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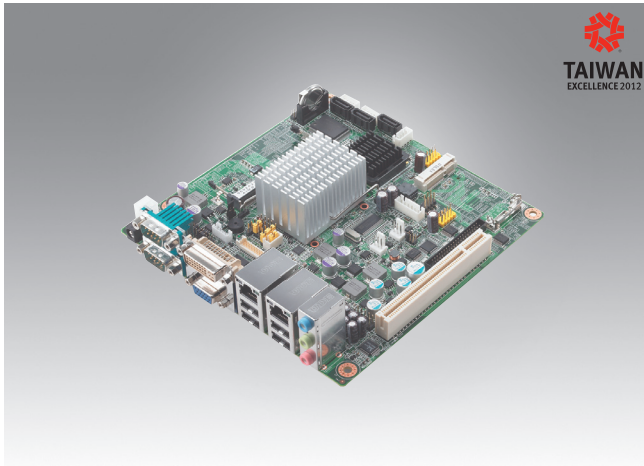
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# AIMB-213

Intel® Atom™ N455/D525 Mini-ITX with CRT/DVI/LVDS, 6 COM, and Dual LAN



## Features

- Supports Intel® Atom™ processor N455 and D525 dual core
- Two 204-pin SO-DIMM up to 4 GB DDR3 800 MHz SDRAM
- Supports 1 PCI and 1 Mini-PCIe expansion, 6 serial ports, 8 USB, and CF
- Lower total cost of ownership with DC12V support and supports 18/24-bit LVDS
- Onboard TPM 1.2 support (optional)
- Supports embedded software APIs and Utilities

