UDOO BOLT

GET STARTED AND
SAFETY INSTRUCTION MANUAL
FOR KIT_UDOO_BOLT_V3 AND
KIT_UDOO_BOLT_V8

PACKAGE CONTENTS

Here are the items you'll find inside the KIT_UDOO_BOLT_V3 and KIT_UDOO_BOLT_V8 Package: 1x UDOO BOLT V3 or UDOO BOLT V8*, 1x 16GB DDR4 SO-DIMM Memory, 1x METAL CASE.

> * In this document the P/N SC40-1000-0000-C0 AND SC40-2000-0000-C0 will be called with the commercial name: UDOO BOLT V3 and UDOO BOLT V8

> * Beware of the warm and moving parts (like the fan) when using UDOO BOLT
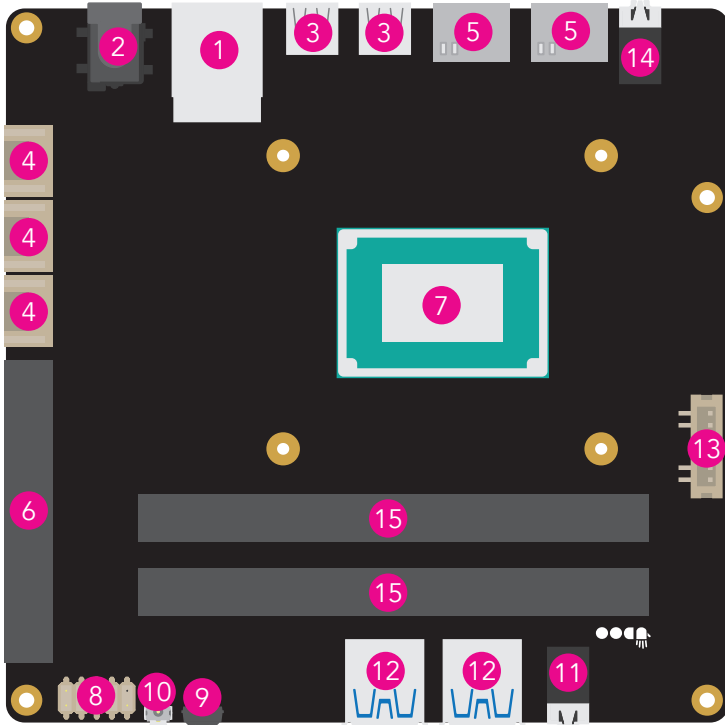
> The weight of each KIT_UDOO_BOLT_V3 and KIT_UDOO_BOLT_V8 is: 780gr

SAFETY INFORMATION

- CE and FCC certifications retained using only the UDOO BOLT qualified Power Supply. When not using UDOO BOLT qualified Power Supply, use 19VDC (min 60W power) PSUs certified for your country (make sure that the power cable is less than 3 mt. long).

- CE and FCC certifications retained with the board inside the UDOO BOLT metal case. When not available, we suggest using a case with the same attributes as the UDOO BOLT metal Case.

- This product should be operated in a well-ventilated environment and, if used inside a case, the case should not be covered.

- This product should be elevated on a stable, flat, electrically non-conductive surface whilst in operation, and clear from any object that can induce a short-circuit.

- Do not expose it to water, moisture or heat from any source; UDOO BOLT is designed for reliable operation at normal ambient room temperatures.

- Avoid handling the warm and moving parts (like the fan) and generally the printed circuit board while it is powered.

- Only handle by the edges to minimise the risk of electrostatic discharge damage.

- Take care whilst handling to avoid mechanical or electrical damage to the printed circuit board and connectors. Also use a grounded wrist strap or touch a safely grounded object before you handle components.

