UBX-510

Edge Mini Server System

UBX-510SZ with Intel Xeon W Server-Grade Processors
UBX-510SL with 13th Gen Intel Core i7/i5/i3 processors

DeviceOn/iService

Features

- Compact size microserver
- Unleashing performance with 13th gen Intel Core W Xeon processors and Windows server OS support
- Efficient thermal solutions tailored for pre-certified PCIe GPU cards in video analytics
- Plentiful I/O ports for various applications

Specifications

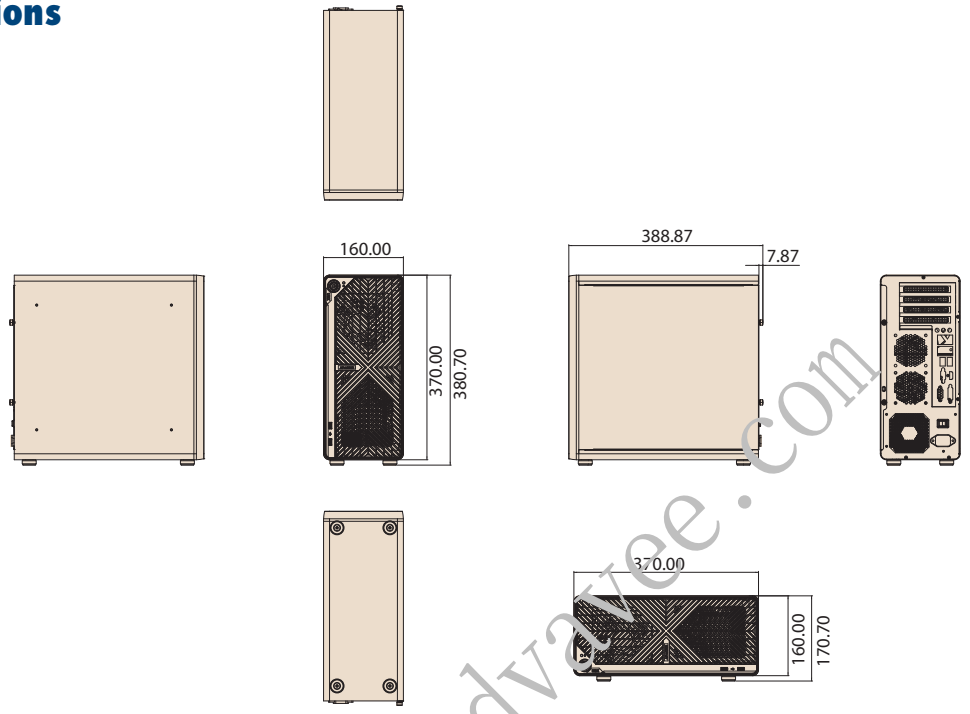
Model		UBX-510SZ	UBX-510SL
Processor System	CPU	Intel® Xeon® W-12xx and 10th Gen. Core™ i7/i5/i3 series processors (LGA1200 Socket)	13th/12th Intel® Gen. Core™ i7/i5/i3 series processors (LGA1700 Socket)
	Chipset	Intel W480E	Intel W680
Memory	Total Slots	4 (dual channel)	4 (dual channel)
	Capacity	Maximum 128 GB	Maximum 128 GB
	Type	DDR4 ECC/non-ECC 2933/2666/2400 MHz UDIMM (288-pin)*	DDR5 ECC*/non-ECC 4400**/4000/3600 MT/s UDIMM (288-pin)
	Size	4 GB, 8 GB, 16 GB, 32 GB	8 GB, 16 GB, 32 GB
Storage	Drive Bay	Max. 4 x 3.5" internal (or Max. 6 x 2.5" internal with optional brackets and 1 x 3.5" internal)	Max. 4 x 3.5" internal (or Max. 6 x 2.5" internal with optional brackets and 1 x 3.5" internal)
	M.2	1 x M.2 2280 (PCIe/SATA)	1 x M.2 2280 (PCIe)
Graphics	Controller	Intel® HD Graphics**	Intel® HD Graphics
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed
Front I/O		2 x USB 3.2 Gen1 Power button / LED indicator	2 x USB 3.2 Gen1 Power button / LED indicator
Rear I/O	USB	4 x USB 3.2 Gen2 Type-A	4 x USB 3.2 Gen2 Type-A
	Video Display	1 x HDMI 1 x VGA 1 x DVI-D	1 x HDMI 1 x VGA 1 x DVI-D
	COM	1 x DB9	1 x DB9
	LAN	4 x RJ-45 GbE	4 x RJ-45 GbE
	Audio	Mic-in, Line-out	Mic-in, Line-out
PCIe Expansion		1 x PCIe Gen3 x16 slot 2 x PCIe Gen3 x4 slot	1 x PCIe Gen5 x16 slot 2 x PCIe Gen4 x4 slot
