



## Features

- Onboard Intel® Celeron®/Atom™ SoC Processors
- One 204-pin SODIMM Socket Up to 8GB DDR3L 1333MHz SDRAM
- Rich I/O, 1 VGA, 1 LAN, 1 SIM Card Slot, 1 Swappable HDD, 1 Audio, 1 12-bit GPIO, 1 SMBUS, 2 COM, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 3 USB
- Expansion Slot Supporting 2 Mini PCIe Slot
- Front Access Swappable 2.5" Drive Bay, SIM Card
- IET Expansion Supporting Multi-COM, Multi-LAN Bypass, Multi-LAN PoE, Multi-COM Isolation Modules
- Rugged Design for Vibration & Shock Protection, Cable Less Design
- Fanless Operation from -15 ~ 60°C & -40 ~ 75°C
- Wide Range DC Power Input from 12 ~ 26V
- Service Window, Easy to Install mSATA, Memory and Mini PCIe Module



## Specifications

### System

<b>Board</b>	EBM-BYTS
<b>CPU</b>	Intel® Celeron® J1900 4-Core 2.0GHz/Intel® Atom™ E3845 4-Core 1.91GHz
<b>BIOS</b>	AMI uEFI BIOS, 64Mbit SPI Flash ROM
<b>System Chipset</b>	Valleyview-D/I SoC Integrated
<b>I/O Chip</b>	EC ITE IT8528E
<b>System Memory</b>	One 204-pin SODIMM Socket Up to 8GB DDR3L 1333MHz SDRAM
<b>Storage</b>	1 x 2.5" Drive Bay, 1 x mSATA
<b>Watchdog Timer</b>	H/W Reset, 1sec. ~ 65535sec.
<b>H/W Status Monitor</b>	CPU & System Temperature Monitoring and Voltages Monitoring
<b>Expansion Interface</b>	IET Interface (1 x DP, 4 x PCIe1, 3 x USB, 1 x LPC, 1 x Line-Out (R/L), 1 x SMBus) 2 x Mini PCIe Socket (mSATA and SIM Card Supported)

### External I/O

<b>COM</b>	2 x COM (Can be set as RS-232/422/485 by BIOS)
<b>LAN</b>	1 x RJ45
<b>VGA</b>	1 x VGA
<b>Audio Port</b>	Mic-in, Line-in, Line-out
<b>GPIO</b>	6-bit GPI and 6-bit GPO
<b>USB Port</b>	3 x USB 2.0 (Rear 2; Front 1)
<b>PS/2</b>	2 x PS/2 for KB & MS
<b>SIM</b>	1 x SIM Card Slot
<b>SMBUS</b>	1 x SMBUS
<b>Antenna</b>	2 Knockouts for Antenna Mounting (Options to Add WiFi & 3G)

### Audio

<b>Audio Chipset</b>	Realtek ALC892 Supports 5.1-CH Audio
<b>Audio Interface</b>	Line-in, Line-out and Mic-in

### Ethernet

<b>LAN Chip</b>	1 x Intel® I211AT Gigabit Controller
<b>Ethernet Interface</b>	10/100/1000 Base-Tx Gigabit Ethernet Compatible

### Mechanical & Environmental

<b>Power Requirement</b>	DC +12V ~ +26V, Wide Voltage Single Power Input TVS Component for Surge Protection Reverse Current/Voltage Protection
<b>ACPI</b>	Single Power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
<b>Power Mode</b>	AT/ATX (ATX is The Default Setting)
<b>Operating Temperature</b>	For Valleyview-D SoC, -15°C ~ 60°C (w/SSD, mSATA) Ambient w/Air Flow; 0°C ~ 45°C (w/HDD) Ambient w/Air Flow For Valleyview-I SoC, -40°C ~ 75°C (w/SSD, mSATA) Ambient w/Air Flow
<b>Storage Temperature</b>	-40 ~ 75°C (-40 ~ 167°F)
<b>Relative Humidity</b>	0% ~ 90% Relative Humidity, Non-condensing
<b>Vibration Protection</b>	With mSATA/SSD: 5Grms, IEC 60068-2-64, Random, 10 ~ 500Hz, 1hr/axis
<b>Shock Protection</b>	With mSATA/SSD: 50G, IEC 60068-2-27, Half Sine, 11ms
<b>Certification</b>	CE, FCC Class B
<b>Dimension (W x D x H)</b>	240mm x 170mm x 45mm
<b>Weight</b>	4.4lbs (2Kgs)

## Ordering Information

### EMS-BYT-1900-A1-1R

Fanless Intel® Celeron® SoC Processor Rugged Embedded System w/VGA, LAN, SIM Slot, Swappable HDD, Audio, 12-bit GPIO, SMBUS, 2 COM, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 3 USB

### EMS-BYT-3845-A1-1R

Fanless Intel® Atom™ SoC Processor Rugged Embedded System w/VGA, LAN, SIM Slot, Swappable HDD, Audio, 12-bit GPIO, SMBUS, 2 COM, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 3 USB