

AAEON's Series of Intel® Atom™ Boards-Comparison Table

	COM-U15	NanoCOM-U15	COM-945GSE	GENE-9455	XTX-945GSE	PFM-945C	EPIC-9457	EMB-9459T
								
Form Factor	COM Express Compact Module Pin-out Type II	COM Express Nano Module Pin-out Type I	COM Express Compact Module Pin-out Type II	3.5" SubCompact	XTX	PCI/104-Express	EPIC Express	Mini-ITX
CPU	Onboard Intel® Atom™ Z530/Z510 Processor		Onboard Intel® Atom™ N270 Processor					
CPU Frequency	Z530: 1.6GHz/FSB 533MHz Z510: 1.1GHz/FSB 400MHz		1.6GHz/FSB 533MHz					
Chipset	Intel® System Controller Hub US15W		Intel® 945GSE + ICH7-M					
Memory Type	Non-ECC DDRII 400/533	Non-ECC DDRII 533	Non-ECC DDRII 400/533	Non-ECC DDRII 400/533	Non-ECC DDRII 400/533	Non-ECC DDRII 533	Non-ECC DDRII 400/533	Non-ECC DDRII 400/533
Max. Memory Capacity	2GB, DDRII SODIMM x 1	1GB, On board	2GB, DDRII SODIMM x 1	2GB, DDRII SODIMM x 1	2GB, DDRII SODIMM x 1	1GB, on board	2GB, DDRII SODIMM x 1	2GB, DDRII DIMM x 1
BIOS	TSOP type		SPI type					
Wake ON LAN	N/A		Yes					
Watchdog Timer	255 levels		255 levels					
Ethernet	Gigabit Ethernet		Gigabit Ethernet	Gigabit Ethernet x 2	10/100 Base-TX Ethernet	10/100 Base-TX Ethernet	Gigabit Ethernet x 2	Gigabit Ethernet x 2
VGA/LCD Controller	Intel® System Controller Hub US15W Integrated		Intel® 945GSE Integrated					
Video Output	24-bit Single Channel LVDS/SDVO		CRT/TV/ 18-bit Dual-channel LVDS/SDVO	CRT/TV/ 18-bit Dual-channel LVDS/DVI-I	CRT/TV/ 18-bit Dual-channel LVDS/SDVO, or 24-bit Dual-channel LVDS	CRT/ 18-bit Dual-channel LVDS/SDVO	CRT/TV/ 18-bit Dual-channel LVDS/DVI-I, or 24-bit Dual-channel LVDS	CRT/TV/ 18-bit Dual-channel LVDS/DVI-I or SDVO
Audio	High Definition Audio Interface		High Definition Audio Interface	2CH Audio	2CH Audio	2CH Audio	2CH Audio	5.1CH Audio
USB Port	USB 2.0 x 8		USB 2.0 x 8	USB 2.0 x 4 (Rear x 2)	USB 2.0 x 6	USB 2.0 x 4	USB 2.0 x 6 (Rear x 4)	USB 2.0 x 8 (Rear x 4)
Serial Port	From LPC Interface		From LPC Interface	COM x 4 (Rear x 1)	COM x 2	COM x 4	COM x 4 (Rear x 2)	COM x 6 (Rear x 2)
Parallel Port	From LPC Interface		From LPC Interface	N/A	Parallel x 1	N/A	Parallel x 1	Parallel x 1
Storage Interface	SSD on Board (Master Device), Max. 4GB PATA x 1 (One Device) or SATA II x 1	SSD on Board (Master Device), Max. 4GB SATA II x 1	PATA x 1 (Two Devices) SATA II x 2	PATA x 1 SATA II x 2 CompactFlash™	PATA x 1 SATA II x 2	SATA II x 1 CompactFlash™	PATA x 1 SATA II x 2 CompactFlash™	PATA x 1 SATA II x 2 CompactFlash™
Expansion Slot	4-bit SDIO: Multiplexed with GPIO Pins PCI-Express [x1] x 1 LPC Bus x 1 SMBus x 1		PCI-Express [x1] x 3 (82801GBM) PCI-Express [x1] x 5 (82801GHM) (Optional) 32-bit PCI x 4 LPC Bus x 1 SMBus x 1	Mini PCI x 1 ECX Proprietary Connector	PCI-Express [x1] x 4 32-bit PCI x 4 LPC Bus x 1 SMBus x 1	PCI/104-Express Connector	PCI/104-Express Connector	PCI-Express [x1] x 2 in PCI-Express [x4] Slot 32-bit PCI x 1 Mini PCI x 1
Power Requirement	+8.5V to +19V, Wide DC Input Range	+4.75V to +14.7V, Wide DC Input Range	+8.5V to +19V, Wide DC Input Range	+8.5V to +19V, Wide DC Input Range or +5V Only Operation	+5V Only Operation	+12V Only Operation	+8.5V to +19V, Wide DC Input Range	+12V Only Operation
Operation Temperature	32°F ~ 140°F (0°C ~ 60°C)		32°F ~ 140°F (0°C ~ 60°C)					
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)		-40°F ~ 176°F (-40°C ~ 80°C)					
Operation Humidity	0% ~ 90% R/H, non-condensing		0% ~ 90% R/H, non-condensing					
Dimension (L x W)	3.75"(L) x 3.75"(W) (95mm x 95mm)	3.31"(L) x 2.17"(W) (84mm x 55mm)	3.75"(L) x 3.75"(W) (95mm x 95mm)	5.75"(L) x 4"(W) (146mm x 101mm)	4.5"(L) x 3.75"(W) (114mm x 95mm)	4.05"(L) x 3.77"(W) (102.8mm x 96mm)	6.5"(L) x 4.53"(W) (165mm x 115mm)	6.7"(L) x 6.7"(W) (170mm x 170mm)

