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2023
Intelligent
Medical Systems

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Intelligent Medical Systems

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New Product Highlights

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Medical Grade System with 12th Gen Intel® Core™ i7/i5 Processor for Smart Healthcare Applications



- 12th gen Intel® Core™ i7/i5 processor, TDP 45W
- 2 DDR5-4800 SO-DIMM for up to 64GB memory
- 1 Thunderbolt 4 and 1 DisplayPort 1.4a with 8K UHD supported
- 2 2.5GbE LAN ports
- Swappable 2.5" SATAIII SSD tray with security lock
- Antimicrobial coating chassis (optional)

mHPC202 >>Page 14

2U Rackmount Server with Dual Intel® Xeon® Gold Sapphire Rapids Processor, Intel® PCH for HPC in Medical Applications



- Dual Intel® Xeon® Gold Sapphire Rapids processors
- 512GB DDR5-4800 ECC registered DIMM
- Micron 3.84TB PCIe NVMe U.3 SSD, 7400 pro series
- Supports PCIe x16 data center accelerator card
- 1800W Redundant Power ATX power supply
- Supports DP full HD output
- Supports dual 10G Base-T

System on Modules

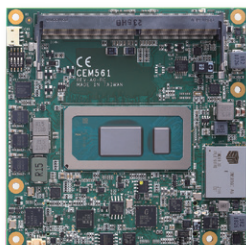
CEM710 >>Page 37

COM Express Type 7 Basic Module with Intel® Xeon® D-1700 Processor



- Intel® Xeon® D-1700 Processor (Ice Lake D)
- 4 DDR4-2666 SO-DIMM for up to 128 GB memory (optional)
- 1 PCIe x16 Gen4, 1 PCIe x8 Gen3, 8 PCIe x1 Gen3
- 2 SATA Gen3
- 4 USB 3.0 and 4 USB 2.0
- 4 10GBase-KR
- Supports TPM 2.0

System on Modules



CEM561 >>Page 40

COM Express Type 6 Compact Module with 12th Gen Intel® Core™ or Celeron® Processor

- 12th gen Intel® Core™ i7/i5/i3 or Celeron® processor (Alder Lake U)
- Dual channel DDR4-3200 SO-DIMM for up to 64GB
- Up to 8 lanes of PCI Express
- 2 SATA Gen3
- 4 USB 3.0 and 8 USB 2.0
- Supports NVMe for up to 512GB (by request)
- Supports TPM 2.0
- Enabler Middleware (eAPI) intelligent remote management software



CEM320 >>Page 49

COM Express Type 10 Mini Module with Intel Atom® x6000E Series or Intel® Celeron® N/J Series

- Intel Atom® x6000E series or Intel® Celeron® N/J processor (Elkhart Lake)
- 8GB/16GB LPDDR4 memory onboard
- Up to 4 lanes of PCI Express
- 2 SATA 3.0
- 2 USB 3.0 and 8 USB 2.0
- eMMC and TPM2.0 onboard

1

Intelligent Medical Systems

Axiomtek offers a full range of scalable, low-power consumption/high-performance medical-grade embedded systems (mBOX series) suitable for any medical applications that require advanced, feature-rich controllers. Axiomtek's mBOX medical-grade systems are designed to operate reliably within mission-critical environments found in healthcare applications. When it comes to high computing capabilities, reliability and compatibility with the most popular AI software, our mHPC medical servers are ideal for integration into medical analytics projects. Researchers and doctors can accurately and quickly achieve results and gain recommendations for diagnosis and treatments. Axiomtek's mHPC server products offer superior computing power, graphical capabilities, rich interfaces, communication options and scalable features.

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Intelligent Medical Systems

Intelligent Medical Systems

Selection Guide



NEW



Features\Models	mBOX600	mBOX500	mBOX100
CPU Level	9th/8th gen Intel® Core™ i7/i5 (Coffee Lake)	12th gen Intel® Core™ i7/i5 (Alder Lake-P)	8th gen Intel® Core™ i7/i5 (Whisky Lake-U)
System Memory	2 x DDR4-2666 SO-DIMM, up to 64GB	2 x DDR5-4800 SO-DIMM, up to 64GB	2 x DDR4-2400 SO-DIMM, up to 64GB
Chipset	Intel® QM370	SoC integrated	SoC integrated
BIOS	AMI	AMI	AMI
Display	1 x HDMI 1.4 (4096 x 2160 @30Hz) 2 x DisplayPort 1.2 (4096 x 2304 @60Hz)	1 x Thunderbolt 4 (7680 x 4320 @ 60Hz) 1 x DisplayPort 1.2 (7680 x 4320 @ 60Hz) 1 x VGA (optional)	1 x HDMI 1.4 (4096 x 2160 @30Hz) 1 x DisplayPort 1.2 (4096 x 2304 @60Hz)
Audio	1 x Mic-in (3.5mm Audio Jack) 1 x Line-out (3.5mm Audio Jack)	1 x Mic-in (3.5mm Audio Jack) 1 x Line-out (3.5mm Audio Jack)	1 x Mic-in (3.5mm Audio Jack) 1 x Line-out (3.5mm Audio Jack)
Others	TPM 2.0	TPM 2.0	TPM 2.0
Ethernet	2 x 10/100/1000 Mbps (isolation)	2 x 100/1000/2500 Mbps	2 x 10/100/1000 Mbps (isolation)
COM	2 x RS-232/422/485 (isolation)	N/A	2 x RS-232/422/485 (isolation)
USB	4 x USB 3.1 Gen2 Type-A (rear)	2 x USB 3.2 Gen2 Type-A (front) 2 x USB 3.2 Gen2 Type-A (rear)	4 x USB 3.1 Gen2 Type-A (rear)
Expansion Interface	1 x PCI Express Mini Card slot 1 x PCIe x16 Gen3 slot	1 x PCIe x16 slot for PCIe x8 Gen4 1 x PCIe x4 Gen3 slot	1 x PCI Express Mini Card slot
Storage	1 x 2.5" SATAIII SSD/HDD 1 x M.2 Key M 2280 NVMe SSD	1 x 2.5" SATAIII SSD/HDD 1 x M.2 Key M 22110 NVMe SSD	1 x 2.5" SATAIII SSD/HDD 1 x M.2 Key M 2280 NVMe SSD
Watchdog Timer	65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.
Power Input	24 VDC	100 to 240 VAC	12 to 24 VDC
Operating Temperature	0°C to +40°C (+32°F to +104°F)	0°C to +40°C (+32°F to +104°F)	0°C to +40°C (+32°F to +104°F)
Mounting	Wall mount	Wall mount	Wall mount
Dimensions (W x D x H)	250 x 240 x 90 mm (9.8" x 9.44" x 3.54")	TBC	250 x 220 x 60 mm (9.8" x 8.66" x 2.36")
Weight (net/gross)	4 kg	TBC	3 kg
Certifications	CE, FCC IEC/EN 60601-1 compliance	CE, FCC IEC/EN 60601-1 compliance	CE, FCC IEC/EN 60601-1 compliance
EOS Support	Win 10 IoT, Linux	Win 10 IoT, Win 11 IoT, Linux	Win 10 IoT, Linux

NEW



Features\Models	mHPC202	mHPC200
CPU Level	Dual Intel® Xeon® Gold Sapphire Rapids	Dual Intel® Xeon® Gold 6226R
System Memory	16 x DDR5-4800 ECC RDIMM, up to 512GB	12 x DDR4-2933 ECC RDIMM, up to 384GB
Chipset	PCH: Intel® Intel® EMMITSBURG, TDP 15W BMC: ASpeed AST2600	PCH: Intel® C621, TDP 15W BMC: ASpeed AST2500A2-GP Embedded Graphics SoC: SiliconMotion SM768
BIOS	AMI	AMI
Display	1 x Single DisplayPort 1.2 (4096 x 2304 @60Hz)	1 x HDMI 1.4 (4096 x 2160 @30/24Hz)
Audio	Line in/ Lin out/ Mic in with 2x5 Box Header P=2.0mm	N/A
Others	N/A	N/A
Ethernet	2 x 10 GbE Ethernet (RJ45) 1 x IPMI 1GbE LAN (BMC)	1 x Network card in support of dual 10G Base-T & dual SFP+
COM	N/A	N/A
USB	4x USB 3.2 Gen1	4 x USB 3.0
Expansion Interface	3 x PCIe riser card inside: Riser Card #0: 2 x PCIe x16, Gen 5.0 slots Riser Card #1: 2 x PCIe x16, Gen 5.0 slots Riser Card #2: 1 x PCIe x16 or 2x PCIe x8 Gen 5.0 slots 1 x M.2 2280 slot	2 x PCIe riser card inside: Riser Card #0: 2 x PCIe x16 Gen3 slot Riser Card #1: 1 x PCIe x16 slot, 1 x PCIe x8 slot, M.2 22110-M slot
Storage	6 x 2.5" SATA SSD 2 x 2.5" NVMe U.2 SSD	2 x 2.5" SATA SSD 2 x 2.5" NVMe U.2 SSD
Watchdog Timer	65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.
Power Input	2 x 1800W redundant ATX power supply	2 x 1200W redundant ATX power supply
Operating Temperature	0°C to +40°C (+32°F to +104°F)	0°C to +40°C (+32°F to +104°F)
Mounting	Rackmount	Rackmount
Dimensions (W x D x H)	600 x 430 x 88 mm (20.5" x 17" x 3.5")	600 x 430 x 88 mm (20.5" x 17" x 3.5")
Weight (net/gross)	TBC	11.9 kg (26 lb)/16.10 kg (35 lb)
Certifications	CE IEC 62368-1, FCC Class A compliance	CE IEC 62368-1, FCC Class A compliance
EOS Support	CentOS 7.6 & Windows 10 IoT	CentOS 7.6 & Windows 10 IoT

mBOX600

Medical Grade System with 9th/8th Gen Intel® i7/i5 Processor for Smart Healthcare Applications



▲ Front view



▲ Rear view

Features

- 9th/8th Gen Intel® i7/i5 processor, TDP 45W
- 2 DDR4-2666 SO-DIMM for up to 64GB memory
- 1 HDMI and 2 DisplayPort++ with 4K UHD supported
- 2 COM and 2 GbE LAN with isolation supported
- Supports half-size PCIe x16 slot
- Swappable 2.5" SATAIII SSD tray with security lock
- Antimicrobial coating chassis (optional)



Specifications

Standard Color	White
CPU	9th/8th gen Intel® Core™ i7/i5 processor (Coffee Lake) with TDP 45W
System Memory	2 x 260-pin DDR4-2666 non-ECC SO-DIMM, up to 64GB
Chipset	Intel® QM370
Graphics	Intel® UHD Graphics 630
Display	1 x HDMI 1.4 (4096 x 2160 @30Hz) 2 x DisplayPort 1.2 (4096 x 2304 @60Hz)
BIOS	AMI uEFI
System I/O Outlet	2 x RS-232/422/485 with isolation supported 2 x 10/100/1000 Mbps Ethernet (Intel® I210-IT & Intel® I219-LM) 4 x USB 3.1 Gen2 1 x HDMI 1.4 2 x DisplayPort 1.2 1 x Line out 1 x Mic in 1 x Power on/off button 1 x DC power input connector 2 x SMA-type antenna connector
Watchdog Timer	65535 levels, 1 to 65535 sec.
Storage	1 x 2.5" SATAIII SSD/HDD 1 x M.2 Key M 2280 NVMe SSD slot
Expansion Interface	1 x Full-size PCI Express Mini Card slot (USB + PCIe signal) 1 x Half size PCI Express x16 Gen3 slot
TPM	TPM 2.0
System Indicator	1 x Blue LED for system power-on
Power Input	24 VDC power supply
Power Adapter	24V/6.25A, 150W adapter (medical grade)
Operating Temperature	0°C to 40°C (32°F to 104°F)
Humidity	10% - 90%, non-condensing
Vibration Endurance	3 Grms STD, random, 5 to 500 Hz, 1 hr/axis
Dimensions	250 mm (9.8") (W) x 240 mm (9.44") (D) x 90 mm (3.54") (H)
Weight (net/gross)	4 kg

Specifications

Certifications	CE, FCC IEC-60601-1 compliance
EOS Support	Win 10 IoT, Linux

Ordering Information

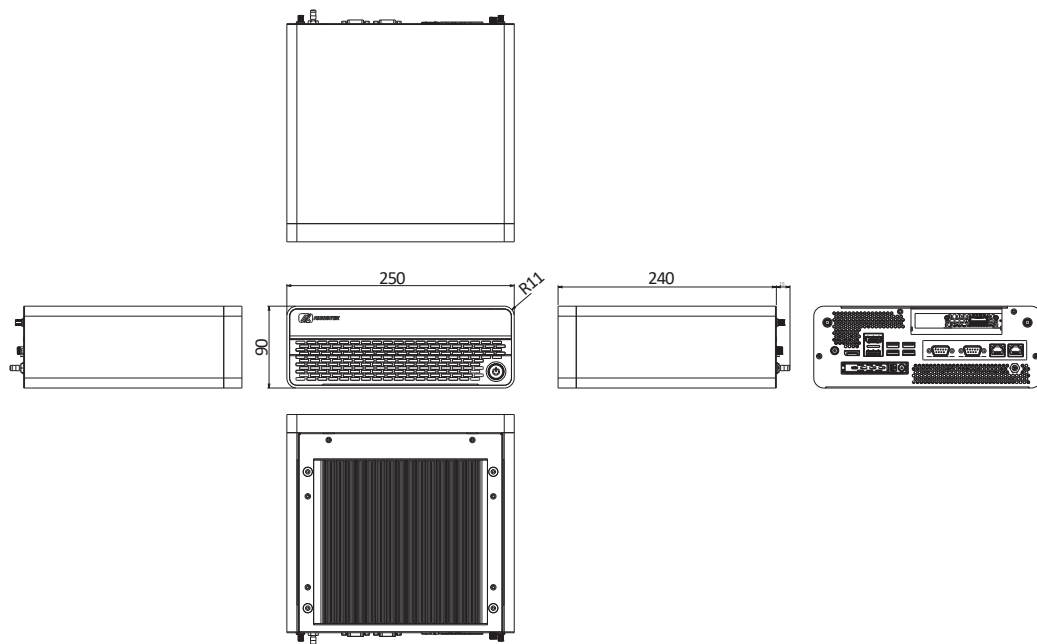
Standard

mBOX600	Medical grade system with 9th/8th Gen Intel® i7/i5 processor, HDMI 1.4, 2 x DisplayPort 1.2, 2 COM, 4 USB 3.1 Gen2, and 2 GbE LAN
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Optional

DDR4 non-ECC SO-DIMM, up to 64GB
2.5" SATA HDD/SSD
M.2 Key M 2280 (PCIe x4) NVMe SSD

Dimensions



mBOX500 NEW

Medical Grade System with 12th Gen Intel® Core™ i7/i5 Processor for Smart Healthcare Applications



Features

- 12th gen Intel® Core™ i7/i5 processor, TDP 45W
- 2 DDR5-4800 SO-DIMM for up to 64GB memory
- 1 Thunderbolt 4 and 1 DisplayPort 1.4a with 8K UHD supported
- 2 2.5GbE LAN ports
- Swappable 2.5" SATAIII SSD tray with security lock
- Antimicrobial coating chassis (optional)



Specifications

Standard Color	White
CPU	12th gen Intel® Core™ i7/i5 processor (Alder Lake-P) with TDP 45W
System Memory	2 x 262-pin DDR5-4800 non-ECC SO-DIMM, up to 64GB
Chipset	SoC integrated
Graphics	Intel® Iris® Xe Graphics eligible
Display	1 x Thunderbolt 4 (7680 x 4320 @ 60Hz) 1 x DisplayPort 1.2 (7680 x 4320 @ 60Hz) 1 x VGA (optional)
BIOS	AMI uEFI
System I/O Outlet	2 x 100/1000/2500 Mbps Ethernet (Intel® i225-LM, AMT & Intel® i225-LM) 2 x USB 3.2 Gen2 Type-A (front) 2 x USB 3.2 Gen2 Type-A (rear) 1 x Thunderbolt 4 contains DP 1.4a/USB 3.2 Gen2/USB 2.0/PCIe x1 1 x DisplayPort 1.4a 1 x VGA port (optional) 1 x Mic-in & 1 x Line-out with 3.5mm Audio Jack 1 x Power on/off button 1 x 100 - 240VAC power input with switch
Watchdog Timer	65535 levels, 1 to 65535 sec.
Storage	1 x 2.5" SATAIII SSD 1 x M.2 Key M 22110 NVMe SSD slot
Expansion Interface	1 x PCIe x16 Gen4 slot for PCIe8 Gen4 1 x PCIe x4 Gen3 slot 1 x expansion slot for a customized I/O module for COM/LAN ports
TPM	TPM 2.0
System Indicator	1 x Blue LED for system power-on
Power Input	100 to 240 VAC power supply
Operating Temperature	0°C to 40°C (-40°F to 158°F)
Humidity	10% - 90%, non-condensing
Vibration Endurance	3 Grms STD, random, 5 to 500 Hz, 1 hr/axis
Dimensions	TBC
Weight (net/gross)	TBC
Certifications	CE, FCC IEC-60601-1 compliance
EOS Support	Win 10 IoT, Linux

