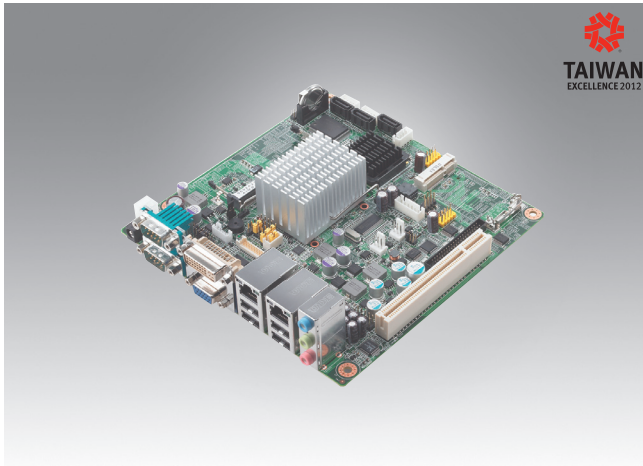


AIMB-213

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:

- SMBus
- H/W Monitor
- Brightness
- Watchdog
- GPIO

Utilities:

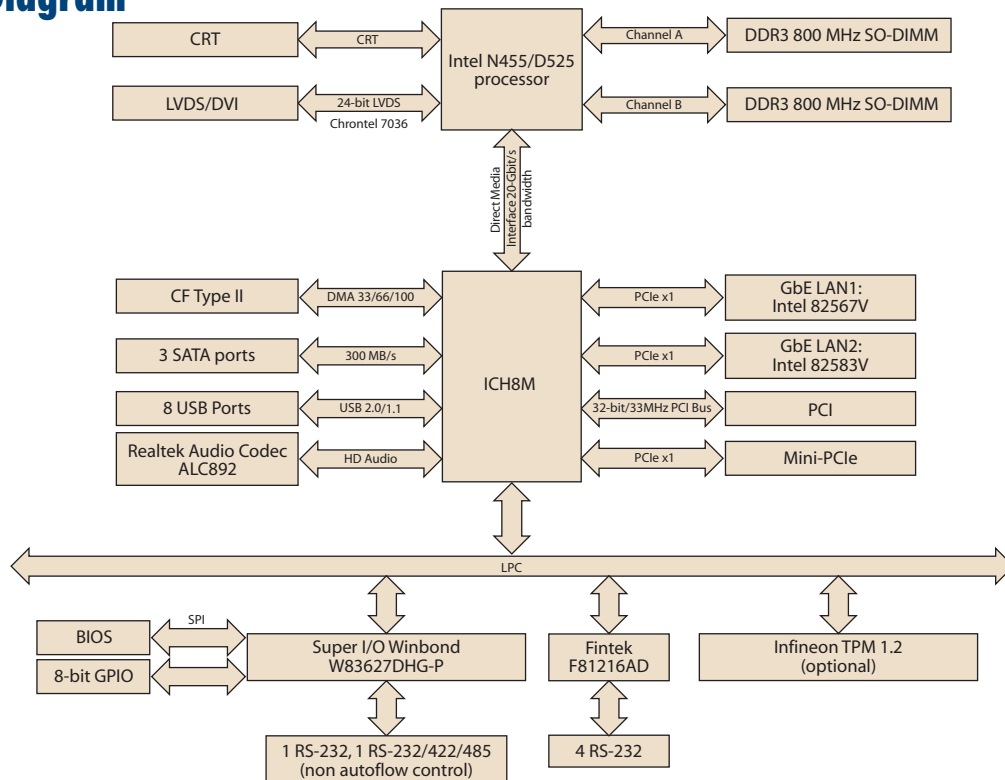
- BIOS flash
- eSOS
- Monitoring
- Flash Lock
- Embedded Security ID



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