Note: All specifications are subject to change without notice.

AAEON Welcomes OEM/ODM Requests

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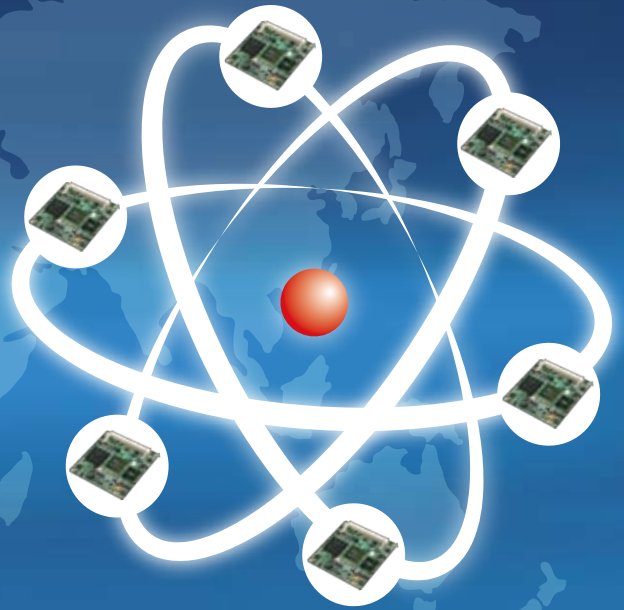
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Asia



AAEON's Series of Products with Intel® Atom™ Processors

- > Low Power Consumption
- > Small Form Factor
- > Fanless



AAEON is an Associate Member of the Intel® Embedded and Communications Alliance: a community of embedded and communications developers and solution providers.



AAEON®

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Intel® Atom™ Low Power Platform

In 2008, Intel® announced a series of newly designed 45nm low power Atom™ processors. Based on an entirely new micro architecture, the Intel® Atom™



processor was developed specifically for targeted performance and low power while maintaining full Intel® Core™ micro architecture instruction set compatibility. Intel® Atom™ processors also feature multiple threads for better performance and increased system responsiveness.