Ordering Information

Standard

mBOX500	Medical Grade System with 12th Gen Intel® Core™ i7/i5 Processor, Thunderbolt 4, DisplayPort 1.4a, 2 2.5GbE LAN, 4 USB 3.2 Gen2, and 1 Mic-in & 1 Line-out with 3.5mm Audio Jack
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Optional

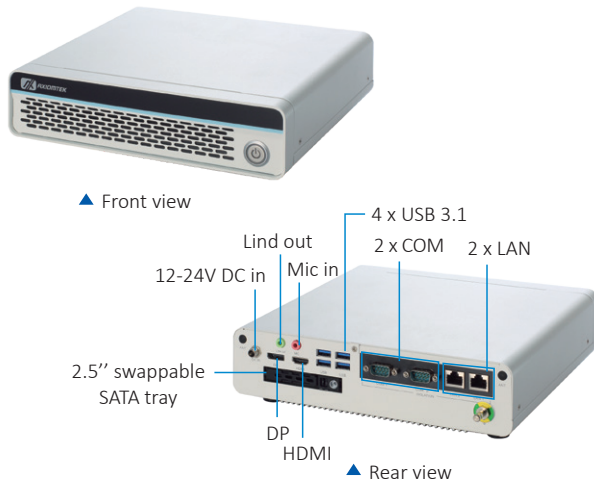
DDR5-4800 MT/s non-ECC SO-DIMM, up to 64GB
2.5" SATA HDD/SSD
M.2 Key M 22110 (PCIe x4) NVMe SSD

Packing List

1 x mBOX500 unit

mBOX100

Medical Grade Fanless Slim System with 8th Gen Intel® Core™ i7/i5 Processor for Smart Healthcare Applications



Features

- 8th gen Intel® Core™ i7/i5 processor, TDP 15W
- 2 DDR4-2400 SO-DIMM for up to 64GB memory
- 1 HDMI and 1 DisplayPort with 4K UHD supported
- 2 COM and 2 GbE LAN with isolation supported
- Swappable 2.5" SATAIII SSD tray with security lock
- Antimicrobial coating chassis (optional)



Specifications

Standard Color	White
CPU	8th gen Intel® Core™ i7/i5 processor (Whiskey Lake-U) with TDP 15W
System Memory	2 x 260-pin DDR4-2400 non-ECC SO-DIMM, up to 64GB
Chipset	SoC integrated
Graphics	Intel® UHD Graphics 620
Display	1 x HDMI 1.4 (4096 x 2160 @30Hz) 1 x DisplayPort 1.2 (4096 x 2304 @60Hz)
BIOS	AMI uEFI
System I/O Outlet	2 x RS-232/422/485 with isolation supported 2 x 10/100/1000 Mbps Ethernet (Intel® I210-IT & Intel® I219-LM, Intel® AMT supported) with isolation supported 4 x USB 3.1 Gen 2 1 x HDMI 1.4 1 x DisplayPort 1.2 1 x Power on/off button 1 x DC power input connector 2 x SMA-type antenna connector 1 x Line out 1 x Mic in
Watchdog Timer	65535 levels, 1 to 65535 sec.
Storage	1 x 2.5" SATAIII SSD/HDD 1 x M.2 Key M 2280 NVMe SSD slot
Expansion Interface	1 x Full-size PCI Express Mini Card slot (USB + PCIe signal)
TPM	TPM 2.0
System Indicator	1 x Blue LED for system power-on
Power Input	12V to 24V DC power supply
Power Adapter	24V/2.7A, 65W adapter (medical grade)
Operating Temperature	0°C to 40°C (-40°F to 158°F)
Humidity	10%- 90%, non-condensing

Specifications

Vibration Endurance	3 Grms STD, random, 5 to 500 Hz, 1 hr/axis
Dimensions	250 mm (9.8") (W) x 220 mm (8.66") (D) x 60 mm (2.36") (H)
Weight (net/gross)	3 kg
Certifications	CE, FCC IEC-60601-1 compliance
OS Support	Win 10 IoT, Linux

Packing List

- 1 x mBOX100 unit
- 1 x 65w medical adapter
- 1 x SDD tray screw pack

Ordering Information

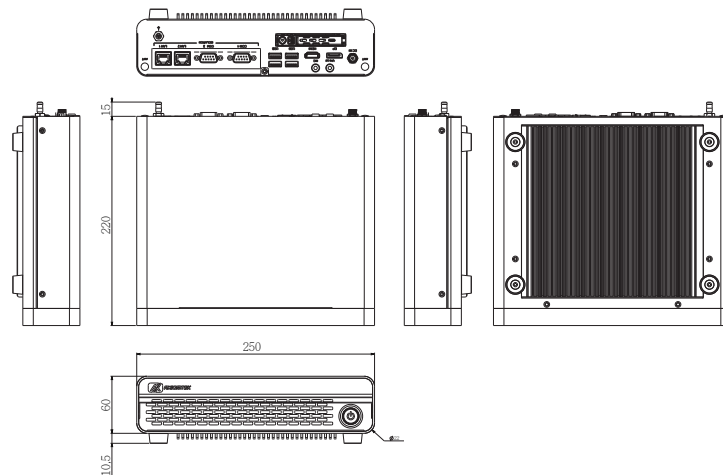
Standard

mBOX100-i7-8665UE (P/N: E27N100101)	Medical grade fanless slim system with Intel® Core™ i7-8665UE processor, 16G DDR4 memory, HDMI 1.4, DisplayPort 1.2, 2 COM, 2 GbE LAN, 4 USB 3.1 Gen 2, 1 Line out and 1 Mic in
mBOX100-i5-8365UE (P/N: E27N100100)	Medical grade fanless slim system with Intel® Core™ i5-8365UE processor, 16G DDR4 memory, HDMI 1.4, DisplayPort 1.2, 2 COM, 2 GbE LAN, 4 USB 3.1 Gen 2, 1 Line out and 1 Mic in

Optional

- DDR4 non-ECC SO-DIMM, up to 64GB
- 2.5" SATA HDD/SSD
- M.2 Key M 2280 (PCIe x4) NVMe SSD

Dimensions



mHPC202 NEW

2U Rackmount Server with Dual Intel® Xeon® Gold Sapphire Rapids Processor, Intel® PCH for HPC in Medical Applications



Features

- Dual Intel® Xeon® Gold Sapphire Rapids processors
- 512GB DDR5-4800 ECC registered DIMM
- Micron 3.84TB PCIe NVMe U.3 SSD, 7400 pro series
- Supports PCIe x16 data center accelerator card
- 1800W Redundant Power ATX power supply
- Supports DP full HD output
- Supports dual 10G Base-T



Specifications

Standard Color	Alpine White
Construction	Heavy-duty steel
CPU	Dual LGA4677 server-grade Intel® Xeon® Gold Sapphire Rapids processors
System Memory	16 x DDR5-4800 ECC RDIMM, up to 512GB
Chipset	PCH: Intel®, TDP 15W BMC: ASpeed AST2600
Display	Single DisplayPort 1.2 (4096 x 2304 @60Hz)
BIOS	AMI
Remote Management	IPMI 2.0 compliant
System I/O Outlet (Left to Right)	2 x USB 3.0 + 1 x DP 2 x USB 3.0 + 1 x RJ-45 1G LAN 1 x USB 3.0 type C 2 x RJ-45 10G LAN port
Watchdog Timer	Reset: 1sec. - 65535sec./min. and 1sec. or 1min./step
Storage	6 x 2.5" SATA SSD hot swappable slot, support RAID 0,1,5,10 2 x 2.5" U.3 SSD hot swappable slot, support RAID 0,1,5,10
Ethernet	1 x Network card supports dual 10G Base-T 1 x 1 x IPMI 1GBe LAN
Expansion Interface	Three PCIe riser cards inside: Riser Card #0: 1 x PCIe x16, 1x PCIe x16 Gen 5.0 slots Riser Card #1: 1 x PCIe x16, 1x PCIe x16 Gen 5.0 slots Riser Card #2: 1 x PCIe x16 or 2x PCIe x8 Gen 5.0 slots w/ switch IC 1 x M.2 2280-M slot, with PCIe4(NVMe)
System Indicator	1 x green LED for system SSD active
Power Supply	2 x 1800W redundant ATX power supply
Operating Temperature	0°C to +40°C (32°F to +104°F)
Humidity	10%- 95%, non-condensing
Dimensions	430 mm (19") (W) x 600 mm (19.4") (D) x 88 mm (3.5") (H)
Weight (net/gross)	TBA

Ordering Information

mHPC202-CCL	2U 19" rack mount server with dual Intel® Xeon® Gold SP processors, 512GB DDR5-4800 ECC registered DIMM memory, Dual Micron PCIe NVMe U.3 SSD slot, six SATA III SSD slots, two 10GB LAN ports, one 1GB LAN port
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System Configuration

Optional

RAM (P/N: TBA)	Micron 32GB DDR5-4800 ECC RDIMM 64GB to 512GB
U.3 SSD (P/N: TBA)	Micron 7400 max series 3.84TB NVMe U.3 SSD, QTY:1-2pcs
SATAIII SSD (P/N: E9B2F1256R)	Transcend 2.5" 256GB SATAIII SSD (TS256S2MAX02IK1), QTY:1-6pcs
22" Rack rail (P/N: 7421A610000E)	NJ-21A61 SERVER SLIDE 22"

mHPC200

2U Rackmount Server with Dual Intel® Xeon® Gold 6226R Processor, Intel® C621 PCH for HPC in Medical Applications



▲ Front view



▲ Rear view

Features

- Dual Intel® Xeon® Gold 6226R processors
- 384GB DDR4-2666 ECC registered DIMM
- Micron 6.4TB PCIe NVMe U.2 SSD, 9300 pro series
- Supports PCIe x16 data center accelerator card
- 1200W Redundant Power ATX power supply
- Supports HDMI full HD output
- Supports dual 10G Base-T & dual SFP+



Specifications

Standard Color	Alpine White
Construction	Heavy-duty steel
CPU	Dual LGA3647 server-grade Intel® Xeon® Gold 6226R processors 2.9GHz, 22MB Cache 16 Cores
System Memory	12 x DDR4-2933 ECC RDIMM, up to 384GB
Chipset	PCH: Intel® C621, TDP 15W BMC: ASpeed AST2500A2-GP Embedded Graphics SoC: SiliconMotion SM768
Display	Single HDMI 1.4 supported by SM768
BIOS	AMI version V1.04
Remote Management	IPMI 2.0 compliant
System I/O Outlet (Left to Right)	2 x 110-240V AC input 2 x LED status (power-on, SSD act.) 1 x LAN (BMC/IPMI) 4 x USB 3.0 1 x HDMI FHD output
Watchdog Timer	Reset: 1sec.- 65535sec./min. and 1sec. or 1min./step
Storage	2 x 2.5" SATA SSD hot swappable slot, support 2 x 256G SSD (RAID 1) 2 x 2.5" U.2 SSD hot swappable slot, support 1 x 6.4T U.2 SSD (RAID 0)
Ethernet	1 x Network card supports dual 10G Base-T & dual SFP+
Expansion Interface	Two PCIe riser cards inside: Riser Card #0: 2 x PCIe x16 Gen 3.0 slot Riser Card #1: 1 x PCIe x16 slot, 1x PCIe x8 slot, M.2 22110-M slot
System Indicator	1 x green LED for system power-on 1 x green LED for SSD active
Power Supply	2 x 1200W redundant ATX power supply
Operating Temperature	0°C to +40°C (32°F to +104°F)
Humidity	10%- 95%, non-condensing
Dimensions	430 mm (19") (W) x 600 mm (19.4") (D) x 88 mm (3.5") (H)
Weight (net/gross)	11.9 kg (26 lb) /16.10 kg (35 lb)
Certifications	CE IEC 62368-1, FCC Class A, compliance
OS Compatibility	CentOS 7.6 & Windows 10 IoT

Ordering Information

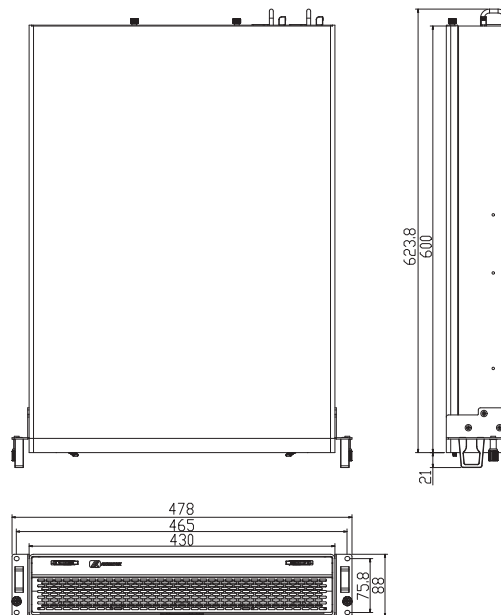
mHPC200-CCL	2U 19" rack mount server with dual Intel® Xeon® Gold 6226R processors, 384GB DDR4-2666 ECC registered DIMM memory, single Micron 6.4TB PCIe NVMe U.2 SSD, two 256GB SATA III SSD, single network card
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System Configuration

Optional

RAM (P/N: E9B1816J00)	Micron 32GB DDR4-2666 ECC RDIMM (MTA36ASF4G72PZ-2G6E1) 64GB to 384GB
U.2 SSD (P/N: E9B2Q00060)	Micron 9300 max series 6.4TB NVMe U.2 SSD (MTFDHAL6T4TDR-1AT1ZABYY) QTY:1-2pcs
SATAIII SSD (P/N: E9B2F1256R)	Transcend 2.5" 256GB SATAIII SSD (TS256S2MAX02IK1) QTY:1-2pcs
22" Rack rail (P/N: 7421A610000E)	NJ-21A61 SERVER SLIDE 22"

Dimensions



2

Medical Panel Computers

The GOT100/GOT5000 series features fanless operation, ultra slim and modern ID design. Incorporating the low power consumption Intel® Celeron®/Pentium® processors and an ultra slim housing makes this product line a perfect choice for various applications across many industries.

Selection Guide		19
MPC153-834	15.6" WXGA TFT Fanless Medical Grade Touch Panel Computer with Intel® Celeron® Processor J1900	21
MPC152-845	15" XGA TFT Fanless Medical Grade Touch Panel Computer with Intel® Celeron® Processor N3060	24
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Intelligent Medical Systems

Medical Panel Computers

Selection Guide



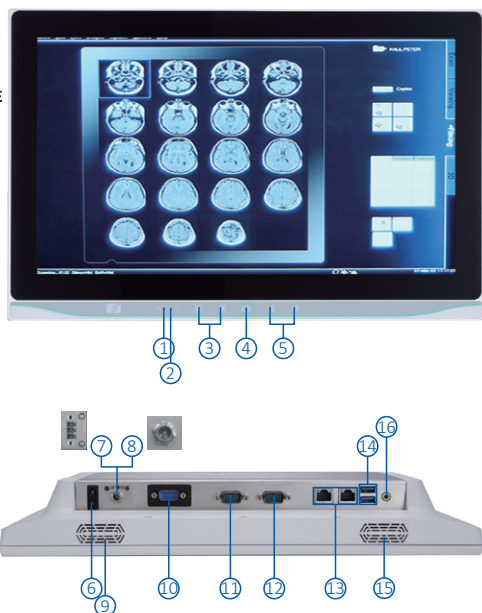
Features\Models	MPC153-834	MPC152-845	MPC102-845
Display	15.6" WXGA TFT, 300 nits	15" XGA TFT, 420 nits	10.4" SVGA TFT, 350 nits
CPU Level	Intel® Celeron® J1900 (up to 2.42 GHz)	Intel® Celeron® N3060 (up to 2.48 GHz)	Intel® Celeron® N3060 (up to 2.48 GHz)
Chipset	SoC integrated	SoC integrated	SoC integrated
System Memory	1 x 204-pin DDR3L-1066/1333 SO-DIMM, up to 8GB	1 x 204-pin DDR3L-1600 SO-DIMM, up to 8GB	1 x 204-pin DDR3L-1600 SO-DIMM, up to 8GB
I/O	2 x RS-232/422/485 1 x RS-232/422/485 (with isolated 4KV) 2 x 10/100/1000 Mbps Ethernet 2 x USB 3.0 1 x Audio (Line-out)	1 x RS-232 1 x RS-232/422/485 2 x 10/100/1000 Mbps Ethernet 2 x USB 2.0 2 x USB 3.0 1 x Audio (Line-out) 1 x Switch for power on/off 1 x AT/ATX selectable switch 1 x 8-bit DIO (programmable, DB9)	1 x RS-232 1 x RS-232/422/485 2 x 10/100/1000 Mbps Ethernet 2 x USB 2.0 2 x USB 3.0 1 x Audio (Line-out) 1 x Switch for power on/off 1 x AT/ATX selectable switch
Storage	1 x Half-slim SSD 1 x CFast™ or mSATA	1 x 2.5" HDD 1 x mSATA	1 x 2.5" HDD 1 x mSATA
Expansion Interface	2 x PCI Express Mini Card slot	2 x PCI Express Mini Card slot	2 x PCI Express Mini Card slot
Touchscreen	5-wire flat resistive type	5-wire flat Resistive Type	5-wire flat Resistive Type
Power Supply	AC version: 100 to 240 VAC-DC, 65W power adapter DC version: 9 to 36 VDC with over current protection fuse	AC version: 100 to 240 VAC-DC, 65W power adapter DC version: 9 to 36 VDC with over current protection fuse	AC version: 100 to 240 VAC-DC, 65W power adapter DC version: 9 to 36 VDC with over current protection fuse
Watchdog Timer	255 levels, 0 to 255 sec.	255 levels, 0 to 255 sec.	255 levels, 0 to 255 sec.
Dimensions (W x D x H)	394.2 x 57 x 257.2 mm (15.53" x 2.25" x 10.13")	387.9 x 54.6 x 307.7 mm (15.27" x 2.14" x 12.11")	292.5 x 45.8 x 235.8 mm (1.52" x 1.8" x 9.28")
Weight (net/gross)	3.0 kg (6.61 lb)/5.2 kg (11.46 lb)	3.2 kg (7.05 lb)/5.1 kg (11.24 lb)	1.8 kg (3.96 lb)/3 kg (6.61 lb)
Operating Temperature	0°C to +40°C (+32°F to +104°F)	0° to +40°C (+32°F to +104°F)	0° to +40°C (+32°F to +104°F)
Mounting	Desktop stand/wall/VESA mount	Desktop stand/panel/wall/VESA mount	Desktop stand/panel/wall/VESA mount
Certifications	CE, EN 60601-1, FCC classB	EN 60601-1 (ESD contact 8KV, air 15KV), CE and FCC	EN 60601-1 (ESD contact 8KV, air 15KV), CE and FCC



