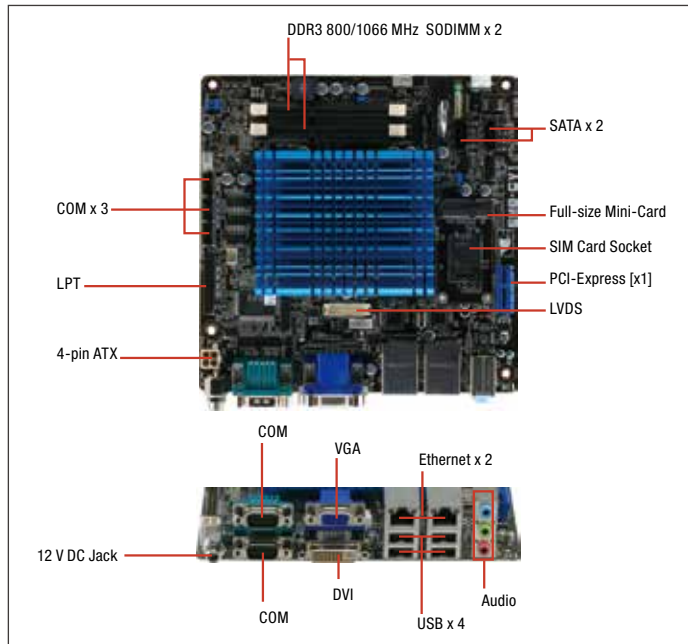


## Mini-ITX Embedded Motherboard with Intel® Atom™ D2550 Processor



## Features

- Onboard Intel® Atom™ D2550 Processor
- Intel® NM10
- DDR3 800/1066 MHz SODIMM x 2, Up to 4 GB
- VGA, 18/24-bit LVDS, DVI, Dual Independent Display
- Gigabit Ethernet x 2, Realtek 8111E
- VIA 1708S, 6-Channel High Definition Audio CODEC
- COM x 5 (RS-232 x 4, RS-232/422/485 x 1)
- PCI-Express [x1] x 1, Mini-Card x 1 (Full Size, mSATA Optional), SIM Slot
- DC 12V (Selectable AT/ATX Mode for Power On)



## Rear Panel I/O Ports

USB	USB 2.0 x 4
Display I/O	VGA x 1, DVI-D x 1
Audio I/O	Mic-in x 1, Line in x 1, Line-out x 1
LAN I/O	LAN (RJ-45) port x 2
Serial Port	COM (RS-232/422/485) x 1, COM (RS-232) x 1
PS/2 Port	—
Others	DC port (12V) x 1

## Internal I/O Connectors

Storage	SATA connectors x 2, SATA power connector x 1, Mini-Card slot x 1
USB	USB connector x 1 supports additional 2 USB ports
Display I/O	LVDS connector x 1, LVDS Power select jumper x 1, LVDS Brightness Control Type Selection x 1, LVDS Function Enable x 1, LVDS Panel Backlight Power Selection x 1, LCD_POWER 5 pin connector x 1
Audio I/O	—
Serial Port	COM header x 3, COM2 External Power Selection jumper x 1
PS/2 Port	PS/2 Keyboard Mouse Connector x 1
Parallel Port	LPT header x 1
DIO	DIO x 1
FAN	CPU Fan connector x 1, Chassis Fan connector x 1
Power	12V AUX Power Connector x 1, AT/ATX mode select jumper x 1
Others	SIM Card Socket x 1, Front Panel connector x 1, Watchdog Timer Function Switch x 1, CMOS jumper x 1

## OS

OS Support	Windows® XP 32-bit, Windows® 7 32-bit, Linux Fedora
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## Specifications

System	
Processor	Integrated Intel® Atom™ processor D2550
Chipset	Intel® NM10
Memory	SO-DIMM x 2, max. 4GB, DDR3 800/1066 MHz, non-ECC, un-buffered memory, Dual-channel memory architecture
Graphics	Intel® HD Graphics
I/O Chipset	ITE IT8783F
Ethernet	Realtek PCIe Gb LAN 8111E, RJ-45 x 2
Audio	VIA 1708S
TPM	—
Expansion Slots	PCIe [x1] x 1, Full-size Mini-Card (PCIe + USB) (mSATA optional) + SIM Card x 1
BIOS	32 M bit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on CPU/Chassis
WatchDog Timer	1~255 step by software program
Smart Fan Control	CPU Fan/ Chassis Fan
Wake On LAN/PXE	Yes (WOL/PXE)
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Intel® HD Graphics
Graphics Multi Display	VGA+LVDS, VGA+DVI, LVDS+DVI
VGA	Up to 1920 x 1200 @60 Hz
DVI	Up to 1920 x 1200 @60 Hz
HDMI	—
Display Port	—
LVDS	Up to 1440 x 900 @60Hz, Single Channel 18/24 bit
eDP	—
Backlight Control	Voltage / PWM
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12VDC
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~185°F (-40°C ~85°C)
Operating Humidity	0% ~ 90%RH, non-condensing
Certificate	CE & FCC
Form Factor	Mini-ITX, 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5 Kg)
MTBF (Hours)	178,817