BOARDS	UDOO BOLT V3	UDOO BOLT V8
FEATURES		
Processor	AMD RYZEN™ EMBEDDED V1202B	AMD RYZEN™ EMBEDDED V1605B
CPU Core	DUAL CORE/QUAD THREAD @ 2.3GHZ (3.2 BOOST)	QUAD CORE/EIGHT THREAD @ 2.0GHZ (3.6 BOOST)
Graphics	AMD RADEON™ VEGA 3 GRAPHICS (3 GPU CU)	AMD RADEON™ VEGA 8 GRAPHICS (8 GPU CU)
Multimedia	DIRECTX® 12 TECHNOLOGY OPENCL, OPENGL, THE VULKAN® API H.265 DECODE & (8-BIT) ENCODE, VP9 DECODE	
Memory	2X SLOT SO-DIMM DUAL-CHANNEL 64-BIT DDR4 2400 MT/S WITH ECC SUPPORT UP TO 32GB	
Mass Storage	32GB EMMC 5.0 HIGH SPEED DRIVE SSD SATA MODULE'S SLOT M.2 SOCKET 2 KEY B 2260 (FEATURED ALSO PCI-E X2) NVME MODULES SLOT M.2 SOCKET 3 KEY M 2280 (PCI-E X4 GEN 3 INTERFACE) SATA III 6 GBIT/S STANDARD CONNECTOR	
Networking	GIGABIT ETHERNET REALTEK RTL8111G SLOT M.2 SOCKET 1 KEY E 2230 FOR OPTIONAL WIFI/BT COMBO	
USB	2X USB 3 TYPE-A 2X USB TYPE-C : - USB 3.1 GEN 2 - DISPLAYPORT ALTERNATE MODE - DUAL ROLE PORT (DRP) USB POWER DELIVERY (USB-PD) 3.0	
Video Interfaces	2 X HDMI 1.4 / 2.0A 2 X DP ALTERNATE MODE ON USB TYPE-C	
Audio Interfaces	HD AUDIO CODEC REALTEK ALC888S MICROPHONE + HEADPHONE COMBO CONNECTOR (TRRS) PRE-AMPLIFIED STEREO SPEAKER CONNECTORS (UP TO 3W) DIGITAL OPTICAL AUDIO S/PDIF AND ANALOG STEREO OUTPUT COMBO JACK 3.5MM CONNECTOR	
Other Interfaces	FRONT PANEL HEADERS, IR RECEIVER, FAN CONTROLLER, RTC BATTERY INCLUDED	
I/O	ARDUINO LEONARDO COMPATIBLE: - 12X ANALOG INPUTS - UP TO 23X DIGITAL INPUT/OUTPUT (7 PWM) - 1X UART 1X I2C 1X SPI - 3X GROVE CONNECTORS: - 1X ANALOG INPUT, 1X UART OR DIGITAL I/O, 1X I2C OR DIGITAL I/O EMBEDDED CONTROLLER I/O : - 2X UART, 2X I2C, 1X SPI, 1X KEYBOARD SCAN, 1X FAN CONTROLLER, 10X GPIO	
OS 64bit		
Power In	DC IN JACK 19V USB TYPE-C POWER IN	
Dimensions	12CM X 12CM - 4.72" X 4.72"	

UDOO BOLT TOP VIEW

1 Gigabit Ethernet	**2** DC-IN 19V
3 2x USB Type-C	**4** 3x Grove Connectors
5 2x HDMI 2.0	**6** Arduino™- Compatible Pinout
7 AMD Ryzen™ Embedded V1000	**8** Front Panel
9 IR receiver	**10** Power Button
11 Audio Headset Jack	**12** 2x USB 3.1 Type-A
13 Pre-amplified Speakers	**14** S/PDIF
15 2x SO-DIMM RAM	

UDOO BOLT BOTTOM VIEW
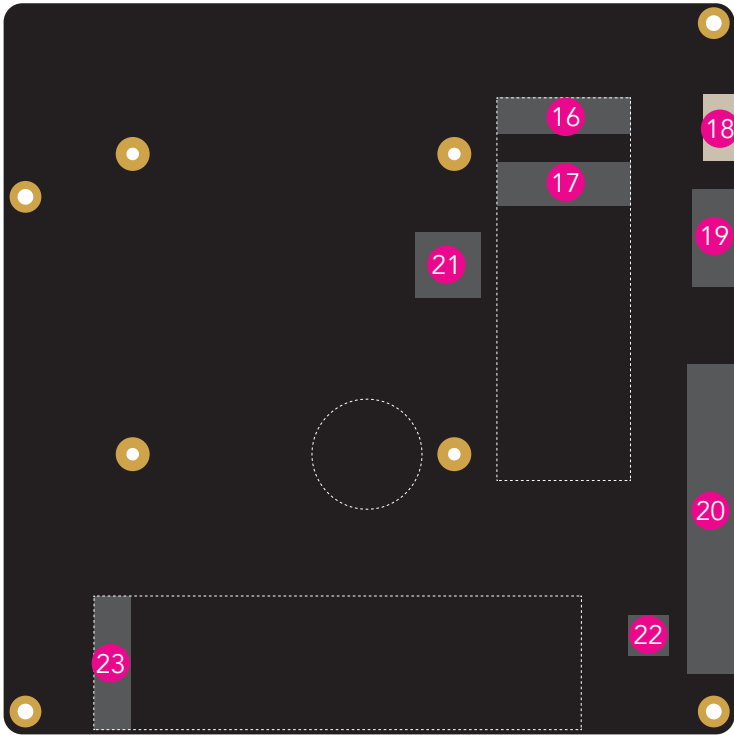
16 SSD/PCI-e M.2 Socket 2 Key B