Features\Models	MPC103-845
Display	10.1" WXGA TFT, 350 nits
CPU Level	Intel® Celeron® N3060 (up to 2.48 GHz)
Chipset	SoC integrated
System Memory	1 x 204-pin DDR3L-1600 SO-DIMM, up to 8GB
I/O	1 x RS-232 1 x RS-232/422/485 2 x 10/100/1000 Mbps Ethernet 2 x USB 2.0 2 x USB 3.0 1 x Audio (Line-out) 1 x Switch for power on/off 1 x AT/ATX selectable switch
Storage	1 x 2.5" half slim SSD (AC type only) 1 x mSATA
Expansion Interface	2 x PCI Express Mini Card slot
Touchscreen	Projected capacitive multi-touch
Power Supply	AC version: 100 to 240 VAC-DC, 65W power adapter DC version: 9 to 36 VDC with over current protection fuse
Watchdog Timer	255 levels, 0 to 255 sec.
Dimensions (W x D x H)	260.8 x 38 x 194.1 mm (10.27" x 1.5" x 7.65")
Weight (net/gross)	1.08 kg (2.38 lb)/2.18 kg (4.8 lb)
Operating Temperature	0° to +40°C (+32°F to +104°F)
Mounting	Desktop stand/panel/wall/VESA mount
Certifications	EN 60601-1 (ESD contact 8KV, air 15KV), CE and FCC

MPC153-834

15.6" WXGA TFT Fanless Medical Grade Touch Panel Computer with Intel® Celeron® Processor J1900



- | | |
|--|--------------------------|
| 1. Power LED | 9. Speaker |
| 2. HDD LED | 10. Isolated COM |
| 3. Brightness adjust +/- | 11. 1 x RS-232/422/485 |
| 4. Display on/off | 12. 1 x RS-232/422/485 |
| 5. Volume adjust | 13. 2 x LAN |
| 6. Power switch (ATX) | 14. 2 x USB 3.0 |
| 7. Terminal block for DC power input | 15. Speaker |
| 8. Screw connector with AC power adapter | 16. 1 x Audio (Line-out) |

Features

- 15.6" WXGA TFT LCD display with LED backlight
- 5-wire flat resistive touch for optional
- Fanless design with Intel® Celeron® processor J1900 4 cores (up to 2.42 GHz)
- EN 60601-1/CE/FCC class B certified
- Half-slim SSD and CFast™ or mSATA
- Antimicrobial plastic enclosure
- IP65 front bezel and IPX1 full enclosure design
- Supports wall mount, VESA arm, and desktop stand
- Supports smart card reader (optional)



Smart card reader cover

▲ Rear view

CFast™ cover



▲ Side view

Introduction

The MPC153-834 is a 15.6" fanless medical grade touch panel computer. In response to market demand, this medical touch panel computer is a cost effective solution. It adopts a modern, sleek and fanless design and is powered by the Intel® Celeron® processor J1900 4 cores up to 2.42 GHz (Bay Trail). For wireless network connection, the MPC153-834 offers 2 PCI Express Mini Card slots. By just plugging in a WLAN card, customers can have instant access to wireless LAN/GPRS/GSM/4G environments. Besides, it provides two types of power input: DC power input (9 to 36VDC) with terminal block connector and AC medical power adapter with screw type connector.

Slim & Lightweight Design

The 15.6-inch medical panel PC is slim and lightweight, perfect for limited space installation.

Built-in Internal WLAN Antenna

The MPC153-834 has 2 PCI Express Mini Card slots and a built-in WLAN antenna for wireless network connections. By simply plugging in the wireless LAN card, customers can use the medical computer in wireless LAN/GPRS/GPS/4G environment.

Support Front Membrane Keys

The MPC153-834 has 5 membrane keys on the front panel which allows users to adjust the LCD on/off, LCD brightness and volume setting easily.

Certifications

This 15.6-inch fanless medical panel platform complies with EN 60601-1, CE, FCC Class B certifications to ensure medical operation safety.

Specifications

Front Bezel	IP65 front bezel	
LCD Panel	Display Type	15.6" WXGA TFT LCD display with LED backlight
	Brightness (cd/m ²)	300 nits
	Resolution	1366 x 768
Main System	CPU	Intel® Celeron® processor J1900 4 cores
	System Memory	1 x 204-pin DDR3L-1066/1333 SO-DIMM, up to 8GB
	BIOS	AMI UEFI BIOS
	Storage	1 x Half-slim SSD 1 x CFast™ or mSATA
	Watchdog Timer	255 levels, 0 to 255 sec.
	Onboard Graphics	Integrated Intel® GFX
I/O Connector	2 x RS-232/422/485 (default RS-232) 1 x RS-232 with isolated 4kV 2 x 10/100/1000 Mbps Ethernet (Intel® i210-IT) 2 x USB 3.0 1 x Audio (Line-out)	
Expansion Interface	1 x Full-size PCI Express Mini Card with mSATA 1 x Full-size PCI Express Mini Card with SIM	
Touchscreen	5-wire flat resistive touch	
Power Supply	AC version: medical grade 100 to 240 V AC-DC, 60W power adapter DC version: 9 to 36 VDC with terminal block	
Dimensions	394.2 mm (15.53") (W) x 57 mm (2.25") (D) x 257.2 mm (10.13") (H)	
Packing Dimensions	508 mm (20.00") (W) x 106 mm (4.17") (D) x 383mm (15.08") (H)	
Weight (net/gross)	3.0 kg (6.61 lb)/5.2 kg (11.46 lb)	
Operating Temperature	0°C to +40°C (32°F to +104°F, with RAM thermal kit)	
Relative Humidity	20% to 90% @ +40°C; non-condensing	
Operation Vibration	2G, 10- 500Hz, random for CFast™	
Certifications	CE, FCC class B and EN60601-1	

* W.T.: Wide Temperature. All W.T. supported products have to be sorted by Axiomtek.

* The DC power source to be used with MPC153-834 must be galvanically isolated according to IEC60601-1 safety of medical devices!

Ordering Information

Standard

MPC153-834-FR-J (P/N: E228153102)	15.6" WXGA fanless medical touch panel computer with Intel® Celeron® processor J1900, 5-wire flat resistive touch screen, AC-DC 60 W power adapter (screw type connector), EMI class B and EN 60601-1 certified
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* Other configuration by request

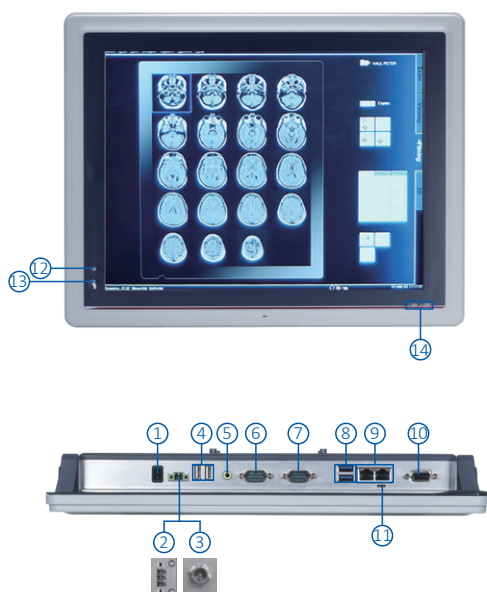
* Specification and certifications may vary based on different requirements

Packing List

1 x MPC153-834
1 x Adapter (MPC153-834-J)
1 x Power cord (MPC153-834-J)

MPC152-845

15" XGA TFT Fanless Medical Grade Touch Panel Computer with Intel® Celeron® Processor N3060



Features

- 15" XGA TFT LCD display with LED backlight
- Fanless design with Intel® Celeron® processor N3060
- 2 GbE LANs, 4 USB and 2 COM
- Plastic and IP65-rated front bezel
- Supports RFID (optional)
- External AT/ATX mode selection switch
- Easy access storage design
- Supports panel/wall mount, VESA arm, and desktop stand
- Adjustable RS-232/422/485 setting via BIOS
- CE (EN 60601-1) and FCC Part 18 EN 60601-1-2 (ESD contact 8kV, air 15kV)



▲ Side view

Introduction

The MPC152-845 is a 15" fanless medical touch panel computer. In response to market demand, this medical panel computer is a cost effective solution. It adopts a modern, super sleek and fanless design and is equipped with a 15" TFT LCD. It is powered by the Intel® Celeron® processor N3060 dual core up to 2.48 GHz. For wireless network connection, the MPC152-845 offers 2 PCI Express Mini Card slots. By just plugging in the mini card WLAN card, customers can have instant access to wireless LAN/GPRS/GSM/4G environments. Besides, it provides two types of power input: DC power with terminal block connector and AC power adapter with screw type connector.

Super Slim & Ultra Lightweight Design

With a thickness of 54.6 mm and weight of 3.2 kg, the MPC152-845 is designed for use in space-constrained environments.

Certifications

This 15-inch medical panel platform complies with EN60601-1 ED3.1 CE, FCC Class B certifications to ensure medical operation safety.

Aluminum Back Chassis with Excellent Thermal Solution

With Axiomtek's patent for plastic plus aluminum mechanism design, the MPC152-845 can dissipate the heat easily and keep the system operation stable.

Specifications

Front Bezel	IP65, NEMA 4 rugged protection, plastic front bezel	
LCD Panel	Display Type	15" XGA TFT LCD with LED backlight
	Brightness (cd/m ²)	420 nits (XGA)
	Resolution	1024 x 768 (XGA)
	Viewing Angel (H/V)	160°/160°
Main System	CPU	Intel® Celeron® processor N3060 2 cores (up to 2.48 GHz)
	System Memory	1 x 204-pin DDR3L-1600 SO-DIMM, up to 8GB
	BIOS	AMI UEFI BIOS
	Storage	1 x 2.5" SATA HDD (9.5 mm height) 1 x mSATA
	Watchdog Timer	255 levels, 0 to 255 sec.
I/O Connector	Onboard Graphics	Integrated in Intel® GFX
	1 x RS-232 1 x RS-232/422/485 2 x 10/100/1000 Mbps Ethernet 2 x USB 2.0 2 x USB 3.0 1 x Audio (Line-out) 1 x Switch for power on/off 1 x AT/ATX selectable switch 1 x 8-bit DIO (programmable, DB9)	
Expansion Interface	1 x Full-size PCI Express Mini Card slot with mSATA 1 x Full-size PCI Express Mini Card slot with SIM	
Touchscreen	Resistive type	
Power Supply	AC version: 100 to 240 V AC-DC, 65W power adapter DC version: 9 to 36 VDC with over current protection fuse	
Power Consumption	32 W	
Dimension	387.9 mm (15.27") (W) x 54.6 mm (2.14") (D) x 307.7 mm (12.11") (H)	
Packing Dimensions	510 mm (20.08") (W) x 105 mm (4.13") (D) x 385 mm (15.16") (H)	
Weight (net/gross)	3.2 kg (7.05 lb)/5.1 kg (11.24 lb)	
Operating Temperature	0°C to +40°C (+32°F to +122°F)	
Relative Humidity	20% to 90% @ +40°C; non-condensing	
Operation Vibration	2G, 5- 500Hz, random for SSD	
Certifications	CE (EN 60601-1) and FCC Part 18 EN 60601-1-2 (ESD contact 8kV, air 15kV)	

Ordering Information

Standard

MPC152-845-J (P/N: E228152105)	15" XGA fanless medical touch panel computer with Intel® Celeron® processor N3060, 5-wire resistive touch screen, AC-DC 65W power adapter (screw type connector) and EMI class B
MPC152-845-DC (P/N: E228152106)	15" XGA fanless medical touch panel computer with Intel® Celeron® processor N3060, 5-wire resistive touch screen and DC power input (terminal block connector)

* Other configuration by request

* Specification and certifications may vary based on different requirements

Packing List

1 x MPC152-845
 1 x Adapter (MPC152-845-J)
 1 x Power cord (MPC152-845-J)
 1 x Phoenix connector (MPC152-845 DC)

Optional Accessories

Wi-Fi + Bluetooth kit	
881251520A0E	Panel mount kit
881251521A0E	Wall mount kit
E226171119	Stand kit
881251203A0E	RFID kit

Optional EOS Installation

WES 7
WE8S (64-bit)

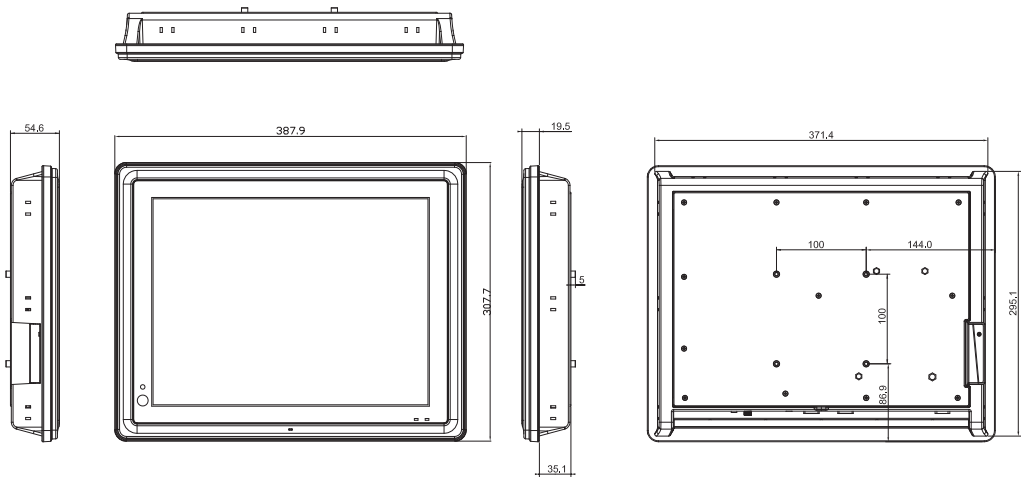
Optional OS Installation

Windows® 7
Windows® 8.1 (64-bit)
Windows® 10



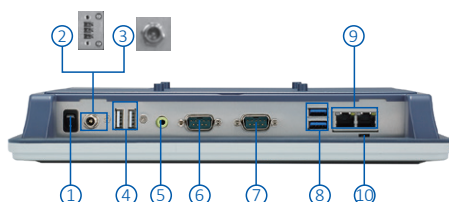
▲ AC power adapter
(for MPC152-845-J)

Dimensions



MPC102-845

10.4" XGA TFT Fanless Medical Grade Touch Panel Computer with Intel® Celeron® Processor N3060



- | | |
|--|------------------------------|
| 1. Power switch (ATX) | 6. 1 x RS-232/422/485 |
| 2. Terminal block for DC power input | 7. 1 x RS-232 |
| 3. Screw connector with AC power adapter | 8. 2 x USB 3.0 |
| 4. 2 x USB 2.0 | 9. 2 x LAN |
| 5. Audio (Line-out) | 10. AT/ATX selectable switch |
| | 11. Touch on/off button |

Features

- 10.4" XGA TFT LCD display with LED backlight
- Fanless design with Intel® Celeron® processor N3060
- 2 GbE LANs, 4 USB and 2 COM
- Plastic and IP65-rated front bezel
- Supports RFID (optional)
- External AT/ATX mode selection switch
- Easy access storage design
- Supports panel/wall mount, VESA arm, and desktop stand
- CE (EN 60601-1) and FCC Part 18
EN 60601-1-2 (ESD contact 8kV, air 15kV)



▲ Side view

Introduction

The MPC102-845 is a 10.4" fanless medical touch panel computer. In response to market demand, this medical panel computer is a cost effective solution. It adopts a modern, super sleek and fanless design and is powered by the Intel® Celeron® processor N3060 dual core up to 2.48 GHz. For wireless network connection, the MPC102-845 offers 2 PCI Express Mini Card slots. By just plugging in the WLAN card, customers can have instant access to wireless LAN/GPRS/GSM/4G environments. Besides, it provides two types of power input: DC power with terminal block connector and AC power adapter with screw type connector.

Super Slim & Ultra Lightweight Design

With a thickness of 45.8 mm and weight of 1.8 kg, the MPC102-845 is designed for use in space-constrained environments.

