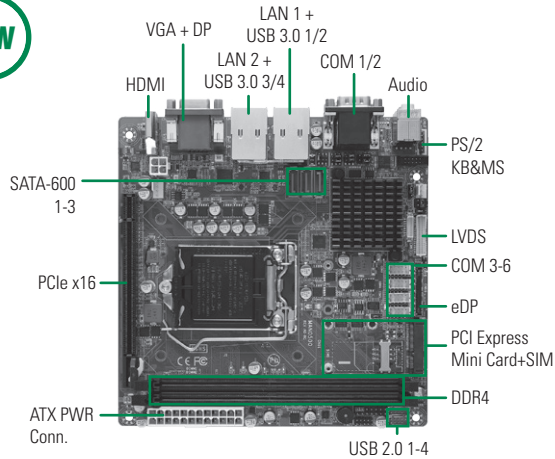


MANO500

Mini-ITX SBC with LGA1151 Socket 6th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® Processor, Intel® H110, HDMI/DP/VGA/LVDS/eDP, Dual LANs and USB 3.0

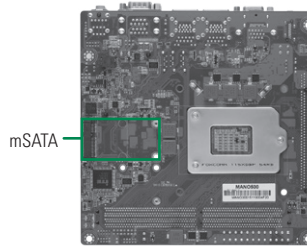


System

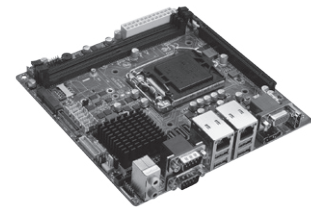
CPU	LGA1151 socket 6th generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processor
System Memory	2 x 288-pin Long-DIMM dual channel DDR4-2133, max. up to 32 GB
Chipset	Intel® H110
BIOS	AMI
SSD	N/A
Watchdog Timer	255 level, 1 – 255 sec.
Expansion Interface	1 x PCIe x16 1 x mSATA 1 x PCI Express Mini Card 1 x SIM card slot
Battery	Lithium 3V/220 mAh
Power Requirements	TBD
Size/Weight	170 x 170 mm
Temperature	0°C ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

Features

- LGA1151 socket 6th generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processor (Skylake)
- 2 DDR4-2133 MHz max. up to 32 GB
- 1 PCIe x16 slot
- 1 PCI Express Mini Card and SIM card slots
- 3 SATA-600 and 1 mSATA
- 4 USB 3.0 and 4 USB 2.0



▲ Rear view



▲ Side view

Display

Chipset	Intel® HD Graphics 530/510
Memory Size	Shared Memory
Display Interface	1 x HDMI 1 x VGA 1 x DisplayPort 1 x LVDS 1 x eDP (co-lay with LVDS) (optional)

Packing List

Standard	
I/O Bracket	
MIO	1 x PS/2 keyboard & mouse 1 x RS-232/422/485 COM1 with 5V/12V power select 5 x RS-232 (COM 2-6)
SATA	3 x SATA-600 1 x mSATA
Hardware Monitoring	Detect CPU/system temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps supports WOL, PXE with Intel® i219LM (LAN1) 2nd port as 10/100/1000 Mbps supports WOL, PXE with Intel® i211AT (LAN2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	4 x USB 3.0 (rear I/O) 4 x USB 2.0

Архангельск (8182)63-90-72
Астана +7(7172)727-132
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48

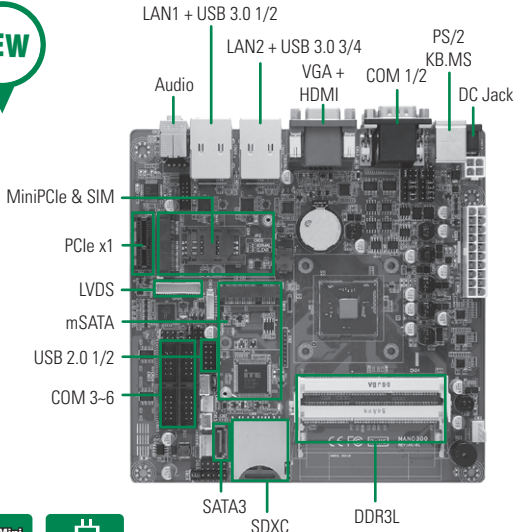
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Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

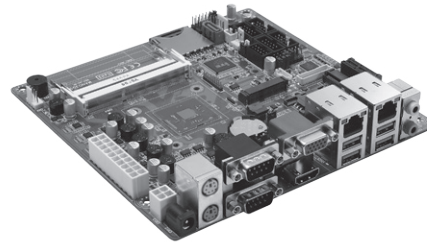
MANO300

Mini-ITX SBC with Intel® Celeron® Processor N3160 (up to 2.24 GHz) SoC, VGA/HDMI/LVDS, USB 3.0, PCI Express Mini Card, mSATA, PCIe x1, and HD Audio



Features

- Intel® Celeron® N3160 processor 2.24 GHz SoC (Braswell)
- 2 DDR3L-1333 MHz SO-DIMM max. up to 8 GB
- PCI Express Mini Card slot and PCIe x1 supported
- 4 USB 3.0 and 2 USB 2.0 ports
- 1 SATA-600, 1 mSATA and 1 SDXC supported
- 6 COM ports supported
- 12VDC and STD ATX supported
- VGA, HDMI and LVDS with triple view supported



▲ Side view

System

CPU	Intel® Celeron® processor N3160 (up to 2.24 GHz) quad core SoC (Braswell)
System Memory	2 x 204-pin SO-DIMM dual channel DDR3L-1333, max. up to 8 GB
Chipset	SoC integrated
BIOS	AMI
SSD	SDXC Slot
Watchdog Timer	255 levels, 1-255 sec.
Expansion Interface	1 x PCIe x1 1 x PCI Express Mini Card
Battery	Lithium 3V/220 mAh
Power Requirements	12VDC or STD ATX
Size/Weight	170 x 170 mm
Temperature	0°C ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 keyboard and mouse 2 x RS-232/422/485 (Rear I/O) 4 x RS-232 (COM 3 with +5/+12V)
SATA	1 x SATA-600 1 x mSATA
Ethernet	2 x Realtek RTL8111F for Gigabit LAN support WoL & PXE
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	2 x USB 2.0 (internal) 4 x USB 3.0 (rear I/O)
TPM	N/A
Digital I/O	8 Channels programmable
SM BUS	N/A

Display

Chipset	Intel® HD graphics
Memory Size	Shared memory
Display Interface	1 x VGA 1 x HDMI 1 x LVDS; 18/24bit dual channel

Packing List

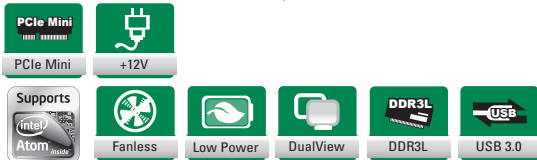
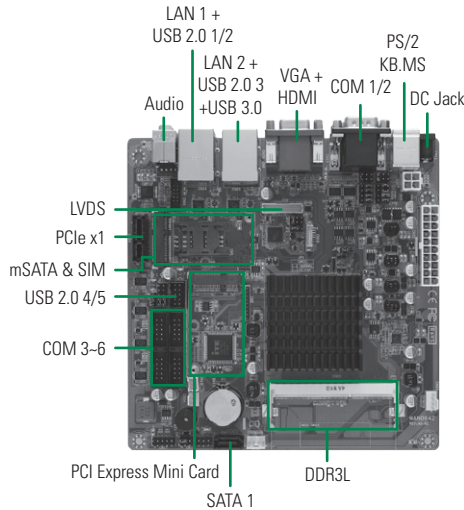
Standard	
I/O Bracket	

Ordering Information

Standard	
MANO300	Intel® Celeron® N3160 mini-ITX SBC with VGA/HDMI/LVDS, dual GbE, LANs 6 COM, USB 3.0, PCIe x1, mSATA, PCI Express Mini Card and HD audio
Optional	
59411500600E	SATA power cable 4P 18CM (RC)

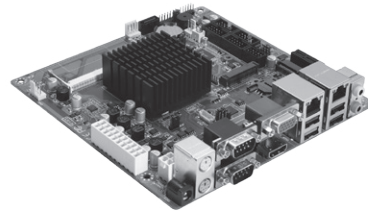
MANO842

Mini-ITX with Intel® Celeron® Processor J1900 (up to 2.42 GHz), VGA/HDMI/LVDS, USB 3.0, PCI Express Mini Card, PCIe x1, and HD Audio



Features

- Intel® Celeron® J1900 Bay Trail-D 2.0 GHz SoC
- 1 DDR3L-1333 MHz max. up to 8 GB
- PCIe x1 supported
- 1 USB 3.0 and 5 USB 2.0 ports
- 1 SATA-300 interface
- mSATA supported
- 6 COM ports
- ATX or 12VDC supported
- Dual view displays



