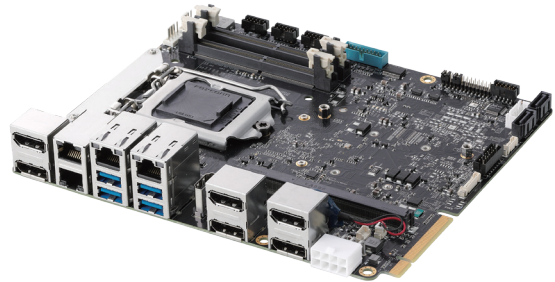


# AMSTX-CF Series (Preliminary)

*Embedded Motherboard supporting MXM Graphics Module with 8<sup>th</sup>/9<sup>th</sup> Generation Intel® Core™ i7/i5/i3 in LGA1151 Socket*

## Features

- ADLINK MXM Graphics module support (Type A/B, up to 120W)
- 8<sup>th</sup>/9<sup>th</sup> Gen Intel® Core™ i7/i5/i3, Celeron® processor
- Dual SODIMMs for up to 64GB DDR4 non-ECC memory (CPU dependent)
- 6 x DisplayPort (2 from CPU, 4 from MXM), one internal HDMI (vertical connector from CPU), LVDS optional
- 1x M.2 E key supporting 1630 or 2230 for wireless LAN / Bluetooth module, 1x M.2 B key supporting 2242 or 2280 for SATA storage module, 1x M.2 M key supporting 2242 or 2280 for SATA/PCIe x4 storage module (not supported by H310 Chipset)
- Reliable Molex type 12V DC-in connector
- 1x Intel® i219-LM and 3x Intel® i210-AT



## Software Support

- Win10 IoT Enterprise SAC 64bit
- Ubuntu 18.04.1 LTS 64bit

## Optional Accessories

- 65W CPU cooler: 32-20495-0000
- 35W CPU cooler: 32-20378-0000-A0
- CPU cooler bracket 32-50015-0100-A0 (default bundle in AMSTX-CF packing)
- MXM cooler for P1000/P2000: 32-20797-0200-A0
- MXM cooler for P3000/P5000: 32-20823-0020-A0
- MXM cooler for T1000: 32-20830-0200-A0
- MXM cooler for RTX3000: 32-20823-1100-A0
- 12V/240W adaptor: 31-62164-0010-A0
- Wifi Kit INTEL AC9260 Non-VPRO 91-95266-0010

## Ordering Information

Model	MXM Support	Chipset	DC-in
AMSTX-CFP12-Q370	EGX-MXM-P1000/P2000/T1000/RTX3000	Q370	12V
AMSTX-CFP35-Q370	EGX-MXM-P3000/P5000	Q370	12V
AMSTX-CFP12-H310	EGX-MXM-P1000/P2000/T1000/RTX3000	H310	12V
AMSTX-CFP35-H310	EGX-MXM-P3000/P5000	H310	12V