Certifications

This 10.4-inch medical panel platform complies with EN60601-1 ED3.1 and CE, FCC Class B certifications to ensure medical operation safety.

Aluminum Back Chassis with Excellent Thermal Solution

With Axiomtek's patent for plastic plus aluminum mechanism design, the MPC102-845 can dissipate the heat easily and keep the system operation stable.

Specifications

Front Bezel	IP65, NEMA 4 rugged protection, plastic front bezel	
LCD Panel	Display Type	10.4" XGA TFT LCD with LED backlight
	Brightness (cd/m ²)	350 nits (XGA)
	Resolution	1024 x 768 (XGA)
	Viewing Angel (H/V)	150°/150°
Main System	CPU	Intel® Celeron® processor N3060 2 cores (up to 2.48 GHz)
	System Memory	1 x 204-pin DDR3L-1600 SO-DIMM, up to 8GB
	BIOS	AMI UEFI BIOS
	Storage	1 x 2.5" SATA HDD (9.5 mm height) 1 x mSATA
	Watchdog Timer	255 levels, 0 to 255 sec.
I/O Connector	Onboard Graphics	Integrated in Intel® GFX
	1 x RS-232	
	1 x RS-232/422/485 (default RS-232)	
	1 x Switch for power on/off	
	1 x AT/ATX mode selection switch	
	2 x USB 2.0	
	2 x USB 3.0	
Expansion Interface	1 x Audio (Line-out)	
	2 x 10/100/1000 Mbps Ethernet (Intel® i211-AT)	
Touchscreen	1 x Full-size PCI Express Mini Card slot with mSATA	
	1 x Full-size PCI Express Mini Card slot with SIM	
Power Supply	Resistive type	
Power Consumption	AC version: 100 to 240 V AC-DC, 65W power adapter	
	DC version: 9 to 36 VDC with over current protection fuse	
Dimension	32W	
Packing Dimensions	292.5 mm (11.52") (W) x 45.8 mm (1.80") (D) x 235.8 mm (9.28") (H)	
Weight (net/gross)	415 mm (16.34") (W) x 100 mm (3.94") (D) x 315 mm (12.4") (H)	
Operating Temperature	1.8 kg (3.96 lb)/3 kg (6.61 lb)	
Relative Humidity	0°C to +40°C (+32°F to +122°F)	
Operation Vibration	20% to 90% @ +40°C; non-condensing	
Certifications	2G, 5- 500Hz, random for SSD	
	CE (EN 60601-1) and FCC Part 18	
	EN 60601-1-2 (ESD contact 8kV, air 15kV)	

Ordering Information

Standard

MPC102-845-DC (P/N: E228102104)	10.4" XGA fanless medical touch panel computer with Intel® Celeron® processor N3060, 5-wire resistive touch screen and DC power input (terminal block connector)
MPC102-845-J (P/N: E228102103)	10.4" XGA fanless medical touch panel computer with Intel® Celeron® processor N3060, 5-wire resistive touch screen, AC-DC 65W power adapter (screw type connector) and EMI class B

* Other configuration by request

* Specification and certifications may vary based on different requirements

Packing List

1 x MPC102-845
1 x Adapter (MPC102-845-J)
1 x Power cord (MPC102-845-J)
1 x Phoenix connector (MPC102-845 DC)

Optional Accessories

Wi-Fi + Bluetooth kit

881281021A0E	Panel mount kit
881251001A0E	Wall mount kit
E226171119	Stand kit
881251203A0E	RFID kit

Optional EOS Installation

WES 7

WE8S (64-bit)

Optional OS Installation

Windows® 7

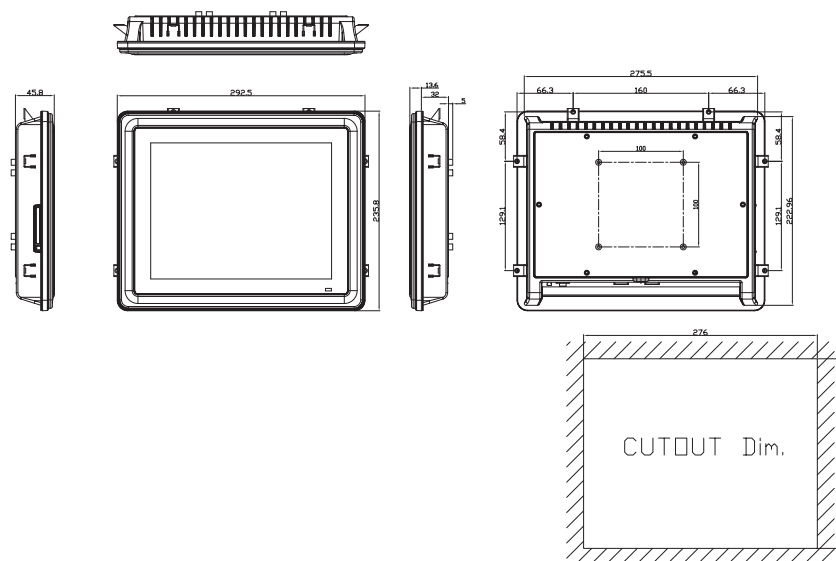
Windows® 8.1 (64-bit)

Windows® 10



▲ AC power adapter
(for MPC102-845-J)

Dimensions

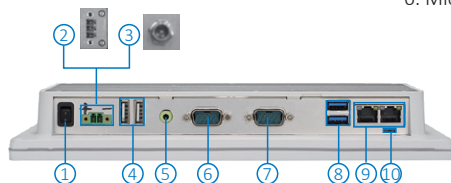


MPC103-845

10.1" WXGA TFT Fanless Medical Grade Touch Panel Computer with Intel® Celeron® Processor N3060



1. Power LED
2. HDD LED
3. Brightness adjust +/-
4. Display on/off
5. Volume adjust
6. Mic-in (optional)



1. Power switch (ATX)
2. Terminal block for DC power input
3. Screw connector with AC power adapter
4. 2 x USB 2.0
5. Audio (Line-out)
6. 1 x RS-232/422/485
7. 1 x RS-232
8. 2 x USB 3.0
9. 2 x LAN
10. AT/ATX switch

Features

- 10.1" WXGA TFT LCD display with LED backlight
- Fanless design with Intel® Celeron® processor N3060
- 2 GbE LANs, 4 USB and 2 COM
- Plastic and IP65-rated front bezel
- Supports RFID (optional)
- External AT/ATX mode selection switch
- Easy access storage design
- Supports panel/wall mount, VESA arm, and desktop stand
- Adjustable RS-232/422/485 setting via BIOS
- CE (EN 60601-1) and FCC Part 18
EN 60601-1-2 (ESD contact 8kV, air 15kV)



▲ Side view

Introduction

The MPC103-845 is a 10.1" fanless medical touch panel computer. It adopts a modern, super sleek and fanless design and has a 10.1" TFT LCD. It is powered by the Intel® Celeron® processor N3060 dual core up to 2.48 GHz. For wireless network connection, the MPC103-845 offers 2 PCI Express Mini Card slots. By just plugging in the WLAN card, customers can have instant access to wireless LAN/GPRS/GSM/4G environments. Besides, it provides two types of power input: DC power with terminal block connector and AC power adapter with screw type connector.

Super Slim & Ultra Lightweight Design

With a thickness of 38 mm and weight of 1.08 kg, the MPC103-845 is designed for use in space-constrained environments.

Certifications

This 10.1-inch medical panel platform complies with EN60601-1 ED3.1 CE, FCC Class B certifications to ensure medical operation safety.

Aluminum Back Chassis with Excellent Thermal Solution

With Axiomtek's patent for plastic plus aluminum mechanism design, the MPC103-845 can dissipate the heat easily and keep the system operation stable.

Specifications

Front Bezel	IP65, NEMA 4 rugged protection, plastic front bezel	
LCD Panel	Display Type	10.1" WXGA TFT LCD with LED backlight
	Brightness (cd/m ²)	350 nits
	Resolution	1280 x 800
	Viewing Angel (H/V)	170°/170°
Main System	CPU	Intel® Celeron® processor N3060 2 cores (up to 2.48 GHz)
	System Memory	1 x 204-pin DDR3L-1600 SO-DIMM, up to 8GB
	BIOS	AMI UEFI BIOS
	Storage	1 x Half-slim SATA SSD (only for MPC103-845-PCT-J) 1 x mSATA
	Watchdog Timer	255 levels, 0 to 255 sec.
I/O Connector	Onboard Graphics	Integrated in Intel® GFX
	1 x RS-232	
	1 x RS-232/422/485 (default RS-232)	
	1 x Switch for power on/off	
	1 x AT/ATX mode selection switch	
	2 x USB 2.0	
	2 x USB 3.0	
Expansion Interface	1 x Audio (Line-out)	
	2 x 10/100/1000 Mbps Ethernet (Intel® i211-AT)	
Touchscreen	1 x Full-size PCI Express Mini Card slot with mSATA	
	1 x Full-size PCI Express Mini Card slot with SIM	
Power Supply	AC version: 100 to 240 VAC-DC, 65W power adapter DC version: 9 to 36 VDC with over current protection fuse	
Power Consumption	40.32 W	
Dimension	260.8 mm (10.27") (W) x 38 mm (1.50") (D) x 194.1 mm (7.65") (H)	
Packing Dimensions	380 mm (14.96") (W) x 100 mm (3.94") (D) x 280 mm (11.02") (H)	
Weight (net/gross)	1.08 kg (2.38 lb)/2.18 kg (4.8 lb)	
Operating Temperature	0°C to +40°C (+32°F to +122°F)	
Relative Humidity	20% to 90% @ +40°C; non-condensing	
Operation Vibration	2G, 5- 500Hz, random for SSD	
Certifications	CE (EN 60601-1) and FCC Part 18	
	EN 60601-1-2 (ESD contact 8kV, air 15kV)	

Ordering Information

Standard

MPC103-845-J (P/N: E228103100)	10.1" WXGA fanless medical touch panel computer with Intel® Celeron® processor N3060, projected capacitive touch screen, AC-DC 65W power adapter (screw type connector) and EMI class B
MPC103-845-DC (P/N: E228103101)	10.1" WXGA fanless medical touch panel computer with Intel® Celeron® processor N3060, projected capacitive touch screen and DC power input (terminal block connector)

* Other configuration by request

* Specification and certifications may vary based on different requirements

Packing List

1 x MPC103-845
1 x Adapter (MPC103-845-J)
1 x Power cord (MPC103-845-J)
1 x Phoenix connector (MPC103-845 DC)

Optional Accessories

Wi-Fi + Bluetooth kit

GOT5103W-845 half slim SSD kit SFP for GOT5103W-845-PCT-J

881251030AOE Panel mount kit

8812B1070AOE Wall mount kit

881251203AOE RFID kit

E226171119 Stand Kit

Optional EOS Installation

WES 7

WE8S (64-bit)

Optional OS Installation

Windows® 7

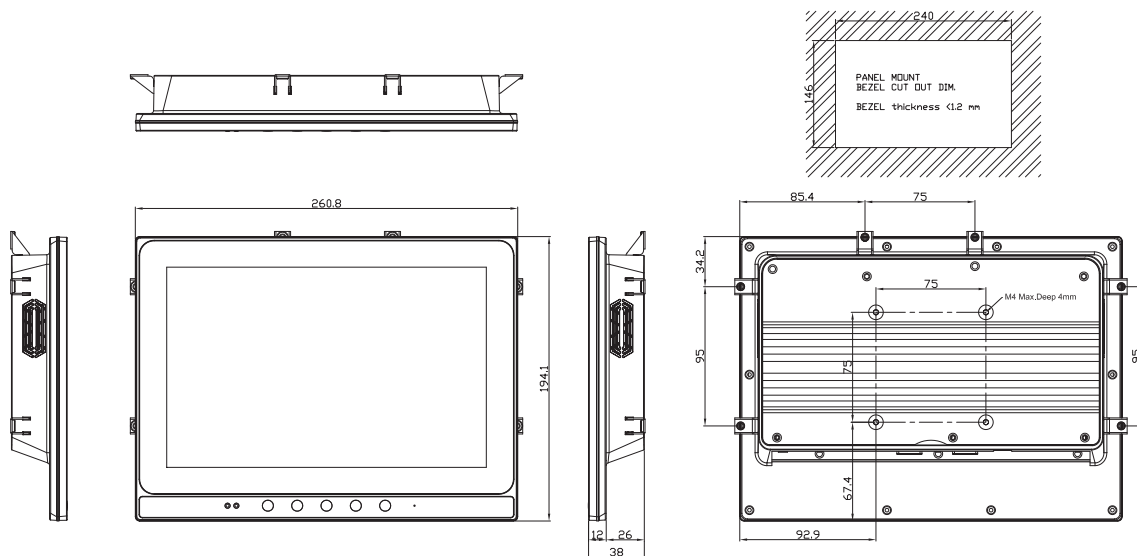
Windows® 8.1 (64-bit)

Windows® 10



▲ AC power adapter
(for MPC103-845-J)

Dimensions



3

System on Modules

Axiomtek's SoM (System on Module) solution includes COM Express modules (CEM) and Qseven modules. In conjunction with a suitable baseboard, Axiomtek's SoM solution is an optimal solution for embedded applications to fulfill the various vertical applications that SBC (Single Board Computer) usually cannot satisfy. SoM is designed with all necessary components, offering the most updated interface and excellent computing performance to reduce TCO (Total Cost of Ownership) and improve time to market.

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Intelligent Medical Systems

System on Modules

Selection Guide

NEW



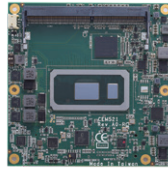
NEW



Features\Models	CEM710	CEM561	CEM530
Form Factor	COM Express® Type 7 Basic	COM Express Type 6 Compact	COM Express Type 6 Compact
CPU Level	Intel® Xeon® D-1700 LCC	12th gen Intel® Core™/ Celeron®	Intel® Xeon® or 9th/8th gen Intel® Core™
CPU Socket	Onboard	Onboard	Onboard
Core Logic Chipset	SoC integrated	SoC integrated	Intel® CM246/Intel® QM370
Memory Type	DDR4-2666	DDR4-3200	DDR4-2666
Max. DRAM Capacity	64GB (128GB optional)	64GB	64GB (96GB optional)
Cache RAM Capacity	SoC integrated	SoC integrated	SoC integrated
BIOS	AMI UEFI BIOS (Legacy Free)	AMI UEFI BIOS (Legacy Free)	AMI UEFI BIOS (Legacy Free)
Watchdog Timer	65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.
Onboard Storage	N/A	NVME up to 512GB (optional)	N/A
Onboard GPIO	4-in/4-out	4-in/4-out	4-in/4-out
I/O	SATA	2 x SATA-600	3 x SATA-600
	TPM	TPM 2.0	TPM 2.0
	COM 1	TX/RX	TX/RX
	COM 2	TX/RX	TX/RX
	COM 3	N/A	N/A
	COM 4	N/A	N/A
	USB	4 x USB 3.0 4 x USB 2.0	4 x USB 3.0 8 x USB 2.0
Display	N/A	1 x LVDS (eDP 1.4 optional) 1 x VGA (default) 2 x DDI	1 x LVDS (eDP 1.4 optional) 1 x VGA (default) 1 x DDI
Ethernet	1 x 10/100/1000/2500 Mbps	1 x 10/100/1000/2500 Mbps	1 x 10/100/1000 Mbps
Audio	Codec on baseboard	Codec on baseboard	Codec on baseboard
Hardware Monitoring	Yes	Yes	Yes
SMBus	Yes	Yes	Yes
Expansion Interface	1 x PCIe x16 Gen3 1 x PCIe x8 Gen3 8 x PCIe x1 Gen2	8 x PCIe x1 Gen3	1 x PCIe x16 Gen3 8 x PCIe x1 Gen3
Power Management	ACPI	ACPI	ACPI
Operating Temperature	0°C to +70°C (+32°F to +158°F)	-40°C to +85°C (-40°F to +185°F)	Industrial: -40°C to 85°C (-40°F to 185°F) Standard: 0°C to 60°C (32°F to 140°F)
Relative Humidity	10%- 95%, non-condensing	10%- 95%, non-condensing	10%- 95%, non-condensing
EMI Compliance	CE	CE	CE