▲ Side view

System

CPU	Intel® Celeron® processor J1900 (up to 2.42 GHz) quad core SoC (Bay Trail)
System Memory	1 x 204-pin DDR3L-1333 SO-DIMM dual channel, max. up to 8 GB
Chipset	SoC integrated
BIOS	AMI
SSD	N/A
Watchdog Timer	255 levels, 1 ~ 255 sec.
Expansion Interface	1 x PCIe x1 1 x PCI Express Mini Card 1 x mSATA
Battery	Lithium 3V/220 mAh
Power Requirements	12VDC or STD ATX
Size/Weight	170 x 170 mm
Temperature	0°C ~ +60°C (32°F ~ 140°F), operation.
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 Keyboard & mouse 2 x RS-232/422/485 (rear I/O) 4 x RS-232
SATA	1 x SATA-300 1 x mSATA
Ethernet	2 x Realtek RTL8111E for Gigabit LAN support WoL & PXE
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	5 x USB 2.0 1 x USB 3.0; (rear I/O: 1 x USB 3.0+3 x USB 2.0)
TPM	N/A
Digital I/O	8 Channels programmable
SM BUS	N/A

Display

Chipset	Intel® HD graphics
Memory Size	Shared Memory
Display Interface	1 x VGA 1 x HDMI 1 x LVDS 18/24bit dual channel

Packing List

Standard

I/O Bracket, Driver CD

Ordering Information

Standard

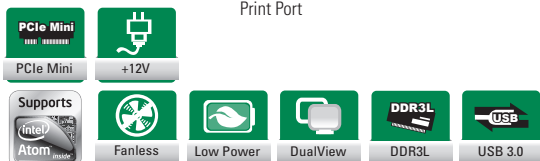
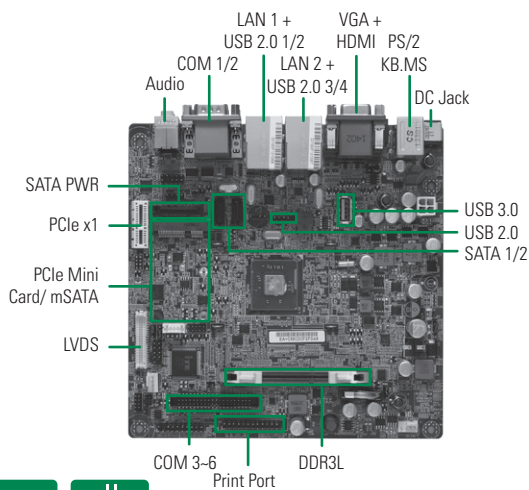
MANO842 Intel® Celeron® J1900 Bay Trail-D mini ITX SBC, VGA/HDMI/LVDS, dual GbE LANs, USB 3.0, PCIe x1, PCI Express Mini Card and HD audio

Optional

59411500600E SATA power cable 4P 18CM (RC)

MANO840

Mini-ITX with Intel® Celeron® Processor J1900 (up to 2.42 GHz), VGA/HDMI/LVDS, USB 3.0, PCI Express Mini Card, PCIe x1, and HD Audio



System

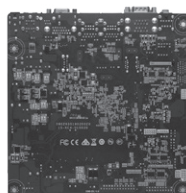
CPU	Intel® Celeron® processor J1900 (up to 2.42 GHz) quad core SoC (Bay Trail)
System Memory	1 x 204-pin DDR3L-1333 SO-DIMM dual channel, max. up to 8 GB
Chipset	SoC integrated
BIOS	AMI
SSD	N/A
Watchdog Timer	255 levels, 1 ~ 255 sec.
Expansion Interface	1 x PCIe x1 1 x PCI Express Mini Card
Battery	Lithium 3V/220 mAH
Power Requirements	12V ATX or 12V DC-Jack
Size/Weight	170 x 170 mm
Temperature	0°C ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

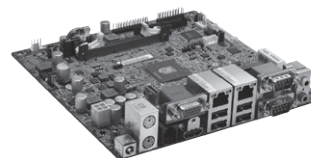
MIO	1 x PS/2 Keyboard & mouse 1 x LPT 6 x RS-232 (1 RS-232 supports +5V/+12V by jumper)
SATA	2 x SATA-300 1 x mSATA (by PCI Express Mini Card Slot, shared with SATA2 Conn)
Ethernet	2 Ports as 10/100/1000 Mbps with Realtek RTL8111G
Audio	HD Audio as Mic-in/Line-out with Realtek ALC269
USB	5 x USB 2.0 1 x USB 3.0
TPM	N/A
Digital I/O	8 Channels programmable
SM BUS	N/A

Features

- Intel® Celeron® J1900 Bay Trail-D 2.0 GHz SoC
- 1 DDR3L-1333 MHz max up to 8 GB
- PCIe x1 supported
- 1 USB 3.0 and 5 USB 2.0 ports
- 2 SATA-300 interfaces
- mSATA supported
- 6 COM ports
- 12V DC Jack
- Dual view displays



▲ Rear view



▲ Side view

Display

Chipset	Intel® HD Graphics
Memory Size	Shared Memory
Display Interface	1 x VGA 1 x HDMI 1 x LVDS 18/24bit dual channel

Packing List

Standard

I/O Bracket, Driver CD

Ordering Information

Standard

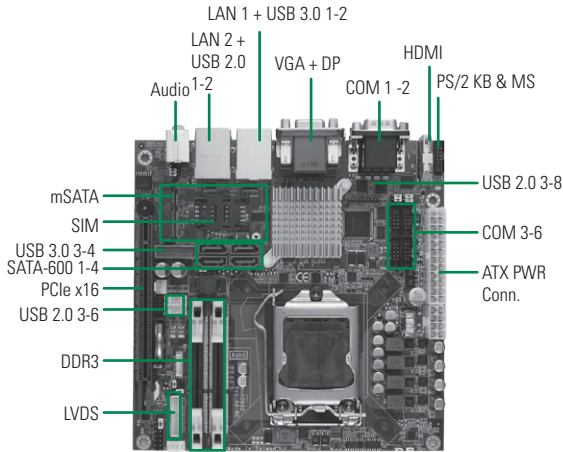
MANO840	Intel® Celeron® J1900 Bay Trail-D mini ITX SBC with VGA/HDMI/LVDS, dual GbE LANs, USB 3.0, PCIe x1, PCI Express Mini Card and HD audio
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Optional

593M8400300E	COM port cable for MANO840 P=2.0 L=300 mm
59460412800E	USB cable A TYPE Dupont 1 x 5 L=200 mm (RC)
593M8400400E	Audio cable with bracket, P=2.54 mm L=300 mm
593F2040300E	LPT cable with bracket, P=2.54 mm L=300 mm

MANO882

LGA1150 Socket Intel® Xeon® E3-v3 and 4th Generation Intel® Core™ i7/i5/i3, Celeron® & Pentium® Mini-ITX SBC with Intel® C226, HDMI/DisplayPort/VGA/LVDS, Dual LAN and USB 3.0



System

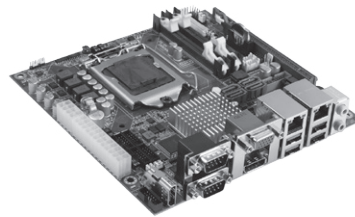
CPU	LGA1150 socket Intel® Xeon® E3-v3 and 4th generation Intel® Core™ i7/i5/i3, Celeron® & Pentium® processor (Haswell/ Haswell Refresh)
System Memory	2 x 204-pin SO-DIMM dual channel DDR3-1333/1600, max. up to 16 GB
Chipset	Intel® C226 (optional: Intel® H81)
BIOS	AMI
SSD	N/A
Watchdog Timer	255 level, 1 ~ 255 sec
Expansion Interface	1 x PCIe x16 1 x PCI Express mini card (Full size and shared mSATA) 1 x SIM card slot (Intel® C226)
Battery	Lithium 3V/220 mAH
Power Requirements	Intel® i7-4770S +5V@2.62A, +12V@4.97A, +5VSB@0.04A, +3.3V@0.76A
Size/Weight	170 x 170 mm
Temperature	0°C ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 KB & MS 2 x RS-232/422/485 (COM 1-2, on rear IO) 4 x RS-232 (COM3-6; by pin header); COM1, 2 with 5V/12V power
SATA	4 x SATA-600 support RAID 0/1/5/10 (Optional: Intel® H81: 2 x SATA 600)
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed, smart fan supported.
Ethernet	1st port as 10/100/1000 Mbps supports WOL, PXE with Intel® i217LM (LAN1) 2nd port as 10/100/1000 Mbps supports WOL, PXE with Intel® i210AT (LAN2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	Intel® C226: 4 x USB 3.0 (2 on rear IO, 2 on internal) 6 x USB 2.0 (2 on rear IO, 4 on internal) Intel® H81: 2 x USB 3.0 (2 on rear IO) 6 x USB 2.0 (2 on rear IO, 4 on internal)
TPM	Infineon TPM 1.2 SLB9635 (Intel® C226)
Digital I/O	8 Channels Programmable (4-IN & 4-OUT default)
SM BUS	N/A