# AMSTX-CF Series

## Specifications

Model	AMSTX-CFP12-Q370	AMSTX-CFP35-Q370	AMSTX-CFP12-H310	AMSTX-CFP35-H310
MXM Support	EGX-MXM-P1000/P2000/ T1000/RTX3000	EGX-MXM-P3000/P5000	EGX-MXM-P1000/P2000/ T1000/RTX3000	EGX-MXM-P3000/P5000
Processor	Intel® Core™ i7-9700E, 2.6GHz, 12M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (8C/8T) Intel® Core™ i7-9700TE, 1.8GHz, 12M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (8C/8T) Intel® Core™ i5-9500E, 3.0GHz, 9M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i5-9500TE, 2.2GHz, 9M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i3-9100E, 3.1GHz, 6M Cache, 65W TDP, LGA1151, DDR4 2400MHz support (4C/4T) Intel® Core™ i3-9100TE, 2.2GHz, 6M Cache, 35W TDP, LGA1151, DDR4 2400MHz support (4C/4T) Intel® Core™ i7-8700, 3.2GHz, 12M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (6C/12T) Intel® Core™ i7-8700T, 2.4GHz, 12M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (6C/12T) Intel® Core™ i5-8500, 3.0GHz, 9M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i5-8500T, 2.1GHz, 9M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i3-8100, 3.6GHz, 6M Cache, 65W TDP, LGA1151, DDR4 2400MHz support (4C/4T) Intel® Celeron® G4900, 3.1GHz, 2M Cache, 54W TDP, LGA1151, DDR4 2400MHz support (2C/2T) Intel® Celeron® G4900T, 2.9GHz, 2M Cache, 35W TDP, LGA1151, DDR4 2400MHz support (2C/2T)			
Chipset	Intel® Q370 Chipset		Intel® H310 Chipset	
Memory	Non-ECC DDR4 2666/2400MHz, 2x SO-DIMM, up to 64GB (dependent on CPU)			
<b>I/O Interfaces</b>				
Display	6x DisplayPort (2 from CPU, 4 from MXM). One internal HDMI (vertical connector from CPU), LVDS optional			
Ethernet	1x GbE (Intel® i219-LM), 3x GbE (Intel® i210-AT)			
Serial Ports	1x RS-232/422/485 pin header, 1x RS-232 pin header (CCTalk supported by jumper setting)			
USB	4x USB 3.1 Gen1 x1 ports, 2x USB 2.0 pin headers, 2x USB 3.1 Gen1 x1 pin headers		4x USB 3.1 Gen1x1 ports, 4x USB 2.0 pin headers	
Audio	Default: One 10-pin wafer(box header) for Mic-in/Line out/Line in Optional 1: Mic in /(6W speaker_out_L+6W speaker_out_R. (on board 10-pin wafer. Connector via additional audio module) Optional 2: Line in /(6W speaker_out_L+6W speaker_out_R. (on board 10-pin wafer. Connector via additional audio module)			
M.2	1x M.2 E key supporting 1630 or 2230 for Wi-Fi/ BT module, 1x M.2 B key supporting 2242 or 2280 for SATA storage module, 1x M.2 M key supporting 2242 or 2280 for SATA/PCIe x4 storage module		1x M.2 E key supporting 1630 or 2230 for Wi-Fi / BT module, 1x M.2 B key supporting 2242 or 2280 for SATA storage module	
PCB Edge Connector	1x PCIe x8 PCB edge connector (data is from 2x PCIe Gen3 x4 root ports, one set of clocks, up to 50W), one PCIe power connector up to 12V @3.5A/5V@4A		1x PCIe x8 PCB edge connector (data is from 1x PCIe Gen2 x1 root ports, one set of clocks, up to 50W), one PCIe power connector up to 12V @3.5A/5V@4A	
Digital I/O	One 1x 10-pin/2.0mm wafer: DI/DO: 4 in and 4 out			
TPM 2.0	Optional			
eSIM	Optional			
<b>Storage</b>				
SATA	2x SATA 6Gb/s, one SATA power connector 2x SATA 6Gb/s signals via M.2 M & B key connector Intel® RST RAID Support		2x SATA 6Gb/s, one SATA power connector 1x SATA 6Gb/s signal via M.2 B key connector	
<b>Mechanical</b>				
Dimensions	197.72 x 167.32 mm (W x L)			
Mounting	ADLINK proprietary mounting hole locations, ADLINK proprietary CPU cooler bracket			
<b>Power Supply</b>				
DC Input	DC 12V input (Molex DC-in jack)			
AC Input	Optional: 240W (12V @20A) AC/DC adapter			
<b>Environmental</b>				
Operating Temperature	0°C to 60°C (w/o MXM), 0°C to 55°C (w/ MXM)			
Storage Temperature	-40°C to 85°C			
Humidity	5% to 95%, non-condensing			
EMC	EN55032/EN55035			