System on Modules

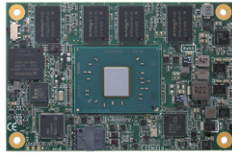
Selection Guide



NEW



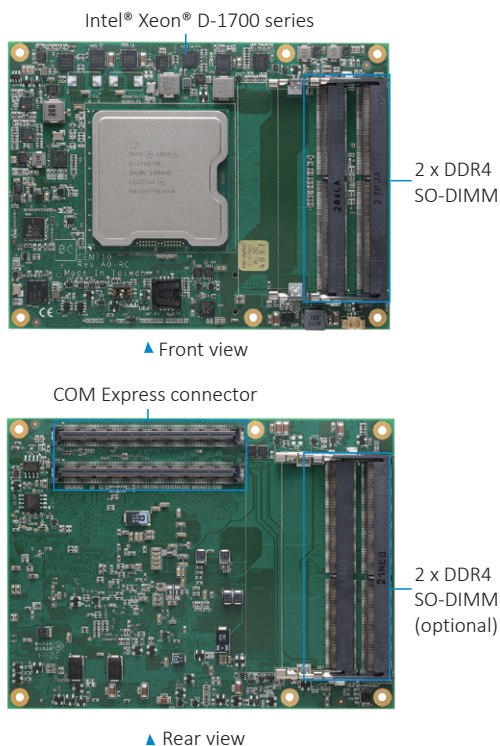
Features\Models		CEM521	CEM320	CEM311
Form Factor		COM Express Type 6 Compact	COM Express Type 10 Mini	COM Express Type 10 Mini
CPU Level		8th gen Intel®Core™/ Celeron® 4305UE	Intel Atom® x6000E Series or Intel® Celeron® N/J Series	Intel® Pentium® N4200 or Intel® Celeron® N3350
CPU Socket		Onboard	Onboard	Onboard
Core Logic Chipset		SoC integrated	SoC integrated	SoC integrated
Memory Type		DDR4-2400	LPDDR4-4267	DDR3L-1866/LPDDR4
Max. DRAM Capacity		64GB	16GB/ 8GB	4GB (default)/8GB (optional)
Cache RAM Capacity		SoC integrated	SoC integrated	SoC integrated
BIOS		AMI UEFI BIOS (Legacy Free)	AMI UEFI BIOS (Legacy Free)	AMI UEFI BIOS (Legacy Free)
Watchdog Timer		65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.
Onboard Storage		eMMC 5.1 up to 64GB (optional)	eMMC 5.1 up to 64GB	eMMC 5.0 up to 64GB (optional)
Onboard GPIO		4-in/4-out	4-in/4-out	4-in/4-out
I/O	SATA	3 x SATA-600	2 x SATA-600	2 x SATA-600
	TPM	TPM 2.0	TPM 2.0	N/A
	Serial	COM 1	TX/RX	TX/RX
		COM 2	TX/RX	TX/RX
		COM 3	N/A	N/A
		COM 4	N/A	N/A
	USB	4 x USB 3.0 8 x USB 2.0	2 x USB 3.0 8 x USB 2.0	2 x USB 3.0 8 x USB 2.0
Display		1 x LVDS (eDP 1.4 optional) 1 x VGA (default) 1 x DDI	1 x LVDS (eDP optional) 1 x DDI	1 x DDI 1 x LVDS (eDP optional)
Ethernet		1 x 10/100/1000 Mbps	1 x 10/100/1000/2500 Mbps	1 x 10/100/1000 Mbps
Audio		Codec on baseboard	Codec on baseboard	Codec on baseboard
Hardware Monitoring		Yes	Yes	Yes
SMBus		Yes	Yes	Yes
Expansion Interface		8 x PCIe x1 Gen3	4 x PCIe x1	4 x PCIe x1
Power Management		ACPI	ACPI	ACPI
Operating Temperature		Industrial: -40°C to 85°C (-40°F to 185°F) Standard: -20°C to +70°C (-4°F to +158°F)	Industrial: -40°C to +85°C (-40°F to +185°F) Standard: -20°C to +70°C (-4°F to +158°F)	Industrial: -40°C to +85°C (-40°F to +185°F) Standard: -20°C to +70°C (-4°F to +158°F)
Relative Humidity		10%- 95%, non-condensing	10%- 95%, non-condensing	10%- 95%, non-condensing
EMI Compliance		CE	CE	CE



Features\Models		CEM310	CEM130
Form Factor		COM Express® Type 10 Mini	COM Express Type 6 Compact
CPU Level		Intel Atom® x5/x7	AMD Ryzen™ Embedded V1000
CPU Socket		Onboard	Onboard
Core Logic Chipset		SoC integrated	SoC integrated
Memory Type		DDR3L-1866	DDR4-2400/3200
Max. DRAM Capacity		4GB (default)/8GB (optional)	32GB (dual channel)
Cache RAM Capacity		SoC integrated	SoC integrated
BIOS		AMI UEFI BIOS (Legacy Free)	AMI UEFI BIOS (Legacy Free)
Watchdog Timer		65536 levels, 0 to 65535 sec.	65536 levels, 0 to 65535 sec.
Onboard Storage		eMMC 5.0 up to 64GB (optional)	N/A
Onboard GPIO		4-in/4-out	4-in/4-out
I/O	SATA	2 x SATA-600	2 x SATA-600
	TPM	N/A	TPM 2.0
	Serial	COM 1	TX/RX
		COM 2	TX/RX
		COM 3	N/A
		COM 4	N/A
	USB	2 x USB 3.0 8 x USB 2.0	3 x USB 3.0 8 x USB 2.0
Display		1 x DDI 1 x LVDS (eDP optional)	1 x VGA 1 x LVDS (eDP 1.3 optional) 2 x DDI (supports HDMI 1.4/DVI/DP 1.2*) *HDMI 2.0/DP 1.4 needs Redriver chip on carrier board
Ethernet		1 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps
Audio		Codec on baseboard	Codec on baseboard
Hardware Monitoring		Yes	Yes
SMBus		Yes	Yes
Expansion Interface		4 x PCIe x1	7 x PCIe x1 via PCIe bridge
Power Management		ACPI	ACPI
Operating Temperature		Industrial: -40°C to +85°C (-40°F to +185°F) Standard: -20°C to +70°C (-4°F to +158°F)	-20°C to +60°C (-4°F to +140°F)
Relative Humidity		10%- 95%, non-condensing	10%- 95%, non-condensing
EMI Compliance		CE	CE

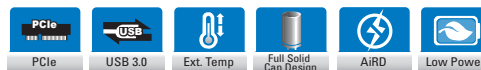
CEM710 NEW

COM Express Type 7 Basic Module with Intel® Xeon® D-1700 Processor



Features

- Intel® Xeon® D-1700 Processor (Ice Lake D)
- 4 DDR4-2666 SO-DIMM for up to 128 GB memory (optional)
- 1 PCIe x16 Gen4, 1 PCIe x8 Gen3, 8 PCIe x1 Gen3
- 2 SATA Gen3
- 4 USB 3.0 and 4 USB 2.0
- 4 10GBase-KR
- Supports TPM 2.0



Specifications

Core System

CPU	Intel® Xeon® D-1712TR (4 x 2.0 GHz, 10MB cache, 50G Eth, 39W) Intel® Xeon® D-1735TR (8 x 2.2 GHz, 15MB cache, 50G Eth, 59W) Intel® Xeon® D-1715TER (4 x 2.4 GHz, 10MB cache, 50G Eth, 50W) Intel® Xeon® D-1732TE (8 x 1.9 GHz, 15MB cache, 50G Eth, 52W) Intel® Xeon® D-1746TER (10 x 2.0 GHz, 15MB cache, 100G Eth, 67W)
System Memory	Default: 2 x 260-pin DDR4-2666 ECC SO-DIMM, up to 64GB Optional: 4 x 260-pin DDR4-2666 ECC SO-DIMM, up to 128GB
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
Storage	N/A
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	1 x PCIe x16 Gen4 1 x PCIe x8 Gen3 8 x PCIe x1 Gen3
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB AT: +12V

I/O

SATA	2 x SATA Gen3
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000/2500 Mbps Ethernet with Intel® I226 4 x 10GBASE-KR with Intel® 10G external PHY
Audio	N/A
USB	4 x USB 3.0 4 x USB 2.0
Serial	2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I ² C 1 x LPC 1 x SPI
GPIO	4-CH in & 4-CH out
Smart Battery	N/A

Mechanical and Environmental

Dimensions	125 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	0°C to +70°C (+32°F to +158°F)
Humidity	10%- 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

Packing List

Quick installation guide

Ordering Information

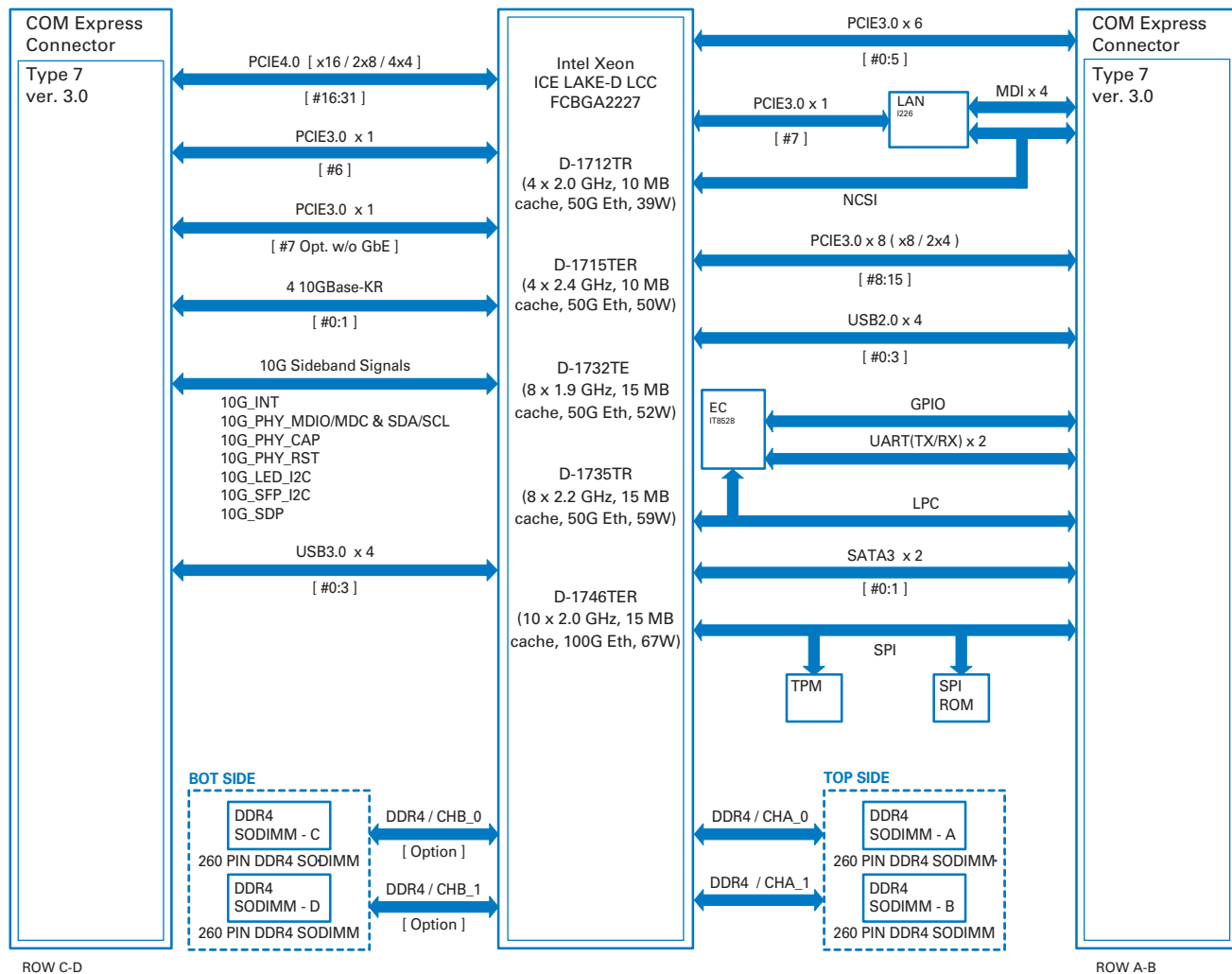
Standard

CEM710-D1712TR (P/N: TBD)	COM Express Type 7 basic module with Intel® Xeon® D-1712TR, 10GBASE-KR, USB 3.0, and TPM
CEM710-D1735TR (P/N: TBD)	COM Express Type 7 basic module with Intel® Xeon® D-1735TR, 10GBASE-KR, USB 3.0, and TPM
CEM710-D1715TER (P/N: TBD)	COM Express Type 7 basic module with Intel® Xeon® D-1715TER, 10GBASE-KR, USB 3.0, and TPM
CEM710-D1732TE (P/N: TBD)	COM Express Type 7 basic module with Intel® Xeon® D-1732TE, 10GBASE-KR, USB 3.0, and TPM
CEM710-D1746TER (P/N: TBD)	COM Express Type 7 basic module with Intel® Xeon® D-1746TER, 10GBASE-KR, USB 3.0, and TPM

Optional

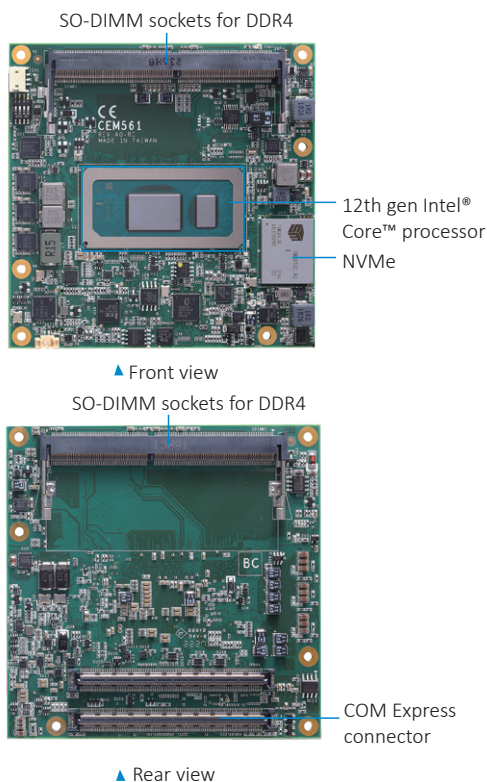
CEB94701 (P/N: E394701100)	COM Express Type 7 development board
TBD	CEM710 heat pipe cooler
TBD	CEM710 heat spreader

Block Diagram



CEM561 NEW

COM Express Type 6 Compact Module with 12th Gen Intel® Core™ or Celeron® Processor



Features

- 12th gen Intel® Core™ i7/i5/i3 or Celeron® processor (Alder Lake U)
- Dual channel DDR4-3200 SO-DIMM for up to 64GB
- Up to 8 lanes of PCI Express
- 2 SATA Gen3
- 4 USB 3.0 and 8 USB 2.0
- Supports NVMe for up to 512GB (by request)
- Supports TPM 2.0
- Enabler Middleware (eAPI) intelligent remote management software



Specifications

Core System

CPU	Intel® Core™ i7-1265UE/i5-1245UE/i3-1215UE processor or Intel® Celeron® processor 7305E
System Memory	2 x Dual-channel DDR4-3200 SO-DIMM slot, up to 64GB
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
SSD	NVMe for up to 512GB (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	1 x PCIe x4 Gen4 + 5 x PCIe Gen3 (NVMe SKUs) 2 x PCIe x4 Gen4 + 5 x PCIe Gen3 (without NVMe SKU) Up to 2 x PCIe x4 Gen4 + 8 x PCIe Gen3 (by request)
Battery Lithium	Yes
Power Input	ATX: +12V, +5VSB AT: +12V

Display

Chipset	Intel® gen 9 Graphics Engine Supports Gfx- DX12.0, OCL2.0, OGL4.3
Display Interface	1 x LVDS; 18/24-bit single/dual channel (optional eDP 1.4b HBR3: 5120 x 3200@60Hz) 1 x VGA; 1920 x 1200 @60Hz (default) 2 x DDI (with up to 8K supported)

I/O

SATA	2 x SATA Gen3
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000/2500 Mbps Ethernet with Intel® I226-LM; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	4 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I ² C
GPIO	4-CH in & 4-CH out
Smart Battery	Yes

Mechanical and Environmental

Dimensions	95 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	-40°C to +85°C (-40°F to +185°F), operation with system thermal solution
Humidity	10%- 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