Features

- LGA1150 socket Intel® Xeon E3-v3 and 4th generation Intel® Core™ i7/i5/i3, Celeron® & Pentium® processor (Haswell/ Haswell Refresh)
- 2 DDR3-1333/1600 MHz, max. up to 16 GB
- PCIe x16 Gen3 supported
- 4 SATA-600 with RAID 0,1, 5 and 10
- mSATA and SIM slots supported
- Intel® AMT 9.0 supported (Intel® C226)
- TPM 1.2 supported
- Triple view display (DP is a must to support triple view)



▲ Side view

Display

Chipset	Intel® HD 4000/ 5000 Graphics
Memory Size	Shared Memory
Display Interface	1 x HDMI (Intel® C226) 1 x DP 1 x VGA 1 x LVDS 24 bit dual channel

Packing List

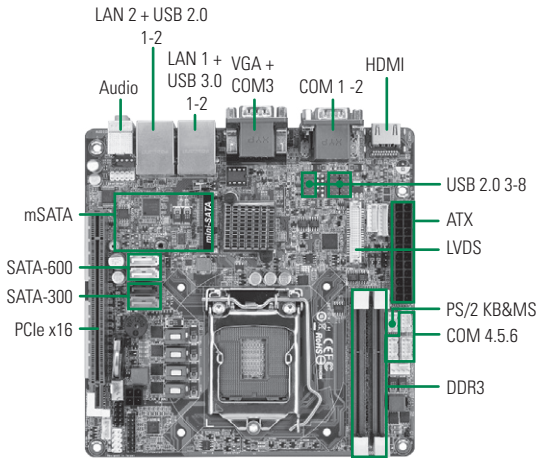
Standard	I/O Bracket, Driver CD, COM & SATA Cable
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Ordering Information

Standard	
MANO882	LGA1150 socket Intel® Xeon® E3-v3 and 4th generation Core™ i7/i5/i3, Celeron® & Pentium® (Haswell/Haswell Refresh) Mini-ITX SBC with Intel® C226, HDMI/DisplayPort/VGA/LVDS, Dual GbE LAN and USB 3.0
Optional	
MANO882-H81	LGA1150 socket Intel® 4th generation Core™ i7/i5/i3, Celeron® & Pentium® (Haswell/Haswell Refresh) Mini-ITX SBC with Intel® H81, DisplayPort/VGA/LVDS, Dual GbE LAN and USB 3.0

MANO881

LGA1150 Socket 4th Generation Intel® Core™ i7/i5/i3 & Celeron® Mini-ITX SBC with Intel® H81, HDMI/VGA/LVDS, Dual LAN and USB 3.0



System

CPU	LGA1150 socket 4th generation Intel® Core™ i7/i5/i3 & Celeron® processor (Haswell/Haswell Refresh)
System Memory	2 x 204-pin SO-DIMM dual channel DDR3-1333/1600, max. up to 16 GB
Chipset	Intel® H81
BIOS	AMI
SSD	N/A
Watchdog Timer	255 level, 1 - 255 sec
Expansion Interface	1 x PCIe x16 Gen2 1 x mSATA
Battery	Lithium 3V/220 mAh
Power Requirements	i7-4770S 3.1GHz 4 GB x 1 DDR3-1333, +12V @ 5.2A, -12V @ 0.1A, +5V @ 2.2A, +5VSB @ 0.2A, +3.3V @ 0.9A
Size/Weight	170 x 170 mm
Temperature	0° ~ +60°C (+32°F ~ +140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 PS/2 header supports KB & MS 3 x RS-232/422/485 (COM 1 - 3) 3 x RS-232 (COM 4 - 6) COM 1 - 6 with 5V/12V power select
SATA	2 x SATA-300 2 x SATA-600
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps supports WOL, PXE with Intel® i217LM (LAN1) 2nd port as 10/100/1000 Mbps supports WOL, PXE with Intel® i210 (LAN2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	2 x USB 3.0 8 x USB 2.0
TPM	N/A
Digital I/O	8 Channels programmable
SM BUS	N/A

Features

- LGA1150 socket 4th generation Intel® Core™ i7/i5/i3 & Celeron® processors (Haswell/Haswell Refresh)
- 2 DDR3-1333/1600MHz max. up to 16 GB
- PCIe x16 Gen2 supported
- 1 mSATA supported
- 2 SATA-600, 2 SATA-300 supported
- 2 USB 3.0 and 8 USB 2.0 ports
- Dual view display
- Display: HDMI/VGA/LVDS

Display

Chipset	Intel® HD 4000/5000 series Graphics
Memory Size	Shared Memory
Display Interface	1 x HDMI 1 x VGA 1 x LVDS

Packing List

Standard

I/O Bracket, Driver CD

Ordering Information

Standard

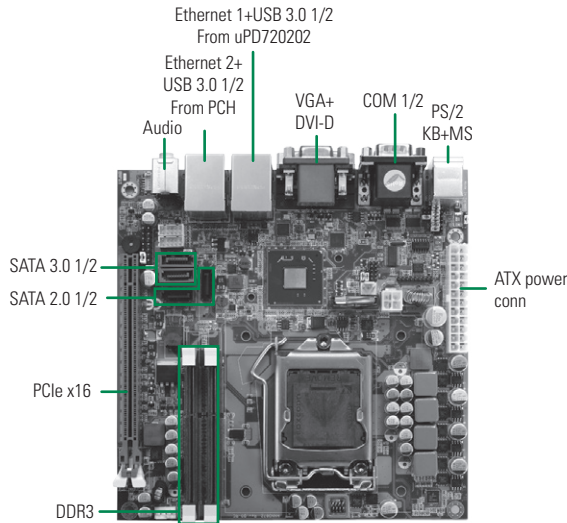
MANO881	LGA1150 socket mini ITX SBC with 4th generation Intel® Core™ i7/i5/i3 & Celeron®, USB 3.0, SATA 3.0 dual LAN, HDMI/VGA/ LVDS and mSATA
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Optional

593826A0000E	SATA signal Cable, L=500 mm
593M8810300E	COM PORT CABLE, P=2.0 L=300 mm
593M8810400E	USB cable with bracket, p=2.54 mm, L=200 mm
593M8400400E	Audio cable with bracket, p=2.54 mm, L=300 mm

MANO873

LGA1155 Socket Intel® Core™ i7/i5/i3 & Celeron® Mini-ITX SBC with Intel® Q77, VGA/DVI-D, Dual LANs and USB 3.0



System

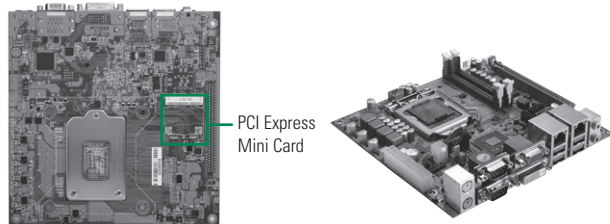
CPU	LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
System Memory	2 x 204-pin SO-DIMM dual channel DDR3-1333/1600 max. up to 16 GB
Chipset	Intel® Q77
BIOS	AMI UEFI BIOS with OA 3.0 built
SSD	N/A
Watchdog Timer	255 level, 1 – 255 sec
Expansion Interface	1 x PCIe x16 Gen3 1 x PCI Express Mini Card (Shared mSATA)
Battery	Lithium 3V/220 mAh
Power Requirements	i7-2700K: +5V @ 1.8A, +12V @ 6.1A, +5Vsb @ 0.3A, +3.3V @ 0.9A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x RS-232/422/485 (COM 1); with 5V/12V power 1 x RS-232 (COM 2) 1 x PS/2 keyboard and mouse
SATA	2 x SATA-300; 1 SATA-300 supports SATA DOM 2 x SATA-600 support RAID 0/1/5/10
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps support WOL, PXE with Intel® 82579LM/V (LAN 1) 2nd port as 10/100/1000 Mbps support WOL, PXE with Intel® 82583V (LAN 2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	4 x USB 3.0 (2 USB 3.0 from Intel® Q77; 2 USB 3.0 from Renesas uPD720202 with WinXP driver) 4 x USB 2.0
TPM	Infineon TPM1.2 SLB9635
Digital I/O	8 Channels (4-IN & 4-OUT)
SM BUS	N/A

Features

- LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processors
- 2 DDR3-1333/1600 MHz max. up to 16 GB memory capacity
- PCIe x16 Gen3 supported
- 2 SATA-600 and 2 SATA-300, support RAID 0/1/5/10
- 4 USB 3.0 ports
- Intel® iAMT 8.0 supported
- TPM 1.2 supported
- mSATA supported



▲ Rear view

▲ Side view

Display

Chipset	Intel® HD 2000/3000/4000 Graphics
Memory Size	Shared Memory
Display Interface	1 x VGA 1 x DVI-D

