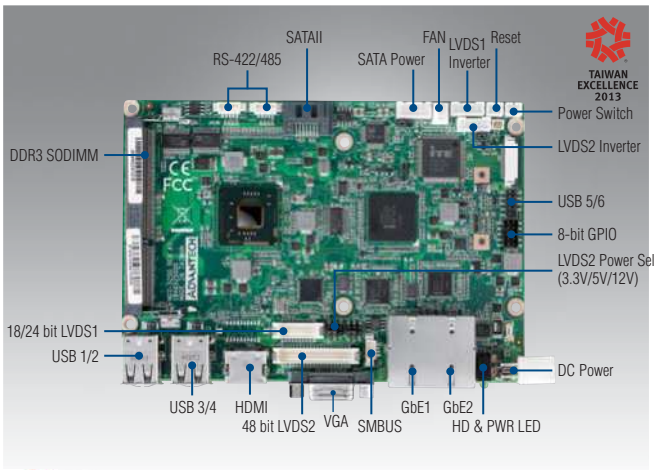
MIO-5250

Intel® Atom™ N2600/ D2550, 3.5" MI/O-Compact SBC, DDR3, HDMI, Dual LVDS, VGA, 2 GbE, CFast, iManager, MIOe



Features

- Embedded Intel® Atom™ N2600/ D2550 dual core processor + Intel NM10, 1 x DDR3 memory support up to 4 GB
- DirectX 9, multiple display: 18/24-bit LVDS1, 48-bit LVDS2, HDMI, VGA
- Flexible design using integrated multiple I/O: MIOe to approach vertical applications & keep domain knowhow.
- 2 GbE support, HD Audio, Rich I/O interface with 4 COM, 1 SATA, I²C or SMBus, 8-bit GPIO, PCIe Mini Card & CFast
- Supports iManager, SUSIAccess and Embedded Software APIs

Software APIs: GPIO, H/W Monitor, Brightness, Watchdog, Backlight On/Off, SMBus, CPU Speed