Packing List

Quick installation guide

Ordering Information

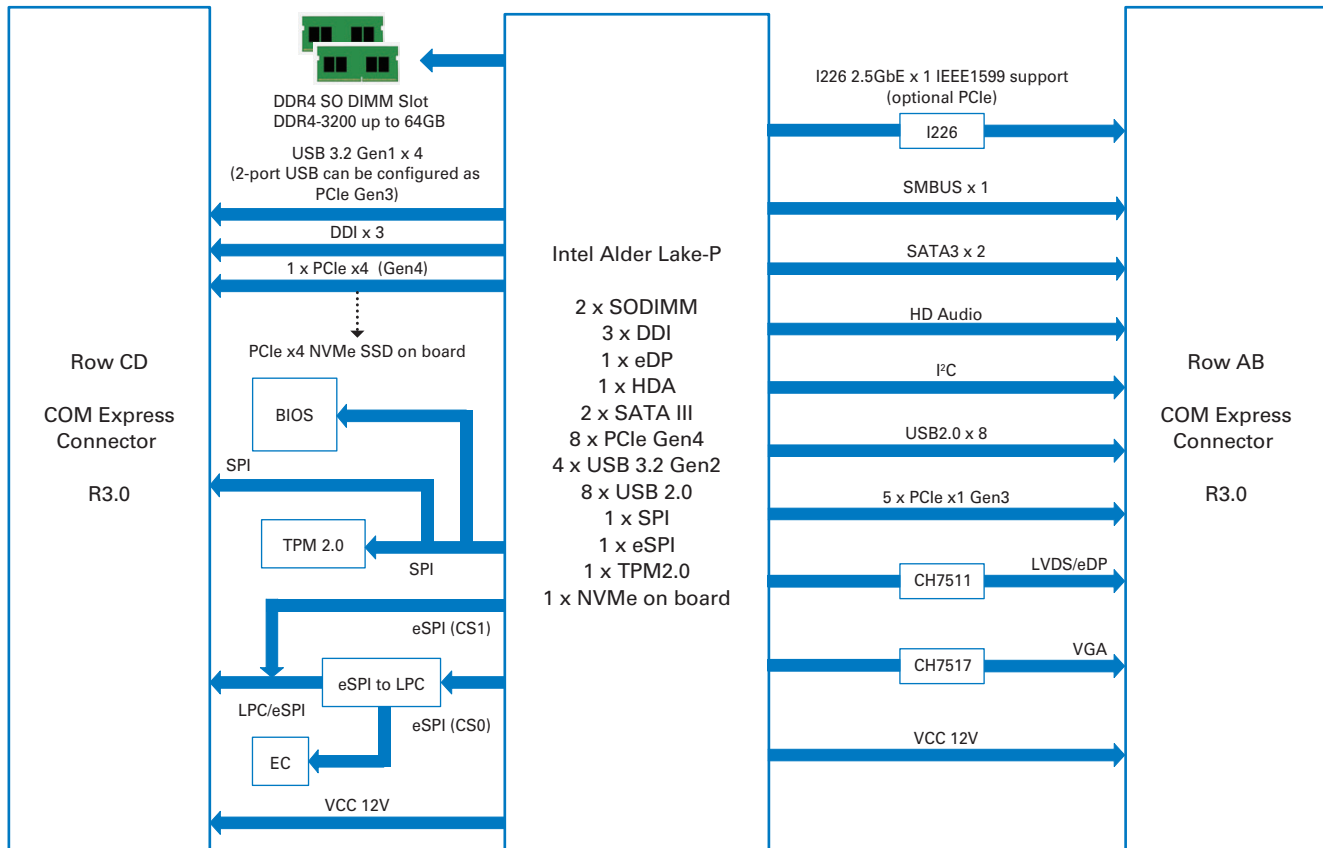
Standard

CEM561-i7-1265 (P/N: TBD)	COM Express Type 6 compact module with Intel® Core™ i7-1265UE, DDI, VGA, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM561-i5-1245 (P/N: TBD)	COM Express Type 6 compact module with Intel® Core™ i5-1245UE, DDI, VGA, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM561-i3-1215 (P/N: TBD)	COM Express Type 6 compact module with Intel® Core™ i3-1215UE, DDI, VGA, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM561-Cel-7305 (P/N: TBD)	COM Express Type 6 compact module with Intel® Celeron® 7305E, DDI, VGA, LVDS, 2.5GbE LAN, and TPM

Optional

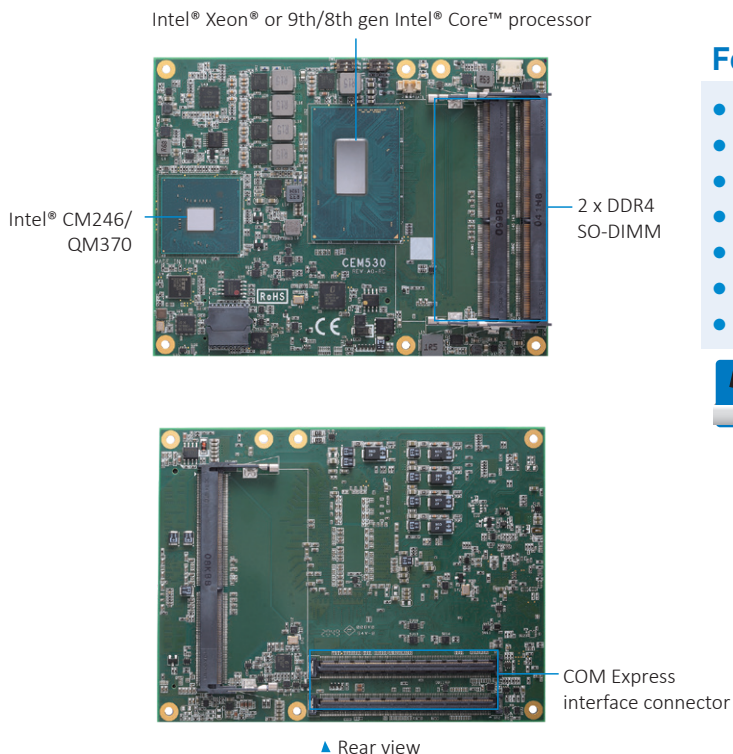
CEB94011 (P/N: E394011100)	COM Express Type 6 evaluation board
TBD	CEM561 heat sink with fan
TBD	CEM561 heat spreader

Block Diagram



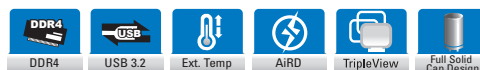
CEM530

COM Express Type 6 Basic Module with Intel® Xeon® or 9th/8th Gen Intel® Core™ Processor
and Intel® CM246/QM370



Features

- Intel® Xeon® or 9th/8th gen Intel® Core™ processor
- Intel® CM246/QM370 chipset
- Dual channel DDR4-2666 SO-DIMM for up to 64GB of memory
- 1 PCIe x16 and 8 PCIe x1 Gen3
- 4 SATA Gen3 with RAID 0/1/5/10
- 4 USB 3.2 and 8 USB 2.0
- Supports TPM 2.0



Specifications

Core System

CPU	Intel® Xeon® or 9th/8th gen Intel® Core™ processor (Coffee Lake & Coffee Lake Refresh)
System Memory	Dual channel DDR4-2666 SO-DIMM, up to 64GB (or 96GB by request)
Chipset	Intel® CM246/Intel® QM370
BIOS	AMI uEFI (Legacy Free)
Storage	N/A
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	1 x PCIe x16 Gen3 8 x PCIe x1 Gen3
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB; AT: +12V

Display

Chipset	Intel® Gen 9 HD Graphic Gfx APIs- DX11/12, OCL2.x, OGL 4.3/4.4 3 independent displays
Display Interface	1 x LVDS; 18/24-bit single/dual channel (default), optional with eDP 1.4: 4096 x 2304 @60Hz 1 x VGA; 1920 x 1200 @60Hz (default) 2 x DDI (DisplayPort 1.2: 4096 x 2304 @60Hz/HDMI 1.4: 4096 x 2160 @30/24Hz)

I/O

SATA	4 x SATA Gen3 with RAID 0/1/5/10
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® I219-LM; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	4 x USB 3.2 Gen2 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I ² C
GPIO	4-CH in & 4-CH out (SDIO optional)
Smart Battery	Yes

Mechanical and Environmental

Dimensions	125 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	-40°C to +85°C (-40°F to +185°F) with system thermal solution (operation with heatsink and fan)
Humidity	10%- 95% relative humidity, non-condensing
Vibration	3.5 Grms

Packing List

Quick installation guide

Ordering Information

Standard

CEM530-E-2276ME+ CM246 (P/N: E38D530106)	COM Express Type 6 basic module with Intel® Xeon® E-2276ME, CM246, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-i7-9850HE+ QM370 (P/N:E38D530107)	COM Express Type 6 basic module with Intel® Core™ i7-9850HE, QM370, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-i3-9100HL+ QM370 (P/N:E38D530102)	COM Express Type 6 basic module with Intel® Core™ i3-9100HL, QM370, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-G4930E+ CM246 (P/N: E38D530105)	COM Express Type 6 basic module with Intel® Core™ G4930E, CM246, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-E-2176ME+ CM246 (P/N: E38D530108)	COM Express Type 6 basic module with Intel® Xeon® E-2176ME, CM246, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-i7-8850H+ QM370 (P/N: E38D530110)	COM Express Type 6 basic module with Intel® Core™ i7-8850H, QM370, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-i5-8400H+ QM370 (P/N: E38D530111)	COM Express Type 6 basic module with Intel® Core™ i5-8400H, QM370, DDI/LVDS, GbE LAN, USB 3.0, and TPM
CEM530-i3-8100H+ QM370 (P/N: E38D530113)	COM Express Type 6 basic module with Intel® Core™ i3-8100H, QM370, DDI/LVDS, GbE LAN, USB 3.0, and TPM

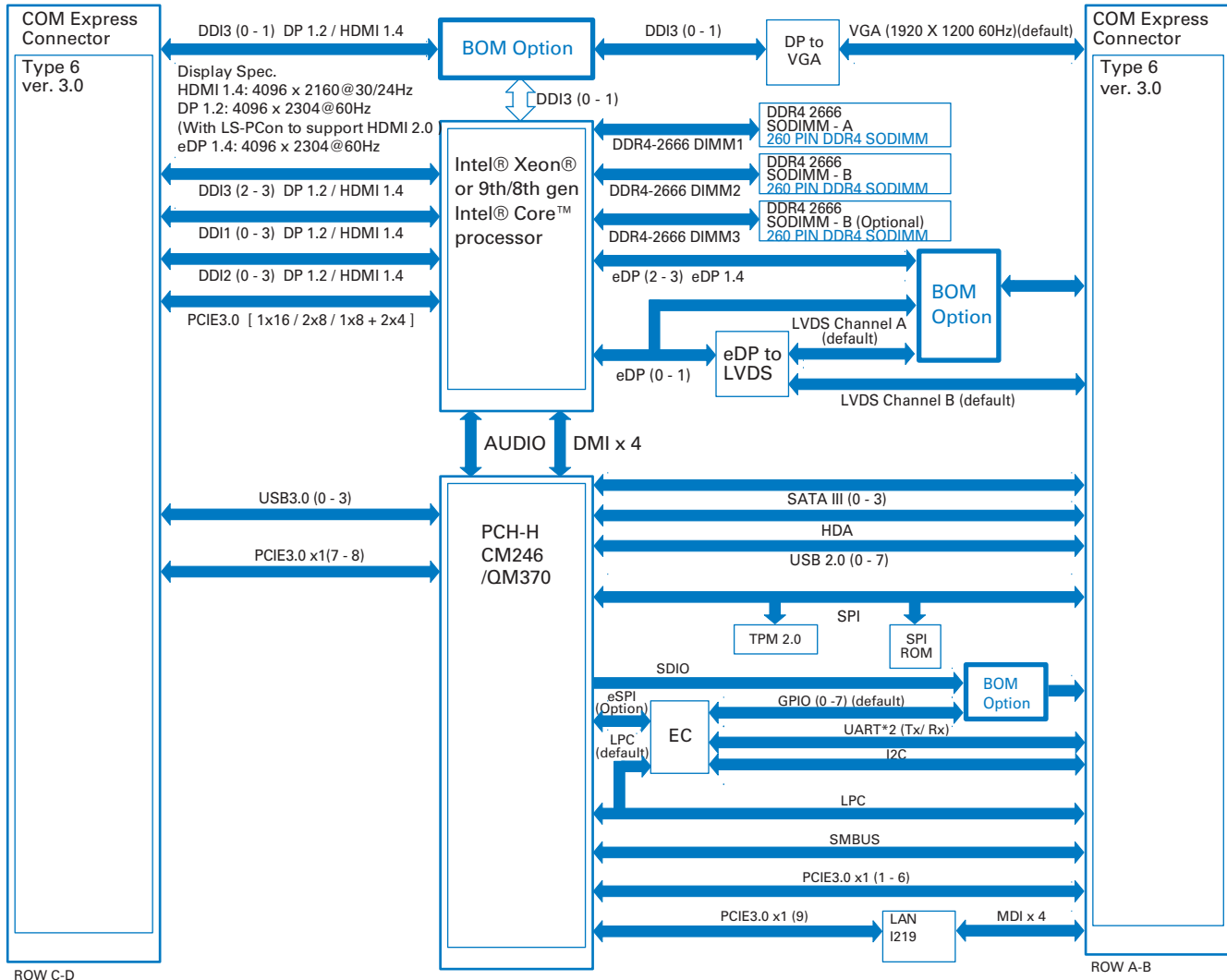
*Any other SKUs (9th or 8th gen Intel® Core™ processor) and combination are supported by request. Please contact sales for the details.

Optional

CEB94011 (P/N: E394011100)	CEB94011 COM Express Type 6 evaluation board
E39J015100	CEM530/CEM520 heat sink with fan
E39J006100	CEM530/CEM520 heat spreader

*CEM530 shared the same thermal solution with CEM520.

Block Diagram

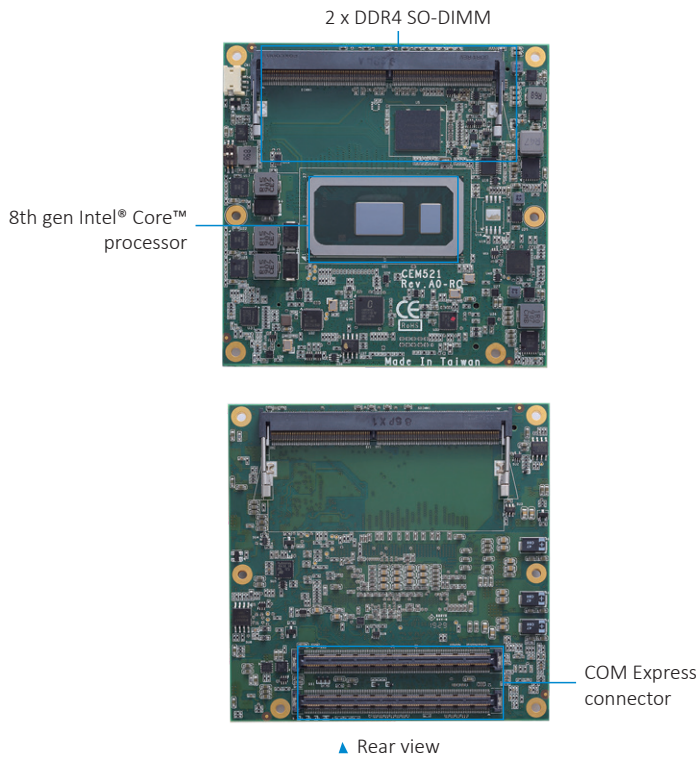


ROW C-D

ROW A-B

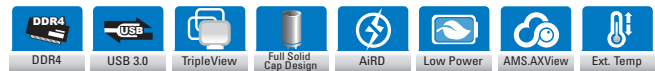
CEM521

COM Express Type 6 Compact Module with 8th Gen Intel® Core™ & Celeron® Processor



Features

- 8th gen Intel® Core™ i7/i5/i3 and Celeron® processors (Whiskey Lake-U)
- 2 dual-channel DDR4-2400 SO-DIMM for up to 64GB
- Max. up to 8 lanes of PCI Express
- 3 SATA Gen3
- 4 USB 3.0 and 8 USB 2.0
- Supports eMMC for up to 64G (optional)
- TPM 2.0 supported
- AMS.AXView intelligent remote management software



Specifications

Core System

CPU	Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE processor (Whiskey Lake-U) & Intel® Celeron® processor 4305UE
System Memory	2 x Dual-channel DDR4-2400 SO-DIMM slot, up to 64GB
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
SSD	eMMC for up to 64G (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	8 x PCI Express Gen3 (max. 5 PCIe Devices with LAN)
Battery Lithium	Yes
Power Input	ATX: +12V, +5VSB AT: +12V

Display

Chipset	Intel® gen 9 Graphics Engine Supports Gfx- DX12.0, OCL2.0, OGL4.3
Display Interface	1 x LVDS; 18/24-bit single/dual channel (optional eDP 1.4 : 4096 x 2304@60Hz) 1 x VGA; 1920 x 1200 @60Hz (default) 1 x DDI (DisplayPort 1.2: 4096 x 2304@60Hz/ HDMI 1.4: 4096 x 2160@30/24Hz)

I/O

SATA	3 x SATA Gen3
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i219-LM; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	4 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I ² C
GPIO	4-CH in & 4-CH out (SDIO optional)
Smart Battery	Yes

Mechanical and Environmental

Dimensions	95 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	Industrial: -40°C to +85°C (-40°F to +185°F) with system thermal solution Standard: -20°C to +70°C (-4°F to +158°F), operation
Humidity	10%- 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

