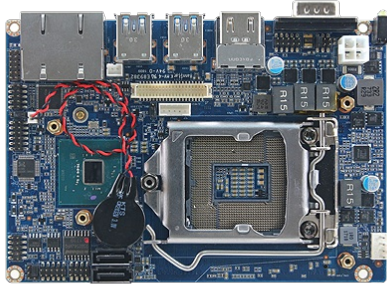




## ECM-CFS

### 8th/9th Gen Coffee Lake-S 3.5" Micro Module

- > Top Layer Soldered Socket
- > Intel® Core™/Pentium®/Celeron® rPGA Processor
- > Intel® Q370/H310 Express Chipset
- > Intel® UHD Graphics 630/610
- > Single DRAM Socket, Max. Up to 32GB DDR4 2666MHz
- > Triple Display (Dual HDMI, LVDS)
- > Single Expansion Slot, mPCIe
- > Dual Gigabit Ethernet, HD Audio Code
- > RAID 0/1, fTPM 2.0



#### + Spec

-System Information-	
<b>Processor</b>	Intel® Core™ i7-8700T Processor (12M Cache, up to 4.00 GHz) Intel® Core™ i5-8500T Processor (9M Cache, up to 3.50 GHz) Intel® Core™ i3-8100T Processor (6M Cache, 3.10 GHz) Intel® Pentium® Gold G5400T Processor (4M Cache, 3.10 GHz) Intel® Celeron® G4900T Processor (2M Cache, 2.90 GHz) Intel® Core™ i7-9700TE Processor (12M Cache, up to 3.80 GHz) Intel® Core™ i5-9500TE Processor (9M Cache, up to 3.60 GHz) Intel® Core™ i3-9100TE Processor (6M Cache, up to 3.20 GHz)
<b>Platform Controller Hub</b>	Intel® Q370 Express Chipset Intel® H310 Express Chipset
<b>System Memory</b>	1 x 260-Pin SO-DIMM Socket, Max. Up to 32GB DDR4 2400/2666MHz
<b>BIOS Information</b>	AMI UEFI BIOS, 256 Mbit SPI Flash ROM
<b>Watchdog Timer</b>	H/W Reset, 1sec. ~ 65535sec.
<b>H/W Status Monitor</b>	Monitoring System Temperature, Voltage and FAN Status with Auto Throttling Control
<b>TPM</b>	TPM 2.0 (Firmware)
Expansion	
<b>Expansion</b>	1 x Mini PCIe (mSATA) (Q370 w/PCIe/SATA/USB 2.0) (H310 w/SATA/USB2.0)
Storage	
<b>Storage</b>	1 x mSATA 2 x SATA III
I/O	
<b>USB Port</b>	2 x USB 2.0 4 x USB 3.1 (w/Q370 Gen2, w/H310 Gen1)
<b>COM Port</b>	2 x RS-232
<b>GPIO</b>	1 x 8bit GPIO
<b>MIO</b>	1 x LPC 1 x SPI
System Control	
<b>LED Indicator</b>	1 x Power on/off LED on Rear side 1 x Storage Access LED on Rear side
Display	
<b>Graphic Chipset</b>	Intel® UHD Graphics 630 (i7-8700T,i7-9700TE, i5-8500T,i5-9500TE, i3-8100T,i3-9100TE) Intel® UHD Graphics 610 (Pentium G5400T, Celeron G4900T)
<b>Spec. &amp; Resolution</b>	Dual HDMI 1.4: Max. Resolution 4096x2304@30Hz LVDS: Max. Resolution 1920x1080@60Hz
<b>Multiple Display</b>	Q370 support Triple Display H310 only support Dual Display:LVDS+HDMI1(default LVDS enable)or HDMI1+HDMI2(LVDS disabled)
Audio	
<b>Audio Codec</b>	Realtek ALC888S
<b>Audio Interface</b>	Mic-In, Line-In, Line-Out
Certifications	
<b>Certification Information</b>	CE FCC Class B
Ethernet	
<b>LAN Chipset</b>	1 x Intel® I210AT 1 x Intel® I219LM
<b>Ethernet Interface</b>	10/100/1000 Base-Tx GbE compatible



<b>LAN Port</b>	2 x RJ-45
<b>Mechanical &amp; Environmental</b>	
<b>Operating Temperature</b>	0°C ~ 60°C (32°F ~ 140°F), with 0.2m/s air flow
<b>Storage Temperature</b>	-40°C ~ 75°C (-40°F ~ 167°F)
<b>Operating Humidity</b>	40°C @ 95% Relative Humidity, Non-condensing
<b>Weight</b>	0.44lbs (0.2kg)
<b>Vibration Test</b>	With SSD : 5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 30min/axis
<b>Shock Test</b>	With SSD : 10Grms, IEC 60068-2-27, Half Sine, 11ms
<b>Drop Test</b>	ISTA 2A, IEC-60068-2-32 Test : Ed
<b>Power Requirement</b>	+12V
<b>ACPI</b>	Single Power ATX Support S0, S1, S3, S4, S5 ACPI 5.0 Compliant
<b>Power Mode</b>	AT/ATX
<b>Dimension (L x W)</b>	5.7" x 4" (146mm x 101mm)
<b>Software Support</b>	
<b>OS Information</b>	Win 10 Linux
<b>Ordering Information</b>	
<b>Ordering Information</b>	<p>ECM-CFS-Q37-B2R 3.5" SBC with Intel® 8th Generation Coffee Lake Processor &amp; PCH Q370</p> <p>ECM-CFS-H31-B2R 3.5" SBC with Intel® 8th Generation Coffee Lake Processor &amp; PCH H310</p> <p>ACC-CPU-9700TER Intel Core i7-9700TE 1.8GHz Processor(12M Cache, up to 3.80 GHz)</p> <p>ACC-CPU-9500TER Intel Core i5-9500TE 2.2GHz Processor(9M Cache, up to 3.60 GHz)</p> <p>ACC-CPU-9100TER Intel Core i3-9100TE 2.2GHz Processor(6M Cache, up to 3.20 GHz)</p> <p>ACC-CPU-8700TR Intel® Core™ i7-8700T Processor (12M Cache, up to 4.00 GHz)</p> <p>ACC-CPU-8500TR Intel® Core™ i5-8500T Processor (9M Cache, up to 3.50 GHz)</p> <p>ACC-CPU-8100TR Intel® Core™ i3-8100T Processor (6M Cache, 3.10 GHz)</p> <p>ACC-CPU-G5400TR Intel® Pentium® Gold G5400T Processor (4M Cache, 3.10 GHz)</p> <p>ACC-CPU-G4900TR Intel® Celeron® G4900T Processor (2M Cache, 2.90 GHz)</p>