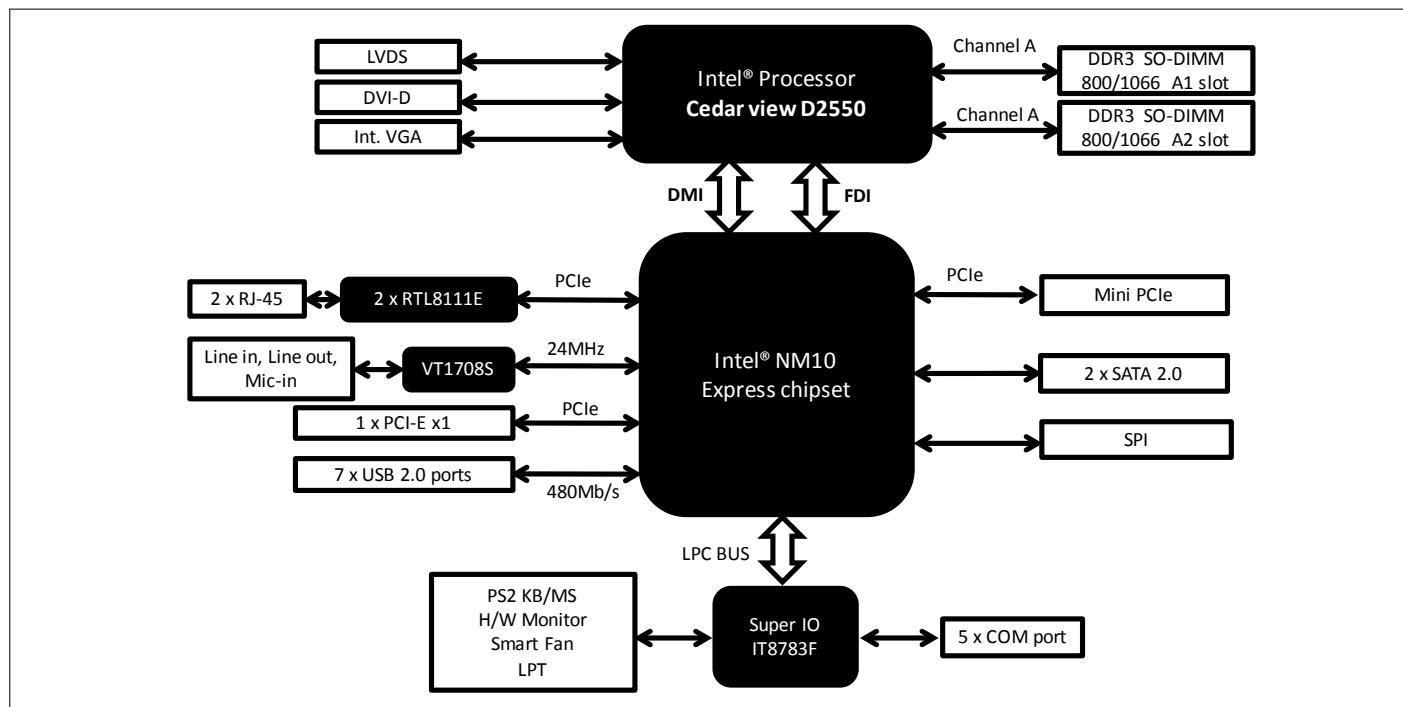
## Packing List

- SATA Cable
- SATA Power Cable
- Metal I/O Bracket
- Product CD
- EMB-CV1

## Optional Accessories

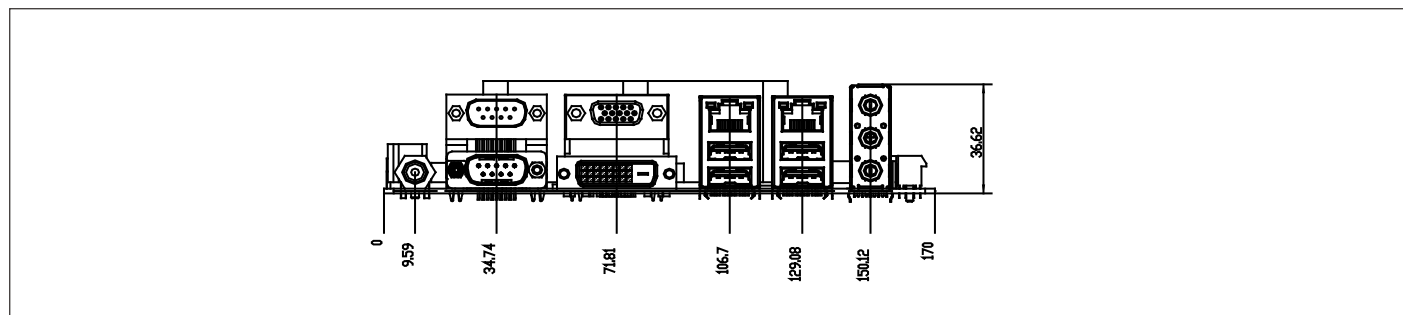
Part Number	Description
1757306007	Lockable Adapter 60W
1757908403	Lockable Adapter 84W
1700060152	PS/2 Cable
1701260305	LPT Cable (25P, 270MM)
1709050201	USB 2.0 Cable (5P, 220MM, p=2.00mm)
1709070800	SATA Cable
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/ bracket)
1701100206	COM Cable (200MM, p=2.00mm)

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part number	CPU	RAM	Fan/Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
EMB-CV1-A12	D2550	SO-DIMM x 2	Fanless	VGA, DVI-D, LVDS	SATA2 x 2	18/24 bit	GbE x 2	USB 2.0 x 7	4	1	Full-size Mini-Card with SIM Card x 1, PCIe[x1] x 1	12V DC	-	32°F ~ 140°F (0°C ~ 60°C)
EMB-CV1-A12-MS	D2550	SO-DIMM x 2	Fanless	VGA, DVI-D, LVDS	SATA2 x 1, mSATA x 1	18/24 bit	GbE x 2	USB 2.0 x 7	4	1	Full-size Mini-Card for mSATA x 1, PCIe[x1] x 1	12V DC	-	32°F ~ 140°F (0°C ~ 60°C)

**Note:**

Intel® Atom™ Processor D2000 series and N2000 series (CV) do NOT support DMA function that may affect ECP mode of Parallel port.