Packing List

Quick installation guide

Ordering Information

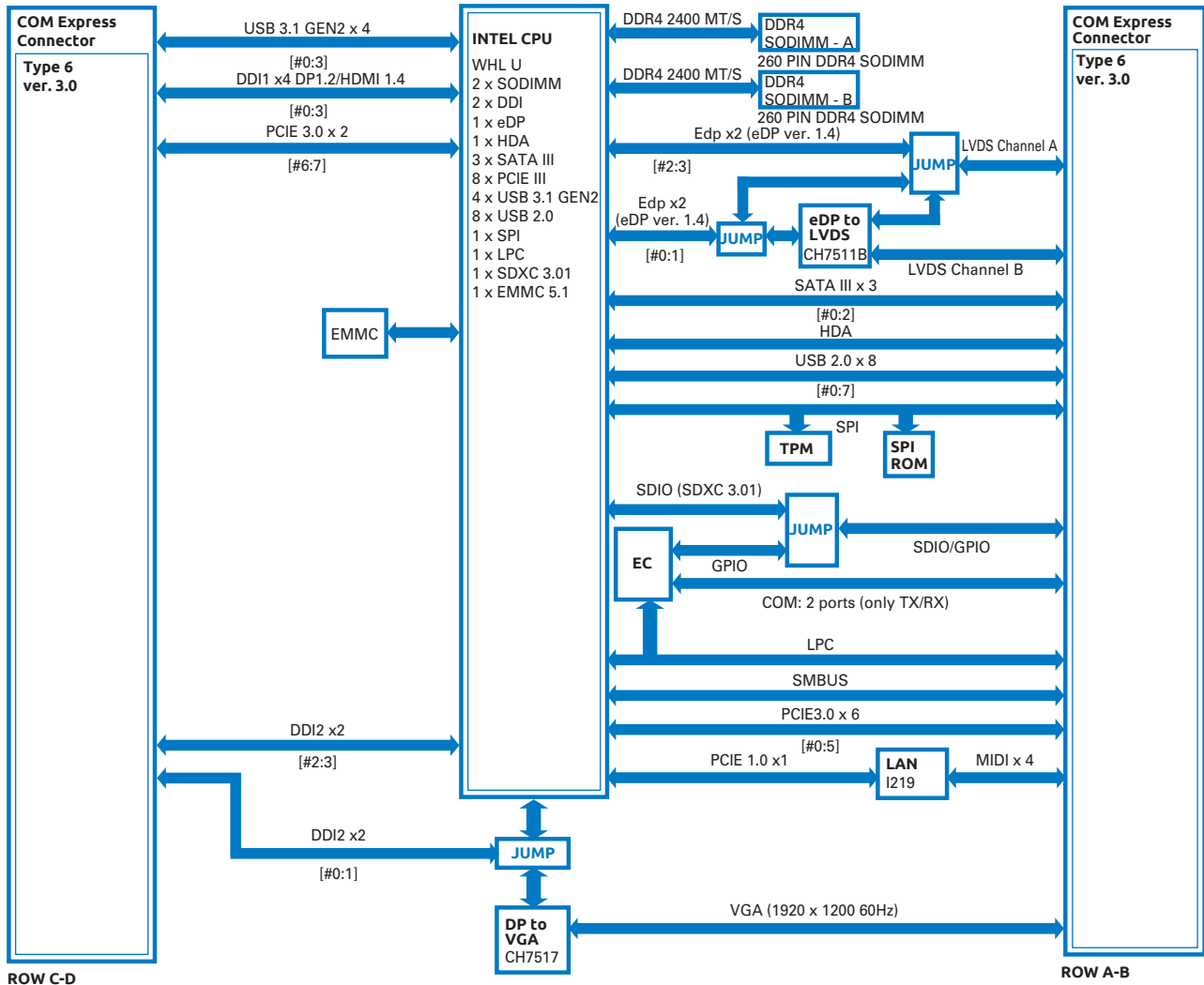
Standard

CEM521-i7-8665UE (P/N: E38D521100)	COM Express Type 6 compact module with Intel® Core™ i7-8665UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-i5-8365UE (P/N: E38D521102)	COM Express Type 6 compact module with Intel® Core™ i5-8365UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-i3-8145UE (P/N: E38D521104)	COM Express Type 6 compact module with Intel® Core™ i3-8145UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-CeL-4305UE (P/N: E38D521105)	COM Express Type 6 compact module with Intel® Celeron® 4305UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-i7-8665UE (Ind.) (P/N: E38D521110)	COM Express Type 6 compact module with Intel® Core™ i7-8665UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM (wide temperature)
CEM521-i5-8365UE (Ind.) (P/N: E38D521111)	COM Express Type 6 compact module with Intel® Core™ i5-8365UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM (wide temperature)
CEM521-i3-8145UE (Ind.) (P/N: E38D521112)	COM Express Type 6 compact module with Intel® Core™ i3-8145UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM (wide temperature)

Optional

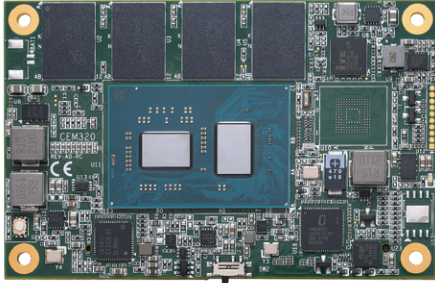
CEB94011 (P/N: E394011100)	COM Express Type 6 evaluation board
E39J016100	CEM521 heat sink with fan
7128D521000E	CEM521 heat spreader

Block Diagram



CEM320 NEW

COM Express Type 10 Mini Module with Intel Atom® x6000E Series or Intel® Celeron® N/J Series



Features

- Intel Atom® x6000E series or Intel® Celeron® N/J processor (Elkhart Lake)
- 8GB/16GB LPDDR4 memory onboard
- Up to 4 lanes of PCI Express
- 2 SATA 3.0
- 2 USB 3.0 and 8 USB 2.0
- eMMC and TPM2.0 onboard



Specifications

Core System

CPU	Intel Atom® x6413E (1.5GHz), Intel® Celeron® N6210 (1.2GHz) Intel® Celeron® J6412 (2.0GHz)
System Memory	8GB/16GB LPDDR4 memory onboard
Chipset	SoC integrated
BIOS	AMI UEFI BIOS (Legacy Free)
Storage	32GB/64GB eMMC onboard
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	4 x PCIe x1 (3 x1 while internal LAN is connected)
Battery Lithium	Yes
Power Input	ATX: +12V, +5VSB AT: +12V Wide range input: +4.75V to +20V

Display

Chipset	Intel® Gen11 Graphics Engines (SoC integrated) OpenGL® 4.5, DirectX® 12, OpenCL® 1.2, Vulkan 1.1
Display Interface	1 x DDI 1 x LVDS (eDP optional)

I/O

SATA	2 x SATA 3.0
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000/2500 Mbps Ethernet with Intel® I226; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	2 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I ² C
GPIO	4-CH in & 4-CH out
Smart Battery	Yes

Mechanical and Environmental

Dimensions	84 x 55 mm
Board Thickness	2.0 mm
Operating Temperature	Industrial:-40°C to +85°C (-40°F to +185°F) with system thermal solution Standard:-20°C to +70°C (-4°F to +158°F)
Humidity	10%- 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

Packing List

Quick installation guide

Ordering Information

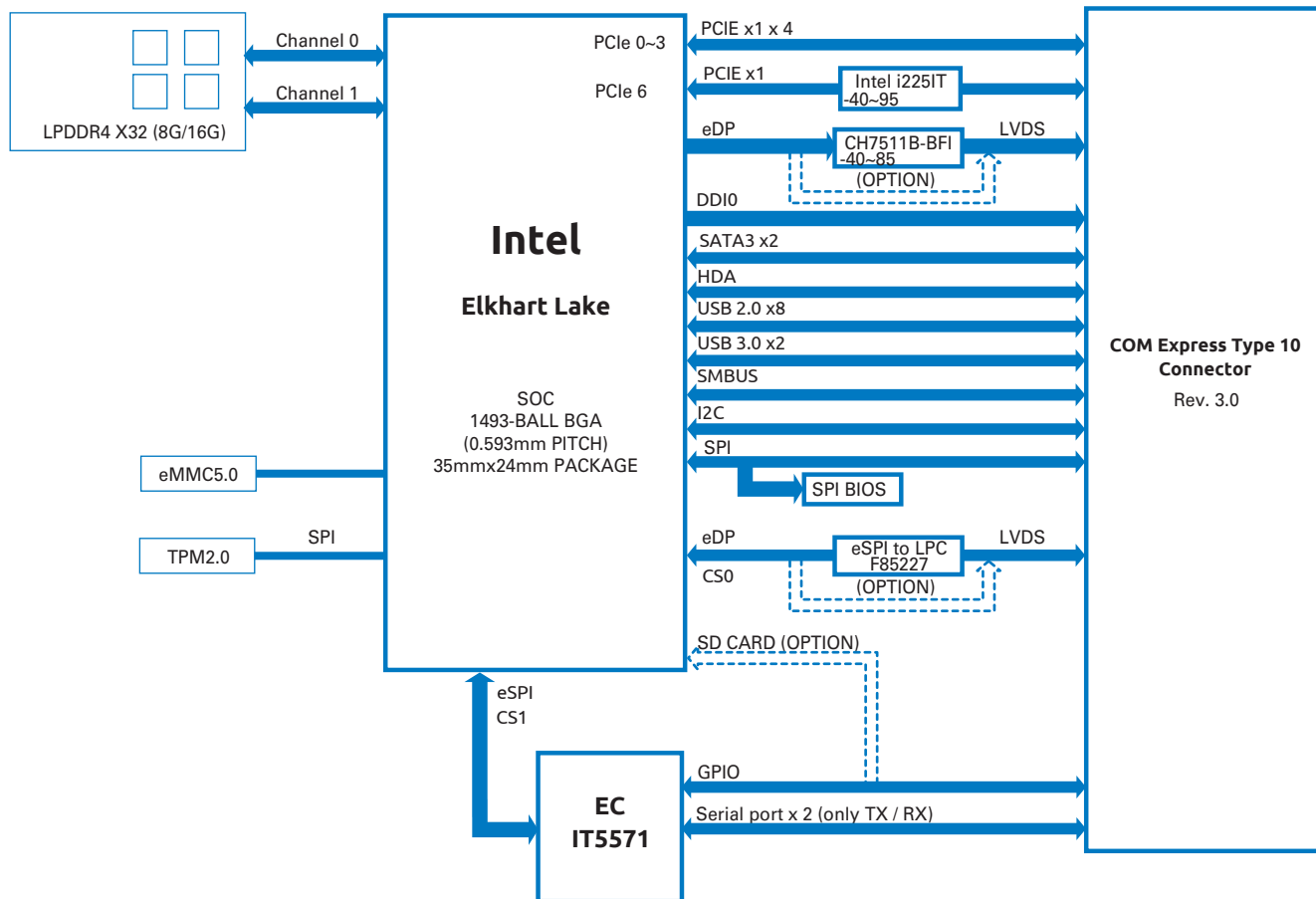
Standard

CEM320-X6413-16GB (P/N: TBD)	COM Express Type 10 Mini module with Intel Atom® X6413E, LPDDR4 16GB, 64GB eMMC, DDI, LVDS, USB 3.0, and GbE LAN (Ind. Temp)
CEM320-N6210-8GB (P/N: TBD)	COM Express Type 10 Mini module with Intel® Celeron® N6210, LPDDR4 8GB, 32GB eMMC, DDI, LVDS, USB 3.0, and GbE LAN (Ind. Temp)
CEM320-J6412-8GB (P/N: TBD)	COM Express Type 10 Mini module with Intel® Celeron® J6412, LPDDR4 8GB, 32GB eMMC, DDI, LVDS, USB 3.0, and GbE LAN (Ind. temp)

Optional

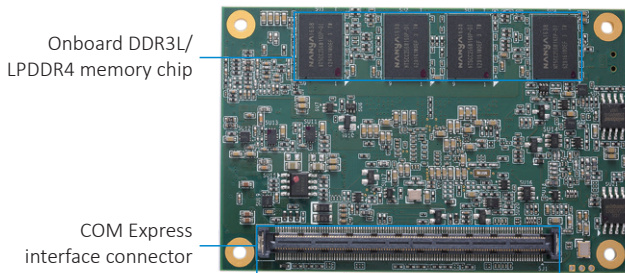
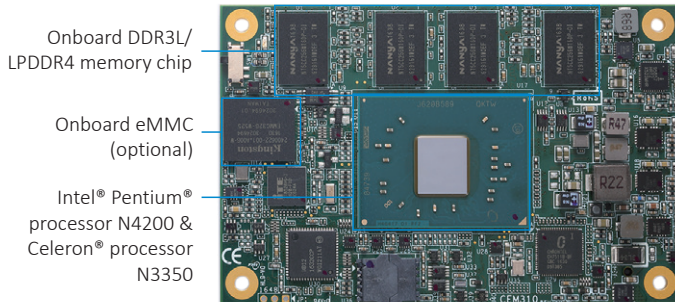
TBD	CEM320 heatspreader
5078D840200E	Heatsink with fan
CEB94017 (P/N: E394017101)	COM Express Type 10 development baseboard

Block Diagram



CEM311

COM Express Type 10 Mini Module with Intel® Pentium® Processor N4200 & Celeron® Processor N3350



▲ Rear view

Features

- Intel® Pentium® processor N4200 & Celeron® processor N3350 (Apollo Lake)
- 4GB DDR3L / 8GB LPDDR4 memory onboard
- Max. up to 4 lanes of PCI Express
- 2 SATA-600
- 2 USB 3.0 and 8 USB 2.0



Specifications

Core System

CPU	Intel® Pentium® processor N4200 & Celeron® processor N3350 (Apollo Lake) onboard
System Memory	4GB DDR3L memory onboard 8GB LPDDR4 memory onboard
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
Storage	eMMC 5.0 upto 64GB (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	4 x PCIe x1 devices (3 x1 while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB AT: +12V Wide range input: +4.75V to +20V

Display

Chipset	Intel® Gen 9 Graphics Engine Support Gfx-DX12.0, OCL2.0, OGL 4.3
Display Interface	1 x DDI (DP, HDMI, DVI) 1 x LVDS; 18/24-bit single channel (eDP optional)

I/O

MIO	1 x LPC interface 1 x SPI interface 2 x Serial TX/RX 1 x I ² C
SATA	2 x SATA-600
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i211AT; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	2 x USB 3.0 8 x USB 2.0
TPM	N/A
SMBus	Yes
Digital I/O	4-CH in & 4-CH out
Smart Battery	Yes

Mechanical and Environmental

Dimensions	84 x 55 mm
Board Thickness	2.0 mm
Temperature	-20°C to +70°C (-4°F to +158°F), operation
Operation Humidity	10%- 95% relative humidity, non-condensing
Vibration	3.5 Grms

Packing List

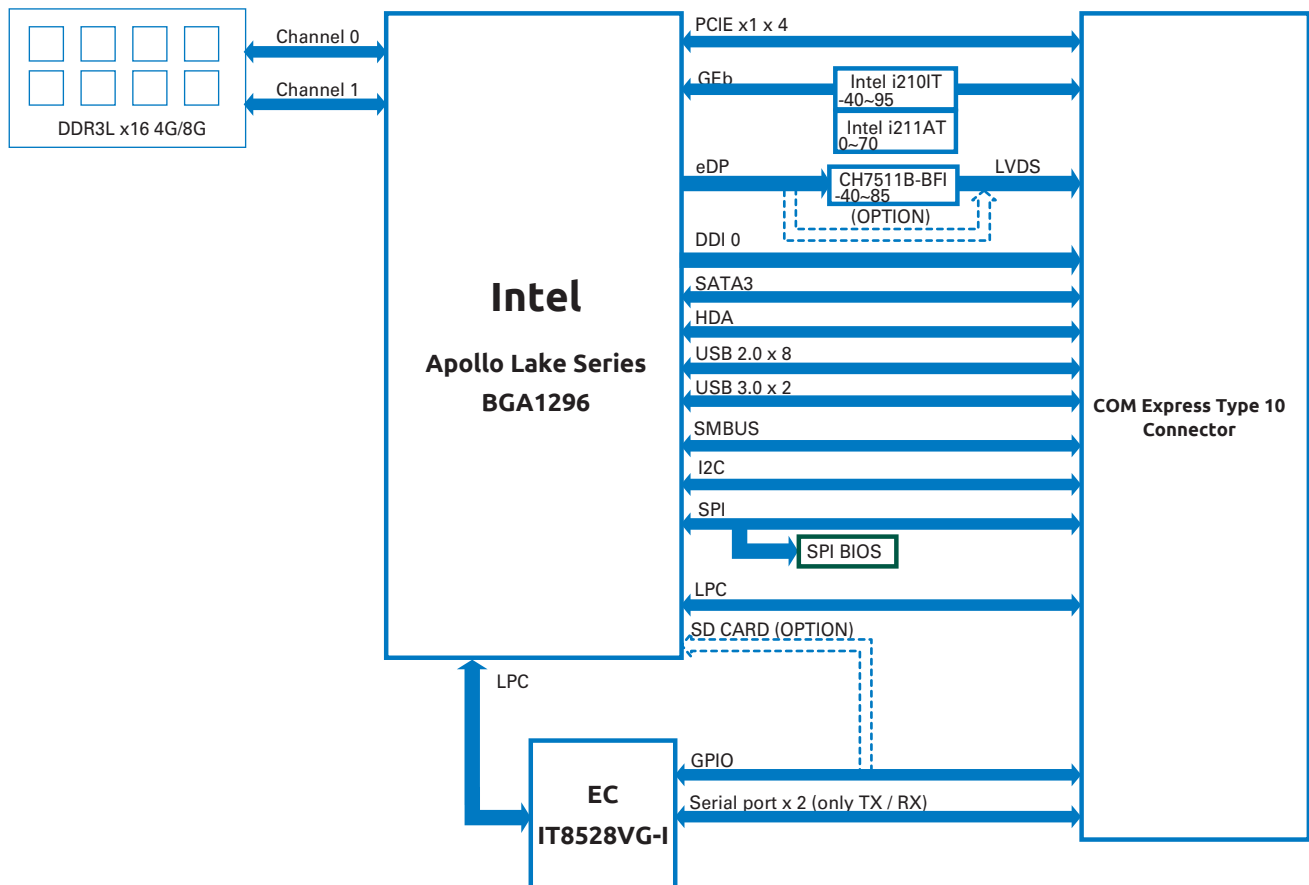
Quick installation guide

Ordering Information

Standard

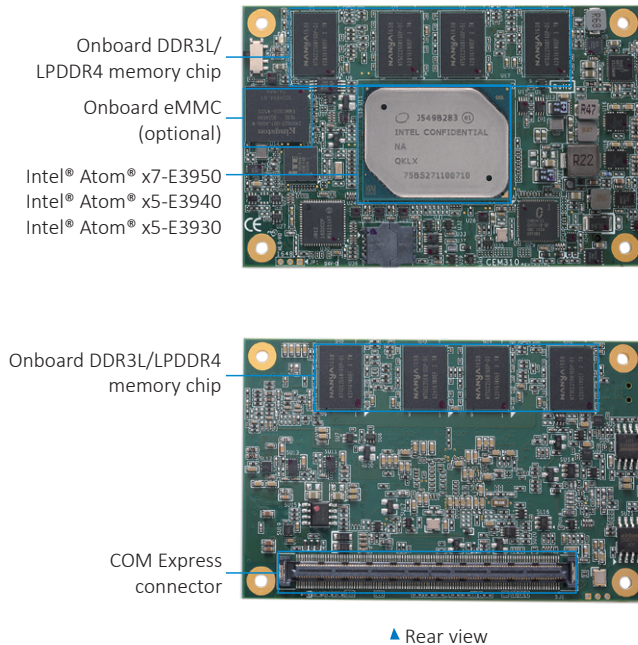
CEM311PG-N4200 (P/N: E38D311103)	COM Express Type 10 compact module with Intel® Pentium® N4200, DDI/LVDS, USB 3.0, and GbE LAN
CEM311PG-N3350 (P/N: E38D311100)	COM Express Type 10 compact module with Intel® Celeron® N3350, DDI/LVDS, USB 3.0, and GbE LAN
CEM311-G3C-P1G (P/N:E38D311107)	COM Express Type 10 compact module with Intel® Pentium® N4200, DDI/LVDS, USB 3.0, GbE LAN, LPDDR4 8GB, and eMMC 64GB
CEM311-H2B-P1G (P/N:E38D311108)	COM Express Type 10 compact module with Intel® Pentium® N3350, DDI/LVDS, USB 3.0, GbE LAN, LPDDR4 4GB, and eMMC 32GB
7128D311000E	CEM311 heat spreader
E39J011100	CEM311 heat sink without fan

