



## ECM-APL

### Intel® Pentium®/Celeron®/Atom® SoC Processor 3.5" Micro Module

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

#### + Spec

System	
<b>Processor</b>	Intel Atom® x7-E3950 Processor (2M Cache, up to 2.00 GHz) Intel Atom® x5-E3940 Processor (2M Cache, up to 1.80 GHz) Intel Atom® x5-E3930 Processor (2M Cache, up to 1.80 GHz) Intel® Pentium® Processor N4200 (2M Cache, up to 2.50 GHz) Intel® Celeron® Processor N3350 (2M Cache, up to 2.40 GHz) Intel® Celeron® Processor J3455 (2M Cache, up to 2.30 GHz)
<b>System Chipset</b>	Apollo SoC integrated
<b>System Memory</b>	1 x 204-Pin DDR3L 1600&1333MHz SO-DIMM, supports up to 8GB (Non-ECC)
<b>I/O Chip</b>	EC(IT8528E), I-series CPU use EC (IT8528I) for WT
<b>BIOS</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 Mini PCIe (for PCIe & USB2.0) 1 x M.2 (2242)B-Key
Storage	
<b>Storage</b>	1 x M.2 support SATA/USB interface & with Micro SIM card connector for SSD/3G/4G
Touch Screen	
<b>Built-in Touch controller (optional)</b>	EETI ETP-CP-MER4485XRU 1 x 5-pin 2.54mm Pin Header
I/O	
<b>USB</b>	1 x USB 2.0 4 x USB 3.0
<b>SATA</b>	1 x SATA3
<b>COM Port</b>	1 x RS-232/422/485 5 x RS-232
<b>MIO</b>	1 x LPC 1 x SPI
<b>SIM</b>	1 x Micro SIM Card Slot
<b>GPIO</b>	1 x 8bit GPIO
Display	
<b>Chipset</b>	Intel® Apollo Lake SoC integrated Gen9 LP Graphics
<b>Resolution</b>	2 x HDMI: Max. Resolution 3840x2160 @ 30Hz 1 x LVDS: Max. Resolution 1920x1080 @ 60Hz
<b>Multiple Display</b>	Triple Display
Audio	
<b>Chipset</b>	Realtek ALC892 supports 5.1-CH
<b>Audio Interface</b>	Mic-In, Line-In, Line-Out
Ethernet	
<b>Chipset</b>	2 x Intel® I211AT Intel I210IT for WT
<b>Ethernet Interface</b>	10/100/1000 Base-Tx GbE compatible
<b>LAN Port</b>	2 x RJ-45
Mechanical & Environmental	
<b>Power Requirement</b>	Typical 12/24Vdc (+12V ~ +26V )
<b>Power Type</b>	AT/ATX
<b>Operating Temperature</b>	0°C ~ 60°C (32°F ~ 140°F)(N4200/N3350) -40°C ~ 85°C (-40°F ~ 185°F)(E3900 Series)(Optional for Wide Temperature Model)



<b>Storage Temperature</b>	-40°C ~ 75°C (-40°F ~ 167°F)
<b>Operating Humidity</b>	40°C @ 95% Relative Humidity, Non-condensing
<b>Dimension (L x W)</b>	5.7" x 4" (146mm x 101mm)
<b>Weight</b>	0.44lbs (0.2kg)
<b>Certifications</b>	
<b>Certification Information</b>	CE,FCC Class B
<b>Software Support</b>	
<b>OS Information</b>	Win 10, Linux

**+ Ordering**

ECM-APL-N4200-B1R  
3.5" W/N4200/5USB/6COM/2LAN/B1

ECM-APL-N3350-B1R  
3.5" W/N3350/5USB/6COM/2LAN/B1

ECM-APL-J3455-B1R  
3.5" W/J3455/5USB/6COM/2LAN/B1

ECM-APL-E50-B1R(0~+60C)  
3.5" W/E3950/5USB/6COM/2LAN/B1

ECM-APL-E40-B1R(0~+60C)  
3.5" W/E3940/5USB/6COM/2LAN/B1

ECM-APL-E30-B1R(0~+60C)  
3.5" W/E3930/5USB/6COM/2LAN/B1

ECM-APL-E50W-B1R(Wide temp.-40~+85C)  
3.5" W/E3950/5USB/6COM/2LAN/B1

ECM-APL-E40W-B1R(Wide temp.-40~+85C)  
3.5" W/E3940/5USB/6COM/2LAN/B1

ECM-APL-E30W-B1R(Wide temp.-40~+85C)  
3.5" W/E3930/5USB/6COM/2LAN/B1





e-**A**lcom  
e-**C**om  
e-**r**onics  
e-**m**