LIVA Q3 Plus

Ryzen Embedded

ECS
ELITEGROUP

HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

Elitegroup Computer Systems Co., LTD.

No. 239, Sec. 2, Tiding Blvd., Neihu District, Taipei City, Taiwan (11493)

Tel: 02-21621177

Preface

Copyright

This publication, including all photographs, illustrations and software, is protected under international copyright laws, with all rights reserved. Neither this manual, nor any of the material contained herein, may be reproduced without written consent of the author.

Version 1.1

Disclaimer

The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. The manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

Trademark Recognition

Windows® 11 are registered trademarks of Microsoft Corp.

Other product names used in this manual are the properties of their respective owners and are acknowledged.

Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device is in conformity with the following EC/EMC directives:

❑ **EN 55032** Electromagnetic compatibility of multimedia equipment - Emission requirements

❑ **EN 61000-3-2** Electromagnetic Compatibility(EMC)

Part 3-2: Limits-Limits for harmonic current emissions (equipment input current ≤ 16A per phase)

❑ **EN 61000-3-3** Electromagnetic Compatibility(EMC)

Part 3-3: Limits-Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16A per phase and not subject to conditional connection

❑ **EN 55035** Information technology equipment-Immunity characteristics-Limits and methods of measurement

❑ **EN 60950** Safety for information technology equipment including electrical business equipment

❑ **EN 62368** Safety for information technology equipment including electrical business equipment

❑ **CE marking** $C \in$

Safety Instructions

Your system is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions.

Setting up your system

- Read and follow all instructions in the documentation before you operate your system.

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

- Set up the system on a stable surface.

- 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 40°C.

- 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.

Attention during use

- Do not step on the power cord or let anything rest on top of it.

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

- When the system is turned OFF, a small amount of electrical current still flows. Always unplug all power, modem, and network cables 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 been 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

The warranty does not apply to products that have been disassembled by users

Safety cautions and warnings

Product disposal notice

IMPORTANT:

This symbol if the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

Nordic Lithium Cautions (for lithium-ion batteries)

CAUTION:

Danger of explosoin if battery is incorrectly replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Product disposal notice

1. *Do not place this product underneath heavy loads or in an unstable position.*

2. *Do not use or expose this product around magnetic fields as magnetic interference may affect the performance of the product.*

3. *Do not expose this product to high levels of direct sunlight, highhumidity or wet conditions.*

4. *Do not block the air vents to this product or impede the airflow in any way.*

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numéique de la classe B respecte toutes les exigences du Rélement sur le matéiel brouilieur du Canada.

$$CE \quad \overset{UK}{CA}$$

CE Statements

This device complies with the essential requirements of the Radio Equipment Directive (RED)-2014/53/EU. This device is restricted for indoor use only when operating under 5150 MHz to 5350 MHz of frequency range.

	AT	BE	BG	CZ	DK	EE	DE
	CY	IE	IT	EL	ES	FR	LV
	LT	LU	HU	MT	NL	PL	PT
	RO	SI	SK	FI	SE	HR	UK

Manufacturer:
Elitegroup Computer Systems Co., Ltd.
No.239, Sec.2, Tiding Blvd., Neihu Dist., Taipei City 114, Taiwan

EU Single Place of Contact:
Noorderhoeve 8
2993 TP Barendrecht
The Netherlands(Holland)

Chapter 1
Introducing the PC

Introduction

Thank you for choosing **LIVA Q3 Plus Mini PC** featuring AMD® Ryzen™ Embedded of great performance and with stylish and flexible design.

This mini PC is based on AMD® Ryzen™ Embedded V1605B/R1505G/ R2314 Mobile platform. This latest Core-M processor is a multi-core system- on-a-chip (SoC) that integrates the next generation AMD® processor core, graphics, memory, and I/O interfaces into one solution.

It supports DDR4 up to 4GB/8GB memory, It also can add additional storage from USB Flash Drive.

The system is equipped with a set of I/O ports at the front/rear panel, including one USB 2.0 port, two USB 3.2 Gen2 Type-A ports, one Giga LAN connector, one HDMI 2.0 Tpye A port, one mDP 1.4 port, one Micro SD card slot, one DC port, one power button.

Note:
ID design and specification may vary, please refer to actual goods you purchase.

Specifications

CPU/Chipset	• AMD® Ryzen™ Embedded V1605B/ R1505G/R2314
Memory	• Support DDR4 up to 4GB/8GB
Storage	• Support eMMC 64 GB/128 GB (Option)
Rear Panel I/O	• 1 x USB 2.0 port
	• 2 x USB 3.2 Gen2 Type-A port
	• 1 x Giga LAN connector
	• 1 x HDMI 2.0 Type A port
	• 1 x mDP 1.4 port
	• 1 x Micro SD card slot
	• 1 x DC port
Button and LED Light	• Power button
	• Power LED Light
LAN	• 802.11 b/g/n/ac WLAN
	• 802.11 b/g/n/ac/ax WLAN 6E

