedded controller designed to revolutionize your production processes. With unparalleled high-speed I/O capabilities, this compact powerhouse guarantees superior production efficiency and accelerated throughput rates, ensuring your operations stay ahead in today's competitive landscape.

Powered by Intel's 12th/13th generation processors, the ARES-1983H series offers exceptional processing power, enabling lightning-fast resolution rates for machine vision cameras and unmatched production efficiency. Experience seamless multitasking and rapid data processing, essential for demanding industrial applications. With its advanced PoE ports, the ARES-1983 Series can support predictive analytics and real-time monitoring, which are crucial for executing effective preventive maintenance programs. This highly advanced technology targets your specific requirements, delivering an exceptional user experience.

Experience unmatched processing power, versatile connectivity, and robust reliability, all packed into a compact and efficient industrial embedded controller. Whether you're in intelligent transport systems, multimedia applications, or factory automation, the ARES-1983H is your gateway to intelligent innovation and enhanced productivity.

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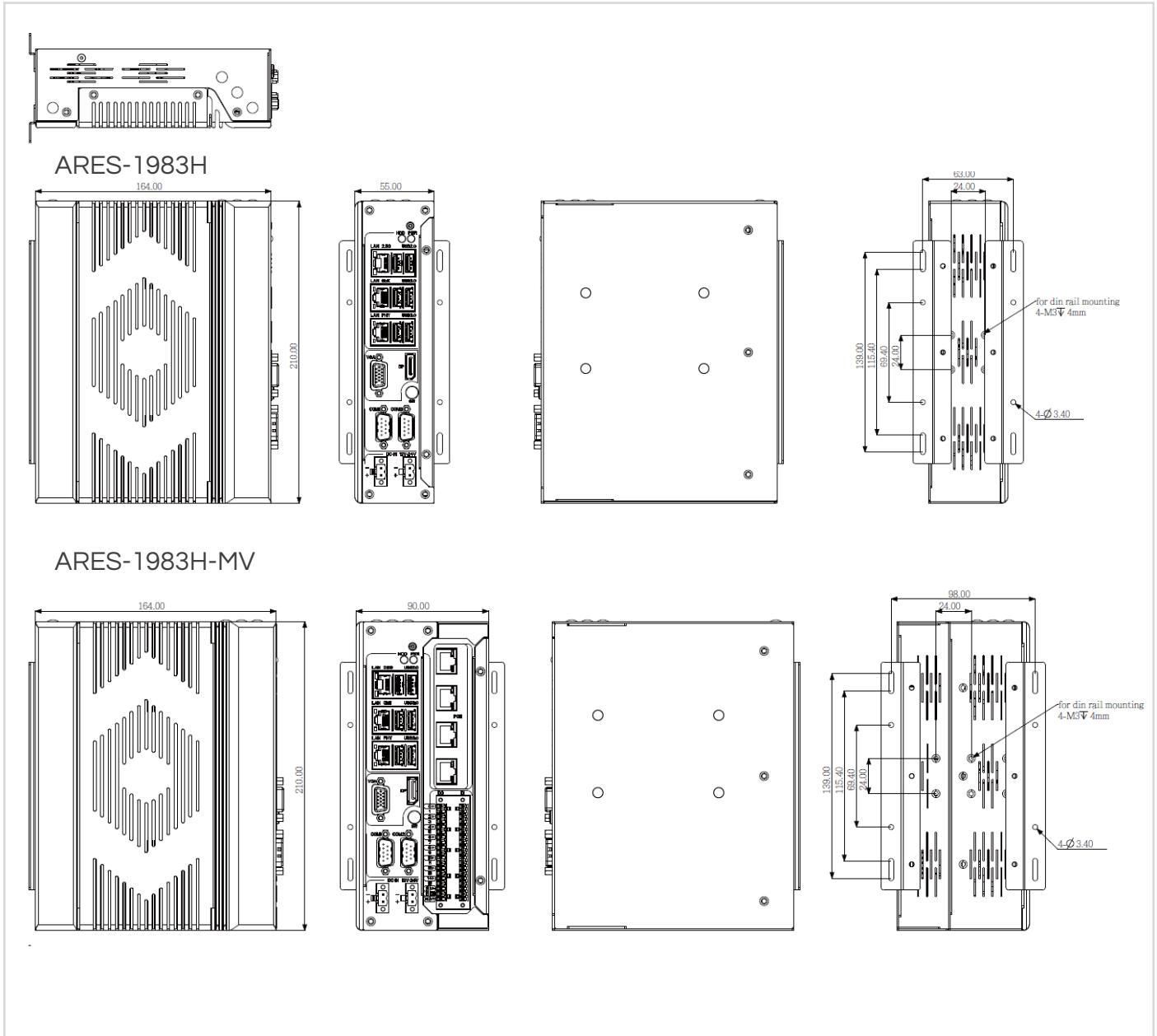
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ARES-1983H series		
SYSTEM	ARES-1983H	ARES-1983H-MV
Processor	Intel® 12th/13th Core™ i7/i5/i3 processor in LGA1700 socket (Max.65W)	
Chipset	Intel® H610E	
Graphics	Integrated Intel® UHD Graphics 730/770	
Memory	1x 262-pin DDR5 SO-DIMM sockets, supporting 5600MHz SDRAM up to 32GB	
LAN Chipset	1x Intel® i226LM 1x Intel® i219LM 5x Intel® i210AT (4 x for GbE PoE)	
Watchdog timer	1~255 levels reset	
TPM	dTPM 2.0	
OS support	Windows 10 / Windows 11 / Ubuntu	
I/O		
Serial port	1x RS232 1x RS232(Default)/422/485	
USB	2x USB-A 3.2 Gen2 (10Gbps) 2x USB-A 3.2 Gen1 (5Gbps) 2x USB-A 2.0 2x Internal USB-A 2.0	
LAN	1x 2.5GbE ports 2x GbE ports	1x 2.5GbE ports 2x GbE ports 4x GbE PoE ports(IEEE802.3af)
Video	1x DisplayPort 1.4, up to 4096x2304@60Hz 1x VGA, up to 1920x1200@60Hz	
Digital I/O	-	16x DI & 16x DO w/ 1.5kV isolation
Others	4x Antenna holes	
STORAGE		
M.2	1x M.2 M-key 2242/2280 slot (PCIe 4.0 x4 + SATA)	1x 2.5" HDD/SSD internal drive bay
EXPANSION BUS		
M.2	1x M.2 E-key 2230 slot (PCIe 3.0 x1 + USB2.0 + CNVi)	
mPCIe	1x mPCIe (PCIe 3.0 x1 + USB 2.0, Full size) w/ 1x nano SIM card slot	
MECHANICAL		
Power Input	DC 12~24V via 2-pin terminal block	
Max. power consumption	w/ 65W TDP CPU: 110W	w/ 65W TDP CPU: 170W
Dimensions	55 (W) x 164 (D) x 210 (H) mm	90 (W) x 164 (D) x 210 (H) mm
Weight	2.5 kg	3.1 kg
Mounting	Wall-mount (standard) or DIN-rail (optional w/ CTOS bracket)	
Construction	Metal + Aluminum	
Operating temperature	w/ 35W TDP CPU: -20 ~ 60°C, ambient w/ air flow w/ 65W TDP CPU: -20 ~ 50°C, ambient w/ air flow	
Storage temperature	-30°C ~ 70°C	
Humidity	10-95% @ 60°C (non-condensing)	
Vibration	5~500Hz 3 Grms X,Y,Z axis w/ SSD, according to IEC 68-2-64	
Shock	10G peak acceleration (11 m sec. duration), operation 30G peak acceleration (11 m sec. duration), non operation according to IEC 68-2-27	
Certification	CE, FCC Class A	

