

## Features

- Onboard Intel® Atom™ x7-E3950 @ 2.0GHz [i-Temp support]
- Onboard Intel® Pentium® N4200 @ 2.5GHz or Celeron® N3350 @ 2.4GHz
- 1x DDR3L-1866 SO-DIMM, Max. 8GB
- Supports HDMI 1.4b, **Dual LVDS(18/24bit)**
- 2x Intel® I210IT PCI-E Gigabit LAN or I211AT PCI-E Gigabit LAN
- Watchdog timer, Digital I/O, mSATA, EuP/ErP
- 4x USB 3.0, 2x USB 2.0, 4x COM, 2x SATA III
- 1x Mini PCI-E slot (full-size), 1x Mini PCI-E slot (half-size)
- Wide-range operating temperature in certain models

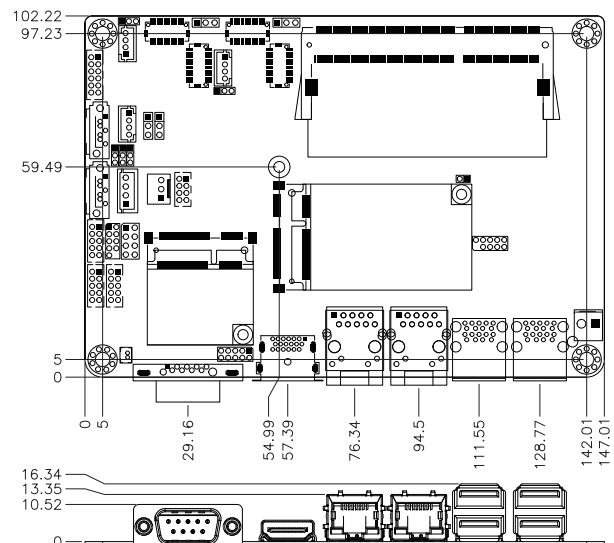
## Specifications

CPU Socket	Intel® Atom™ QC x7/ E3950 (1.6~2.0 GHz) Intel® Pentium® QC N4200 (1.1~2.5 GHz) Intel® Celeron® DC N3350 (1.1~2.4 GHz)
System Memory	1x DDR3L SO-DIMM, Max 8GB (Non-ECC)
System Chipset	Integrated in Intel SoC
BIOS	AMI
Watchdog Timer	256 levels
SSD	1x mSATA (Via Full-size Mini PCI-E)
H/W Monitor	Yes
Expansion Slot	2x Mini PCI-E (1x Full size, 1x half-size)
VGA Controller	Intel SoC integrated Gen9 18EUs graphics
VGA Memory	Share memory
Display Interface	Supports HDMI(1.4b), Dual LVDS (18/24bit)
LAN Controller	IB818F-I50 2x Intel I210IT PCI-E Gigabit LAN IB818F-420/335: 2x Intel I211AT PCI-E Gigabit LAN
LAN Connector	2x RJ-45
I/O Chipset	Fintek F81964D-I 1x RS232/422/485 (jumperless selection) 3x RS232
USB	4x USB 3.0 on board 2x USB 2.0 via pin-header
Serial ATA	2x SATA III
Audio	Intel® Atom™ SoC built-in HD audio controller + Realtek ALC283 Codec w/ class-D speaker amplifier
Others	Digital I/O, +12V ~ +24V DC-in, EuP/ErP
Dimensions	102 x 147 mm (4" x 5.8")
Max. Power Requirement	Intel® Atom™ E3950, 1.6GHz w/ 8GB DDR3L +12V: 1.09A Intel Pentium N4200, 1.1GHz w/8GB DDR3L +12V: 1.09A
Operating Temperature	N4200/N3350: 0°C ~ +60°C (32°F ~ 140°F) <b>E3950: -40°C ~ +85°C (-40°F ~ 185°F)</b>
Storage Temperature	-40°C ~ 90°C (-40°F ~ 194°F)
Relative Humidity	90% (non-condensing @60°C)