17 Connectivity M.2 Socket 1 Key E

18 SATA Power

19 SATA 3.0

20 Embedded Controller I/O

21 eMMC 5.0 32GB

22 AT Mega32U4 Arduino™- Compati-
    ble Microcontroller

23 NVMe M.2 Socket 3 Key M

GET STARTED BOLT
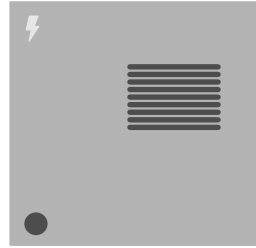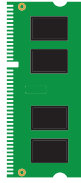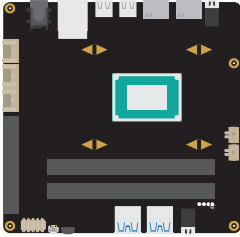
Here's what you need to get started:

- 1x UDOO BOLT;
- 1x 16GB DDR4 SO-DIMM Memory;
- 1x METAL CASE;
- 1 x UDOO BOLT Power Supply* or other 19VDC (min 60W power) PSUs certified for your country (Make sure that the power cable is less than 3 mt. long);
- 1 x Bootable USB Drive with OS installation on it*;
- 1 x Monitor with HDMI or USB-C cable*;
- 1 x Keyboard and Mouse*.

* Item purchased seperately.

* UDOO BOLT Power Supply model: YS50-1903150. Input: 100-240VAC 50/60Hz. Output: 19VDC 3.15A 65WMax

To get more info, visit the Get Started BOLT page in udoo.org website: http://www.udoo.org/get-started-bolt/

To properly start with your UDOO BOLT you need to follow these 3 steps:

1- RAM Installation;
2- METAL CASE Installation;
3- Create a Bootable Flash Drive and Install the OS you want.

1- RAM INSTALLATION
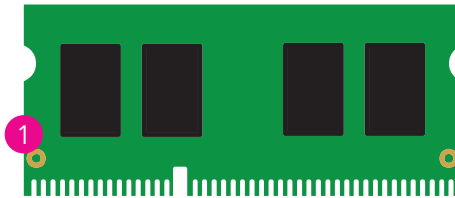
1 16GB DDR4 SO-DIMM Memory

The UDOO BOLT has two 260-pin SO-DIMM sockets for DDR4 memory.
- Supports 4GB, 8GB and 16GB DDR4 SO-DIMMs up to 32GB.
- Supports 1.2V DDR4-2400 DIMMs with dual channel architecture.

In order to exploit the Dual-Channel mode make sure that you install memory modules of the same type and density in different channel DIMM slots.

Follow these steps to install the DIMM:
- 1: Pull both clips on either side of the slot outwards. Align the DIMM module with the slot.
- 2: Press the module straight down until the plastic clips tick and close. Ensure that the module fits tightly into the DIMM slot. Push the clips inwards to check.

Once you installed the RAM you can proceed to assemble the minimum amount of accessories (like the Wi-Fi, the Keyboard and Mouse and more) to make your UDOO BOLT working like a charm.

To properly install the RAM and all the other accessories follow the get started video you'll find here: https://www.youtube.com/watch?v=IItKGizZY7U

2- METAL CASE INSTALLATION
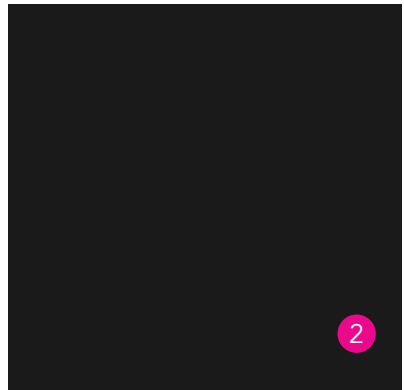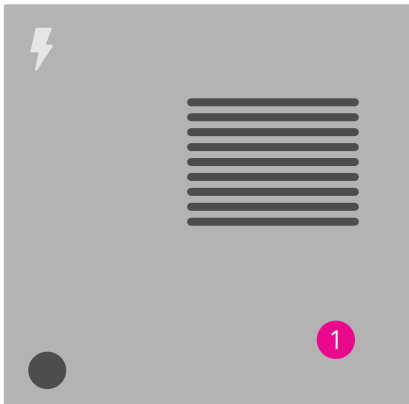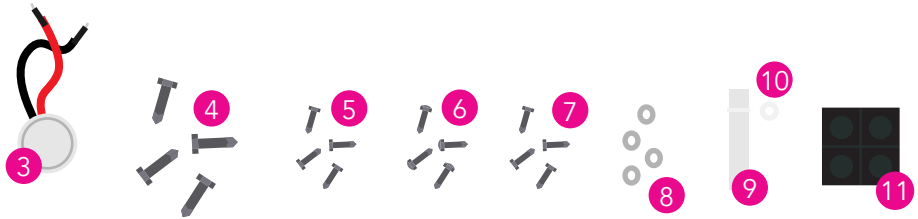
1. Aluminum Silver External Part

