

# 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

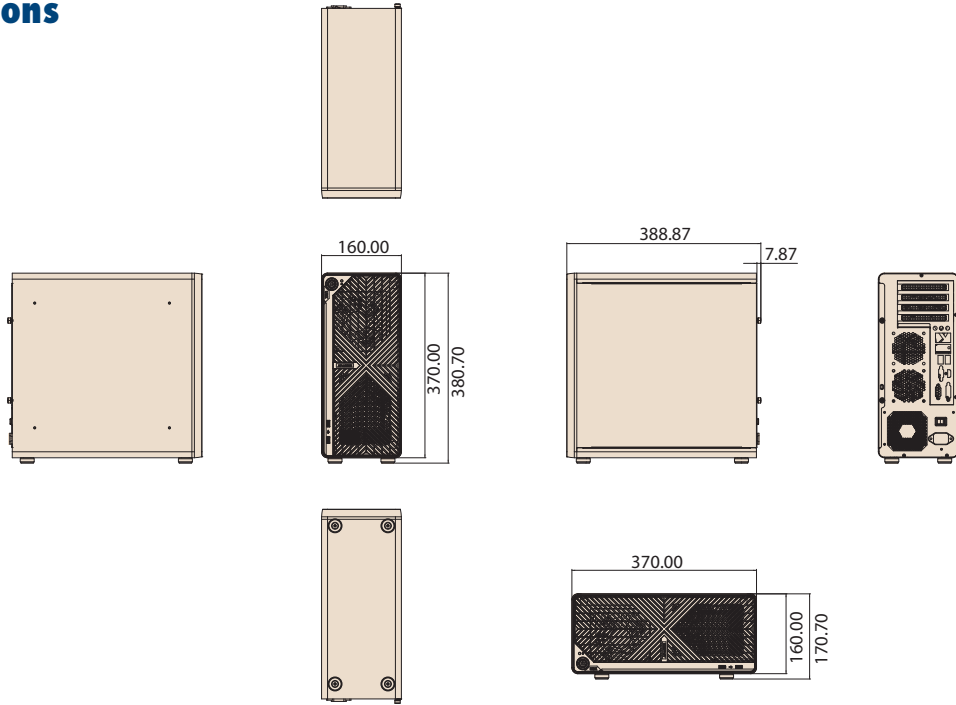
- Compact size microserver
- Unleashing performance with 13th gen Intel Core W Xeon processors and Windows server OS support
- Efficient thermal solutions tailored for pre-certified PCIe GPU cards in video analytics
- Plentiful I/O ports for various applications

### Specifications

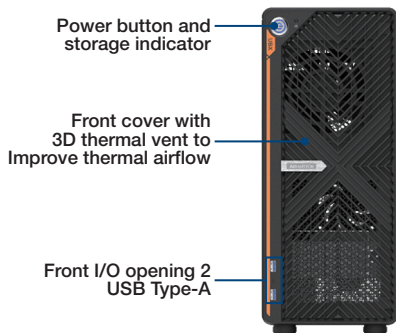
| Model                                      |                                    | UBX-510SZ  | UBX-510SL   |
|--|------------------------------------|--|---|
| Processor System                           | CPU                                | Intel® Xeon® W-12xx and 10th Gen. Core™ i7/i5/i3 series processors (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)   |
| Storage                                    | Size                               | 4 GB, 8 GB, 16 GB, 32 GB   | 8 GB, 16 GB, 32 GB  |
|  | 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)   |
| Graphics                                   | M.2                                | 1 x M.2 2280 (PCIe/SATA)   | 1 x M.2 2280 (PCIe)   |
|  | Controller                         | Intel® HD Graphics**   | Intel® HD Graphics  |
| Front I/O                                  | 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  |
|  |                                    | 2 x USB 3.2 Gen1<br>Power button / LED indicator   | 2 x USB 3.2 Gen1<br>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<br>1 x VGA<br>1 x DVI-D   | 1 x HDMI<br>1 x VGA<br>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<br>2 x PCIe Gen3 x4 slot  | 1 x PCIe Gen5 x16 slot<br>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 Temperature                | -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)  |
| OS Support                                 | Humidity                           | 95% @ 40°C, non-condensing   | 95% @ 40°C, non-condensing  |
|  |                                    | 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.<br>** 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.<br>** 4400MT/s can only be supported with 1 DIMM per channel configuration (2 DIMMs in total). |

**Dimensions**

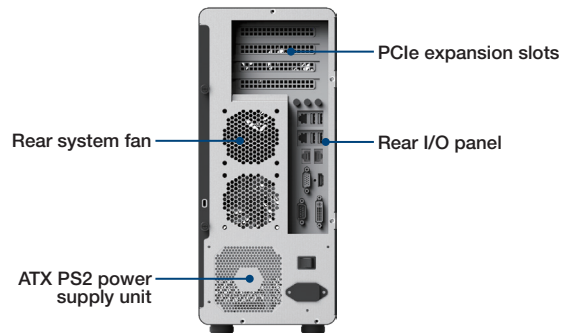
Unit: mm



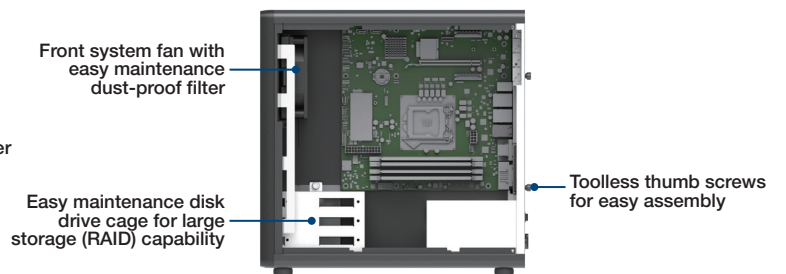
**Front View**



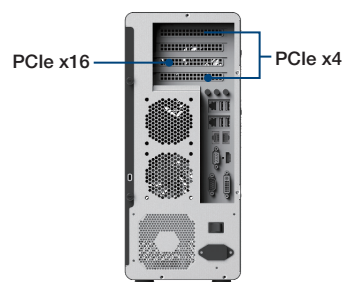
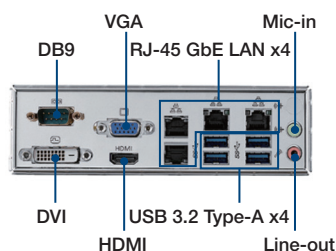
**Rear View**



**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 10th 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                          |

\* 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.

# DeviceOn/iService

## Unified Remote Device Management Software



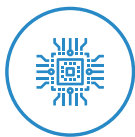
### Features

- 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

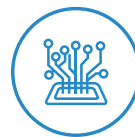
- Peripheral integration
- Open APIs for integration

### 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