## Ordering Information

IB818F-I50	Intel® Atom™ x7/ E3950 (1.6GHz~2.0 GHz) 3.5-inch Disk Size SBC w/ dual GbE LAN, HDMI, 2 x LVDS (18/24-bit LVDS dual channel), EuP/ErP, 12V~24V DC-in, wide temp. support
IB818F-420	Intel® Pentium® N4200 (1.1GHz~2.5GHz) 3.5-inch Disk Size SBC w/ dual GbE LAN, HDMI, 2x LVDS (18/24-bit LVDS dual channel), EuP/ErP, 12V~24V DC-in
IB818F-335	Intel® Pentium® N3350 (1.1GHz~2.4GHz) 3.5-inch Disk Size SBC w/ dual GbE LAN, HDMI, 2x LVDS (18/24-bit LVDS dual channel), EuP/ErP, 12V~24V DC-in
HSIB818-I	Heat sink for IB818F-I50
HSIB818	Heat sink for IB818F-420/ IB818F-335
IB76A-1	cable kit w/ USB, COM, Power, SATA+Power

## Dimensions and Drawing



#### Processor Ultra Low Power Reference Table

Processor Number	Intel® Pentium® Processors - 14 nm Apollo-Lake SoC Platform	Intel® Celeron® Processors - 14 nm Apollo-Lake SoC Platform	Intel® Atom™ Processors - 14nm or Apollo-Lake-I SoC Platform		
	N4200	N3350	x7-E3950	x5-E3940	x5-E3930
Base Freq (GHz)	1.1	1.1	1.6	1.6	1.3
Intel® Turbo Boost Technology 2.0 (GHz)	2.5	2.4	2.0	1.8	1.8
Last Level Cache	2M	2M	2M	2M	2M
Cores/Threads	4/4	2/2	4/4	4/4	2/2
Memory Speed (DDR3L)	1866	1600	1866	1866	1866
TDP	6W	6W	12W	9W	6.5W

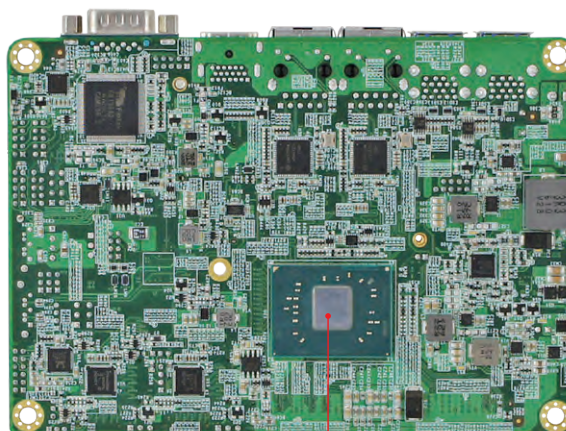
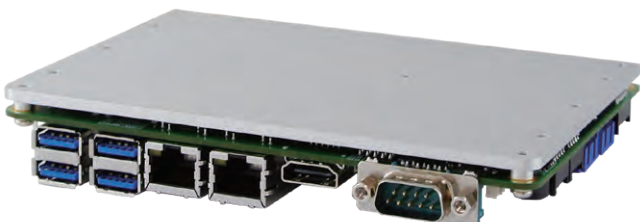
#### IB818 with heatsink for Pentium® & Celeron® SoC



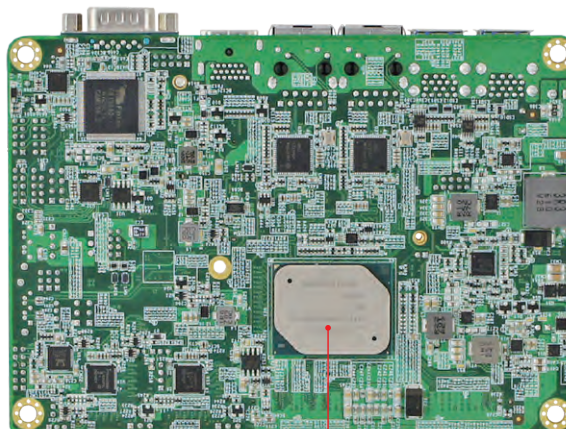
#### IB818 with heatsink for Atom™ SoC



#### IB818 with heat spreader



Intel® Pentium® QC N4200  
Intel® Celeron® DC N3350



Intel® Atom™ QC x7/ E3950