



EPS-CFS

Intel® 8th/9th Coffee Lake Rugged Fanless Embedded System



- > 8th/9th Generation Intel® Processors
- > Intel® Q370/H310 Express Chipset
- > Intel® UHD Graphics 630/610
- > Intel® Gigabit LAN Controller
- > Memory Max. Up to 32GB DDR4 2666
- > mPCIe Expansion Slot (Max. Up to 2)
- > -10~60C Operating Temperature
- > Support RAID 0/1
- > Support Firmware TPM 2.0

+ Spec

| System | |
|------------------------------|--|
| Processor | 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) |
| System Chipset | Intel® Q370 Express Chipset Intel® H310 Express Chipset |
| System Memory | 1 x 260-Pin SO-DIMM Socket, Max. Up to 32GB DDR4 2400/2666MHz |
| BIOS | AMI UEFI BIOS, 256 Mbit SPI Flash ROM |
| Watchdog Timer | H/W Reset, 1sec. ~ 65535sec. and 1sec./step |
| H/W Status Monitor | Monitoring System Temperature, Voltage and FAN Status with Auto Throttling Control |
| TPM | TPM 2.0 (Firmware) |
| SBC | ECM-CFS |
| Expansion | |
| Expansion | 1 x mPCIe Socket (Q370 w/PCIe/SATA/USB 2.0) (H310 w/SATA/USB2.0) 1 x mPCIe Socket (USB, Factory Option) |
| Storage | |
| Storage | 1 x mSATA 2 x 2.5" Drive Bay (Internal) |
| I/O | |
| USB | 2 x USB 2.0 4 x USB 3.2 (w/Q370 Gen. 2, w/H310 Gen. 1) |
| COM Port | 2 x RS-232 |
| Antenna | 2 x Antenna Mounting Hole |
| GPIO | 1 x 8-Bit GPIO |
| Display | |
| Chipset | Intel® UHD Graphics 630 (i7-8700T,i7-9700TE, i5-8500T,i5-9500TE, i3-8100T,i3-9100TE) Intel® UHD Graphics 610 (Pentium G5400T, Celeron G4900T) |
| Resolution | 2 x HDMI 1.4: Max. Resolution 4096x2304@30Hz |
| Multiple Display | Dual Display |
| Audio | |
| Chipset | Realtek ALC892 |
| Audio Interface | 1 x Mic-In 1 x Line-Out |
| Ethernet | |
| Chipset | 1 x Intel® I211AT 1 x Intel® I219LM |
| Ethernet Interface | 10/100/1000 Base-Tx GbE compatible |
| LAN Port | 2 x RJ-45 |
| Mechanical & Environmental | |
| Power Requirement | +12V |
| ACPI | Single Power ATX Support S0,S3, S4, S5 ACPI5.0 Compliant |
| Power Type | AT/ATX (ATX is default setting) |
| Operating Temperature | With extended temperature peripherals:-10°C ~ 60°C (14°F ~ 140°F), with 0.5m/s air flow With extended temperature peripherals:-10°C ~ 50°C (14°F ~ 122°F), with 0.2m/s air flow |



| | |
|----------------------------------|--|
| Storage Temperature | -40°C ~ 75°C (-40°F ~ 167°F) |
| Operating Humidity | 40°C @ 95% Relative Humidity, Non-condensing |
| Weight | 5.4kg |
| Construction | Aluminum + Metal |
| Mounting Kit | Wall Mount kit (Standard) |
| Dimension (L x W x H) | 212mm x 240mm x 85mm |
| Vibration Test | With SSD: 5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 30min/axis |
| Shock Test | With SSD: 10Grms, IEC 60068-2-27, Half Sine, 11ms |
| Drop | ISTA 2A, IEC-60068-2-32 Test : Ed |
| Certifications | |
| Certification Information | CE FCC Class B |
| Software Support | |
| OS Information | Win10 Linux |
| Power Requirement | |
| Adapter | Input: 100 ~ 240Vdc/ 50 ~ 60Hz Output: AC-DC 120W Adapter |
| System Control | |
| Control Buttons | 1 x Power On/Off Button w/LED on Front Side |
| LED Indicator | 1 x Power on/off LED on Rear side 1 x Storage Access LED on Front/Rear side |

Ordering

With Intel® Q370 Chipset

EPS-CFS-Q37-A1-1R (i7-8700T)
 EPS-CFS-Q37-A1-2R (i5-8500T)
 EPS-CFS-Q37-A1-3R (i3-8100T)
 EPS-CFS-Q37-A1-4R (Pentium Gold G5400T)
 EPS-CFS-Q37-A1-5R (Celeron G4900T)
 EPS-CFS-Q37-A1-6R (i7-9700TE)
 EPS-CFS-Q37-A1-7R (i5-9500TE)
 EPS-CFS-Q37-A1-8R (i3-9100TE)

With Intel® H310 Chipset

EPS-CFS-H31-A1-1R (i7-8700T)
 EPS-CFS-H31-A1-2R (i5-8500T)
 EPS-CFS-H31-A1-3R (i3-8100T)
 EPS-CFS-H31-A1-4R (Pentium Gold G5400T)
 EPS-CFS-H31-A1-5R (Celeron G4900T)
 EPS-CFS-H31-A1-6R (i7-9700TE)
 EPS-CFS-H31-A1-7R (i5-9500TE)
 EPS-CFS-H31-A1-8R (i3-9100TE)