On Board Connectors		5 x FAN connector, 5 x SATA 3.0, SMBUS, 2 x serial ports, 1 x chassis intruder, audio, 1 x USB 3.2 Gen 1 (2 ports), 3 x USB 2.0 (6 ports), 1 x USB Type-A	5 x FAN connector, 5 x SATA 3.0, SMBUS, 2 x serial ports, 1 x chassis intruder, audio, 1 x USB 3.2 Gen 1 (2 ports), 2 x USB 2.0 (4 ports), 1 x USB 2.0 Type-A
Power Supply Unit		500 W 80+bronze PSU	500 W 80+bronze PSU
Environment	Operation Temperature	0 ~ 40°C	0 ~ 40°C
	Storage Temerature	-20 ~ 60°C	-20 ~ 60°C
	Vibration	0.5Grms	0.5Grms
	Shock	10G (with 11ms duration, half sine wave)	10G (with 11ms duration, half sine wave)
	Humidity	95% @ 40°C, non-condensing	95% @ 40°C, non-condensing
OS Support		Windows Server 2019/2022, Windows 10/11	Windows Server 2022, Windows 10/11
Dimensions (W x H x D)		160 x 370 x 380 mm	160 x 370 x 380 mm
Weight (kg)		Net weight : 6 / Gross weight :7	Net weight : 6 / Gross weight : 7
Certifications		CE, FCC, UL, CCC, CB	CE, FCC, UL, CCC, CB
Others		Kensington lock, Equipotential terminal	Kensington lock, Equipotential terminal
DeviceOn/iService Remote Device Management	Operating System	Windows 10 IoT 2021	Windows 10 IoT 2021
	Common Controls (Reboot, Shutdown)	v	v
	Remote Desktop	v (via VNC)	v (via VNC)
	Audio Controls	v	v
	Connection Status	v	v
	Hardware Status	v	v
	Hard Disk Status	v	v
	Batch Operation Support	v	v
	OTA Storage Management	FTP	FTP
	OTA Software Updates	v	v
	Software Watchlist	v	v
	Software Start/Stop	v	v
	Peripherals Watchlist	v	v
Remarks		* ECC will not be supported when paired with Core i5/i7/i9 processors. ** Some Xeon processors have no graphics support. Please check Intel® specification for processor graphics availability.	* ECC will not be supported when paired with Core i3 processors. ** 4400MT/s can only be supported with 1 DIMM per channel configuration (2 DIMMs in total).