Utilities: Monitoring

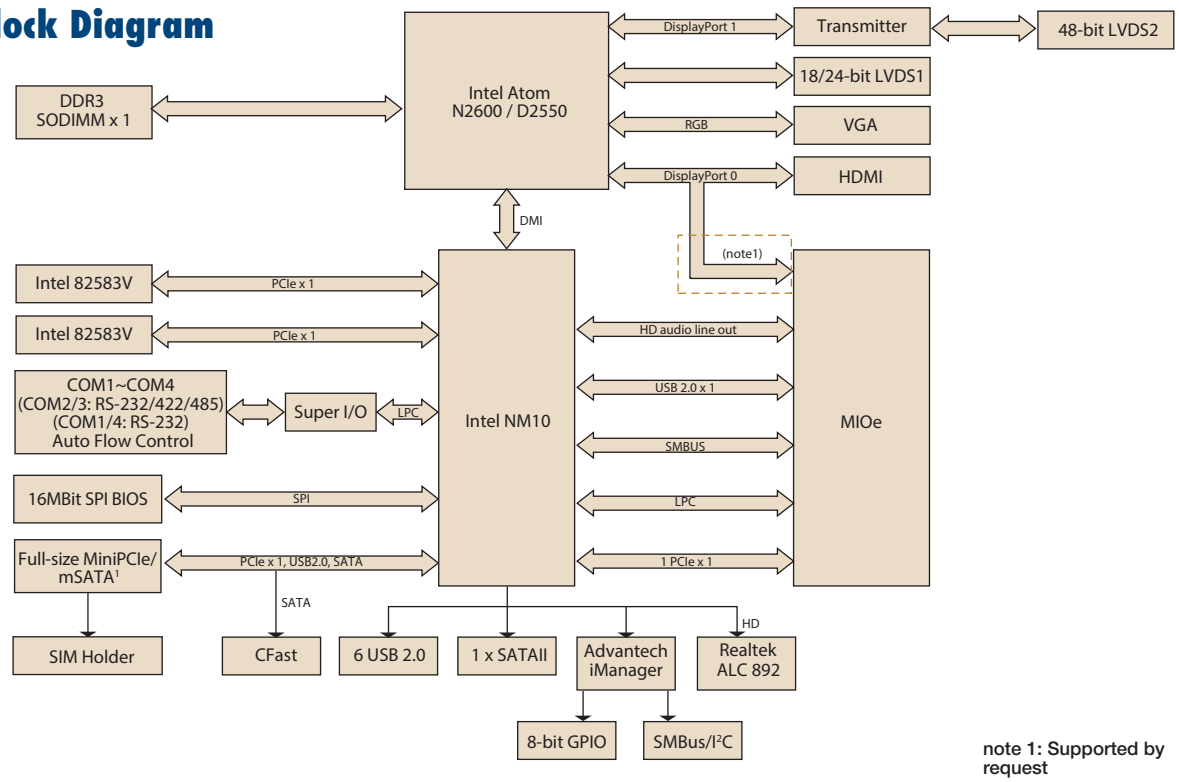
Specifications

Processor System	CPU	Intel Atom Dual Core processor N2600 1.6GHz/ D2550 1.86GHz
	Frequency	Dual-Core 1.6GHz/ 1.86GHz
	L2 Cache	1MB
	System Chipset	Intel Atom N2600/ D2550 + Intel NM10
	BIOS	AMI EFI 16Mbit
Memory	Technology	DDR3 800MHz (N2600), DDR3 1066 MHz (D2550)
	Max. Capacity	4 GB
	Socket	1 x 204-pin SODIMM
Display	Chipset	Integrated Intel GMA 3600 series
	Graphic Engine	DirectX 9 and OpenGL3.0 support HW Accelerated Decode: MPEG2, H.264, VC-1
	LVDS	18/24-bit LVDS1: up to 1366 x 768 (N2600), 1440 x 900 (D2550) 48-bit LVDS2: 1920 x 1200 (only for MIO-5250D-S8A1E)
	VGA	Up to 1920 x 1200
	HDMI	Supports 1920 x 1200, Max data rate: up to 1.65 Gb/s, Supports HDMI v1.3 Up to 1080p support
	Multi-Display	VGA+LVDS, VGA+HDMI, HDMI+LVDS
Ethernet	Speed	10/100/1000Mbps
	Controller	GbE1: Intel 82583V, GbE2: Intel 82583V
	Connector	2 RJ45 on Rear I/O
Audio	Chipset	Realtek ALC892, High Definition Audio (HD), Line-in, Line out, Mic-in
	Amplifier	Optional via MIOe
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CFast	1
	mSATA	1 (Supports either mSATA or full size miniPCIe, selected by BIOS, default support miniPCIe)
	SATA	1, up to 3Gb/s (300 MB/s)
Rear I/O	Ethernet	2
	VGA	1
	HDMI	1
	USB	4 x USB 2.0
	LED	Power, HDD
	DC Jack	1 (MIO-5250N-S6A1E only)
Internal I/O	USB	2 x USB 2.0
	Serial	2 x RS-232 from COM1/4, 2 x RS-232/422/485 from COM2/3 with auto flow control (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM port speed up to 115K bps
	I²C	1 (Shares with SMBus pin)
	SMBus	1
	GPIO	8-bit general purpose input/output
Expansion	MiniPCIe	1 x Full-size with SIM Holder
	MIOe	SMBus, 1 x USB2.0, LPC, 1 x PCIe x1, line out, DisplayPort (optional), +5 Vsb/+12 Vsb power, Power On, Rest
Power	Power Type	Single 12V DC power input
	Power Supply Voltage	Supports single 12V input, ± 10%
	Power Consumption (Typical)	MIO-5250N-S6A1E: 0.606 A @ 12 V (7.27 W) MIO-5250D-S8A1E: 0.829 A @ 12 V (9.95 W)
	Power Consumption (Max, test in HCT)	MIO-5250N-S6A1E: 0.729 A @ 12 V (8.75 W) MIO-5250D-S8A1E: 1.029 A @ 12 V (12.35 W)
	Power Management	ACPI
	Battery	Lithium 3 V / 210 mAH
Environment	Operating	0 ~ 60 °C (32 ~ 140 °F) (Operating humidity: 40 °C @ 95% RH Non-Condensing)
	Non-Operating	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4"), same as 3.5"
	Weight	0.74 kg (1.63 lb), weight of total package
	Total Height	Top Side: 20 mm (including heatsink); Bottom Side: 9 mm; PCB: 1.6 mm

