

EXBC-1000 Series

5.25" Embedded Single Board Computer with 9th Gen Intel® Xeon®/Core™ i7/i5/i3 Processor (Coffee Lake Refresh)

- Workstation-grade platform : 8 Cores 9th Generation Intel® Xeon®/Core™ i7/i5/i3 processor (Coffee Lake Refresh) with Intel® C246/H310 Chipset
- Fanless -25°C to 60°C Operating Temperature
- Display : Multiple DisplayPort, DVI and dual channel 24-bit LVDS display interfaces support triple independent display, up to 4K resolution
- 4-port USB 3.1 Gen 2 support up to 10Gbps data transfer
- 4 Independent GigE LAN, iAMT 12.0 supported
- SIM Socket for WiFi/4G/3G/LTE/GPRS/UMTS
- 4 COM RS-232/422/485, 16 GPIO
- Expansion : 1 PCIe, 1 SUMIT A, B, 2 Mini PCIe
- 12V DC Power Input
- Easy to customize for low-profile system applications

Healthcare



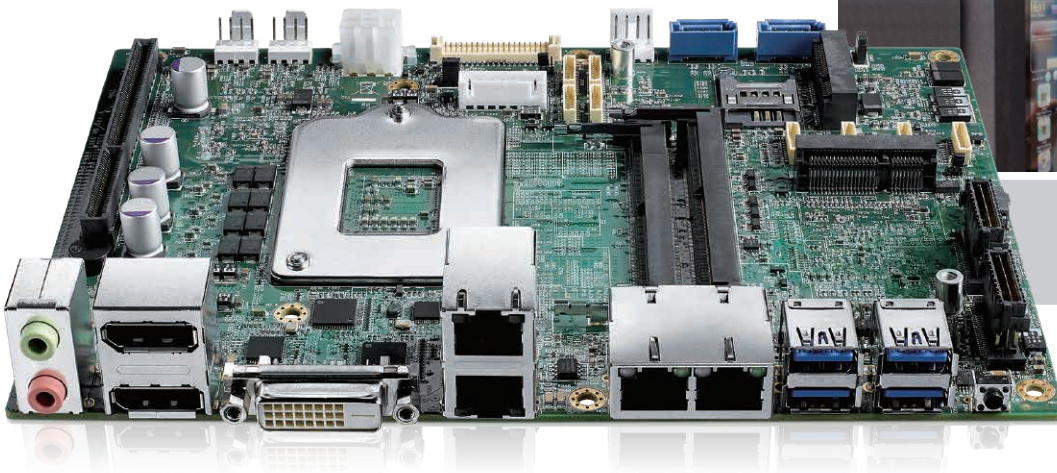
Robotic Control



Gaming



Kiosk/POS



intel
partner
Gold



Specifications

System

Processor	8 Cores Intel® Xeon®/Core™ i7/i5/i3 Processor (CFL-R S)
Chipset	Intel® C246/H310
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2666MHz SO-DIMM, up to 64GB (ECC/Non-ECC)
OS	Windows 10, Linux

Graphics

Graphics Processor	Intel® UHD Graphics 630
Interface	4 display interfaces : - DVI-D : Up to 1920 x 1200 @60Hz - 2 DisplayPort : Up to 4096 x 2304 @60Hz - LVDS : Dual channel 24-bit, up to 1920 x 1200

Ethernet

LAN 1	Intel® I219LM GigE LAN supports iAMT 12.0
LAN 2	Intel® I210 GigE LAN
LAN 3	Intel® I210 GigE LAN
LAN 4	Intel® I210 GigE LAN

Audio

Audio Codec	Realtek ALC888S-VD, 7.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out

Storage

SATA	2 SATA III (6Gbps), only C246 Chipset support S/W RAID 0, 1
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)

I/O Interface

Front I/O	- 1 DVI-D Connector - 2 DisplayPort Connector - 4 USB 3.1 Connector - 4 RJ45 Connector - 1 Mic-in - 1 Line-out - 1 Power Button - 1 Reset Button
Internal I/O	- 1 ATX 6-pin Power Connector - 1 SUMIT A Connector (Optional) - 1 SUMIT B Connector (Optional) - 4 COM RS-232/422/485 Connector - 2 Mini PCIe Connector - 1 SIM Card Socket - 2 DDR4 SO-DIMM Socket - 1 LVDS Connector - 1 LVDS Backlight Connector - 2 SATA Data Connector - 1 SATA Power Connector - 1 GPIO Header - 2 Fan Connector - 1 PCIe Slot - 1 USB 2.0 Wafer with 2 ports - 1 PS/2 KB/MS Header - 1 Front Panel Header - 1 Reset ON/OFF Connector - 1 Clear CMOS Header

Expansion

SUMIT	- 1 SUMIT Connector A (Internal) - 1 SUMIT Connector B (Internal)
PCIe Slot	EXBC-1100 : 1 PCIe Slot for PCIe x16/PCIe x4/PCIe x1/USB 2.0 EXBC-1000 : 1 PCIe Slot for PCIe x16
Mini PCIe	2 Mini PCIe Socket : - 1 Mini PCIe for PCIe/USB/SIM Card - 1 Mini PCIe for PCIe/USB/Optional mSATA

Power

Power Input	12V DC-in (± 5%)
Power Interface	ATX Power Connector

Others

TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Mgmt.	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Mechanical

Dimensions	203.0mm x 146.0mm (7.99" x 5.75")
Weight	351g (0.77lb)

Environment

Operating Temp.	35W TDP CPU w/Heat Sink : -25°C to 60°C (-13°F to 140°F) 65W TDP CPU w/Fan : -25°C to 60°C (-13°F to 140°F) 80W TDP CPU w/Fan : -25°C to 60°C (-13°F to 140°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 60°C
EMC	CE, FCC

Order Information

Model	Chipset	PCIe	SUMIT
EXBC-1100E	C246	x16, x4, x1 signal	Yes
EXBC-1100	C246	x16, x4, x1 signal	NA
EXBC-1000	H310	x16 signal	NA

CPU List

Series	CPU	Cores	GHz	TDP (W)	CPU	Cores	GHz	TDP (W)	ECC RAM
Intel® Xeon®	E-2176G	6	4.6	80	E-2278GE	8	4.7	80	Yes
					E-2278GEL	8	3.9	35	
	E-2124G	4	4.5	71	E-2226GE	6	4.6	80	
Intel® Core™	i7-8700	6	4.6	65	i7-9700E	8	4.4	65	N/A
	i7-8700T	6	4	35	i7-9700TE		3.8	35	
	i5-8500	6	4.1	65	i5-9500E	6	4.2	65	
	i5-8500T	6	3.5	35	i5-9500TE		3.6	35	
	i3-8100	4	3.6	65	i3-9100E	4	3.7	65	Yes
	i3-8100T	4	3.1	35	i3-9100TE		3.2	35	

Cable Packing List

P/N	Description	Qty
61-13Q1009-0DA	COM Port Cable	2
61-13B0707-386	SATA Data Cable	1
61-13P0430-08A	SATA Power Cable	1
61-193102U-156	USB 2.0 Cable	1

Optional Accessories

H_Sink	Heat Sink for EXBC-1000 Series
Fan Bracket	Fan Bracket for EXBC-1000 Series
H_Spreader	Heat Spreader for EXBC-1000 Series

Dimensions & Drawing

Unit : mm (inch)

