

# AECX-WHLO

Intel® Whiskey Lake-U® Series based 3.5" Embedded Board supports Intel® 8th Gen Core™ i7/i5/i3/Celeron® Processor with DP (HDMI)/LVDS(eDP), SATA III, 4 COM, 6 USB, Dual Intel® GbE LAN.



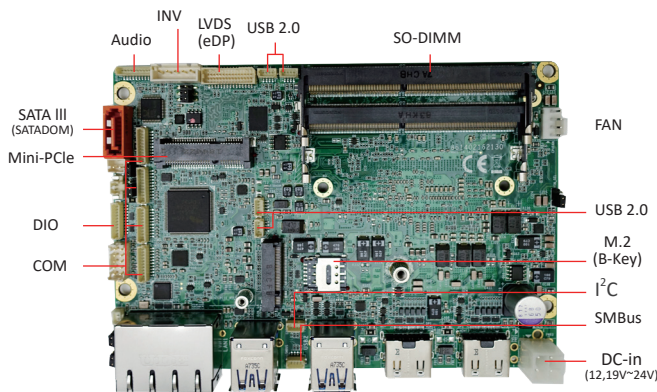
Multi Display



HIGH Performance



Fanless



## Key Features

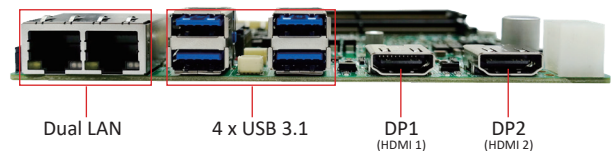
- Intel® 8th Gen Core™ i7/i5/i3 / Celeron® Processor onboard
- Two 260-pin SO-DIMM up to 32GB DDR4 2400MHz SDRAM
- Multi-Display : 2 DP (HDMI) / LVDS (eDP)
- Two Intel® Gigabit Ethernet port
- 1 M.2 M-key 2280(NVMe), 1 M.2 B-key 3042 (WWAN w/ nSIM), 1 Mini PCIe (full-size),
- 1 SATA III (w/ SATADOM), 4COM, 4 USB 3.1 and 2 USB 2.0 ports
- Supports 4K/2K Resolution Display
- DC-IN 12V or 19V ~ 24V, EuP/ErP 2013 Ready
- Supports Intel vPro, AMT technologies

## Product Specification

System Processor/Chipset	
Processor	Intel® Core™ i7-8665UE Processor Quad Core (8M Cache, UP to 4.4 GHz) Intel® Core™ i5-8365UE Processor Quad Core (6M Cache, UP to 4.1 GHz) Intel® Core™ i7-8145UE Processor Dual Core (4M Cache, UP to 3.9 GHz) Intel® Celeron® Processor 4305UE Dual Core (2M Cache, 2.0 GHz)
Chipset	Intel® Whiskey Lake-U Processor integrated
BIOS	AMI® UEFI Flash ROM
Memory	
Technology	DDR4 SDRAM up to 2400 MHz
Max. capacity	up to 64GB (32GB per DIMM)
Socket	2 x 260-pin SO-DIMM
Display	
Graphics	Intel® Gen 9.5 UHD 620 Graphics integrated
Display interface	2 x DP v1.2 (HDMI v1.4b, optional) 1 x LVDS 2-channel 18/24-bit (eDP, optional) 1 x eDP v1.4 (optional)
Multi-display	Up to three independent displays
Resolution	DP: Up to 4096 x 2160 @ 60Hz (max.) HDMI: Up to 4096 x 2160 @ 30Hz (max.) LVDS: Up to 1920 x 1200 @ 60Hz (max.) eDP: Up to 4096 x 2304 @ 60Hz (max.)
Ethernet	
Interface	10/100/1000 Mbps
Controller	Intel® I211 GbE / Intel® I210 GbE (optional)
Connector	2 x RJ45 (rear I/O)
Audio	
Interface	Line-in, Line-out, Mic-in
CODEC	Realtek® ALC662 HD Audio Codec
Expansion Slot	
Mini-PCIe	1 x Mini-PCIe (SATA, Full-size)
M.2	1 x M.2 M-Key 2280 (SATA, NVMe), 1 x M.2 B-Key 3042 (WWAN, w/ uSIM)
SATA	
Max. data transfer rate	6.0GB/s
Port	1 x SATA III support SATADOM
I/O	
Audio	Line-in, Line-out, Mic-in (box-header)
USB	4 x USB 3.1 (rear I/O) 2 x USB 2.0 (box-header)
COM	1 x RS-232/422/485 (box-header) 3 x RS-232 (box-header)
FAN	1 x CPUFAN 4-pin PWM (wafer-header)
GPIO	1 x 8-bit Programmable GPIO (box-header)
i²C	1 x i²C (box-header)
SMBus	1 x SMBus (box-header)

Power Requirement	
Power connector	ATX 2x2-pin for Standard, Wafer 1x2-pin, DC-Jack ψ2.5mm screw type (optional)
Power type	DC-IN 12V or DC-IN 19V~24V (by jumper selection)
Power mode	AT / ATX (by jumper selection)
Watchdog Timer	
Interval	Programmable 1~255 sec/min
Output	System reset
Environment	
Operating temperature	0°C ~ 60°C (32°F ~ 140°F) standard -20°C ~ 70°C (-4°F ~ 158°F) optional -40°C ~ 70°C (-40°F ~ 158°F) optional
Storage temperature	-40°C ~ 80°C (-40°F ~ 176°F)
Relative humidity	0% ~ 95% (non-condensing)
Form Factor	
Dimensions (L x W)	3.5" Embedded Board 146mm x 102mm (5.75" x 4.01")

## Rear I/O



## Dimensions



## Ordering Information

Part Number	Description
AECX-WHLO-8665	3.5", Intel Core i7 8665UE 25W, 2DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V, 19V~24V)/ATX4P
AECX-WHLO-8365	3.5", Intel Core i5 8365UE 25W, 2DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V, 19V~24V)/ATX4P
AECX-WHLO-8145	3.5", Intel Core i3 8145UE 25W, 2DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V, 19V~24V)/ATX4P
AECX-WHLO-4305	3.5", Intel Celeron 4305UE 15W, 2DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V, 19V~24V)/ATX4P

## Optional Accessories

Part Number	Description
VK00000700A9	SATA cable
VK00002600A9	SATA power cable
TBD	Heatsink
TBD	Heat Spreader