Packing List

Standard

User's manual/utility CD, cable, I/O Bracket

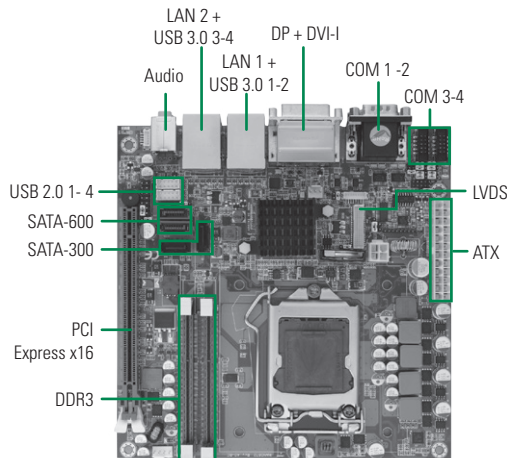
Ordering Information

Standard

MANO873	LGA1155 socket mini ITX SBC with 3rd generation Intel® Core™ i7/i5/i3 and Celeron®, VGA/DVI-D, 2 GbE LAN & USB 3.0
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MANO872

LGA1155 Socket 3rd Generation Intel® Core™ i7/i5/i3 & Celeron® Mini-ITX SBC with Intel® Q77, DisplayPort/DVI-I/LVDS, Dual LANs and USB 3.0



System

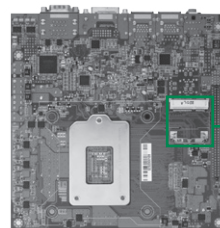
CPU	LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
System Memory	2 x 204-pin SO-DIMM dual channel DDR3-1333/1600 max. up to 16 GB
Chipset	Intel® Q77
BIOS	AMI UEFI BIOS with OA 3.0 built
SSD	N/A
Watchdog Timer	255 level, 1 ~ 255 sec.
Expansion Interface	1 x PCIe x16 Gen3 1 x PCI Express Mini Card
Battery	Lithium 3V/220 mAh
Power Requirements	i7-2700K: +5V @ 1.5A, +12V @ 6.8A, +5Vsb @ 0.5A, +3.3V @ 1A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

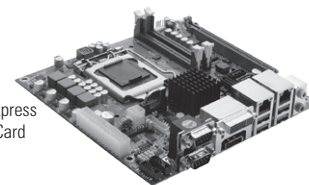
MIO	1 x RS-232/422/485 (COM 1) 3 x RS-232 (COM 2-4); COM 1 and COM 3 with 5V/12V power
SATA	2 x SATA-300, 2 x SATA-600, support RAID 0/1/5/10
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps support WOL, PXE with Intel® 82579LM/V (LAN 1) 2nd port as 10/100/1000 Mbps support WOL, PXE with Intel® 82583V (LAN 2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	4 x USB 3.0 4 x USB 2.0
TPM	Infineon TPM 1.2 SLB9635
Digital I/O	8 Channels (4-IN & 4-OUT)
SM BUS	N/A

Features

- LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
- 2 DDR3-1333/1600 MHz max. up to 16 GB memory capacity
- PCIe x16 Gen3 supported
- 2 SATA-600 and 2 SATA-300, support RAID 0/1/5/101
- 4 USB 3.0 ports
- Intel® iAMT 8.0 supported
- TPM 1.2 supported
- Triple view display



▲ Rear view



▲ Side view

Display

Chipset	Intel® HD 2000/3000/4000 Graphics
Memory Size	Shared Memory
Display Interface	1 x DisplayPort 1 x DVI-I 1 x LVDS

Packing List

Standard

User's manual/utility CD, cable, I/O bracket

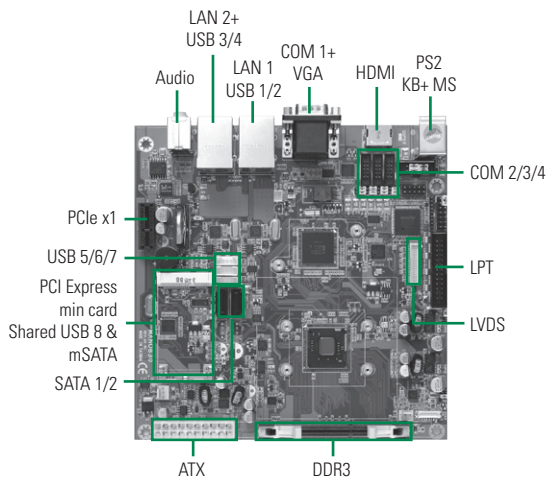
Ordering Information

Standard

MANO872	LGA1155 socket mini ITX SBC with 3rd generation Intel® Core™ i7/i5/i3 & Celeron®, DisplayPort/DVI-I/LVDS, 2 GbE LAN and 4 USB 3.0
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MANO830

Intel® Atom™ D2550/N2600 Mini-ITX SBC with Intel® NM10, VGA/HDMI/LVDS, PCI Express Mini Card, PCIe x1 and HD Audio



System

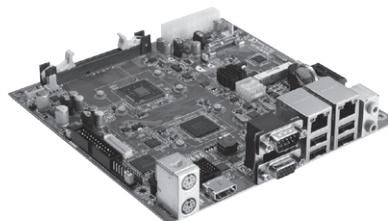
CPU	Intel® Atom™ Cedarview processor D2550 1.86 GHz/ N2600 1.6 GHz onboard
System Memory	1 x 204-pin SO-DIMM DDR3-1066 max. up to 4 GB (N2600 supports DDR3-800 max. up to 2 GB)
Chipset	Intel® NM10
BIOS	AMI UEFI BIOS
SSD	N/A
Watchdog Timer	Reset: 1 ~ 255 sec.
Expansion Interface	1 x PCIe x1 1 x PCI Express Mini Card (By jumper selection for mSATA or PCIe Mini Card)
Battery	Lithium 3V/220 mAH
Power Requirements	D2550: +5V @ 1.7A, +12V @ 1.5A, +5Vsb @ 0A, +3.3V @ 1.0A N2600: +5V @ 1.4A, +12V @ 1.4A, +5Vsb @ 0A, +3.3V @ 1.0A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 keyboard and mouse 4 x RS-232 (COM 1 ~ COM 4) with 5V/12V jumper selection 1 x LPT
SATA	2 x SATA-300
Ethernet	2 x Realtek RTL8111E for Gigabit LAN
Audio	HD Audio as Mic-in/Line-out with Realtek ALC892
USB	7 x USB 2.0
TPM	N/A
Digital I/O	8 Channels (4-IN & 4-OUT)
SM BUS	N/A

Features

- Intel® Atom™ Cedarview processor D2550 (1.86 GHz)/ N2600 (1.6 GHz) onboard
- 1 DDR3-1066 MHz max. up to 4 GB
- PCIe x1 supported
- 8 USB 2.0 ports
- 2 SATA-300 supported
- PCI Express Mini Card supported
- ATX power supported
- Dual view display
- Display: VGA/HDMI/LVDS



▲ Side view

Display

Display Chipset	Intel® GMA graphic core
Memory Size	Shared Memory
Display Interface	1 x VGA 1 x HDMI 1 x LVDS 24bit dual channel

Packing List

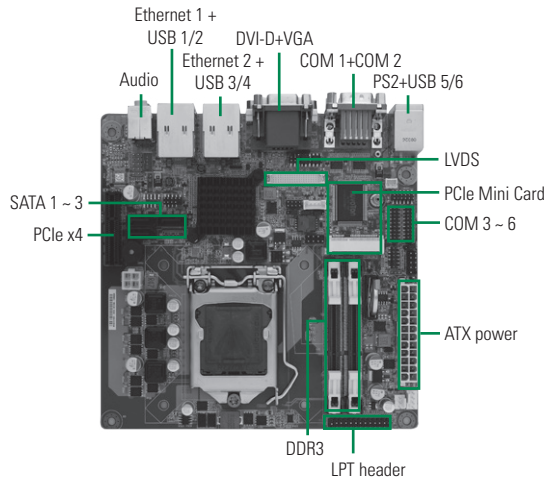
User's manual/utility CD, cable, I/O bracket

Ordering Information

Standard	
MANO830-D2550	Intel® Atom™ Cedar-view D2550 mini-ITX SBC with Intel® NM10, VGA/HDMI/LVDS, 2 GbE, HD Audio
MANO830-N2600	Intel® Atom™ Cedar-view N2600 mini-ITX SBC with Intel® NM10, VGA/HDMI/LVDS, 2 GbE, HD Audio

MANO861

LGA1155 Socket 3rd Generation Intel® Core™ i7/i5/i3 & Celeron® Mini-ITX SBC with Intel® H61, VGA/DVI-D/LVDS, Dual LANs and HD Audio



