Rev.00

USER GUIDE

BPC SERIES

mod. BPC-1200

FEC
ITALIA

BPC SERIES | BPC-1200

User Guide
Version 00
Date July 2024

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CE Conformity Declaration

This appliance complies with the following directives and regulations:

2014/35/UE	LVD “Low Voltage” Directive
2014/30/UE	EMC Directive “Electromagnetic Compatibility”
2011/65/UE	Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS II) and subsequent amendments according to Directive 2015/863/EU (RoHS III) and Directive 2017/2102
2009/125/CE	Directive on the establishment of a framework for the development of ecodesign specifications for energy-related products
(UE) N. 617/2013	Regulation laying down implementing measures for Directive 2009/125/EC of the European Parliament and of the Council on ecodesign requirements for computers and computer servers
(CE) N. 1907/2006	Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Summary

Chapter 1
General

- Package material list
- Installation recommedations
- Warranty Notes
- Safety

Package material list

Here's below packaging material list:

Supplied Material	
1	DPC-1200
2	AC Power Supply

Before installation

Once the content's packaging is checked, it's advisable to keep it to allow any computer's transport viable and safer.
After the unpackage, arrange all the materials on a work surface. Then, carefully follow the instructions in the following chapters.

Warranty Notes

We recommend that you read the warranty certificate and make sure that it has been filled in with the date of purchase, the dealer's stamp, and the data relating to the model and serial number.
The latter can be found on the label glued to the back of the basic module.

Safety

Carefully read these safety directions:

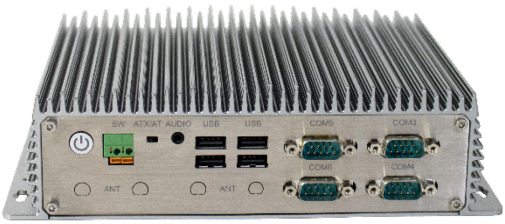
1) Unplug from the power outlet before cleaning, disassembling, or transporting. Do not use liquid cleaners or sprays for cleaning. Use only a damp cloth and avoid any prolonged contact with moisture.
2) Lay the machine on a stable surface before maintenance or use, to avoid accidental falls.
3) The panel's back grilles are ventings. DO NOT COVER.
4) Make sure the voltage and load are correct before connecting the machine to the power outlet.
5) Safely place the power cord to avoid accidental trips. Do not twist, pinch, or knot it.
6) Follow all precautions and warnings printed on the machine.

7) If the machine isn't long-time used, unplug it from the power source.
8) Do not pour any liquid into the openings. It could cause fire or electric shock.
9) Only qualified service personnel should open and repair the equipment.
10) If one of the following situations occurs, have the machine checked by our technical service:
    a. The power cord, plug, or adapter is visibly damaged.
    b. Liquid has entered the machine.
    c. The machine has been exposed to moisture.
    d. The machine fell and was damaged.
    e. The machine has obvious signs of breakage.
11) DO NOT LEAVE THE MACHINE IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -30°C (-22°F) OR HIGHER THAN 80°C (176°F)

Chapter 2
System Presentation

This chapter introduces the basic information of the BPC-1200

- Introduction
- Key Features
- Application
- Specs/Dimensions
- I/O Ports



The new BPC series Industrial BOX PCs from FEC Italia are specifically designed to operate in demanding industrial environments, where extreme conditions such as dust, vibrations, and high temperatures can represent significant challenges for traditional hardware. The distinctive feature of these INDUSTRIAL BOX PCs is the absence of cooling fans, which drastically reduces the risk of mechanical failures and minimizes the need for maintenance.

Designed to operate with minimal power consumption, help reduce operating costs, and improve overall system efficiency.

Fanless industrial BOX PCs represent a robust and reliable solution for computing needs in critical industrial environments, ensuring high performances and long operational life.

Sturdiness and Reliability

Built-in aluminum alloy, the BPC-1200 industrial BOX PC is designed to withstand shocks, vibrations, and harsh environmental conditions, such as extreme temperatures and dusty environments.

The small size allows installation in limited spaces, making it ideal for applications where space is critical, such as in industrial machinery or vehicles.

Versatile Connectivity

Featuring a wide range of I/O ports, 10 USB ports, 6 serial ports, 3x LAN supporting Wake-on-LAN and PXE, and wireless options, the BPC-1200 can easily be integrated with various industrial systems and sensors.