|	
	• WLAN Module MT7922A12L Specifications
Intended Use/Category	• WLAN 2.4GHz
RF output power	• 20 dBm
Frequency range(MHZ)	• 2412-2472 MHz
Intended Use/Category	• WLAN 5GHz
RF output power	• 23 dBm
Frequency range(MHZ)	• 5180-5320 MHz, 5500-5700 MHz, 5745-5825 MHz
Intended Use/Category	• EDR
RF output power	• 16 dBm
Frequency range(MHZ)	• 2402-2480 MHz
Intended Use/Category	• LE
RF output power	• LE 4.0 :11 dBm, LE 5.0 : 11 dBm
Frequency range(MHZ)	• 2402-2480 MHz
Intended Use/Category	• 6GHz
RF output power	• LPI : 23 dBm , VLP : 14dBm
Frequency range(MHZ)	• 5955-6415 MHz
Power Supply	• ASIAN POWER DEVICES INC. WA-36N12R
	• SunWard Electronic Technology AD36BLH120300
System BIOS	• AMI BIOS with 128Mb SPI Flash ROM
	• Supports dual display
Operation System	• Windows 10/Windows 11 (base on SOC)
Heatsink Design	• Heatsink and cooling fan
Operation Temp	• 0~ + 40°C
Dimension	• 74mm x 74mm x 52.1mm
Color	• Black

Front and Rear I/O
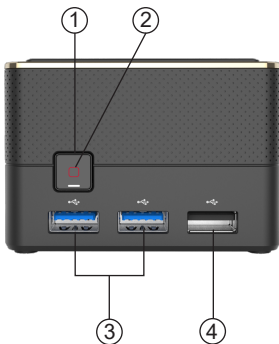
Note:
ID design and specification may vary, please refer to actual goods you purchase.

1.	**Power Button**	Use this button to power on/off the system.
2.	**Power State LED**	This is power state LED light.
3.	**USB 3.2 Gen2 Type-A Port**	Connect your USB 3.2 Gen2 Type-A device to this port.
4.	**USB 2.0 Port**	Connect your USB 2.0 device to this port.
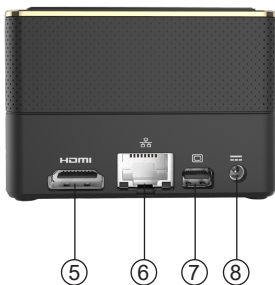
5. HDMI Port   You can connect the display device to the HDMI port.

6. Giga LAN Port   Connect the RJ-45 jack to the LAN ports for Network connecting.

7. mDP Port   You can connect the display device to the mDP port.

8. 12V DC_IN Port   Connect the DC_IN port to the power adapter.

Side I/O

9. Security Key hole   This is security key hole.

10. Micro SD card slot   This is Micro SD card slot.

Install the VESA Mount

1. Mount 4 screws on VESA bracket.
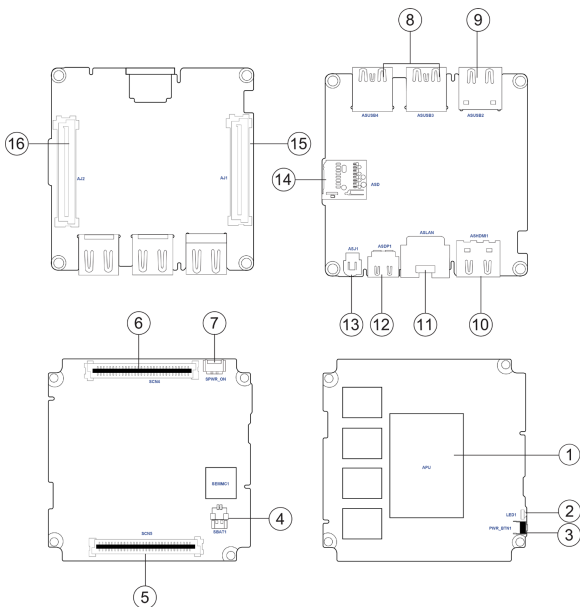
2. Fasten 2 screws under the case.

3. Hold the case towards the VESA bracket and insert the screws into the holes.

4. Slide the case down until it fixed.

Motherboard Components

Note:
Find AJ1~2 and SCN4~5 on the two motherboards, insert SCN4~5 into AJ1~2 correctly after their alignment.

Table of Motherboard Components

LABEL	COMPONENTS
1. APU	AMD® Ryzen™ Embedded V1605B/R1505G/R2314
2. LED1	Power state LED
3. PWR_N1	Power On/Off button
4. SBAT1	Battery connector
5. SCN5	Motherboard connector
6. SCN4	Motherboard connector
7. SPWR_ON	Power connector
8. AUSB3~4	Standard USB 3.2 Gen2 Type-A port
9. ASUSB2	Standard USB 2.0 port
10. ASHDMI	HDMI connector
11. ASLAN	Network connector
12. ASDP1	mDP1.4 connector
13. ASJ1	Power input port
14. ASD	Micro SD card slot
15. AJ1	IO board connector
16. AJ2	IO board connector