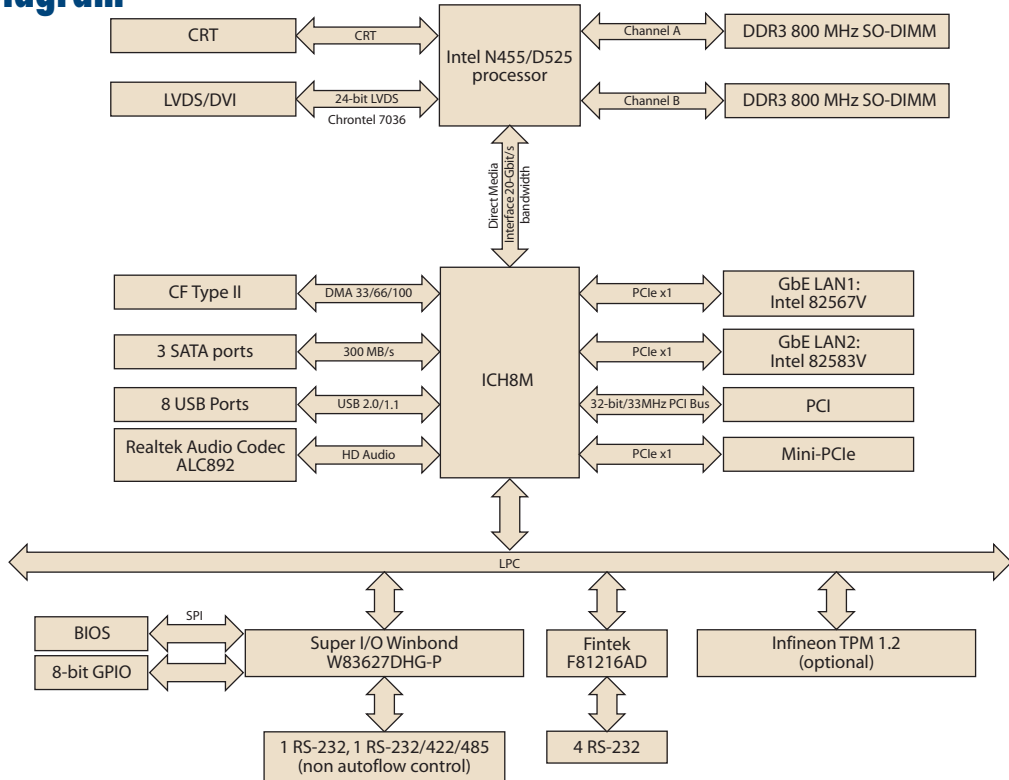
**Software APIs:**

**Utilities:**

## Specifications

Processor System	CPU (45 nm)	Intel Atom N455	Intel Atom D525
	Max. Speed	1.66 GHz (single core)	1.8 GHz (dual core)
	L2 Cache	512 KB	1 MB
	Chipset	ICH8M	
	BIOS	AMI 16 Mbit SPI	
Expansion Slot	PCI	32-bit/33 MHz, 1 slot	
	Mini-PCIe	1	
	PCIe	-	
Memory	Technology	Dual channel DDR3 800 MHz SDRAM	
	Max. Capacity	4 GB/2 GB per SO-DIMM	
	Socket	2 x 204-pin SO-DIMM (Non-ECC)	
Graphics	Controller	Embedded Gen3.5+ GFX Core, 200/400-MHz render clock frequency for N455/D525	
	VRAM	Shared system memory up to 224 MB SDRAM	
	VGA	Supports up to SXGA 1400 x 1050 @ 60Hz for Atom N455, up to 2048 x 1536 for Atom D525	
	LVDS	Supports 18/24-bit single channel and up to WXGA 1366 x 768 (through Chronitel 7036)	
	DVI	Supports up to 1366 x 768	
Dual Display	VGA + DVI, VGA + LVDS, support extended mode and clone mode; DVI + LVDS, supports clone mode		
Ethernet	Interface	10/100/1000 Mbps	
	Controller	GbE LAN1: Intel 82567V; GbE LAN2: Intel 82583V	
	Connector	RJ-45 x 2	
SATA	Max Data Transfer Rate	300 MB/s (SATA 2.0)	
	Channel	3	
EIDE	Mode	None	
	Channel	None	
SSD	CompactFlash	Supports CompactFlash Type I/II	
Rear I/O	CRT	1	
	DVI	1	
	Ethernet	2	
	USB	4 (USB 2.0)	
	Audio	3 (Mic-in, Line-out, Line-in)	
	Serial	2 (1 x RS-232, 1 x RS-232/422/485)	
	Parallel	-	
	DC Jack	1 (2.5 mm)	
	Internal Connector	LVDS & Inverter	1
USB		4 (USB 2.0)	
Serial		4 (RS-232), only COM6 supply 5V/12V	
IDE		None	
SATA		3 (SATA 2.0)	
SATA PWR Connector		3	
CompactFlash		1	
Parallel		None	
Watchdog Timer	DIO	8-bit GPIO	
	Output	System reset	
Power	Interval	Programmable 1 ~ 255 sec/min	
	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode	
Environment	Power Consumption	12 V @ 3.4 A (Intel D510 1.66 GHz processor/DDR2 800 MHz 2 GB, SATA HDD x1) 12 V @ 2.73 A (Intel N455 1.66 GHz processor/DDR2 800 MHz 2 GB, SATA HDD x1)	
	Operating	Non-Operating	
Physical Characteristics	Temperature	0 ~ 60° C (32 ~ 140° F)	
	Dimensions	170 mm x 170 mm (6.69" x 6.69")	

**Block Diagram**



**Ordering Information**

Part Number	CPU	SC/DC	GbE	COM	LVDS	TPM	Thermal Solution
AIMB-213N-S6A1E	Atom N455	Single core	2	6	1, 18/24-bit	(1)	Passive
AIMB-213D-S6A1E	Atom D525	Dual core	2	6	1, 18/24-bit	1	Active

Note: Passive = fanless; Active = with fan  
 \*( ) BOM options available on MP version.

**Packing List**

Part number	Description	Quantity
1700003194	SATA HDD cable	3
1700018785	SATA power cable	3
1700008876	1-to-4 serial ports cable kit, 35 cm	1
1960046526N001	CPU cooler (For Atom D525 only)	1
1960050473T000	I/O port bracket	1
2002021310	Startup manual	1
2062021300	Driver CD	1

**Optional Accessories**

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1757003995	Adapter AC100-240V 60 W +12V/5A FSP
1700018699	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm

**Optional Chassis**

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

**I/O View**



AIMB-213N-S6A1E  
 AIMB-213D-S6A1E

**Embedded OS/API**

OS/API	Part No.	Description
Win XPE	2070010792	WES09 AIMB-213 V4.0 ENG ATI PSNL
	2070010791	WES7 E SP1 x86 AIMB-213 V5.1 ENG ATI PSNL
Win CE	2070011086	CE 7.0 Pro AIMB-213 V1.0 ENG
Software API	TBD	SUSI V3.0 SW API for AIMB-213 XP