Equipped with advanced safety features, such as overvoltage and short-circuit protection, and are certified to comply with industry standards, ensuring stable and safe performance.

I/O Port	Connector Type
Video	1x DP 1x HDMI
LAN	3x 10/100/1000/2500 Mbps Intel®225-V GbE LAN
USB	6x USB 2.0 4x USB 3.0
USB	3x USB 3.0 1x USB 2.0
COM	2x RS232 4x RS232/422/485
Audio	1x Audio-out and Mic-in Φ3,5mm Jack
Power Supply	2-pin terminal block with 9~36VDC alimentation.

Extensions	Possibility to extend power button with Power SW Extension

Chapter 3
System Setup

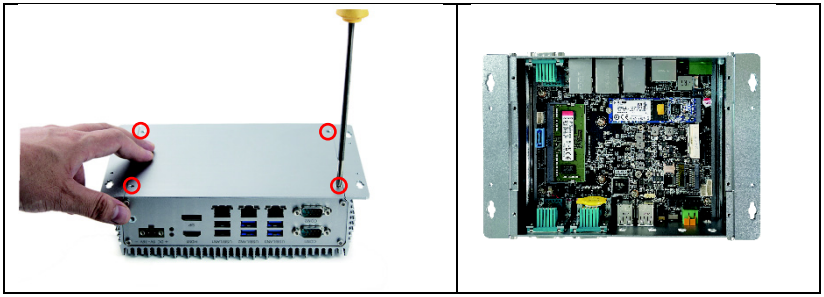
- Memory Card installation
- SSD Installation
- Expansion I/O
- WiFi+BT Module Installation
- 4G/5G Module Installation
- SATA Installation

Cover removal

WARNING

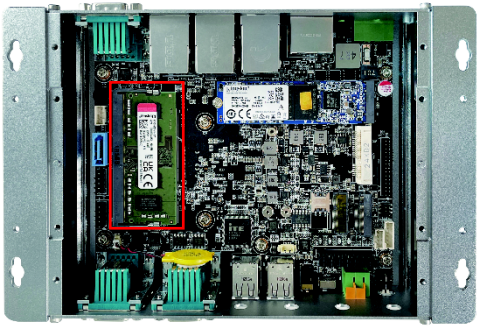
To prevent electric shock or system damage, please operate under the guidance of professional technicians.

When removing the device cover, the power must be turned off and the unit disconnect

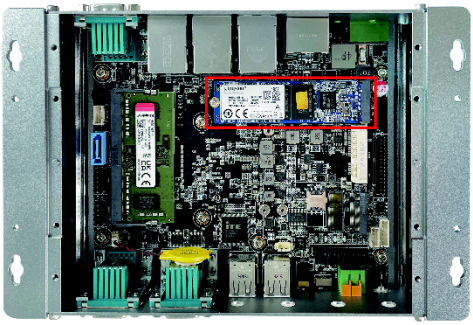


Unscrew the four retention screws.

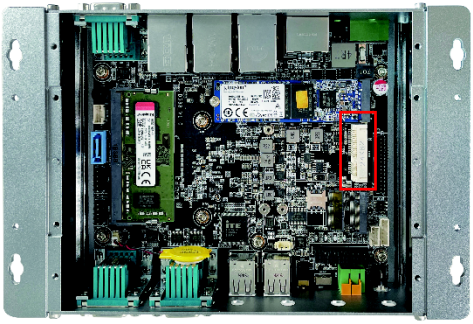
Memory Card installation (RAM)



M.2 SSD Installation

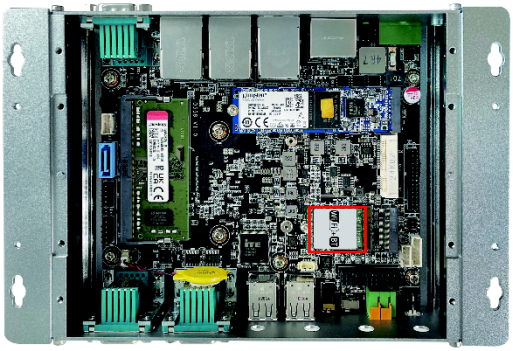


Expansion I/O

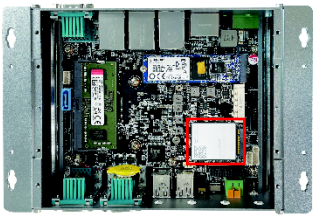
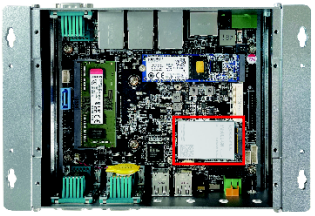