N270, Z510 and Z530 processors by Intel® support the embedded market with a 7+ year life cycle. To meet the embedded market and application demand for low power platforms, AAEON has developed a full range of products based on Intel® Atom™ processors.

Intel® Atom™ Processor N270

The Intel® Atom™ processor N270, implemented in 45nm technology, is power-optimized and delivers robust performance-per-watt for cost-effective embedded solutions.



Featuring extended lifecycle support, this processor offers an excellent solution for embedded market segments such as digital signage, interactive clients (KIOSKS, point-of-sale terminals), thin clients, digital security, residential gateways, print imaging and commercial and industrial control. The processor remains software compatible with previous 32-bit Intel® architectures and complementary silicon.

This single-core processor is validated with the mobile Intel® 945GSE Express Chipset, consisting of the Intel® 82945GSE Graphics Memory Controller Hub and Intel® I/O Controller Hub 7-M. The chipset features power-efficient graphics with an integrated 32-bit 3D graphics engine based on Intel® Graphics Media Accelerator 950 architecture with SDVO, LVDS, CRT and TV-Out display ports. It provides rich I/O capabilities and flexibility via high-bandwidth interfaces such as PCI Express, PCI, Serial ATA and Hi-Speed USB 2.0 connectivity.

Intel® Atom™ Processor Z5xx



The Intel® Atom™ processor Z5xx series delivers the benefits of Intel® architecture for small form factors, thermally constrained and fanless embedded applications. Implemented in 45nm technology, these power-optimized processors provide robust performance-per-watt in an ultra-small 13 x 14mm package.

Featuring embedded lifecycle support, the Intel® Atom™ processors are ideal for many embedded market segments such as in-vehicle infotainment, medical, interactive client (KIOSKS, point-of-sale terminals), gaming and industrial control. It remains software compatible with previous 32-bit Intel® architectures and complementary silicon.



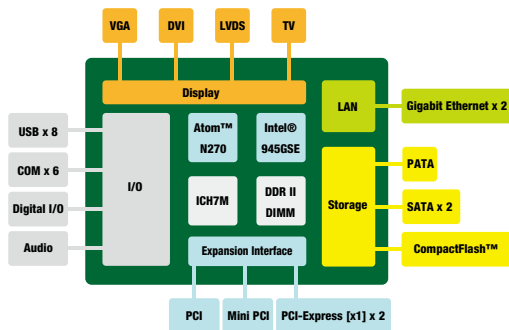
These single-core processors are validated with the Intel® System Controller Hub (SCH) US15W, which integrates a graphics memory Controller Hub and an I/O Controller Hub into one small 22 x 22mm package. This low-power platform has a combined thermal design power under five watts.

Intel® Atom™ Processors Comparison Table

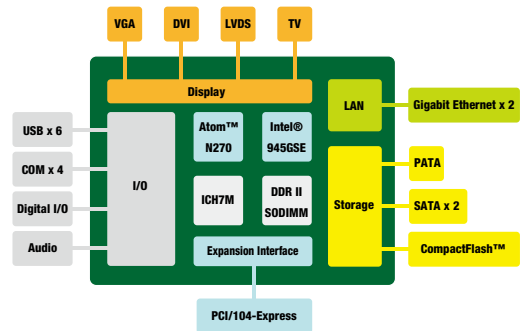
Processor	Atom™ N270	Atom™ Z510	Atom™ Z530
Core Speed	1.6GHz	1.1GHz	1.6GHz
FSB Speed	533MHz	400MHz	533MHz
L1 Cache	24kB data/ 32kB instruction	24kB data/ 32kB instruction	24kB data/32kB instruction
L2 Cache	512kB	512kB	512kB
Launch Date	Q2'08	Q2'08	Q2'08
Mfg Avail	7+ Yrs	7+ Yrs	7+ Yrs
Lithography	45 nm	45 nm	45 nm
Number of Physical Cores	1	1	1
Intel® Hyper-Threading Technology	✓	X	✓
Intel® Virtualization Technology	X	✓	✓
Intel® 64 Architecture	X	X	X
Enhanced Intel SpeedStep® Technology	✓	✓	✓
Demand Based Switching	X	✓	✓
Execute Disable Bit	✓	✓	✓
Intel® Trusted Execution Technology	X	X	X
SIMD	SSE2, SSE3, SSSE3	SSE2, SSE3, SSSE3	SSE2, SSE3, SSSE3
Package Size	22mm x 22mm	13mm x 14mm	13mm x 14mm
Max TDP	2.5 Watts	2 Watts	2.2 Watts
Valid Chipset	Intel® 945GSE + ICH7M	Intel® SCH US15W	Intel® SCH US15W

