Ascent GX10
GX10

User Guide

Regulatory Model: GX10

Important information

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LIMITATION OF LIABILITY

ACCESSIBILITY STATEMENT

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SERVICE AND SUPPORT

Visit our multi-language website at https://www.asus.com/support/.

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About this guide

This user guide includes information on your Small Scale Server:

Memory and M.2 solid state drive already included; NVIDIA DGX™ Base Operating System included:
Specifications and steps to set up your Small Scale Server.

Audience

This user guide is intended to provide basic setup information about the Small Scale Server and components to vendors, system integrators, and other engineers and technicians who need this level of information.

Conventions used in this guide

To highlight key information in this manual, some text are presented as follows:

IMPORTANT! This message contains vital information that must be followed to complete a task.

NOTE: This message contains additional information and tips that can help complete tasks.

WARNING! This message contains important information that must be followed to keep you safe while performing certain tasks and prevent damage to your Small Scale Server's data and components.

Other Common Notations

Abbrev.	Description
#	Used after a signal name to identify an active-low signal (such as USBP0#)
GB	Gigabyte (1,073,741,824 bytes)
GB/s	Gigabytes per second
Gb/s	Gigabits per second
KB	Kilobyte (1024 bytes)
Kb	Kilobit (1024 bits)
kb/s	1000 bits per second
MB	Megabyte (1,048,576 bytes)
MB/s	Megabytes per second
Mb	Megabit (1,048,576 bits)
Mb/s	Megabits per second
TDP	Thermal Design Power
xxh	An address or data value ending with a lowercase h indicates a hexadecimal value.
x.x V	Volts. Voltages are DC unless otherwise specified.
x.x A	Amperes.

Production identification information

ASUSTeK Small Scale Server Ascent GX10 Identification Information

Product Name	Ascent GX10
GX10	Small Scale Server

Where to find more information

Refer to the following source(s) for additional information and for product and software updates.

ASUS website

The ASUS website (www.asus.com) provides updated information on ASUS hardware and software products.

Safety and caution information

- Accessories that came with this product have been designed and verified for the use in connection with this product. Never use accessories from other products to prevent the risk of electric shock or fire.

- This device may interfere with the operation of some pacemakers, hearing aids or other medical devices. To reduce the risk, maintain a separation distance of 20 cm (8 inches) between the device and the medical device. Refer to the medical device for additional information.

- Modification of the wireless solution, thermal solution, device components or enclosure shall violate regulatory compliance requirements and may induce safety hazards.

⚠️ Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.

Package contents
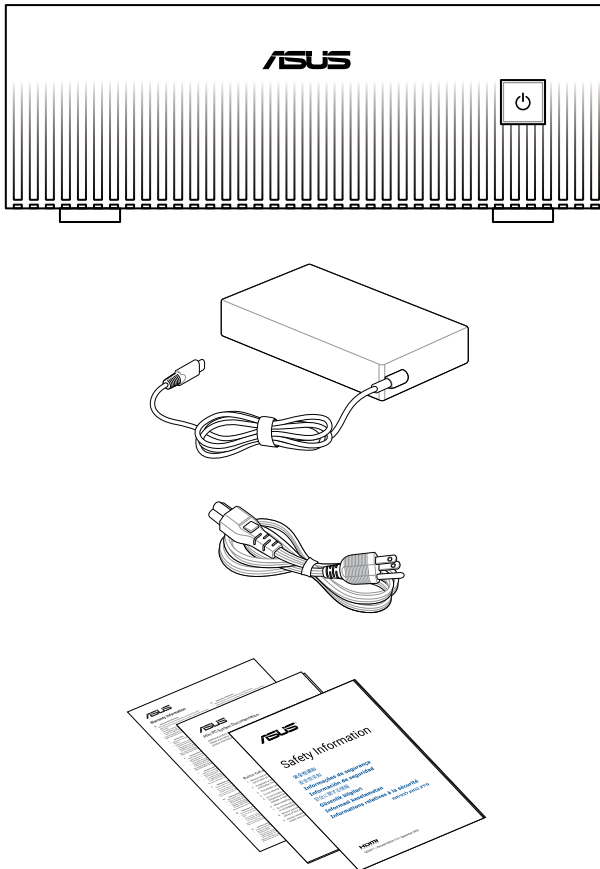
NOTE:

- The most up-to-date and accurate product specifications are available on www.asus.com for download.
- Product and accessory images are for illustrative purposes only. The actual appearance and specifications may vary depending on the model.
- *The bundled power adapter may vary depending on the model and the country (or region) of sale.
- Some bundled accessories may vary depending on the model. For details on these accessories, refer to their respective user manuals.
- If the device or its components fail or malfunction during normal and proper use within the warranty period, bring the warranty card to the ASUS Service Center for replacement of the defective components.

Front view
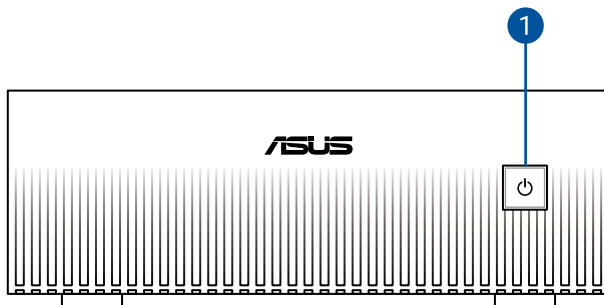
Rear view
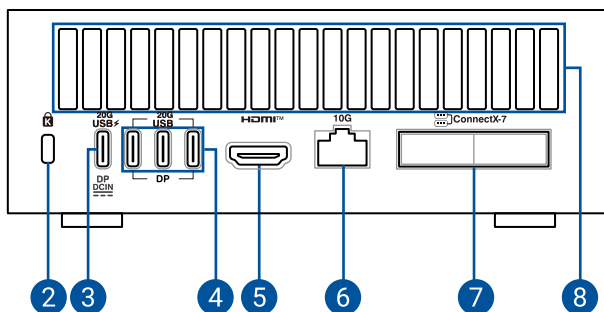
1. Power button
2. Kensington® security slot
3. USB 20Gbps Type-C® port with DisplayPort 2.1 and power input support
4. USB 20Gbps Type-C® port with DisplayPort
5. HDMI™ port
6. LAN port
7. ConnectX®-7 interface with QSFP ports
8. Air vents

Small Scale Server setup guide

Connecting the display

HDMI port
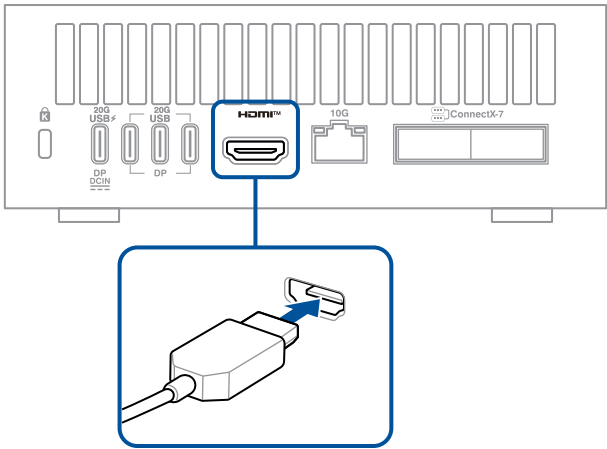
USB Type-C® port
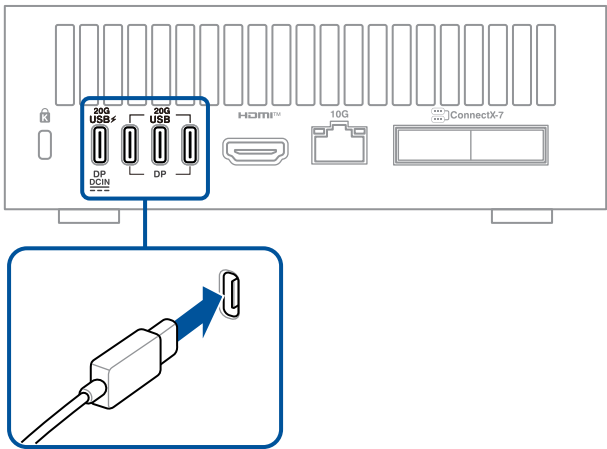
USB Type-C® specifications:

Port	Details	Specifications
USB 20Gbps	USB-C® output support	DP2.1 (HBR3)
	Power over USB-C®	15W per port, max 30W total (output)
	Power profile support	5V @ 3A (output)
USB 20Gbps with power delivery input	Power delivery input	240W (48V @ 5A, PD3.1 EPR) (input)

Display resolution table:

Port	Video Output	Max. Resolution
USB 20Gbps USB-C®	DisplayPort 2.1 (UHBR10)	4K (3840 x 2160) @ 144Hz
HDMI	HDMI 2.1b (FRL8)	4K (3840 x 2160) @ 60Hz

Connecting the keyboard and mouse
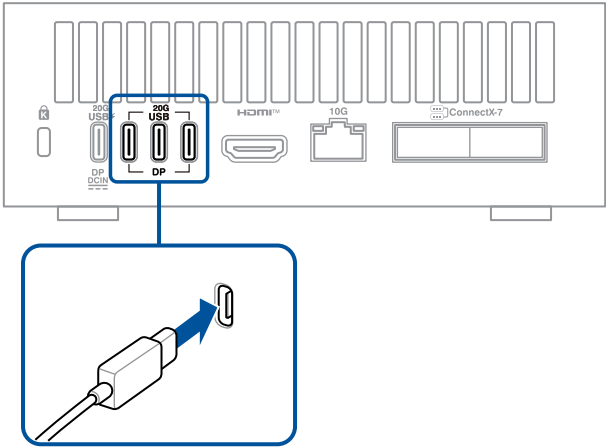
Connecting the QSFP cable
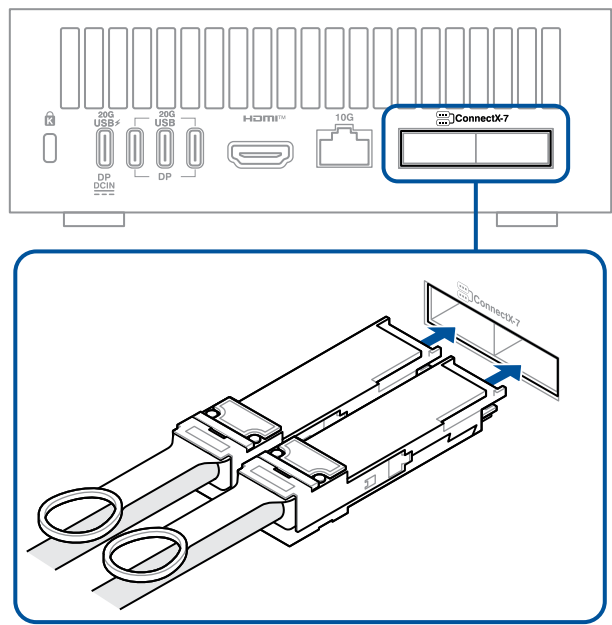
NOTE: You must use a Quad Small Form-factor Pluggable (QSFP) cable that is less than three (3) meters in length.

Connecting the LAN cable
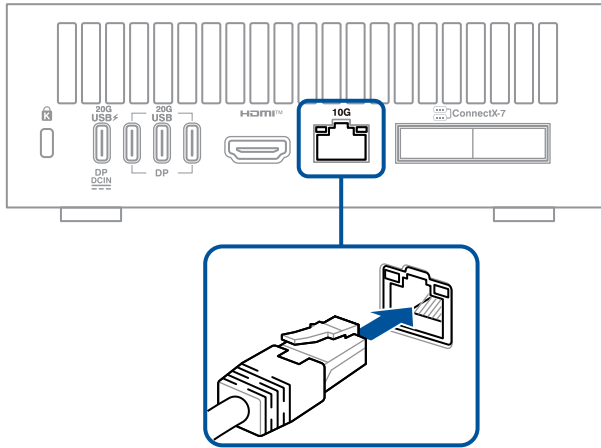
NOTE:

This Small Scale Server uses the following network ports for optimal functionality, secure management, and simplified network discovery:

- TCP Port 22 (SSH): Enables secure remote access for device management and configuration.
- TCP Port 80 (HTTP): Supports initial headless device configuration (OOBE) via a web interface. This port is automatically disabled after initial setup to minimize security risks.
- UDP Port 5353 (mDNS/Avahi): Simplifies local network service discovery, allowing devices to resolve this device by hostname and discover advertised services like SSH and HTTP.