1x m-PCIe (Optional)

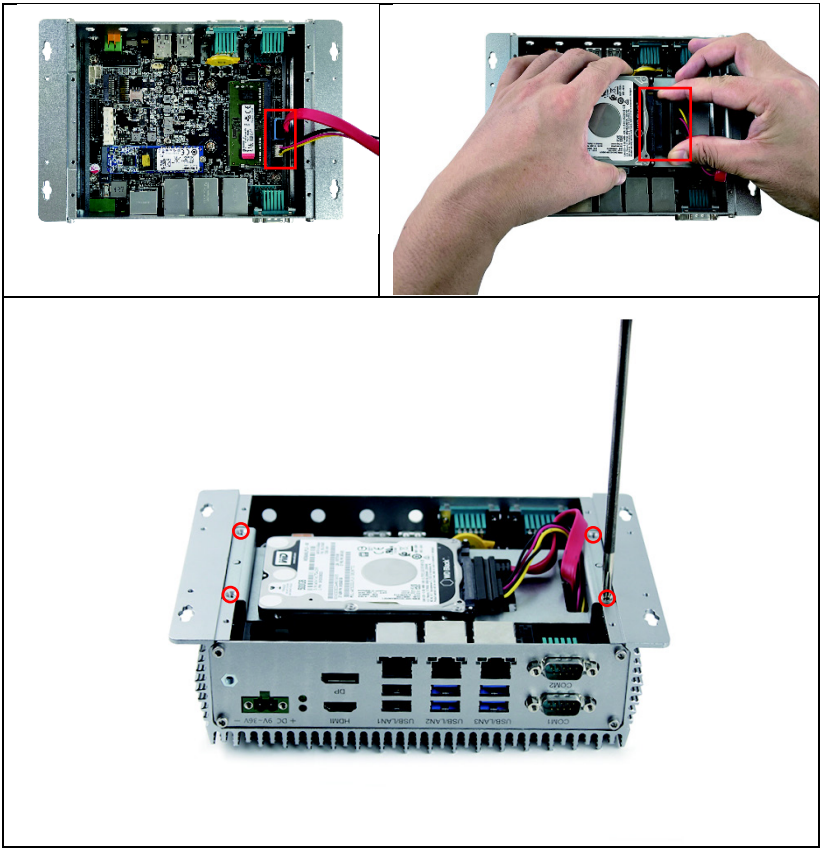
WiFi+BT Module Installation



4G/5G Module Installation

4G Module	5G Module
	

SATA Installation

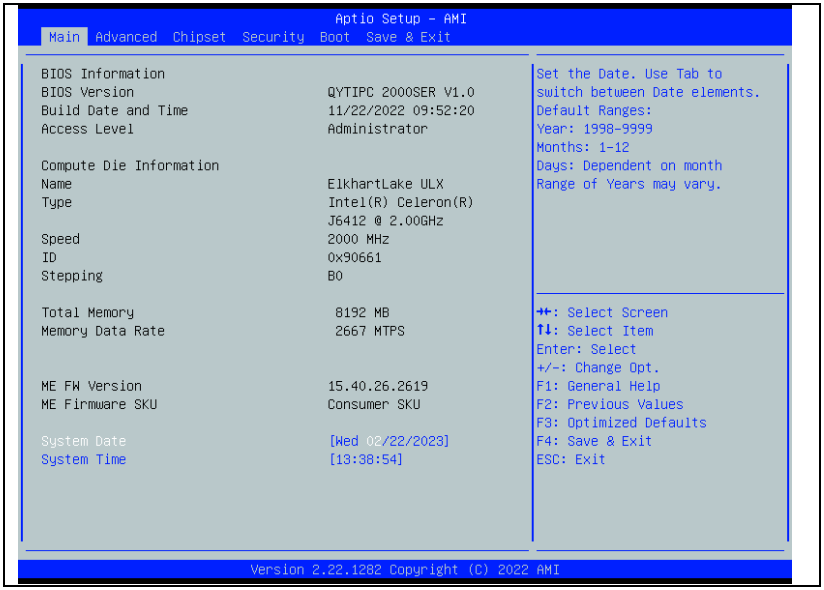


Chapter 4
BIOS Setup