System

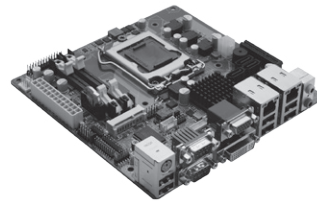
CPU	LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 and Celeron® processors
System Memory	2 x 204-pin SO-DIMM dual channel DDR3-1333/1600 max. up to 16 GB
Chipset	Intel® H61
BIOS	AMI UEFI BIOS
SSD	N/A
Watchdog Timer	255 levels, 1 ~ 255 sec.
Expansion Interface	1 x PCIe x4 1 x PCI Express Mini Card (Shared USB & mSATA)
Battery	Lithium 3V/ 220 mAH
Power Requirements	+5V @ 1.7A, +12V @ 5.9A, +5Vsb @ 0.1A, +3.3V @ 1.0A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x RS-232/422/485 (COM 1) 5 x RS-232 (COM 2~6)
SATA	3 x SATA-300
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps supports WOL, PXE with Realtek 8111E (LAN1) 2nd port as 10/100/1000 Mbps supports WOL, PXE with Realtek 8111E (LAN2)
Audio	HD audio as MIC-in/Line-out with Realtek ALC892
USB	6 x USB 2.0
TPM	N/A
SMBus	N/A
Digital IO	8 Channels (4-IN & 4-OUT)

Features

- LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
- Intel® H61 chipset
- 2 DDR3-1066/1333 MHz max. up to 16 GB
- 1 PCIe x4 supported
- 3 SATA-300 interfaces
- 6 USB 2.0 ports
- 6 COM ports
- Dual view display
- Display: VGA/DVI-D/LVDS



▲ Side view

Display

Chipset	Intel® Integrated Graphics
Memory Size	Shared memory
Display Interface	1 x VGA 1 x DVI-D 1 x LVDS

Packing List

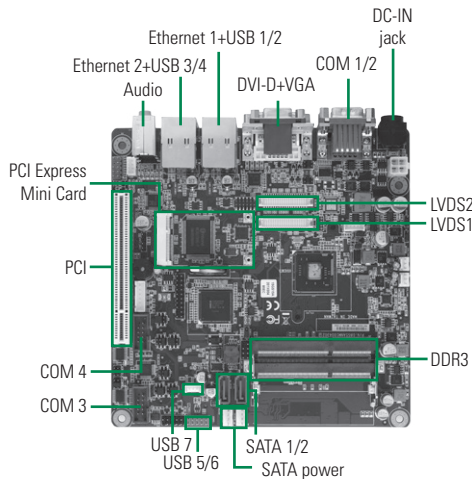
User's manual/utility CD, cable

Ordering Information

Standard	
MANO861	LGA1155 socket mini ITX SBC with 3rd generation Intel® Core™ i7/i5/i3 & Celeron®, VGA/DVI-D/LVDS, 2 GbE LAN, 6 COM and audio
Optional	
5938M861010E	COM Port Cable, 10x2P, P=2.0 mm, L=300 mm

MANO831

Intel® Atom™ Processor D2550 Mini-ITX SBC with Intel® NM10 Chipset, VGA/DVI-D/LVDS1/LVDS2, Dual LAN and HD Audio



System

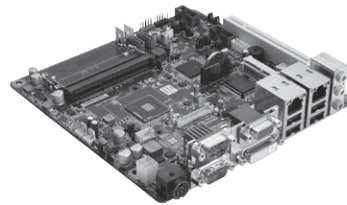
CPU	Intel® Atom™ processor D2550 (1.86 GHz)
System Memory	2 x 204-pin SO-DIMM, support DDR3-1066 max. up to 4 GB
Chipset	Intel® NM10
BIOS	AMI 16Mb flash ROM
SSD	N/A
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	1 x PCI 1 x mini PCIe
Battery	Lithium 3V/220 mAh
Power Requirements	+12V @ 1.6A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	2 x RS-232 (COM 1 ~ 2) 2 x RS-232/422/485 (COM 3 ~ 4)
SATA	2 x SATA-300
Hardware Monitoring	Detect CPU/system temperature, voltage and support Smart fan control
Ethernet	2 x Realtek RTL8111E for Gigabit LAN
Audio	HD Codec audio as MIC-in/Line-in/Line-out speaker-out with Realtek ALC892
USB	7 x USB 2.0
SMBus	N/A
Digital I/O	8 Channels (4-IN & 4-OUT)
TPM	Infineon TPM 1.2 SLB9635

Features

- Intel® Atom™ processor D2550 (1.86 GHz) onboard
- 2 DDR3-1066 MHz max. up to 4 GB
- Dual view display via DVI-D/VGA/LVDS1/LVDS2
- PCI/Mini PCIe expansion slot
- 2 SATA-300 interfaces
- 7 USB 2.0 ports
- TPM 1.2 supported



▲ Side view

Display

Chipset	Intel® Graphics Media Accelerator (GMA) 3650
Memory Size	Share memory
Display interface	1 x VGA 1 x DVI-D 1 x LVDS1 (single channel) 1 x LVDS2 (dual channel)

Packing List

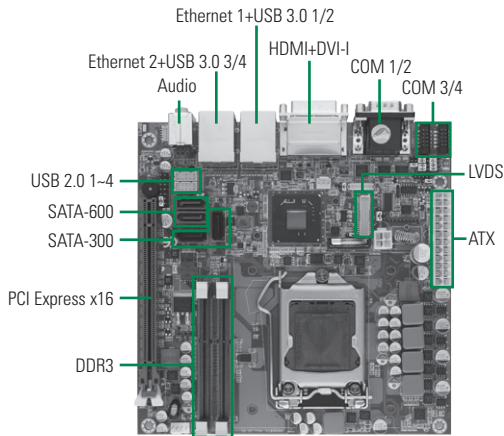
User's manual/utility CD, cable

Ordering Information

Standard	
MANO831	Mini ITX SBC with Intel® Atom™ D2550, VGA/DVI-D/LVDS, 2 GbE LAN, 4 COM, 7 USB and HD audio
Optional	
59460642100E	COM port Cable, 5 x 2P, P=2.54 mm, L=300 mm
594F2112100E	COM port DB9 to 5x2P P=2.54 L30cm w/BK
594F2112110E	COM portx2 DB9 to 5x2P P=2.54 L30cm w/BK

MAN0871

Mini-ITX SBC with LGA1155 Socket Intel® Core™ i7/i5/i3 & Celeron® with Intel® Q77, HDMI/DVI-I/LVDS, Dual LANs and USB 3.0



System

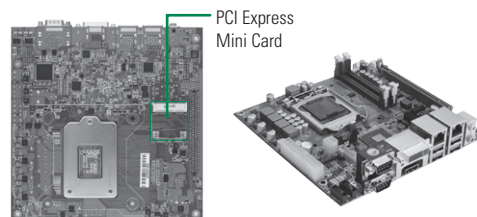
CPU	LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
System Memory	2 x 204-pin DDR3-1333/1600 SO-DIMM dual channel max. up to 16 GB
Chipset	Intel® Q77
BIOS	AMI UEFI BIOS with OA 3.0 built
SSD	N/A
Watchdog Timer	255 level, 1 ~ 255 sec.
Expansion Interface	1 x PCIe x16 Gen3 1 x PCI Express Mini Card
Battery	Lithium 3V/220 mAh
Power Requirements	Intel® Core™ i7-2700K 3.5 GHz, 8 GB DDR3 1333 x 2 +5V @ 1.5A, +12V @ 6.8A, -12V @ 0.1A, +5VSB @ 0.5A, +3.3V @ 1.0A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0°C ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x RS-232/422/485 (COM 1) 3 x RS-232 (COM 2-4) COM 1 and COM 3 with 5V/12V power
SATA	2 x SATA-300; 1 SATA-300 supports SATA DOM 2 x SATA-600, support RAID 0/1
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps supports WOL, PXE with Intel® 82579LM/V (LAN 1) 2nd port as 10/100/1000 Mbps supports WOL, PXE with Intel® 82583V (LAN 2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC662
USB	4 x USB 3.0 4 x USB 2.0
TPM	Infineon TPM 1.2 SLB9635
SMBUS	N/A
Digital IO	8 channels (4-IN & 4-OUT)

Features

- LGA1155 socket 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
- 2 DDR3-1333/1600 MHz max. up to 16 GB
- PCIe x16 Gen 3 supported
- 2 SATA-600 and 2 SATA-300, support RAID 0/1/5/10
- 4 USB 3.0 ports
- Intel® AMT 8.0 supported
- TPM 1.2 supported
- Dual view displays



▲ Rear view

▲ Side view

Display

Chipset	Intel® HD 4000/2500 Graphics
Memory Size	Shared memory
Display Interface	1 x HDMI 1 x DVI-I 1 x LVDS

