



## ECM-APL2-A

### Intel® Apollo Lake 3.5" Micro Module

- > Bottom Layer Soldered
- > Intel® Pentium®/Celeron®/Atom™ BGA Processor
- > Intel® HD Graphics 500/505
- > Single DRAM Socket, Max. Up to 8GB DDR3L 1600&1333MHz
- > Triple Display (Dual HDMI, VGA)
- > Dual Expansion Slot, 2-mCPLe
- > Dual Gigabit Ethernet, HD Audio Code
- > 0~60C for N & J Series, -40~85C for E Series
- > TPM 2.0

#### + Spec

##### System Information

<b>Processor</b>	Intel® Celeron® Processor J3455E (2M Cache, up to 2.30 GHz)
<b>System Memory</b>	1 x 204-Pin SO-DIMM Socket, Max. Up to 8GB DDR3L 1600&1333MT/s
<b>I/O Chipset</b>	EC IT8528E/ IT8528I
<b>BIOS Information</b>	AMI uEFI BIOS, 128Mbit SPI Flash ROM
<b>Watchdog Timer</b>	H/W Reset, 1sec. ~ 65535sec. and 1sec./step
<b>H/W Status Monitor</b>	Monitoring System Temperature, Voltage and FAN Status with Auto Throttling Control

##### Expansion

<b>Expansion</b>	1 x Full Size mPCle 1 x Half Size mPCle
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##### Storage

<b>Storage</b>	1 x mSATA (Shared mCPLe)
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##### I/O

<b>USB Port</b>	4 x USB 3.0 2 x USB 2.0
<b>COM Port</b>	2 x RS-232/422/485
<b>SATA</b>	1 x SATA III
<b>DIO</b>	1 x 8bit GPIO
<b>MIO</b>	1 x LPC 1 x SPI

##### Display

<b>Graphic Chipset</b>	Intel® HD Graphics 500 (E3930, E3940, J3455, N3350) Intel® HD Graphics 505 (E3950, N4200)
<b>Spec. &amp; Resolution</b>	2 x HDMI 1.4: Max. Resolution 3840x2160 @ 30Hz 1 x VGA: Max. Resolution 1920x1200 @ 60Hz
<b>Multiple Display</b>	Triple Display

##### Audio

<b>Audio Codec</b>	Realtek ALC888S, supports 5.1-CH
<b>Audio Interface</b>	1 x Mic-In 1 x Line-In 1 x Line-Out

##### Certifications

<b>Certification Information</b>	CE FCC Class B
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##### Ethernet

<b>LAN Chipset</b>	2 x Intel® I211AT/ I210IT
<b>Ethernet Interface</b>	10/100/1000 Base-Tx GbE compatible
<b>LAN Port</b>	2 x RJ45 with ACT/LINK and SPEED LEDs

##### Mechanical & Environmental

<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>Power Requirement</b>	Typical 12/24Vdc (+12V ~ +26V )
<b>Power Mode</b>	AT/ATX
<b>Dimension (L x W)</b>	5.7" x 4" (146mm x 101mm)

<b>Vibration Protection</b>	With SSD: 5Grms, IEC 60068-2-64, Random, 10 ~ 500Hz, 30min/Axis, 3 Axis
<b>Shock Protection</b>	With SDD : 50G, IEC 60068-2-27, Half Sine, 11ms, Z Axis
<b>Drop</b>	ISTA 2A, IEC-60068-2-32 Test : Ed, 1 Corner, 3 Edges, 6 Faces
<b>Software Support</b>	
<b>OS Information</b>	Win 10 Linux
<b>Ordering Information</b>	
<b>Ordering Information</b>	ECM-APL2-J3455-C1R 3.5" W/J3455/6USB/2COM/2LAN/C1  ACC-ECMAPL2-SD-2R Heat spreader for ECM-APL2 N/J series