https://advavee.com

All product specifications are subject to change without notice.

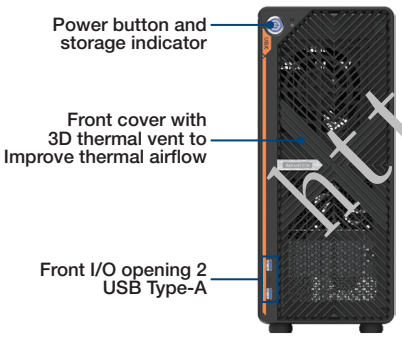
Dimensions

Unit: mm

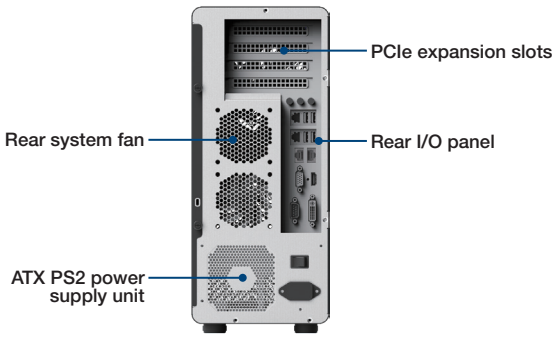


https://advavee.com

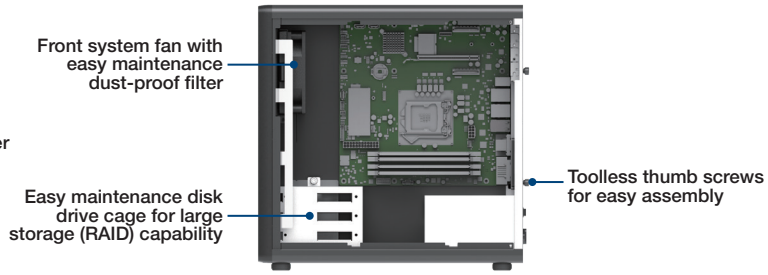
Front View



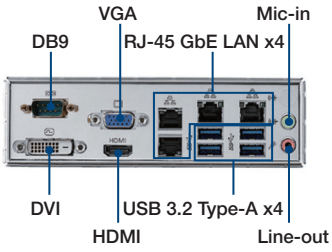
Rear View

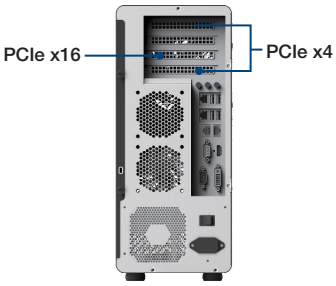


Side View



UBX-510SZ/SL Rear I/O





Ordering Information

Model	Part Number	Description
UBX-510	UBX-510SZ-BBR00	Intel Xeon W & 10th Core-I Processors, LGA1200, 500 W 80+ bronze, barebone
	UBX-510SL-BBR00	13th Gen intel Core-i7/i5/i3 Processors, LGA1700, 500 W 80+ bronze, barebone

Package Content

Item	Support Model	Q'ty	Description
CPU Cooler	UBX-510SZ	1	LGA 1200 CPU cooler (CPU under 95 W)
	UBX-510SL	1	LGA 1700 CPU cooler (CPU under 65 W)
SATA Cable	UBX-510SZ/SL	4	SATA 7P/SATA 7P, 60CM
SATA Power Cable	UBX-510SZ/SL	2	4P-5.08/SATA 15P, 10cm

Optional Items

Type	Support Model	Part Number	Description
Processor	UBX-510SZ*	96MPXECO-3.5-12M12	XEON 3.5G 12M 1200P 6C W-1250E, 80W
		96MPXECO-2.4-12M12	XEON 2.4G 12M 1200P 6C W-1250TE, 35W
		96MPXECO-3.4-16M12	XEON 3.4G 16M 1200P 8C W-1270E, 80W
		96MPXECO-2.0-16M12	XEON 2.0G 16M 1200P 8C W-1270TE, 35W
	UBX-510SL**	96MPI-13100T-4E	13th Gen Intel Core I3 2.5G 8M 4C 1700P I3-13100T, 35W
		96MPI-13500T-14E	13th Gen Intel Core I5 1.6G 20M 14C 1700P I5-13500T, 35W
		96MPI-13500TE-14E	13th Gen Intel Core I5 1.3G 20M 14C 1700P I5-13500TE, 35W
		96MPI-13700T-16E	13th Gen Intel Core I7 1.4G 24M 16C 1700P I7-13700T, 35W
		96MPI-13700TE-16E	13th Gen Intel Core I7 1.1G 24M 16C 1700P I7-13700TE, 35W

* Please inquiry to the PM regarding the requirements for 14th Gen Intel Core I processors.
** Please inquiry to the PM regarding the requirements for 12th/13th Gen Intel Core I processors with different specifications.

