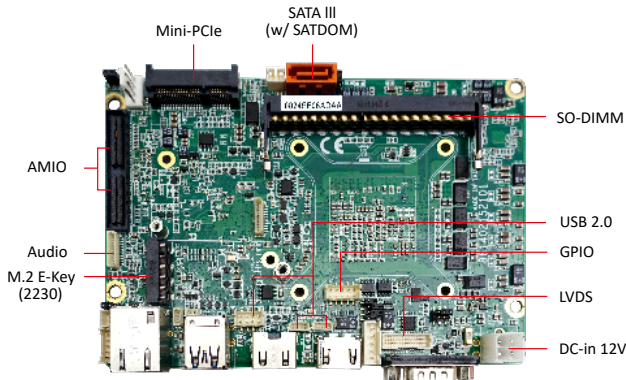


# AECX-CFL1

Intel® Coffee Lake –H Series based 3.5" Embedded Board supports Intel® 8th & 9th Gen Core™ i7/ i5/ i3 Processors with 2 HDMI/LVDS, SATA, COM, 6 USB, AMIO, Intel® GbE LAN.



## Key Features

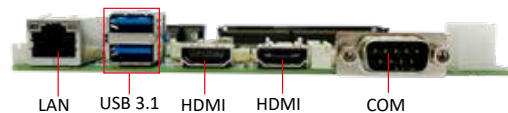
- Intel® 8th/9th Gen Core™ i7/i5/i3/ Celeron® (FCBGA1440) Processor onboard, with Intel® QM370 chipset
- One 260-pin SO-DIMM up to 16GB DDR4 2666MT/s SDRAM
- Multi-Display : 2 HDMI / LVDS / AMIO (DP interface)
- 1 Mini-PCIe (full-size) and 1 M.2 M-key 2242 (SSD) slots
- 1 SATA III (w/ SATADOM), 1 COM, 2 USB 3.1 and 4 USB 2.0
- Intel® vPro™ Technology, Support iAMT v12.0
- DC-IN 12V, EuP/ErP 2013 Ready

## Product Specification

System Processor/Chipset	
Processor	Intel® 8th/9th Coffee Lake-H series processor onboard 9 <sup>th</sup> Core™ i7-9850HE (up to 4.4GHz, 6C/12T, 45W) 8 <sup>th</sup> Core™ i7-8850H (up to 4.3GHz, 6C/12T, 45W) 8 <sup>th</sup> Core™ i5-8400H (up to 4.2GHz, 4C/8T, 45W) 8 <sup>th</sup> Core™ i3-8100H (3.0GHz, 4C/4T, 45W) Celeron® G4930E (up to 2.4GHz, 2C/2T, 35W)
Chipset	Intel® QM370 PCH
BIOS	AMI UEFI Flash ROM
Memory	
Technology	DDR4 SDRAM up to 2666 MT/s
Max. capacity	Up to 16GB
Socket	1 x 260-pin SO-DIMM
Display	
Graphics	Intel® HD Gen 9-LP Graphics integrated
Display interface	2 x HDMI v1.4b 1 x LVDS(eDP) 2ch 18/24-bit (co-layout eDP) 1 x AMIO (DP v1.2), 1 x eDP v1.4 (optional)
Multi-display	Up to three independent displays
Resolution	HDMI : 4096 x 2160 @ 30Hz (max.) LVDS : 1920 x 1200 @ 60Hz (max.) eDP : 4096 x 2304 @ 60Hz (max.) AMIO (DP v1.2): 4096 x 2160 @ 60Hz (max.)
Ethernet	
Interface	10/100/1000 Mbps
Controller	Intel® I219LM GbE PHY w/AMT
Connector	1 x RJ45 (rear I/O)
Audio	
Interface	Line-in, Line-out, Mic-in
CODEC	Realtek ALC662 HD Audio Codec
Expansion Slot	
AMIO (optional)	1 x DP v1.2, 1 x Line-out, 1 x LPC, 1 x PCIe (x4), 1 x SMBus, 1 x UART, 1 x USB 3.0 interface
Mini-PCIe	1 x Full size
M.2	1 x M.2 M-Key 2242 (SSD)
SATA	
Max. Data Rate	6.0GB/s
Port	1 x SATAIII support SATADOM
I/O	
Audio	Line-in, Line-out, Mic-in (box-header)
COM	1 x RS-232/422/485 (Rear I/O)
HDMI/DP/LVDS	2 x HDMI (rear I/O), 1 x LVDS (box-header) 1 x AMIO (DP interface)
FAN	1 x CPUFAN 4-pin PWM (Wafer-header)
GPIO	1 x 8-bit Programmable GPIO (Box-header)
SMBus	1 x SMBus (box-header)

USB	2 x USB 3.1 (rear I/O), 4 x USB 2.0 (box-header)
Power Requirement	
Power connector	ATX 2x2-pin or DC-Jack screw type (optional)
Power type	DC-IN 12Vdc
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-CFL1-9850 (MOQ)	3.5", Intel Core i7-9850HE 45W, QM370, 2HDMI/LVDS, SATA/COM/6USB/LAN, DC(12V)/ATX4P
AECX-CFL1-8850 (MOQ)	3.5", Intel Core i7-8850H 45W, QM370, 2HDMI/LVDS, SATA/COM/6USB/LAN, DC(12V)/ATX4P
AECX-CFL1-8400	3.5", Intel Core i5-8400H 45W, QM370, 2HDMI/LVDS, SATA/COM/6USB/LAN, DC(12V)/ATX4P
AECX-CFL1-8100 (MOQ)	3.5", Intel Core i3-8100H 45W, QM370, 2HDMI/LVDS, SATA/COM/6USB/LAN, DC(12V)/ATX4P
AECX-CFL1-4930	3.5", Intel Celeron® G4930E 45W, QM370, 2HDMI/LVDS, SATA/COM/6USB/LAN, DC(12V)/ATX4P

## Optional Accessories

Part Number	Description
801302204501	SATA + SATA Power Cable
801202205002	COM RS-232 Cable
800702005001	Audio (Line-in, Line-out, Mic-in) Cable
TBD	Cooler w/FAN for BGA

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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