

# MF-Patom-201 Industrial BOX PC

## Engineering Specification

### Motherboard specification:

All in one designed with VGA , LAN , sound on board in Mini Itx form factor  
Industrial circuit and components designed.

Chip sets: Intel 945GSE + ICH7M

CPU: Intel Atom N270 ( 1.6Ghz/512K ) fanless CPU built in

Lan : 2 x 10/100/ 1000 Dual giga bit Lan on board ( **2<sup>nd</sup> Lan optional** )

USB port: 8 ports ( 2 ports in pin headers & 6 ports in the back of I/O ports )

Case size : 22 cm ( W ) x 20 cm ( L ) x 5.6 cm ( H ) metal case

**VESA mount bracket:** Optional VESA mount bracket which enable the case for VESA mountable.

Power supply : External power supply 80 watts , AC input 90-240V full range.

Driver bay: 1 x 2.5" HDD

PCI slot : None

Front panel: Power LED , HDD LED, Power switch , Reset switch.

Back panel : Lan x 2 ( **2<sup>nd</sup> Lan optional** ) , VGA , 6 ports USB 2.0 , sound ( Line in , Line out , Mic ) ,  
PS/2 Keyboard , PS/2 mouse , + 12 VDC- input for power adapter.



## Mini-ITX Motherboards

### MF-Patom

## Intel® Atom™ Mini-ITX Motherboard with Intel® 945GSE Chipset



### FEATURES

- Onboard Intel® Atom™ Processor N270, 1.6GHz, 533MHz FSB
- 1x DDR2 DIMM, Max. 2GB
- Supports CRT and LVDS (dual display)
- Onboard 10/100/1000 Mbits PCI-E Gigabit LAN x 2 ( 2<sup>nd</sup> Lan optional )
- 2x SATA II, 8x USB 2.0, 4x COM, 1x IDE
- 1x PCI, 1 x PCI-E (x1), 1x Mini PCI-E(x1)

### MF-Patom SPECIFICATIONS

#### CPU

Intel® Atom™ N270 Single Core processor  
1.60GHz speed

CPU Front Side Bus ( FSB )  
533MHz

#### Chipset

Intel® 945GSE  
ICH7M

#### BIOS

Award BIOS, ACPI supported

#### System Memory

One DDR2 sockets support up to 2GB DDR2 SDRAM  
PC533 DDR2 SDRAM

#### Integrated VGA

Intel® 945GSE integrated Graphics Media Accelerator (GMA 950) supports CRT

#### LVDS

Supports 24/18-bit dual channel LVDS  
LVDS interface via 2x DF24 sockets

#### LAN

Realtek RTL8111C/8111D PCI-E Gigabit Lan x 2 ( 2<sup>nd</sup> Lan optional )

#### Audio

ICH7M integrated audio controller with ALC655 codec

#### Audio Amp

Dual channels , 2.5 watts per channel

#### LPC I/O

**Winbond W83627EHG chipset, Fintek 81216DG**  
1x IDE, 1x KB, 1x mouse, 4x COM 2x SATAII

**Serial Ports**  
One RS232/422/485 and three RS-232 COM ports

**Serial ATA**  
Supports 2 SATA II ports

**USB (2.0)**  
Supports 8 USB ports (6 ports + 2 ports via pin header)

**Keyboard and Mouse Connector**  
PS/2 type

**Watchdog Timer**  
Generates system reset; 256 levels

**Hardware Monitoring**  
Built in W83627EHG; monitors system/CPU  
temperature and voltage status

**Digital I/O**  
4 in / 4 out

**Power Connector**  
DC power jack for +12V DC-in

**Expansion Slots**  
1x PCI, 1x PCI-E (x1), 1x Mini PCI)

**Edge Connectors**  
DC-in, PS/2 KB/Mouse Mini DIN, VGA CRT, 1x or 2x RJ-45, 4x USB, Dual/Triple jack for audio

**Onboard Connectors/Headers**  
IDE1 (40-pin), CF socket (solder side), Digital I/O,  
4x COM, 2x SATA, USB5/6/7/8, Digital I/O, LPT

**Form Factor**  
Mini-ITX Motherboard

**Dimensions**  
170mm x 170mm

**Power Consumption**  
Intel® Atom™ N270 1.6GHz w/ 2.0 GB DDR2-800  
+12V: 2.65A

**MTBF: 70000 hours**

**Operating Temperature**

0°C~60°C (32°F~140°F)