Packing List

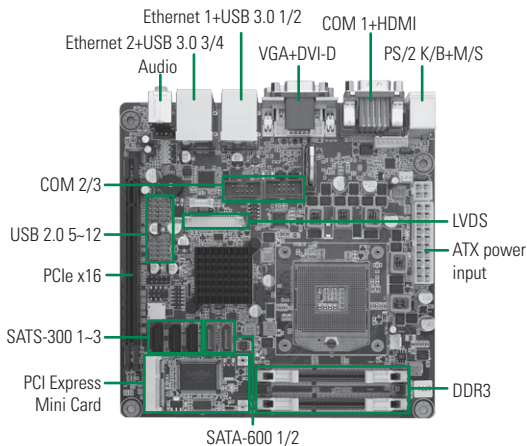
User's manual/utility CD, cable

Ordering Information

Standard	
MAN0871	LGA1155 socket mini ITX SBC with 3rd generation Intel® Core™ i7/i5/i3 & Celeron®, HDMI/DVI-I/LVDS, 2 GbE LANs and USB 3.0

MANO870

Mini-ITX SBC with Socket G2 3rd Generation Intel® Core™ i7/i5/i3 & Celeron® Intel® QM77, HDMI/DVI-D/VGA/LVDS, PCI Express Gen 3, SATA-600, Dual LANs and HD Audio



System

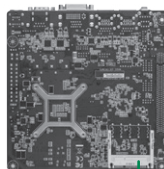
CPU	Socket G2 (rPGA 988B) for 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
System Memory	2 x 204-pin DDR3-1333/1600 SO-DIMM dual channel max. up to 16 GB
Chipset	Intel® QM77
BIOS	AMI UEFI BIOS with OA 3.0 built
SSD	1 x CFast™
Watchdog Timer	255 level, 1 ~ 255 sec
Expansion Interface	1 x PCIe x16 Gen 3 1 x PCI Express Mini Card
Battery	Lithium 3V/220 mAh
Power Requirements	Intel® Core™ i5-3610ME 2.7 GHz, 4 GB DDR3 1333 x 2 +5V @ 1.4A, +12V @ 6.7A, -12V @ 0.1A, +5VSB @ 0.4A, +3.3V @ 1.0A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0°C ~ +60°C (32°F ~ 14°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 keyboard & mouse 3 x RS-232 (COM 1-3) with 5V/12V power
SATA	2 x SATA-600 3 x SATA-300 support RAID 0/1/5/10
Hardware Monitoring	Detect CPU/System temperature, voltage and fan speed
Ethernet	1st port as 10/100/1000 Mbps supports WOL, PXE with Intel® 82579LM (LAN1) 2nd port as 10/100/1000 Mbps supports WOL, PXE with Intel® 82583V (LAN2)
Audio	HD Audio as Mic-in/Line-out with Realtek ALC892
USB	4 x USB 3.0 8 x USB 2.0
TPM	Infineon TPM 1.2 SLB9635
Digital I/O	8 Channels (4-IN & 4-OUT)
SM BUS	N/A

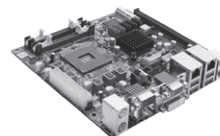
Features

- Socket G2 (rPGA 988B) for 3rd generation Intel® Core™ i7/i5/i3 & Celeron® processor
- 2 DDR3-1333/1600 MHz max. up to 16 GB
- PCIe x16 Gen 3 supported
- 4 USB 3.0 ports
- 2 SATA-600 and 3 SATA-300, support RAID 0/1/5/10
- Intel® AMT 8.0 supported
- TPM 1.2 supported
- HDMI, DVI-D, LVDS and VGA with dual view supported



▲ Rear view

CFast™



▲ Side view

Display

Chipset	Intel® Integrated GMA
Memory Size	Shared memory
Display Interface	1 x HDMI 1 x DVI-D 1 x VGA 1 x LVDS

Packing List

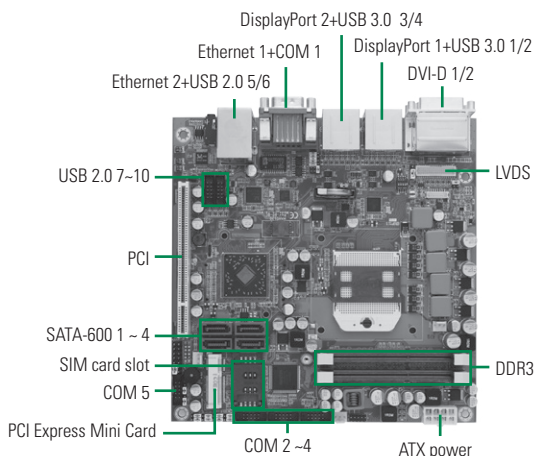
User's manual/utility CD, cable

Ordering Information

Standard	
MANO870	Socket G2 mini ITX SBC with 3rd generation Intel® Core™ i7/i5/i3 & Celeron®, HDMI/DVI-D/VGA/LVDS, PCI Express Gen 3, SATA-600, 2 GbE LANs and audio
Optional	
59460642100E	COM port cable, 5x2P, P=2.54 mm, L=300 mm
594F2112100E	COM port DB9 to 5x2P, P=2.54 mm, L=300 mm w/BK
594F2112110E	COM port x 2 DB9 to 5x2P, P=2.54 mm, L=300 mm w/BK

MANO111

AMD Embedded R-Series APU Mini-ITX SBC with AMD A75, DDR3, USB 3.0, LVDS/ DisplayPort/DVI-D and Dual LANs



System

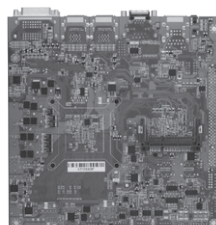
CPU	FS1r2 socket AMD Embedded R-Series APU
System Memory	2 x 204-pin SO-DIMM DDR3-1333/1600 max. up to 16 GB
Chipset	AMD A75
BIOS	AMI UEFI BIOS with OA 3.0 built
SSD	CFast™
Watchdog Timer	255 level, 1 ~ 255 sec
Expansion Interface	PCI, PCIe Mini Card, SIM card
Battery	Lithium 3V/220 mAH
Power Requirements	AMD R-Series R-464L 2.3 GHz, 8 GB DDR3 1600 x 2 +12V @ 3.4A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

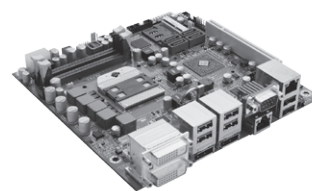
MIO	1 x RS-232/422/485 (COM 1); with +5V/+12V. 4 x RS-232 (COM 2-5); with +5V/+12V.
SATA	4 SATA-600 with RAID 0, 1, 5 and 10
Hardware Monitoring	Detect CPU/system temperature, voltage and support Smart fan control
Ethernet	1st port as 10/100/1000Mbps supports wake-on-LAN PXE with Realtek RTL8111E 2nd port as 10/100/1000Mbps supports wake-on-LAN, PXE and DUSH with Realtek RTL8111DP
Audio	Supports 2.1channel audio lineout via HD Codec ALC662
USB	4 x USB 3.0 6 x USB 2.0
TPM	1.2
SMBus	N/A
Digital IO	8 channels (4-IN & 4-OUT)

Features

- FS1r2 Socket AMD Embedded R-Series APU
- AMD A75 FCH
- Integrated graphics AMD Radeon HD 7 series
- DDR3 1333/1600 Dual channel SO-DIMM max. up to 16 GB
- 4 SATA-600 support RAID 0,1,5,10
- 4 USB 3.0 ports
- 4 independent displays
- DisplayPort 2 supports multi-stream
- TPM 1.2 supported
- DASH Remote Management Supported



▲ Rear view



▲ Side view

Display

Chipset	Integrated Gfx (AMD Radeon HD7000 series)
Memory Size	Shared memory
LCD Interface	18/24 bit Dual channel LVDS
Display Interface	1 x LVDS 2 x DisplayPort 2 x DVI-D

Packing List

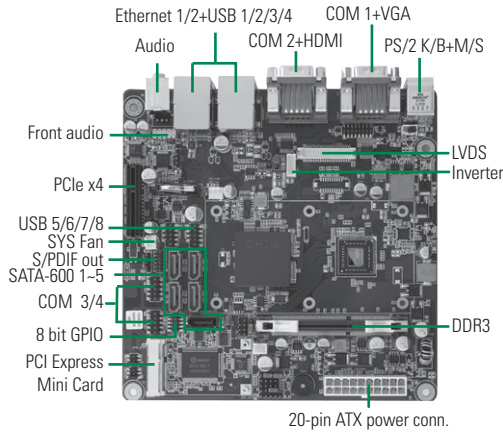
User's manual/utility CD, cable

Ordering Information

Standard	
MANO111	Mini ITX SBC with AMD R-Series APU, DDR3, LVDS/ DisplayPort/DVI-D, 5 COM, 4 USB 3.0 and 2 GbE LAN

MANO120

AMD G-Series APU Mini-ITX SBC with AMD A55E, HDMI/VGA/LVDS, Dual LAN and SATA-600