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## Appearance and dimensions (mm)



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## Ordering information

### ARES-1983H series

#### MODEL NO.

ARES-1983H	ARES-1983 w/ H610E Chipset, 3x LAN, 2x COM, 6x USB, 1x DP, 1x VGA, 1x M.2 E-Key, 1x mPCIe & 1x M.2 M-Key
ARES-1983H-MV	ARES-1983H w/ 4x GbE PoE, 16x isolated DI + 16x isolated DO & 1x 2.5" SSD/HDD tray

#### OPTIONAL ACCESSORIES

WMK-1973	Wall mounting bracket kit for ARES series (standard)
PAC-120W6B-FSP-ES	19V/6.3A, 120W AC/DC adapter kit
PAC-180W6C-FSP-ES	24V/7.5A, 180W AC/DC adapter kit
WIFI-AT3550	Atheros QCNFA324 M.2 Wi-Fi+BT module kit (w/ 2 x 30cm RF cable)
ANT-D11	1 x Wi-Fi Dual-band 2.4G/5G antenna kit
ANT-H11	1 x 2dBi HSUPA antenna kit
LTE-4450	Quectel EG25-G mPCIe LTE Cat 4 module kit (for global, w/ 1 x 25cm RF cable)
MK-5C-8G/16G/32G DIMM Memory ASSY Kit	8G/16G/32G DDR5 memory kit (w/ heatsink)
DRK-002	DIN rail mounting bracket kit for ARES series

#### CONFIGURATION (\*CTOS KIT)

Intel® Core™ i7-13700E	Intel® 13th Gen. 65W processor, 16C/24T, 1.9GHz, L2: 24MB
Intel® Core™ i5-13500E	Intel® 13th Gen. 65W processor, 14C/20T, 2.4GHz, L2: 11.5MB
Intel® Core™ i3-13100E	Intel® 13th Gen. 60W processor, 4C/8T, 3.3GHz, L2: 5MB
Intel® Core™ i7-13700TE	Intel® 13th Gen. 35W processor, 16C/24T, 1.1GHz, L2: 24MB
Intel® Core™ i5-13500TE	Intel® 13th Gen. 35W processor, 14C/20T, 1.3GHz, L2: 11.5MB
Intel® Core™ i3-13100TE	Intel® 13th Gen. 35W processor, 4C/8T, 2.4GHz, L2: 5MB
Intel® Core™ i7-12700E	Intel® 12th Gen. 65W processor, 12C/20T, 2.1GHz, L2: 12MB
Intel® Core™ i5-12500E	Intel® 12th Gen. 65W processor, 6C/12T, 2.9GHz, L2: 7.5MB
Intel® Core™ i3-12100E	Intel® 12th Gen. 60W processor, 6C/12T, 2.9GHz, L2: 7.5MB
Intel® Core™ i7-12700TE	Intel® 12th Gen. 35W processor, 12C/20T, 1.4GHz, L2: 12MB
Intel® Core™ i5-12500TE	Intel® 12th Gen. 35W processor, 6C/12T, 1.9GHz, L2: 7.5MB
Intel® Core™ i3-12100TE	Intel® 12th Gen. 35W processor, 4C/8T, 2.1GHz, L2: 5MB