Block Diagram



CEM310

COM Express Type 10 Mini Module with Intel Atom® x5 and x7 Processor



Features

- Intel Atom® x5 and x7 processors (Apollo Lake)
- 4GB DDR3L / 8GB LPDDR4 memory onboard
- Max. up to 4 lanes of PCI Express
- 2 SATA-600
- 2 USB 3.0 and 8 USB 2.0



Specifications

Core System

CPU	Intel Atom® x7-E3950 (2.0 GHz) Intel Atom® x5-E3940 (1.8 GHz) Intel Atom® x5-E3930 (1.8 GHz)
System Memory	4GB DDR3L memory onboard 8GB LPDDR4 memory onboard
Chipset	SoC integrated
BIOS	AMI UEFI BIOS (Legacy Free)
Storage	eMMC 5.0 up to 64GB (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	4 x PCIe x1 (3 x1 while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB AT: +12V Wide range input: +4.75V to +20V

Display

Chipset	Intel® Gen 9 Graphics Engine Supports Gfx – DX12.0, OCL2.0, OGL 4.3
Display Interface	1 x DDI (DisplayPort, HDMI, DVI) 1 x LVDS; 18/24-bit single channel (eDP optional)

I/O

SATA	2 x SATA-600
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i210-IT; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	2 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	N/A
SMBus	Yes
Others	1 x I ² C
GPIO	4-CH in & 4-CH out
Smart Battery	Yes

Mechanical and Environmental

Dimensions	84 x 55 mm
Board Thickness	2.0 mm
Operating Temperature	Industrial: -40°C to +85°C (-40°F to +185°F) with system thermal solution Standard: -20°C to +70°C (-4°F to +158°F)
Humidity	10%- 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

Packing List

Quick installation guide

Ordering Information

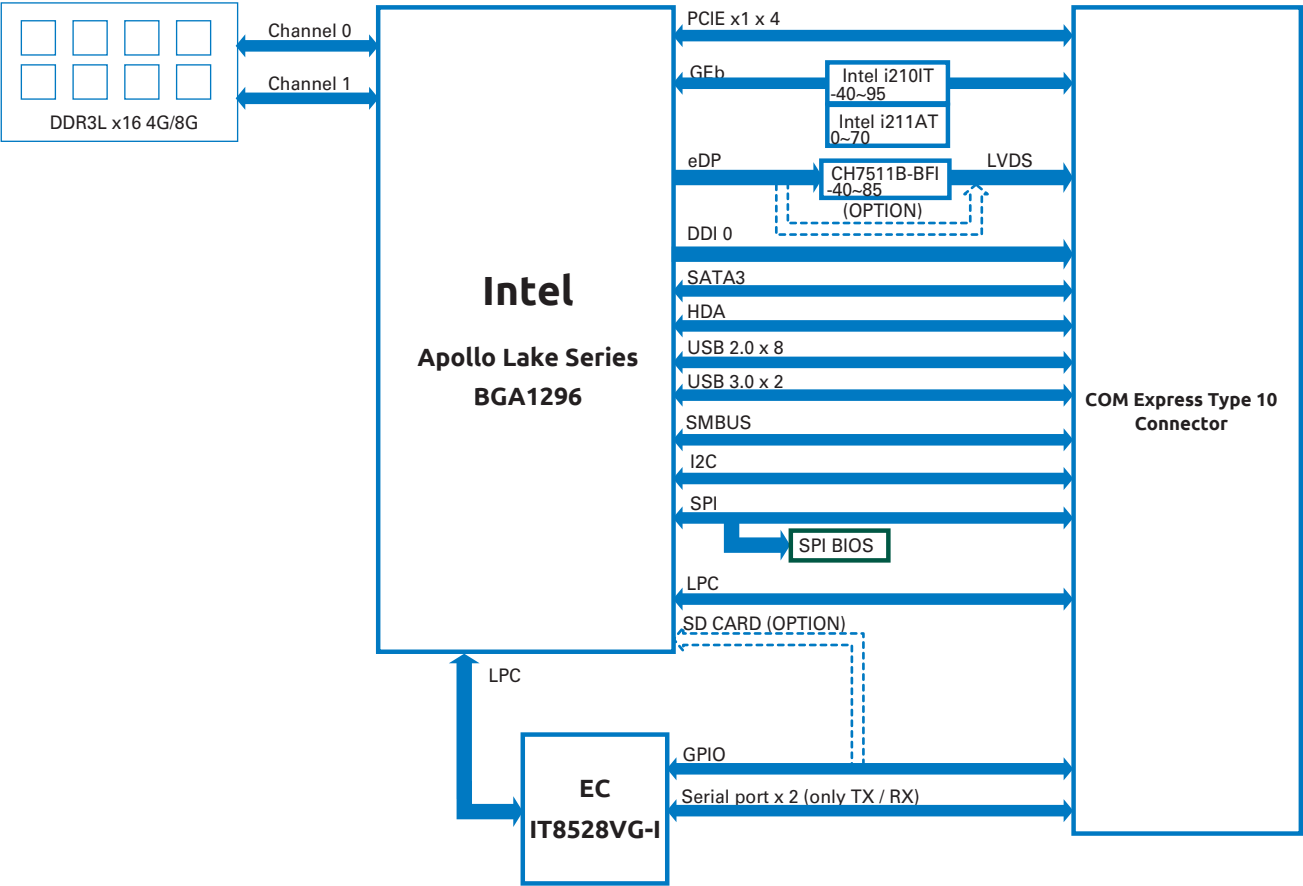
Standard

CEM310PG-E3930+4GB (Ind) (P/N: E38D310100)	COM Express Type 10 Mini module with Intel® Atom® x5-E3930, DDI, LVDS, USB 3.0, and GbE LAN (Ind. Temp)
CEM310PG-E3940+4GB (Ind) (P/N: E38D310102)	COM Express Type 10 Mini module with Intel® Atom® x5-E3940, DDI, LVDS, USB 3.0, and GbE LAN (Ind. Temp)
CEM310PG-E3950+4GB (Ind) (P/N: E38D310103)	COM Express Type 10 Mini module with Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0, and GbE LAN (Ind. temp)
CEM310PG-E3930+4GB (P/N: E38D310104)	COM Express Type 10 Mini module with Intel® Atom® x5-E3930, DDI, LVDS, USB 3.0, and GbE LAN
CEM310PG-E3940+4GB (P/N: E38D310105)	COM Express Type 10 Mini module with Intel® Atom® x5-E3940, DDI, LVDS, USB 3.0, and GbE LAN
CEM310PG-E3950+4GB (P/N: E38D310106)	COM Express Type 10 Mini module with Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0, and GbE LAN
CEM310-D3C-P1G (P/N: E38D310110)	COM Express Type 10 Mini module with Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0, and GbE LAN LPDDR4 8GB eMMC 64GB (Ind. Temp)
CEM310-F2B-P1G (P/N: E38D310111)	COM Express Type 10 Mini module with Intel® Atom® x7-E3930, DDI, LVDS, USB 3.0, and GbE LAN LPDDR4 4GB eMMC 32GB (Ind. Temp)

Optional

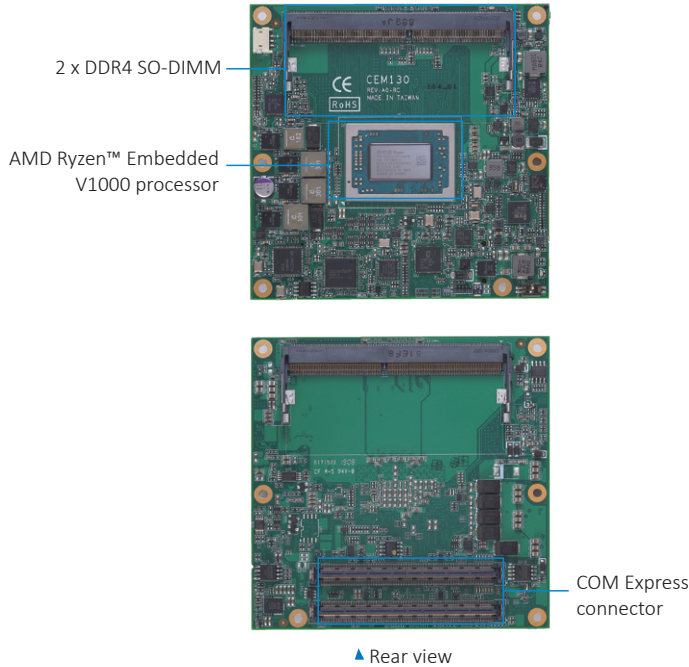
7128D310000E	CEM310 heatspreader
5078D840200E + 7128D310000E	Heatsink with fan (cooler + heatspreader)
CEB94017 (P/N: E394017101)	COM Express Type 10 development baseboard

Block Digram



CEM130

COM Express Type 6 Compact Module with AMD Ryzen™ Embedded V1000 Processor



Features

- AMD Ryzen™ Embedded V1000 processors
- 2 DDR-2400/3200 SO-DIMM for up to 64GB of memory
- Max. up to 7 lanes of PCI Express
- 2 SATA-600
- 3 USB 3.0 and 8 USB 2.0
- TPM 2.0 supported
- Wide voltage input from +8V to +20V



Specifications

Core System

CPU	AMD Ryzen™ Embedded V1000 series V1202B / 2.3 GHz (12-25W) V1605B / 2.0 GHz (12-25W) V1756B / 3.25 GHz (35-54W) V1807B / 3.35 GHz (35-54W)
System Memory	2 x DDR4-2400/3200 SO-DIMM, up to 64GB (dual channel)*, non-ECC/ECC memory *Memory speed was depend on memory rank.
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
Storage	N/A
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	7 x PCIe x1 via PCIe bridge
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB AT: +12V Wide range input: +8V to +20V

Display

Graphic	Radeon™ RX Vega Graphics with up to 11 compute units H.265 (10-bit) decode & (8-bit) encode, VP9 decode
Display Interface	1 x VGA; 1920 x 1200 @60Hz 1 x LVDS dual-channel 18/24-bit or eDP 1.3 (optional) 2 x DDI (HDMI 1.4, DVI, DisplayPort 1.2)*

*HDMI 2.0 needs redriver chip on carrier board/DisplayPort 1.4 needs Redriver chip on carrier board

I/O

SATA	2 x SATA-600
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i210; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	3 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I ² C
GPIO	4-CH in & 4-CH out
Smart Battery	Yes

Mechanical and Environmental

Dimensions	95 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Humidity	10%- 95% relative humidity, non-condensing

*Memory speed was depend on memory rank.

Packing List

Quick installation guide

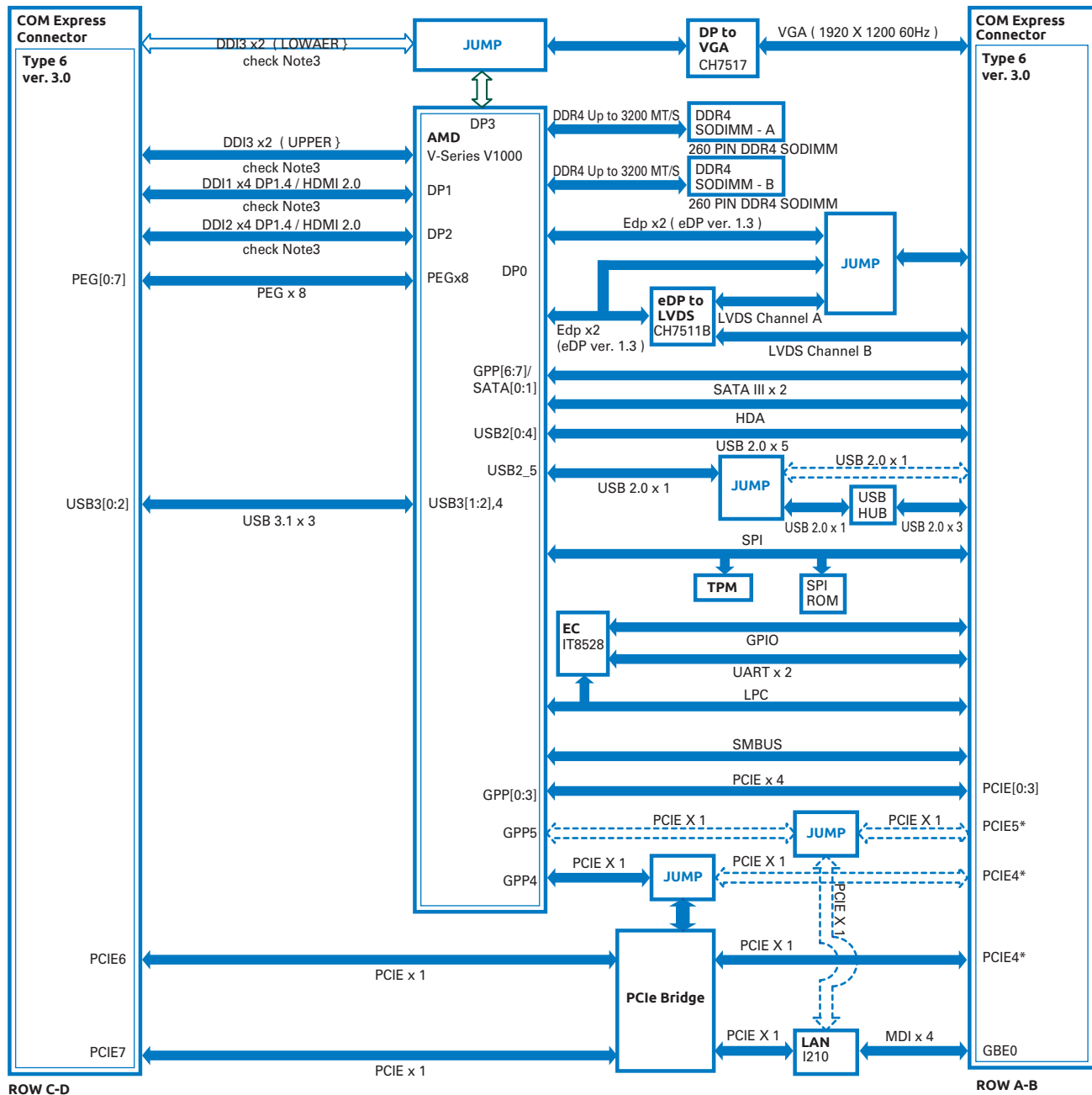
Ordering Information

Standard

CEM130-V1202B (P/N: E38D130103)	COM Express Type 6 Compact module with AMD Ryzen™ Embedded V1202B, DDI, LVDS, GbE LAN, USB 3.0 and TPM
CEM130-V1605B (P/N: E38D130102)	COM Express Type 6 Compact module with AMD Ryzen™ Embedded V1605B, DDI, LVDS, GbE LAN, USB 3.0 and TPM
CEM130-V1756B (P/N: E38D130101)	COM Express Type 6 Compact module with AMD Ryzen™ Embedded V1756B, DDI, LVDS, GbE LAN, USB 3.0 and TPM
CEM130-V1807B (P/N: E38D130100)	COM Express Type 6 Compact module with AMD Ryzen™ Embedded V1807B, DDI, LVDS, GbE LAN, USB 3.0 and TPM

Optional

CEB94011 (P/N: E394011100)	COM Express Type 6 application board
E39J014100	CEM130 heat sink with fan
7128D130000E	CEM130 heat spreader





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