Connecting the power adapter
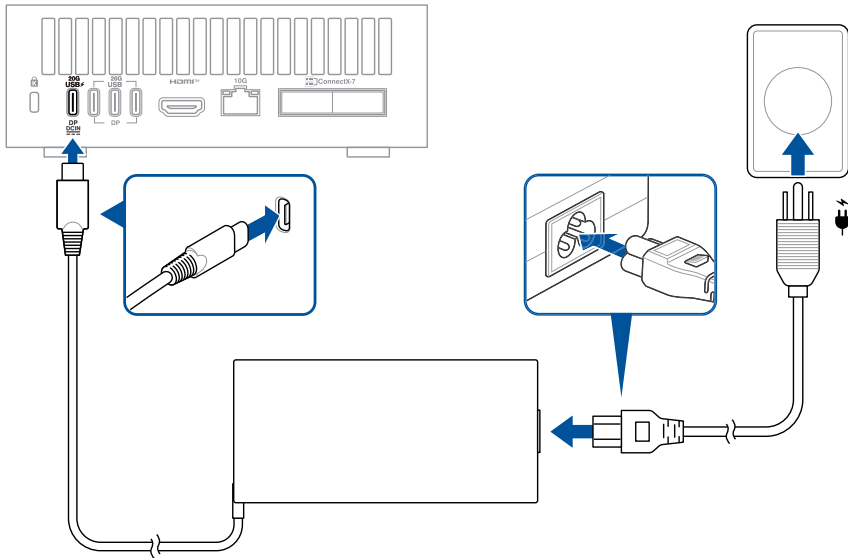
NOTE:
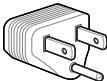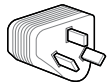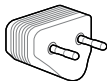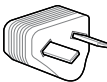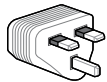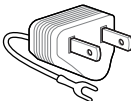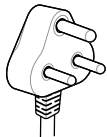
- Please refer to the following for more information on the adapter and the system:

  240W Power adapter
  - Input voltage: 100-240 Vac
  - Input frequency: 50-60 Hz
  - Output current: 5 A (240.0 W)
  - Output voltage: 48 Vdc
  - Rated for use between 0°C and 35°C (32°F and 95°F)

  System
  - Rated input current: 5 A (240 W)
  - Rated input voltage: 48 Vdc
  - Operating temperature: 0˚C to 35˚C (32°F to 95°F)

- Operating this system in an environment that exceeds 50˚C (122°F) may cause the system time shown in the BIOS to deviate by more than 3 seconds.

Plug	Code	Country
	US	United States
	CN	China
	EU	European Union
	AU	Australia
	UK	United Kingdom
	JP	Japan (Type-A)
	IN	India

Starting up the first time

After you have connected your Small Scale Server to power source and turned it on, you will be guided through a series of steps for initial device setup.

You have three ways to access the inital setup interface:

1. Standalone (desktop) mode
2. Network appliance mode using Wi-Fi connection
3. Network appliance mode using Ethernet connection

Standalone (desktop) mode

In this mode, you need to connect a display, keyboard, and mouse as they are used to interact with your Small Scale Server's Out-of-Box Experience (OOBE) system setup user interface.

1. Connect a display via HDMI (recommended) or USB Type-C® (for DP displays).
2. Connect a keyboard and mouse.
3. Turn on your Small Scale Server, and follow the on-screen instructions.

> **NOTE:** The OOBE system setup user interface shows only after a keyboard and mouse are detected.

