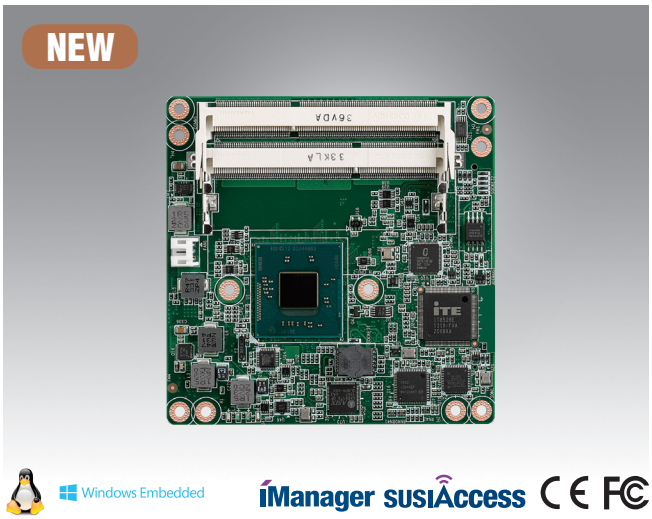
SOM-6867

Intel Atom/Celeron Processor COM Express Type 6 Compact Module



Windows Embedded iManager SUSIAccess CE FC

Features

- Embedded Intel Atom/Celeron Processor E3845/E3827/E3825/J1900
- Dual Channel DDR3L-1333 SODIMM sockets up to 8 GB
- Supports VGA, LVDS, HDMI/DVI/DisplayPort
- Support 3 PCIe x1, 8 USB2.0, USB3.0, 2 SATAII, LPC, SMBus, I²C
- Supports iManager, SUSIAccess and Embedded Software APIs