2. Aluminum Black Inner Part

3. Momentary pushbutton 12mm

4. M4x12mm, countersunked screw, cross resessed

5. M3x6mm, countersunked screw, cross resessed

6. M3_6mm pan head screw, cross recessed

7. M2.5x6mm countersunked screw, cross resessed

8. M3 Washer

9. Light Pipe

10. Rubber stop for Light Pipe

11. Rubber Feet

Let's see what we have in the CASE package:

- 1x Aluminum Silver External Part;
- 1x Aluminum Black Inner Part;
- 1x Momentary pushbutton 12mm;
- 4x M4x12mm, countersunked screws, cross resessed;
- 4x M3x6mm, countersunked screws, cross resessed;
- 4x M3x6mm pan head screws, cross recessed;
- 4x M2.5x6mm countersunked screws, cross resessed;
- 4x M3 Washers;
- 1x Light Pipe;
- 1x Rubber stop for Light Pipe;
- 4x Rubber Feet.

To install the Metal Case properly follow the get started video you'll find here: https://www.youtube.com/watch?-v=Afg88Vbm3Xc

First of all insert the Light Pipe in the hole you'll find in the Aluminum Black Inner Part and then secure it with the plastic rubber band from below. Make sure the longer part is below the hole.

Now get the board and insert it in the Aluminum Black Inner Part. Make sure to place the LED below the Light Pipe. Then get the 4 M3x6mm pan head screws and tight them in the 4 holes to fix the bolt in the Inner Part.

Now take the Aluminum Silver External Part and screw the button in the only rounded hole you see. Then get the Case Inner Part and slide it in the Case External Part. Plug the 2 button cables in the front header panel: the black one goes in the Pin 8 while the red one goes in the pin 6.

Now it's time to screw the 2 Aluminum parts together. To do so you'll need the 4 M2.5x6mm countersunked screws. Now the Metal Case is installed.

If you need to use an external hard drive make sure to use the 4 M3x6mm, countersunked screws and the 4 Washers while if you need to fix the case in a monitor with a VESA mount you can use the 4 M4x12mm, countersunked screws.

3- CREATE A BOOTABLE FLASH DRIVE AND INSTALL THE OS YOU WANT
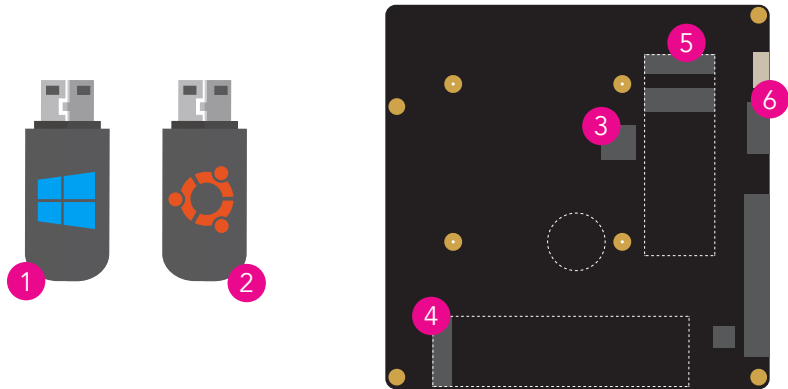
1 Windows Flash Drive

2 Ubuntu Flash Drive

3 eMMC 5.0 32GB

4 NVMe M.2 Socket 3 Key M

5 SSD/PCI-e M.2 Socket 2 Key B

6 SATA 3.0

Now that all is good from the hardware side we can start thinking about the software part. First you need to know what operating system you want to install in your UDOO BOLT and then you need to be aware from where you're starting with. Is it a Windows PC, a Linux System or a MAC Computer?