AAEON's Series of Intel® Atom™ Boards-Block Diagram

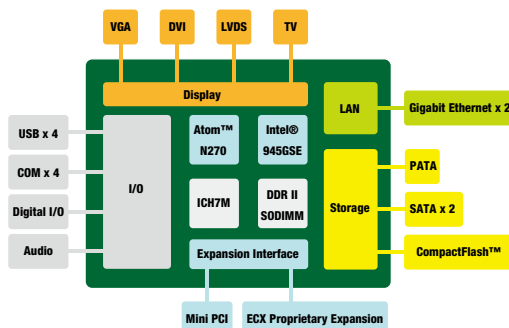
EMB-9459T – Mini-ITX



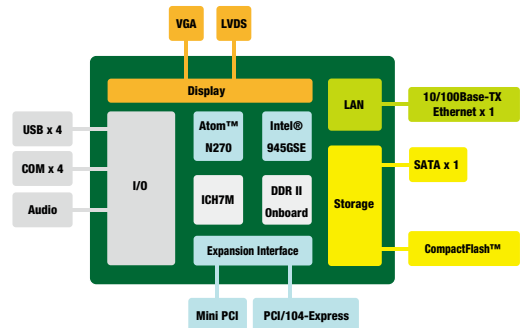
EPIC-9457 – EPIC Board



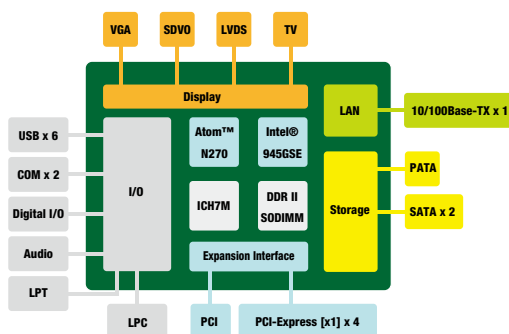
GENE-9455 – 3.5" SubCompact Board



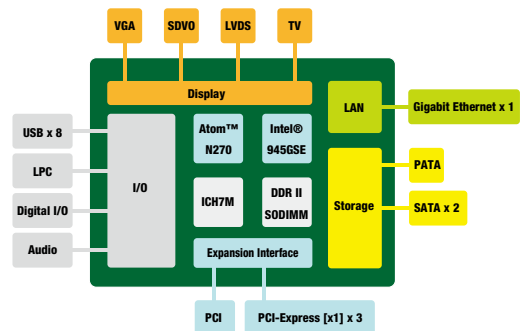
PFM-945C – PC/104



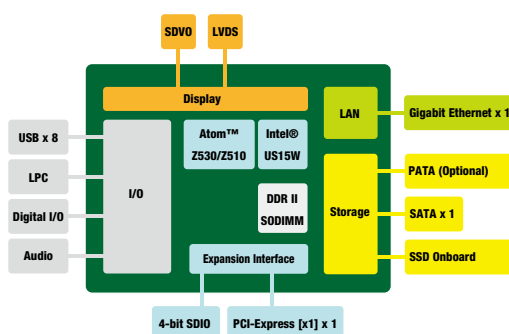
XTX-945GSE – XTX Module



COM-945GSE – COM Express Module



COM-U15 – COM Express Module



NanoCOM-U15 – COM Express Module