System

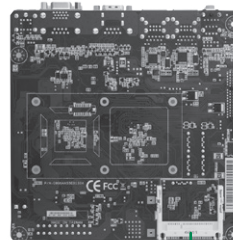
CPU	AMD G-Series APU T56N 1.65 GHz dual core onboard
System Memory	1 x 204-pin SO-DIMM supports DDR3-1066/1333 max. up to 4 GB
Chipset	AMD A55E
BIOS	AMI EFI 16Mb SPI
SSD	1 x CFast™
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	1 x PCIe x4 slot 1 x PCIe Mini Card 1 x CFast™
Battery	Lithium 3 V/ 220 mAh
Power Requirements	+5V @ 1.65A, +12V @ 1.7A, -12V @ 0.06A, +5VSB @ 0.09A, +3.3V @ 0.41A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Relative Humidity	10% ~ 95% relative humidity, non-condensing

I/O

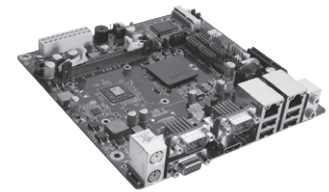
MIO	1 x PS/2 keyboard 1 x PS/2 mouse 4 x RS-232 (with 2 powered COM)
SATA	5 x SATA-600
Hardware Monitoring	Detect CPU/system temperature, voltage and support Smart fan control
Ethernet	2 ports as 10/100/1000 Mbps support Wake-on-LAN, PXE Boot ROM with Realtek RTL8111DL
Audio	HD Codec audio as MIC-in/Line-out 2 CH support multiple streaming with Realtek ALC892 Speaker-out 3W x 2 with TPA3005D2 amplifier Front Audio pin header
USB	8 x USB 2.0
SMBus	System Management Bus for advanced monitoring/control interface
Digital I/O	8 channels (4-IN & 4-OUT)

Features

- AMD G-Series APU T56N 1.65 GHz
- AMD A55E FCH
- 1 DDR3-1066/1333 MHz max. up to 4 GB
- 18 bit single channel LVDS
- Dual display combination with VGA, HDMI and LVDS
- PCIe x4 slot and PCI Express Mini Card
- SATA-600 supported
- AT/ATX mode supported



▲ Rear view CFast



▲ Side view

Display

Chipset	AMD Radeon™ HD6320 Graphic engine
Memory Size	2 GB
Display Interface	1 x HDMI 1 x VGA 1 x LVDS

Packing List

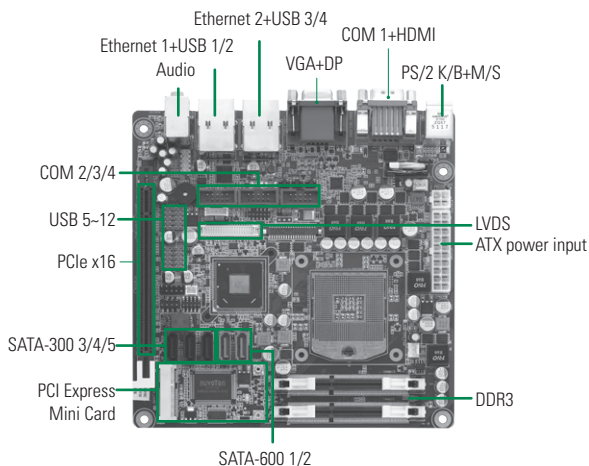
User's manual/utility CD, SATA cable and I/O bracket

Ordering Information

Standard	
MANO120VGGA-T56N	AMD G-Series APU T56N mini ITX SBC with A55E FCH, LVDS/HDMI/VGA, 2 GbE LAN, HD audio, 4 COM, 8 USB ports and CFast™

MANO860

Socket G2 Intel® Core™ i7/i5/i3 & Celeron® Mini-ITX SBC with Intel® QM67, DisplayPort/HDMI/VGA/LVDS, SATA-600, Dual LAN and RAID



System

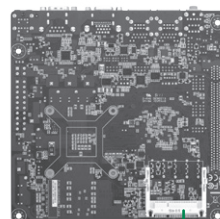
CPU	Socket G2 (rPGA 988B) for 2nd generation Intel® Core™ i7/i5/i3 and Celeron® processor
System Memory	2 x 204-pin SO-DIMM support DDR3-1066/1333 max. up to 16 GB
Chipset	Intel® QM67
BIOS	AMI UEFI BIOS
SSD	1 x CFast™
Watchdog Timer	255 levels, 1-255 sec.
Expansion Interface	1 x PCIe x16 Gen. 2 1 x PCI Express Mini Card
Battery	Lithium 3 V/ 220 mAh
Power Requirements	+12V @ 4.86A, +5V @ 1.28A, +3.3V @ 1.05A, +5VSB @ 0.36A, -12V @ 0.41A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

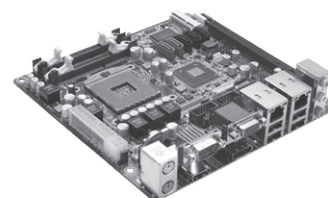
MIO	1 x PS/2 keyboard 1 x PS/2 mouse 4 x RS-232 (COM 2/3/4); with +5V/+12V powered
SATA	2 x SATA-600, 3 x SATA-300, support RAID 0/1/5/10
Hardware Monitoring	Detect CPU/system temperature, voltage and support Smart fan control
Ethernet	1st port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® 82579LM 2nd port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® 82583V
Audio	HD Codec audio as MIC-in/Line-in/Line-out speaker-out with Realtek ALC892
USB	12 x USB 2.0
TPM	Infineon SLB9625 for trusted platform
SMBus	System Management Bus for advanced monitoring/control
Digital I/O	8 channels (4-IN & 4-OUT)

Features

- Socket G2 (rPGA 988B) 2nd generation Intel® Quad/ Dual Core™ i7/i5/i3 & Celeron® processor
- 2 DDR3-1066/1333 MHz, max. up to 16 GB
- PCIe x16 Gen. 2 supported
- 2 x SATA-600, 3 x SATA-300, support RAID 0/1/5/10
- Intel® iAMT supported
- TPM supported
- Display: DisplayPort/HDMI/VGA/LVDS



▲ Rear view



▲ Side view

CFast

Display

Chipset	Intel® HD Graphics 2000/3000
Memory Size	1.7 GB
Display Interface	1 x DP 1 x HDMI 1 x LVDS 1 x VGA

Packing List

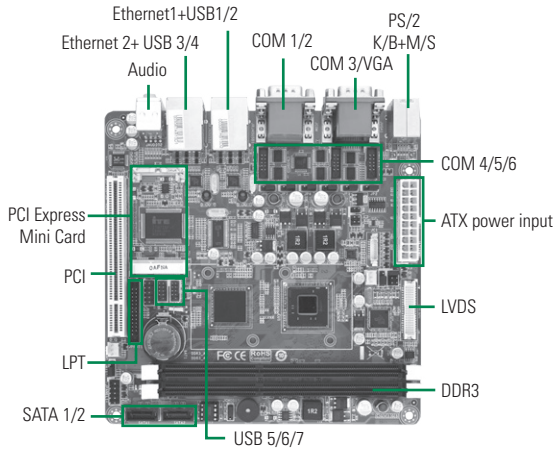
User's manual/utility CD, SATA cable, I/O bracket

Ordering Information

Standard	
MANO860PHGGA (P/N: E38M860100)	Socket G2 mini ITX SBC with Intel® Core™ i7/i5/i3, VGA/DisplayPort/HDMI/LVDS, 2 GbE LAN, HD audio, 4 COM, 5 SATA and CFast™
Optional	
59460642100E	COM Port Cable, 5 X 2P, P=2.54 mm, L=300 mm
594F2112100E	COM Port DB9 to 5x2P, P=2.54 mm, L=300 mm w/BK
594F2112110E	COM Portx2 DB9 to 5x2P, P=2.54 mm, L=300 mm w/BK

MANO825

Intel® Atom™ D525 Processor Mini-ITX SBC with Intel® NM10 Chipset, VGA/LVDS, Dual LANs and 6 COM



System

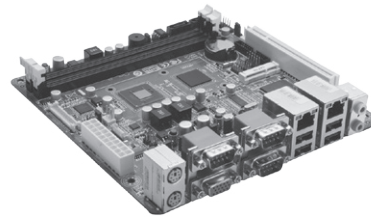
CPU	Intel® Atom™ processor D525 1.8 GHz onboard
System Memory	2 x 240-pin DIMM support DDR3-800 max. up to 4 GB
Chipset	Intel® NM10
BIOS	AMI
SSD	N/A
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	1 x PCI 1 x PCI Express Mini card
Battery	Lithium 3 V/ 220 mA
Power Requirements	Intel® Atom™ D525 Dual Core Pineview-D, 2 GB DDR3 x 2 Max. RMS: +5V @ 1.6A, +12V @ 0.6A, -12V @ 0.1A, +5VSB @ 0.1A, +3.3V @ 1.8A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 keyboard 1 x PS/2 mouse 6 x RS-232; with +5V/+12V powered by jumper selection 1 x LPT
SATA	2 x SATA-300
Hardware Monitoring	Detect CPU/system temperature, voltage and Smart fan control
Ethernet	2 ports as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Realtek 8111E
Audio	HD Codec audio as MIC-in/Line-out with Realtek ALC662
USB	7 x USB 2.0
SMBus	System Management Bus for advanced monitoring/control
Digital IO	8 channels (4-IN & 4-OUT)