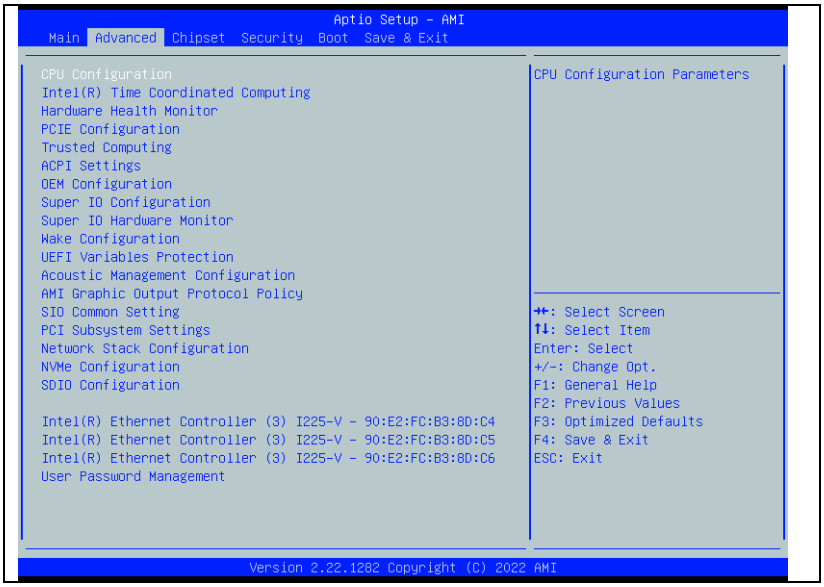
- Access to BIOS
- Advanced Setup
- Chipset
- Security
- Boot
- Save & Exit

Access to BIOS: <DEL> Key

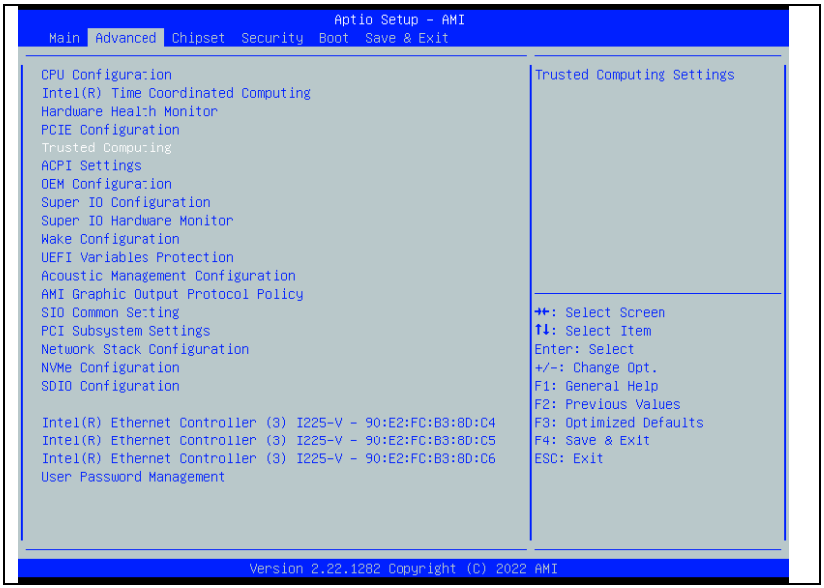
On startup, press the <DEL> key to enter BIOS setup screen