After you created the Bootable Flash Drive you need to use it to install the OS in one of the UDOO BOLT drives.
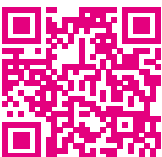
To properly create the bootable flash drive and install the OS you want follow the get started video you'll find here: https://www.youtube.com/watch?v=Vjq3Qzq7UaU

SPARE PARTS

The UDOO BOLT V3 (P/N: SC40-1000-0000-C0) and UDOO BOLT V8 (P/N SC40-2000-0000-C0) are part of the KIT_UDOO_BOLT_V3 and KIT_UDOO_BOLT_V8 can be sold individually as a spare part allowing the end user to replace the board inside the Enclosure (P/N: ENCLOSURE_BOLT)

NOTICES

Federal Communications Commission Interference Statement

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 receiver.
- Connect the equipment to 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.

⚠ Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

WARRANTY

This product is subject to the Italian Law Decree 24/2002, acting European Directive 1999/44/CE on matters of sale and warranties to consumers.
The warranty on this product lasts for 2 years.

Under the warranty period, the Supplier guarantees the buyer assistance and service for repairing, replacing or credit of the item, at the Supplier's own discretion.
Items cannot be returned unless previously authorized by the supplier.

The authorization is released after completing the specific form available on the web-site http://www.udoo.org/customer-care/ (Open a New Ticket -> Return Merchandise Application).

The RMA authorization number must be put both on the packaging and on the documents shipped with the items, which must include all the accessories in their original packaging, with no signs of damage to, or tampering with, any returned item.

The error analysis form identifying the fault type must be completed by the customer and has must accompany the returned item.

Following a technical analysis, the supplier will verify if all the requirements, for which a warranty service applies, are met. If the warranty cannot be applied, the Supplier will calculate the minimum cost of this initial analysis on the item and the repair costs. Costs for replaced components will be calculated separately.

> ⚠ All changes or modifications to the equipment not explicitly approved by SECO S.p.A. could impair the equipment's functionalities and could void the warranty

INFORMATION AND ASSISTANCE

What do I have to do if I'm experiencing problems with my product?

The following services are available:

- UDOO website: visit http://www.udoo.org to receive the latest information on the product. In most cases it is possible to find useful information to solve the problem.

- UDOO Forum: join to the community of UDOO users. In the forum, available at http://www.udoo.org/forum/, it is possible to search the multiple topics of the community, and look for other users that had the same kind of problem - and how they solved it. It is also possible to post new topics to ask for specific help.

- Repair centre: it is possible to send the faulty product to the SECO Repair Centre. In this case, follow this procedure:

> - Returned items must be accompanied by a RMA Number. Items sent without the RMA number will be not accepted.
> - Returned items must be shipped in an appropriate package. SECO is not responsible for damages caused by accidental drop, improper usage, or customer neglect.

Note: Please have the following information before asking for technical assistance:

- Name and serial number of the product;
- Description of Customer's peripheral connections;
- Description of Customer's software (operating system, version, application software, etc.);
- A complete description of the problem;
- The exact words of every kind of error message encountered.

RMA number request

To request a RMA number, please visit http://www.udoo.org. On the bottom of the page, please select "Customer Care", click on the "Open a New ticket" button and. A RMA Number will be sent within 1 working day (only for on-line RMA requests).

LABELS
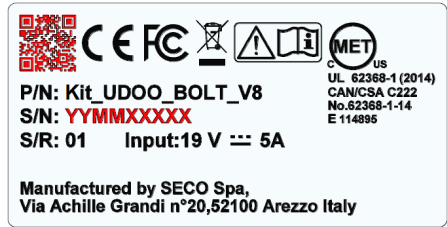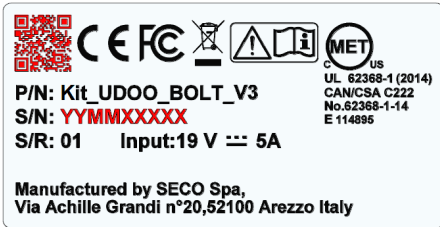
The labels above depend on the KIT: the left ones are related to the KIT_UDO_BOLT_ V3 corresponding on the P/N: SC40-1000-0000-C0 while on the right column the labels are related to the KIT_UDOO_BOLT_V8 corresponding on the P/N: SC40-2000-0000-C0.

The parts highlighted in red (the QR Code and the Serial Number) will change for every Kit/Board.

The S/N is divived in:
YY= Year of Manufacturing.
MM= Month of Manufacturing.
XXXXX= Monthly Progressive Number.