Features

- Intel® Atom™ processor D525 1.8 GHz onboard
- 2 DDR3-800 MHz 240-pin DIMM max.up to 4 GB
- DualView with VGA & 24-bit LVDS
- 2 SATA-300 supported
- 6 COM ports supported
- PCI slot and PCI Express Mini Card



▲ Side view

Display

Chipset	Intel® GMA3150 graphics core
Memory Size	Intel® DVM 4.0 compliant
Display Interface	1 x VGA 1 x LVDS; 18/24-bit single channel

Packing List

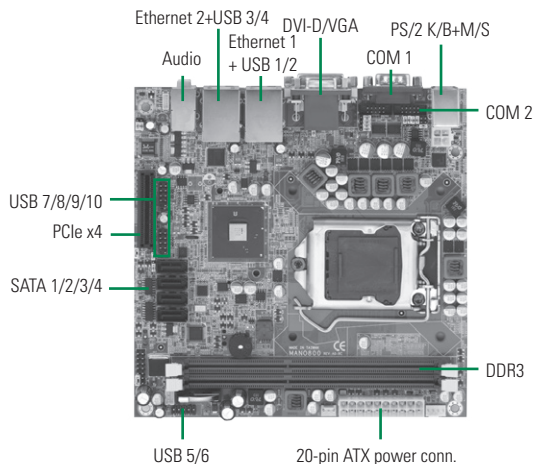
User's manual/utility CD, SATA cable

Ordering Information

Standard	
MANO825VGA-D525	Mini ITX SBC with Intel® Atom™ processor D525, VGA/LVDS, 2 GbE LAN, 6 COM, HD audio and PCI expansion
Optional	
594M8252110E	COM Port Cable, 5x2P, P=2.0 mm, L=200 mm

MANO800

LGA1156 Intel® Core™ i7/i5/i3 & Pentium® Mini-ITX SBC with Intel® Q57, DVI-D/VGA, PCI Express x4 and 4 SATA RAID



System

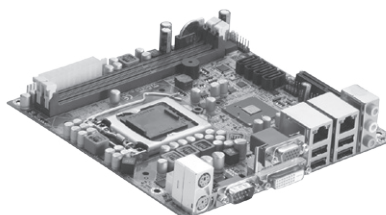
CPU	LGA1156 socket for Intel® Core™ i7/i5/i3 & Pentium® processor with FSB 1066/1333 MHz
System Memory	2 x 240-pin DIMM support DDR3-1066/1333 max. up to 8 GB
Chipset	Intel® Q57
BIOS	AMI UEFI BIOS
SSD	1 x CompactFlash™ type-II or 1 x CFast™ (optional)
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	1 x PCIe x4
Battery	Lithium 3 V/ 220 mA/H
Power Requirements	Intel® Core™ i5-660 @ 3.33 GHz, 2 GB DDR3 Max. RMS: +5V_SBY @ 0.022A, +3.3V @ 0.845A, +5V @ 1.252A, +12V @ 2.495A, -12V @ 0.034A
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Relative Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x PS/2 keyboard 1 x PS/2 mouse 1 x RS-232/422/485 (COM 1); with +5V/+12V powered 1 x RS-232 (COM 2); with +5V/+12V powered
SATA	4 x SATA-300 with RAID 0/1/5/10
Hardware Monitoring	Detect CPU/system temperature, voltage and support Smart fan
Ethernet	1st port as 10/100/1000Mbps supports Wake-on-LAN, RPL/PXE Boot ROM with Intel® 82578DM 2nd port as 10/100/1000Mbps supports Wake-on-LAN, RPL/PXE Boot ROM with Intel® 82583V
Audio	HD Codec audio as MIC-in/Line-in/Line-out speaker-out with Realtek ALC662
USB	10 x USB 2.0
SMBus	System Management Bus for advanced monitoring/control
Digital IO	8 channels (4-IN & 4-OUT)

Features

- LGA1156 socket for Intel® Core™ i7/i5/i3 & Pentium® processor with FSB 1066/1333 MHz
- 2 DDR3-1066/1333 MHz max. up to 8 GB
- 4 SATA-300 with RAID 0, 1, 5, 10 supported
- CompactFlash™ type-II or CFast™ (optional)
- Display: DVI-D/VGA



▲ Side view

Display

Chipset	Intel® HD Graphics
Memory Size	Intel® DVM T 5.0 compliant
Display Interface	1 x VGA 1 x DVI-D

Packing List

Standard

Quick installation guide, user's manual/utility CD, cable

Cable

Part Number	Description	Qty
593826A0000E	SATA signal cable 500 mm	1

Ordering Information

Standard

MANO800DGGA CF w/ CF (P/N: E38M800100)	LGA1156 mini ITX SBC with DVI-D/VGA, 2 GbE LAN, HD audio, 2 COM ports, 4 SATA and CompactFlash™
MANO800DGGA (P/N: E38M800102)	LGA1156 mini ITX SBC with DVI-D/VGA, 2 GbE LAN, HD audio, 2 COM ports, 4 SATA

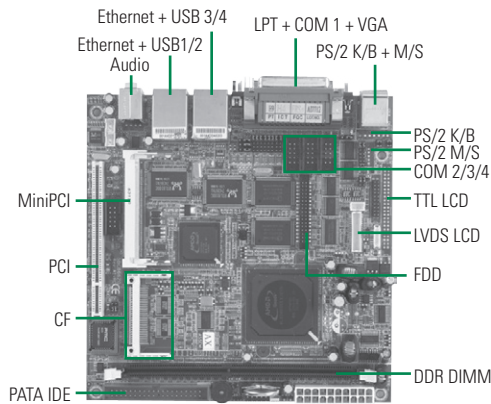
Optional

MANO800DGGA (P/N: E38M800101)	LGA1156 mini ITX SBC with DVI-D/VGA, 2 GbE LAN, HD audio, 2 COM ports, 4 SATA and CFast™
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* Discrete graphic card is necessary for display if the chosen CPU doesn't have integrated graphics support.

SBC86620

AMD LX800 Mini-ITX SBC with Dual LANs,
4 COM and USB 2.0



System

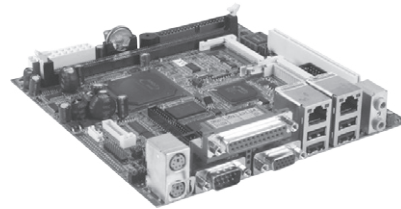
CPU	AMD LX800 processor onboard
System Memory	1 x 184-pin DIMM supports DDR-333/400 max. up to 1 GB
Chipset	AMD LX800 + CS5536AD
BIOS	Phoenix-Award
SSD	1 x CompactFlash™ type-II
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	1 x PCI for 32-bit PCI supports 2 bus masters 1 x MiniPCI
Battery	Lithium 3V/220 mAh
Power Requirements	AMD LX800, 1 GB DDR Max. RMS: +5V_SBY @ 0.07A, +3.3V @ NA, +5V @ 1.255A, +12V @ 0.046A, -12V @ NA
Size	170 x 170 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Relative Humidity	10% ~ 95% relative humidity, non-condensing

Архангельск (8182)63-90-72
Астана +7(7172)727-132
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48

Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41

Features

- Low Power Fanless AMD LX800
- Dual 10/100 Mbps Ethernet supported
- 4 COM and 4 USB 2.0 ports
- 1 PCI slot and MiniPCI socket for expansion



▲ Side view

Display

Chipset	AMD LX integrated
Memory Size	Max. up to 254 MB
Display Interface	1 x VGA 1 x LCD interface for TTL (Max up to 24-bit) or LVDS (18/24-bit single channel)

Packing List

Standard		
Quick installation guide, user's manual/utility CD, cable		
Cable		
Part Number	Description	Qty
59380402010E	COM port cable w/ bracket	1
593836A0010E	40-40-40 IDE cable L=310+155 mm	1

I/O

MIO	1 x IDE; PATA-100 1 x FDD 1 x PS/2 keyboard 1 x PS/2 mouse 3 x RS-232 (COM 2/3/4); with +5V/+12V powered 1 x RS-232/422/485 (COM 1); with +5V/+12V powered 1 x LPT; with SPP/EPP/ECP supported
SATA	N/A
Hardware Monitoring	Detect CPU/system temperature and voltage
Ethernet	2 ports as 10/100 Mbps support Wake-on-LAN, RPL/PXE Boot ROM with Realtek RTL8100C
Audio	AC'97 Codec audio as MIC-in/Line-out/Speaker-out with Realtek ALC203
USB	4 x USB 2.0
SMBus	System Management Bus for advanced monitoring/control interface
Digital I/O	8 channels (4-IN & 4-OUT)

Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
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Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
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