Software APIs: Watchdog, I²C, SMBus, H/W Monitor, GPIO, Brightness Control

Utilities: BIOS flash, Monitoring, Embedded Security ID

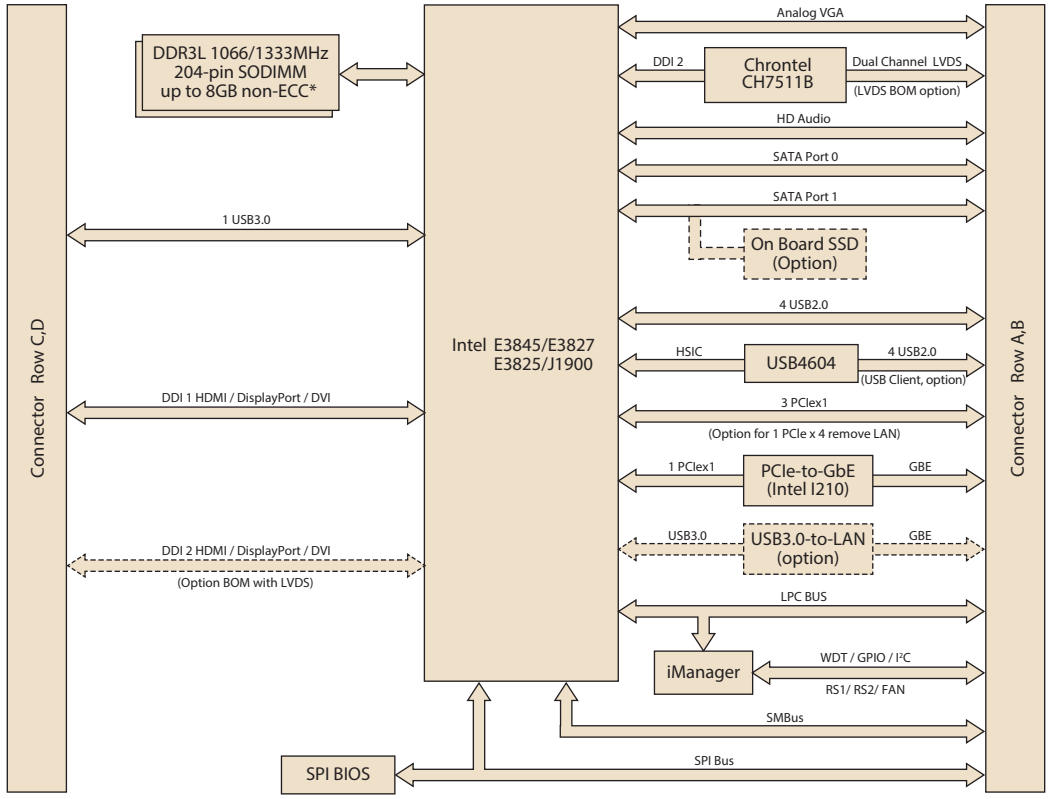
Specifications

Form Factor	Form Factor	COM Express Compact Module			
	Pin-out Type	COM Express R2.1 Type 6			
Processor System	CPU	E3845	E3827	E3825	J1900
	Base Frequency	1.91 GHz	1.75 GHz	1.33 GHz	2.0 GHz
	Burst Frequency	N/A	N/A	N/A	2.42 GHz
	Core/Threads	4/4	2/2	2/2	4/4
	LLC	2 MB	1 MB	1 MB	2 MB
	CPU TDP	10 W	8 W	6 W	10W
	BIOS	AMI EFI 16 Mbit			
Memory	Technology	DDR3L 1333, 2-CH	DDR3L 1333, 2-CH	DDR3L 1066, 1-CH (DIMM 1)	DDR3L 1333, 2-CH
	ECC Support	N/A			
	Max. Capacity	Up to 8GB			
	Socket	Dual 204P SODIMM			
Graphics	Controller	Intel HD Graphics for Intel Atom Processor Z3700 Series			
	Base/Burst Frequency	542/792 MHz	542/792 MHz	533/533 MHz	688/854 MHz
	Graphic Memory	Up to 1720MB DVMT			
	3D/HW Acceleration	DX11, OpenGL3.2, OpenCL1.1, OpenGLES 2.0, H.264 (AVC)			
Display	VGA	2560 x 1600			
	LCD	Single and dual channel 18/24 bit LVDS, up to 1920 x 1200			
	DDI (HDMI/DVI/DisplayPort)	1 DDI (up to 2560 x 1600; optional: 2 DDI without LVDS; HDMI up to 1920 x 1200)			
	Dual Display	LVDS + DDI, VGA + LVDS, VGA + DDI, DDI + DDI (Optional)			
Expansion	PCI Express x1	3 ports (optional 4 PCIe x1, or 1 PCIe x4 without LAN)			
	Audio Interface	HD Audio			
	LPC	Yes			
Serial Bus	SMBus	Yes			
	I²C Bus	Yes			
Ethernet	Controller	Intel i210			
	Speed	10/100/1000 Mbps			
I/O	SATA	2 ports support SATAII 3.0Gb/s (Optional: 1 port while using onboard storage)			
	Onboard Storage	onboard flash (Optional, MLC up to 64GB, SLC up to 32GB)			
	USB3.0	1 Port			
	USB2.0	8 Ports			
	USB Client	1 port (optional)			
	Audio Interface	HD Audio			
	SPI Bus	1 channel (SPI BIOS EEPROM)			
	GPIO	8-bit GPIO			
	Watchdog	65536 level, 0 ~ 65535 sec			
	COM Port	2 Ports (2-Wire)			
	Express Card	2 Ports			
	Smart Fan	2 Ports; 1 Port on COM Module. Support 12V Fan, 1 Port on Carrier Board			
Power	Type	ATX: Vin, VSB, AT: Vin			
	Supply Voltage	Vin: 4.75(5-5%) ~ 20V(19+5%), VSB: 5V±5%, RTC Battery: 2.0-3.3V			
	Power Consumption (Max.)	+12V @ 1.73A (J1900) +12V @ 1.28A (E3845)			
	Power Consumption (Idle)	+12V @ 1.01A (J1900) +12V @ 0.79A (E3845)			
Environment	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F) Storage: -40 ~ 85° C (-40 ~ 185° F)			
	Humidity	Operating: 40° C @ 95% relative humidity, non-condensing Storage: 60° C @ 95%relative humidity, non-condensing			
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")			

All product specifications are subject to change without notice.

Last updated: 29-May-2018

Block Diagram



*- E3800 Series must to have Channel A (DIMM1) inserted.

Ordering Information

Part No.	SoC	Base / Burst Freq.	CPU TDP	LLC	Core	Threads	Thermal Solution	Operating Temperature
SOM-6867ACB-S9A1	E3845	1.91GHz / N/A	10W	2MB	4	4	Passive	0 ~ 60 °C
SOM-6867ACB-S7A1	E3827	1.75GHz / N/A	8W	1MB	2	2	Passive	0 ~ 60 °C
SOM-6867ACB-S3A1	E3825	1.33GHz / N/A	6W	1MB	2	2	Passive	0 ~ 60 °C
SOM-6867RCB-U0A1	J1900	2.0GHz / 2.42GHz	10W	2MB	4	4	Passive	0 ~ 60 °C
SOM-6867AXB-S9A1	E3845	1.91GHz / N/A	10W	2MB	4	4	Active	-40 ~ 85 °C
SOM-6867AXB-S7A1	E3827	1.75GHz / N/A	8W	1MB	2	2	Active	-40 ~ 85 °C

Note: Passive = fanless; Active = with fan

Development Board

Part No.	Description
SOM-DB5800-00A2E	COM Express Development Board A2 Type 6 Pin-out

Packing List

Part No.	Description	Quantity
-	SOM-6867 CPU Module	1
1960065753N001	Heatspreader	1

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 16.25 mm
1960048819N001	Semi-Cooler 95 x 95 x 33 mm

Embedded OS

OS	Part no.	Description
WES7E	2070013142	SOM-6867 x64 V5.6.8
Linux		Linux Supported