Type	Part Number	Description
GPU Card*	SKY-QUAD-T400-4-B	NVIDIA T400 4GB
	SKY-QUAD-T1000-8-B	NVIDIA T1000 8GB
	SKY-QUAD-4000SA-20	NVIDIA RTX 4000 SFF Ada
	SKY-QUAD-4000A-20	NVIDIA RTX 4000 Ada
	EAI-3100-41A1	Intel Arc A370M 4GB
ML Accelerator**	SKY-TESL-L4-24P	NVIDIA Tesla L4 24G
TPM Module	PCA-TPM-00B1E	UBX-510SZ TPM 2.0 module by LPC
	PCA-TPMSPI-00A1	UBX-510SL TPM 2.0 module by SPI
2.5" Storage Bracket	989K008734	Storage bracket to fit two 2.5" modules in 3.5" drive bay
Power Cord	1702002600	Power Cord UL 3P 10A 125V 183cm
	1700018705	Power Cord EU 3P 10A 250V 183cm 180°
	1700000596-11	Power Cord CCC 3P 10A 250V 183cm
	1700001714	Power Cord BSMI 3P 7A 125V 183cm
	1700018704	Power Cord BSI 3P 10A 250V 180cm (UK)
	1700000237	Power Cord PSE 3P 12A 125V 183cm
Operating System	20708WX1VS0036	Img WIN10 LTSC 2021-VLE UBX-510SL V1.00 7MUI x64 (UBX-510SL core i3, i5)
	20708WX1HS0024	Img WIN10 LTSC 2021-HLE UBX-510SL V1.00 7MUI x64 (UBX-510SL core i7)
	20708WLV1S0003	WIN11 LTSC_24H2_VLE UBX-500SL(I3I5) V1.00 7MUI
	20708WLH1S0000	WIN11 LTSC_24H2_HLE UBX-500SL(I7I9) V1.00 7MUI

* The GPU card and ML accelerator cannot be sold separately; they must be bundled with the UBX-510 barebone.
** There is a necessary and dedicated fan dock kit for the NVIDIA Tesla L4 passive cooling ML accelerator. Please inquire with the PM for more information or to submit a request.

http://advantech.com

DeviceOn / iService

Unified Remote Device Management Software

Features

- Supports Advantech devices equipped with Windows, Android, and Linux
- Flexible device, location, user, and permission management
- Enable remote monitoring to control hardware, software, and peripherals
- Supports over-the-air (OTA) firmware and software updates
- Ensures quick, easy, and secure device onboarding
- RESTful APIs for third-party system integration

Introduction

Advantech's DeviceOn/iService is a next-generation unified device management solution based on the WISE-DeviceOn platform. Designed to enable centralized monitoring and remote management, DeviceOn/iService supports Advantech devices equipped with Windows, Linux, or Android operating systems. The software also supports the management of applications and integrated peripherals, such as a barcode scanner, card reader, camera, and printer. Users can remotely access and control connected devices, take screenshots, rollout OTA upgrades, and use remote desktop capabilities for troubleshooting from any location at any time. Moreover, DeviceOn/iService supports batch operations to facilitate the management of multiple devices simultaneously for easy and convenient device configuration and deployment.

Total Management

Devices & Hardware
- Windows, Linux, Android
- Hardware, storage, battery

Software & Peripherals
- Software monitoring & access
- Screens, USB devices, printers

Expandable
- Peripheral integration
- Open APIs for integration

Remote Access

Real-Time Monitoring
- Connection/hardware status
- Software/peripheral status
- Failure notifications

Remote Controls
- Power controls
- Audio, backlight controls
- Software controls

Troubleshooting
- Screenshots
- Remote desktop support

Operational Efficiency

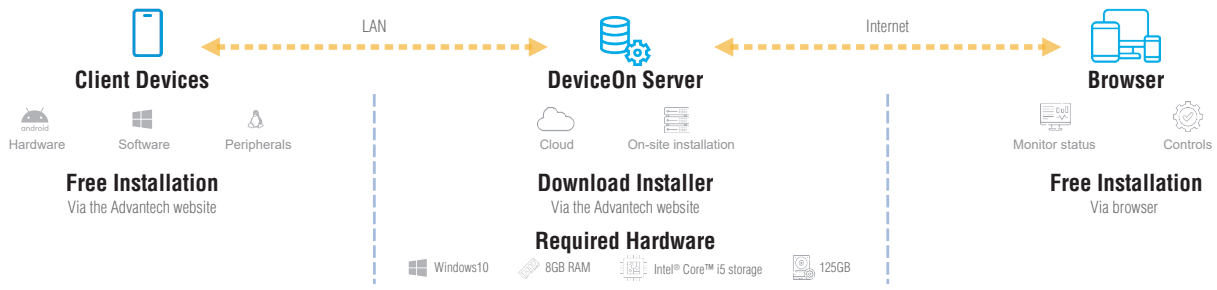
OTA Updates
- System/software updates
- File repository management
- App store

Batch Controls
- 1-to-many batch reboot, etc.
- Time-saving tasks

Setup Booster
- Software/peripheral watchlist
- Roles, rule templates

Note: Some functions may vary according to the product

System Architecture



https://advantec.com