All product specifications are subject to change without notice

Last updated: 29-Apr-2016

Block Diagram



note 1: Supported by request

Ordering Information

Part No.	CPU	L2 Cache	Memory	LVDS1	LVDS2	VGA & HDMI	GbE	Audio	RS-232/ 422/485	RS-232	USB 2.0	SATAII	CFast	Mini PCIe	MIOe	Power Connector	Thermal Solution	Operating Temp.
MIO-5250N-S6A1E	Intel Atom N2600 1.6G	1MB	SO-DIMM	24-bit	-	Yes	2	Yes	2	2	6	1	1	1	Yes	DC Jack	Passive	0 ~ 60 °C
MIO-5250D-S8A1E	Intel Atom D2550 1.86G	1MB	SO-DIMM	24-bit	48-bit	Yes	2	Yes	2	2	6	1	1	1	Yes	2x2 type	Passive	0 ~ 60 °C
MIO-5250NZ-2GS6A1E	Intel Atom N2600 1.6G	1MB	2GB bundle	24-bit	-	Yes	2	Yes	2	2	6	1	1	1	Yes	DC Jack	Passive	20 ~ 80 °C
MIO-5250NZ22GS6A1E	Intel Atom N2600 1.6G	1MB	2GB bundle	24-bit	-	Yes	2	Yes	2	2	6	1	1	1	Yes	DC Jack	Passive	40 ~ 85 °C
MIO-5250DZ22GS8A1E	Intel Atom D2550 1.86G	1MB	2GB bundle	24-bit	48-bit	Yes	2	Yes	2	2	6	1	1	1	Yes	2x2 type	Passive	40 ~ 85 °C

Note: Passive = fanless; Active = with fan
Note: Wide temperature range version has been bundled with verified industrial-grade memory module

Packing List

Part No.	Description	Quantity
	MIO-5250 SBC	
	Startup Manual	
	Utility CD	
1700008941	SATA cable 7P 32CM C=R 180/180D W/Lock	1
1700018785	SATA 35cm power cable	1
1700019435	COM RS-485 D-SUB 9P (M)/1*5P 1.25 25cm cable	2
1701200220	COM RS232 Cable 2*10P-2.0/D-SUB 9P (M)*2 22CM	2
1700019584	Audio Cable 2*5P-2.0/JACK*3 20cm	1
9689000002	mini Jumper pack	1
1960054274T001	Heatsink 135 x 84.2 x 20 mm for MIO-5250	1

Optional Accessories

Part No.	Description
1960054269T001	Heat spreader for MIO-5250 (137 x 84.2 x 16.7mm)
1700006291	SATA2 cable 7P/ 7P 30cm C=R 180/90
1703100260	Internal USB cable
1757003934	Adaptor 100-240V 60W 12V 5A W/O PFC

Embedded OS/API

Embedded OS/API	Part No.	Description
Windows Embedded Standard 7	2070011953	WES7E MIO-5250 V5.1.4 ENG/GER/JPN/TC
	2070011955	WES7P MIO-5250 V5.1.3 EN/TC/SC/RU/FR/DE/ ES/IT/JP/KR
Windows Embedded Standard		WES2009 (graphic driver support by case)
Windows Embedded Compact 7	2070012241	WEC7 MIO-5250 V1.0 ENG
VxWorks		6.9.2
Linux		Ubuntu 12.04 (graphic driver support by case)
Software API		iManager 2.0

Rear I/O View



MIO-5250N-S6A1E



MIO-5250D-S8A1E