Network appliance mode using Wi-Fi connection

In this mode, you need to set up your Small Scale Server over your Wi-Fi network. To do so, you will need the following information:

Hotspot SSID: gx10-<id>
Hotspot password: <password>
System setup page: http://gx10-<id>.local

Values in <> are derived from your Ethernet adapter's MAC address and must be in lowercase. You should also be able to find this information on page 3 of the insert that came with your Small Scale Server.

Generating device-specific values

Example MAC address: **1F:2D:3E:4A:5B:6C**

Device-specific value	Example	How to generate
<id>	5b6c	Last four characters of your MAC address
<password>	b9942196	1. Start with your MAC address. **1F:2D:3E:4A:5B:6C** 2. Remove the colons (:). **1F2D3E4A5B6C** 3. MD5 hash the string. **cd1c5e7d3f83b1c4046e9699b9942196** 4. Take the last eight characters. **b9942196** 5. Ensure all characters are lowercase. **b9942196**

Setting up using Wi-Fi connection

The following steps use the example MAC address provided above. Your actual SSID, password, and system setup page will be based on your Ethernet adapter's MAC address.

1. Turn on your Small Scale Server, and it will create a Wi-Fi access point with the following SSID and password:

    SSID: gx10-5b6c
    Password: b9942196

2. Use a laptop computer (preferred) or mobile device to connect to this Wi-Fi access point.

3. Once connected, open a web browser on your laptop computer or mobile device and go to http://gx10-5b6c.local.

4. Follow the instructions on your laptop computer or mobile device's screen.

Network appliance mode using Ethernet connection

Even if you have connected an Ethernet cable to your Small Scale Server, you still need to follow the instructions in the **Network appliance mode using Wi-Fi connection** section for the initial setup. Only later in the setup process will your Small Scale Server switch to using the Ethernet cable.

Powering on the system
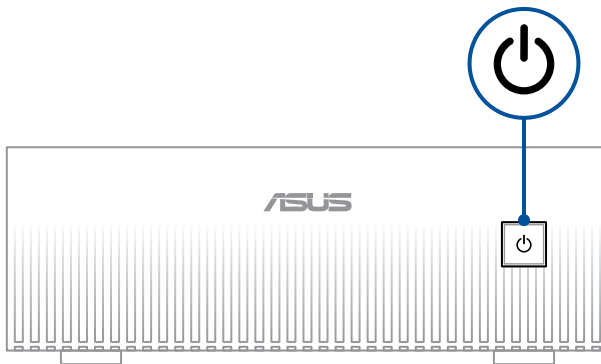
NOTE: This Small Scale Server does not support system power state S3 (ACPI S3 mode).

Safety precautions

IMPORTANT! ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

- This device is intended for use in ambient temperatures between 0°C and 35°C (32°F and 95°F). Avoid using or storing next to heat sources, in direct sunlight, or outside the intended temperature ranges.

- Do not use this product near water or a heated source.

- Openings on the chassis are for ventilation. Do not block or cover these openings. Make sure you leave plenty of space around the system for ventilation. Never insert objects of any kind into the ventilation openings.

- Use this product in environments with ambient temperatures between 0°C and 35°C.

- Failure to use the included power adapter shall violate regulatory compliance requirements and may expose the user to safety hazards.

- Risk of electric shock, fire, or burn if using an AC adapter other than the one provided with this device. Indoor use only and in dry locations. The adapter is rated for use between 0°C and 35°C (32°F and 95°F).

- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.

- The power supply cord must be plugged into a socket or outlet that is provided with a suitable earth ground.

- This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

- Do not install this equipment at a height exceeding 2 meters.

Care during use

- Do not walk on the power cord or allow anything to rest on it.

- Do not spill water or any other liquids on your system.

- When the system is turned off, a small amount of electrical current still flows. Always unplug the power cord from the power outlets before cleaning the system.

- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.

  - The power cord or plug is damaged.

  - Liquid has spilled into the system.

  - The system does not function properly even if you follow the operating instructions.

  - The system was dropped, or the cabinet is damaged.

  - The system performance changes.

- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.

- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.