



## SEM X-H81

Intel® 4th Generation Core™ Refresh i7/ i5/ i3, Pentium® and Celeron® Processors Mini ITX Motherboard with Intel® H81 Express Chipset

- > Intel® LGA1150 Socket Supports 4th Generation Core™ Refresh i7/i5/i3, Pentium® and Celeron® Processors (Max. TDP at 84W)
- > Intel® H81 Express Chipset
- > 2 x 240-pin DDR3 1333/1600 MHz DIMM supports up to 16 GB
- > VGA, HDMI, DVI-D
- > 1 x Realtek RTL8111E PCIe Gigabit Ethernet
- > Realtek ALC892 Supports 7.1-CH HD Audio
- > 1 x PCIe x 16, 1 x Mini PCIe
- > 2 x SATA III, 2 x SATA II
- > 7 x USB 2.0, 2 x USB 3.0
- > 1 x RS-232, 1 x S/PDIF
- > ATX Power

**+** Spec

System	
<b>Processor</b>	Intel® LGA1150 Socket Supports 4th Generation Core™ Refresh i7/i5/i3, Pentium® and Celeron® Processors (Max. TDP at 84W)
<b>Processor</b>	Intel® LGA1150 Socket Supports 4th Generation Core™ Refresh i7/i5/i3, Pentium® and Celeron® Processors (Max. TDP at 84W)
<b>System Chipset</b>	Intel® H81 Express Chipset
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<b>System Memory</b>	2 x 240-pin DDR3 1333/1600 MHz SO-DIMM supports up to 16 GB
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<b>I/O Chip</b>	Nuvoton NTC5532D
<b>I/O Chip</b>	Nuvoton NTC5532D
<b>BIOS</b>	AMI uEFI BIOS, 128Mbit SPI Flash ROM
<b>BIOS</b>	AMI uEFI BIOS, 128Mbit SPI Flash ROM
<b>Watchdog Timer</b>	H/W Reset: 1sec. ~ 65535sec./min. and 1sec. or 1min./step
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<b>H/W Status Monitor</b>	Monitoring CPU & System Temperature and Voltage
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Expansion	
<b>Expansion</b>	1 x PCIe x 16 1 x Mini PCIe
<b>Expansion</b>	1 x PCIe x 16 1 x Mini PCIe
I/O	
<b>USB</b>	7 x USB 2.0 2 x USB 3.0
<b>USB</b>	7 x USB 2.0 2 x USB 3.0
<b>COM Port</b>	1 x RS-232
<b>COM Port</b>	1 x RS-232
<b>MIO</b>	1 x PS/2 Keyboard or Mouse
<b>MIO</b>	1 x PS/2 Keyboard or Mouse
<b>Other</b>	1 x S/PDIF-out Header
<b>Other</b>	1 x S/PDIF-out Header
Display	
<b>Chipset</b>	Intel® 4th Generation CPU integrated VGA + DVI-D, VGA + HDMI, DVI-D + HDMI
<b>Chipset</b>	Intel® 4th Generation CPU integrated VGA + DVI-D, VGA + HDMI, DVI-D + HDMI
<b>Resolution</b>	VGA: 1920 x 1200 @ 60Hz HDMI: 4096 x 2160 @ 24Hz DVI-D: 1920 x 1200 @ 60Hz
<b>Resolution</b>	VGA: 1920 x 1200 @ 60Hz HDMI: 4096 x 2160 @ 24Hz DVI-D: 1920 x 1200 @ 60Hz
Audio	
<b>Chipset</b>	Realtek ALC892 supports 7.1-CH
<b>Chipset</b>	Realtek ALC892 supports 7.1-CH
<b>Audio Interface</b>	Mic-in, Line-out, Line-in, Rear R/L, S/PDIF-out



Ethernet	
Chipset	1 x Realtek 8111E
Chipset	1 x Realtek 8111E
Ethernet Interface	10/100/1000 Base-Tx GbE compatible
Ethernet Interface	10/100/1000 Base-Tx GbE compatible
LAN Port	1 x RJ-45
LAN Port	1 x RJ-45
Mechanical & Environmental	
Power Requirement	+12V/+5V/5Vsb/+3.3V/-12V
Power Requirement	+12V/+5V/5Vsb/+3.3V/-12V
Power Type	ATX
Power Type	ATX
Operating Temp	0°C ~ 60°C (32°F ~ 140°F)
Operating Temp	0°C ~ 60°C (32°F ~ 140°F)
Storage Temp	-40°C ~ 75°C (-40°F ~ 167°F)
Storage Temp	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing
Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing
Dimension (L x W)	6.69" x 6.69" (170mm x 170mm)
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Weight	0.88lbs (0.4kg)
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## + Ordering

SEM-X-H81-A1R  
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