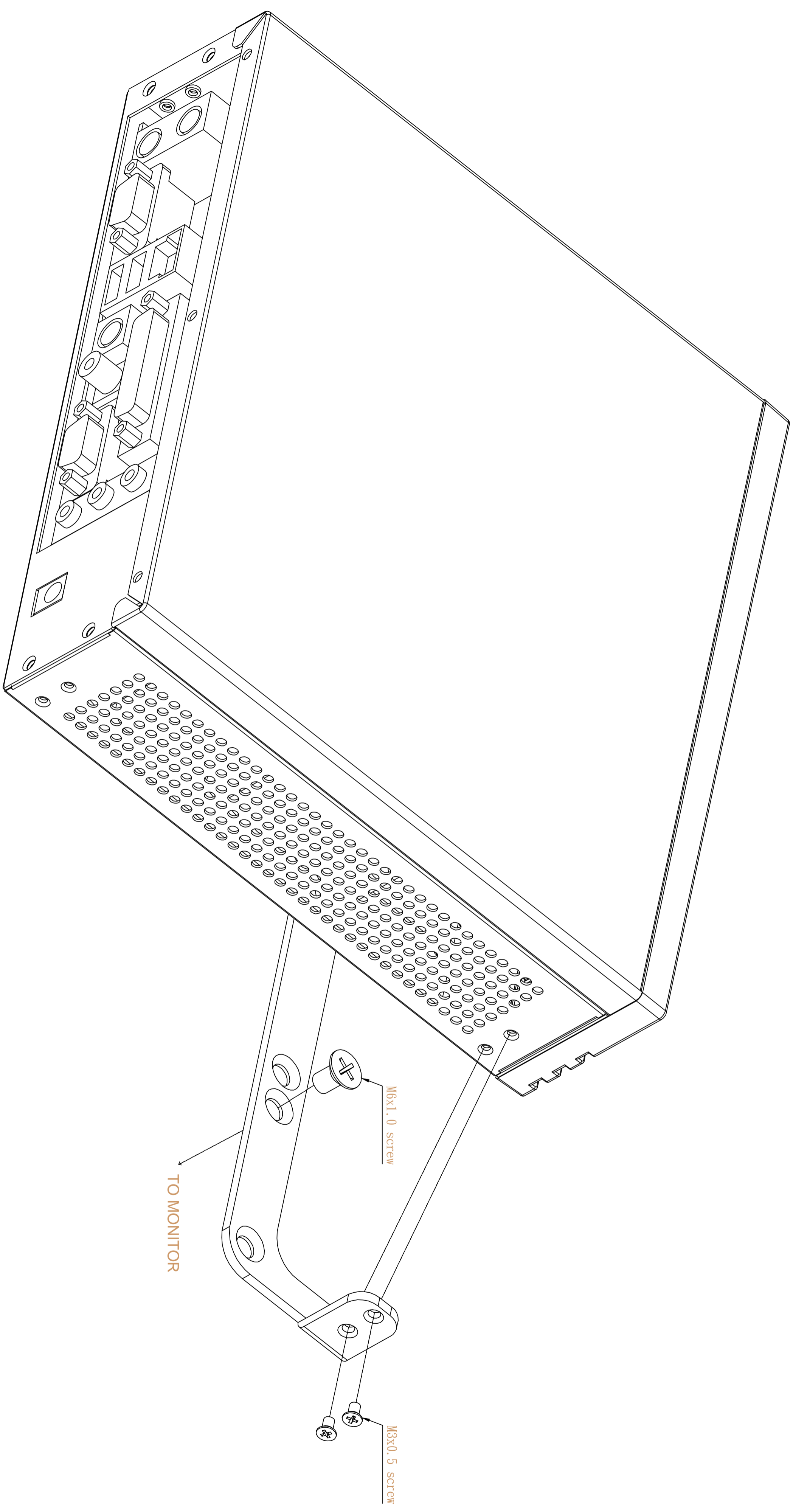
**Storage Temperature**

-20°C~80°C (-4°F~176°F)

**Relative Humidity**

10%~90% (non-condensing)

Rev. / Type	Description	App'D
E' REV / TYPE	BCN SPECIFICATION	ECN APP'D



TO MONITOR

M6x1.0 screw

M3x0.5 screw

Rev.		TITLE:	
REV.			
Model	Part No.	Appr'D	Dwg No.
		Check'D	Tool No.
Unit	Mat'l	Drawn'D	Scale 1:1 Sheet
Qty	Thick		
	Burr		
X ± X	X° ± X°		
X ± X	X° ± X°		
XX ± XX	XX° ± XX°		

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Path: PATN

1 2 3 4 5 6 7 8

## VESA mount bracket installation procedure:

**Step1.** Screw in the VESA mount bracket into the VESA mount holes , the VESA mount bracket can be fit into 75mm or 100mm or 200mm VESA mount holes. The VESA mount screws type is M6 x 1.0 ( V-shape ). Due to the weight of the itx-201 case with motherboard and HDD is less than 5KG , so , it is sufficient and required only one VESA mount bracket with 2 VESA mount screws to hold it into the objects.

**Step2.** Install the itx-201 case into the VESA mount bracket , front bezel face up ( cable connectors face down ) , screw in the VESA mount bracket to the itx-201 case. The mounting screws type is M3 x 0.5 ( V-shape ) , 2 screws in each side ( left and right ).