

MXE-5600 Series

9th Gen Intel® Xeon®, Core™ i7/i3 and 8th Gen Intel® Core™ i5 Processor-Based Embedded Fanless Computer

Features

- 9th Gen Intel® Xeon®, Core™ i7/i3 and 8th Gen Intel® Core™ i5 BGA processor and Mobile Intel® CM246 Chipset
- Dual SODIMMs for up to 32GB DDR4 non-ECC/ ECC memory
- Rich I/O: 2x DP++, HDMI, 2x GbE, 6x COM, 8-ch DI, 8-ch DO, TPM2.0
- 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 4x USB 2.0
- Rich storage: 2x 2.5" SATA 6 Gb/s, CFAST, M.2 2280
- Embedded expansion: Mini PCIe, M.2 3042, 2x USIM
- Front accessible I/O and adaptive Function Module v.2 option
- 5x user defined LED



Software Support

- Win10 IoT Enterprise CBB 64bit
- Linux Ubuntu 18.04

Ordering Information

Model	CPU	PCH
MXE-560X/M4G	Intel® Xeon® E-2276ME	CM246
MXE-5601/M4G	Intel® Core™ i7-9850HE	CM246
MXE-5602/M4G	Intel® Core™ i5-8400H	CM246
MXE-5603/M4G	Inte® Core™ i3-9100HL	CM246

Optional Accessories

- **2.5" SSD, HDD, M.2, CFAST Storage**
- **Wireless Module**
Wi-Fi, BT, 3G, 4G LTE, LoRa wireless kit (w/ antenna)
- **160W AC/DC Adapter (P/N: 31-62120-0010)**

Specifications

Model Name	MXE-560X	MXE-5601	MXE-5602	MXE-5603
System Core				
Processor	Intel® Xeon® E-2276ME 45W	Intel® Core™ i7-9850HE 45W	Intel® Core™ i5-8400H 45W	Intel® Core™ i3-9100HL 25W
Core	6	6	4	4
Base Freq.	2.8 GHz	2.7 GHz	2.5 GHz	1.6 GHz
MAX Turbo Freq.	4.5 GHz	4.4 GHz	4.2 GHz	2.9 GHz
Chipset	Mobile Intel® CM246			
Memory	4GB DDR4 2400MHz, dual SODIMMs, up to 32GB Optional: 8, 16, 32GB DDR4 ECC 2400MHz (Xeon® and i3 support ECC)			
I/O Interfaces				
Display	2x DP++ and 1x HDMI			
Ethernet	2x Intel® GbE: 1x i211AT + 1x i219 iAMT support			
Serial Ports	COM1/2: RS-232/422/485, COM3/4/5/6: RS-232			
USB	2x USB 3.1 Gen 2 + 2x USB 3.1 Gen 1 + 4x USB 2.0, 1x internal USB 2.0 dongle			
Audio	Line-out, Mic-in (Optional: speaker-out)			
Mini PCIe	1x Full size (USB 2.0 + PCIe)			
M.2	1x socket 2, key B+M or B, 2280/3042: USB 3.1 Gen 1, SATA 6 Gb/s and PCIe x2			
USIM	2 (1 for Mini PCIe and 1 for M.2)			
DI/O	8-ch DI and 8-ch DO			
I ² C	2 (3.3V & 5V)			
TPM 2.0	Supported			
Storage Devices				
2.5" SATA	2x internal (supports RAID 0, 1)			
CFast	1x Type II			
Mechanical				
Dimensions	210 (W) x 240 (D) x 86 (H) mm (8.27" x 9.45" x 3.39")			
Weight	3.6 kg (8 lbs)			
Mounting	Wall mount			
Power Supply				
DC Input	9 to 32V (± 10% tolerance)			
AC Input	Optional: 160W AC/DC adapter			
Environmental				
Operating Temperature	Standard: 0°C to 50°C (32°F to 122°F) w/ airflow			
	Extended temperature (w/ ind. storage, airflow)			
	-20°C to 70°C (-4°F to 158°F) (only support single SODIMM) -20°C to 60°C (-4°F to 140°F) (w/ dual SODIMMs)			
Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excluding storage)			
Humidity	~95% @ 40°C (104°F) (non-condensing)			
Vibration	Operating: 5 Grms, 5-500 Hz, 3 axes (w/ SSD/CFast)			
	Operating: 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)			
Shock	Operating: 100 Grms, half sine 11ms duration (w/ SSD/CFast)			
ESD	Contact ±8KV, Air ±15KV			
EMC	EN61000-6-4/-2, CE & FCC Class B with validated AC/DC adapter			
Safety	UL/cUL, CB			

MXC-6600 Series

9th Gen Intel® Xeon®, Core™ i7/i3 and 8th Gen Intel® Core™ i5 Processor-Based Embedded Fanless Computer

Features

- 9th Gen Intel® Xeon®, Core™ i7/i3 and 8th Gen Intel® Core™ i5 Processor-Based Embedded Fanless Computer
- Dual SODIMMs for up to 32GB DDR4
- Rich I/O: 2x DP++, 1x HDMI, 2x GbE, 6x COM, 8-ch DI, 8-ch DO, TPM 2.0
- 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 4x USB 2.0
- Rich storage: up to 4 internal 2.5" SATA 6 Gb/s ports with RAID 0/1/5/10 support, CFAST, M.2 2280
- Embedded expansion: 1x Mini PCIe, 1x M.2 3042, 2x USIM
- Front accessible I/O and adaptive Function Module v.2 option
- 5x user defined LEDs
- Flexible modular expansion with 2 or 4 slots



Software Support

- Win10 IoT Enterprise CBB 64bit
- Linux Ubuntu 18.04

Ordering Information

Model	CPU	PCH	Slot #
MXC-662X-2E/M4G	Intel® Xeon® E-2276ME	CM246	2
MXC-6621-2E/M4G	Intel® Core™ i7-9850HE	CM246	2
MXC-6622-2E/M4G	Intel® Core™ i5-8400H	CM246	2
MXC-6623-2E/M4G	Intel® Core™ i3-9100HL	CM246	2
MXC-664X-3E/M8G	Intel® Xeon® E-2276ME	CM246	4
MXC-6641-3E/M8G	Intel® Core™ i7-9850HE	CM246	4
MXC-6642-3E/M8G	Intel® Core™ i5-8400H	CM246	4
MXC-6643-3E/M8G	Intel® Core™ i3-9100HL	CM246	4

Optional Accessories

- **2.5" SSD, HDD, M.2, CFAST Storage**
- **MXC-6600 Fan Kit (P/N: 91-95267-000E)**
- **Additional 2x 2.5" SATA expansion kit**
- **Wireless Module**
Wi-Fi, BT, 3G, 4G LTE, LoRa wireless kit (w/ antenna)
- **AC/DC Adapter**
280W (P/N: 91-95263-0010)
220W (P/N: 31-62149-0010-A0)

Specifications

Model Name	MXC-660X	MXC-6601	MXC-6602	MXC-6603
System Core				
Processor	Intel® Xeon® E-2276ME 45W	Intel® Core™ i7-9850HE 45W	Intel® Core™ i5-8400H 45W	Intel® Core™ i3-9100HL 25W
Core	6	6	4	4
Base Freq.	2.8 GHz	2.7 GHz	2.5 GHz	1.6 GHz
MAX Turbo Freq.	4.5 GHz	4.4 GHz	4.2 GHz	2.9 GHz
Chipset	Mobile Intel® CM246			
Memory	4GB DDR4 2400MHz, dual SODIMMs, up to 32GB Optional: 8, 16, 32GB DDR4 ECC 2400MHz (Xeon® and i3 support ECC)			
I/O Interfaces				
Display	2x DP++ and 1x HDMI			
Ethernet	2x Intel® GbE: 1x i211AT + 1x i219 iAMT support			
Serial Ports	COM1/2: RS-232/422/485, COM3/4/5/6: RS-232			
USB	2x USB 3.1 Gen 2 + 2x USB 3.1 Gen 1 + 4x USB 2.0, 1x internal USB 2.0 dongle			
Audio	Line-out, Mic-in (Optional: speaker-out)			
Mini PCIe	1x Full size (USB 2.0 + PCIe)			
M.2	1x socket 2, key B+M or B, 2280/3042: USB 3.1 Gen 1, SATA 6 Gb/s and PCIe x2			
USIM	2 (1 for Mini PCIe and 1 for M.2)			
DI/O	8-ch DI and 8-ch DO			
I ² C	2 (3.3V & 5V)			
TPM 2.0	Supported			
Expansion Slots	MXC-6620 series : PCIe x16 + PCIe x4 (Total up to 150W) MXC-6640 series : PCIe x16 + 2 PCIe x4 + PCI (Total up to 150W with 12V in; total up to 250W with 24V in)			
Storage Devices				
2.5" SATA	2x internal (supports RAID 0, 1, 5, 10) Optional: additional 2x internal			
CFast	1x Type II			
Mechanical				
Dimensions	MXC-6620 series: 165 (W) x 240 (D) x 210 (H) mm (6.5" x 9.45" x 8.27") MXC-6640 series: 206 (W) x 240 (D) x 210 (H) mm (8.11" x 9.45" x 8.27")			
Weight	MXC-6620 series : 4.6 kg (10.2 lbs) MXC-6640 series : 4.9 kg (10.8 lbs)			
Mounting	Wall mount			
Power Supply				
DC Input	9 to 32V (± 10% tolerance)			
AC Input	Optional: 220W or 280W AC/DC adapter			
Environmental				
Operating Temperature	Standard: 0°C to 50°C w/ airflow Extended temperature (w/ ind. storage, airflow) -20°C to 70°C (-4°F to 158°F) (only support single SODIMM) -20°C to 60°C (-4°F to 140°F) (w/ dual SODIMMs)			
Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excluding storage)			
Humidity	~95% @ 40°C (104°F) (non-condensing)			
Vibration	Operating: 5 Grms, 5-500 Hz, 3 axes (w/ SSD/CFast) Operating: 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)			
Shock	Operating: 100 Grms, half sine 11ms duration (w/ SSD/CFast)			
ESD	Contact ±8KV, Air ±15KV			
EMC	EN61000-6-4/-2, CE & FCC Class B with validated AC/DC adapter			
Safety	UL/cUL, CB			