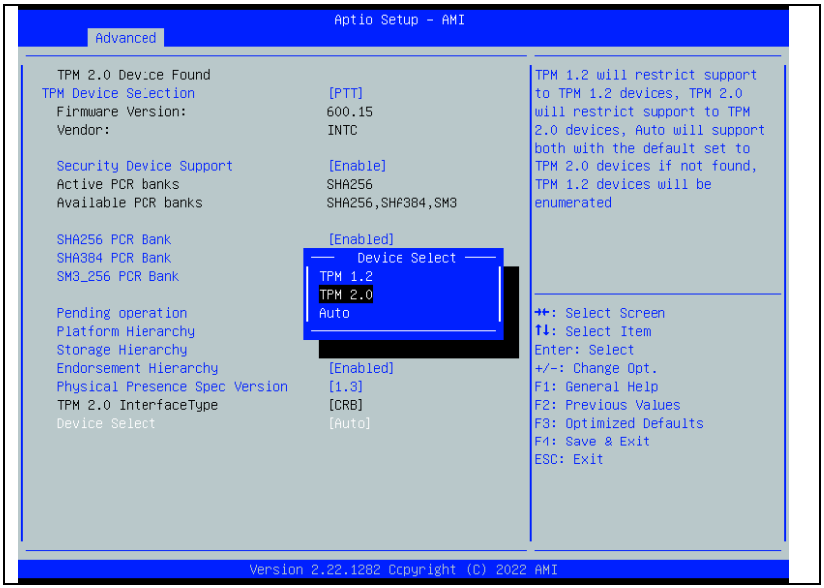


Advanced Setup

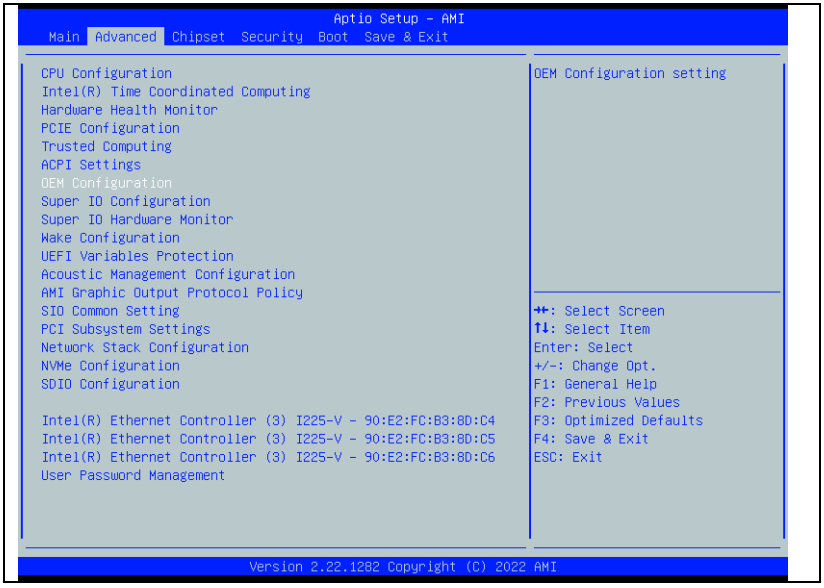


TPM 2.0 UEFI Spec Version

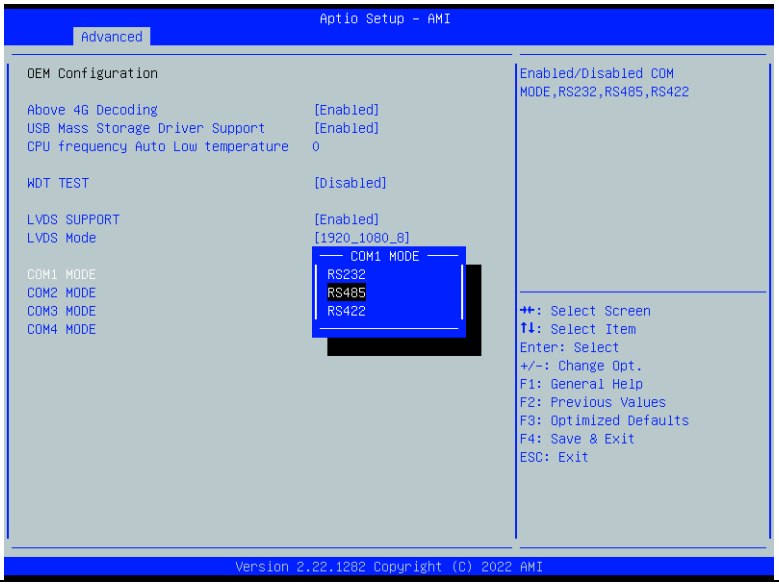




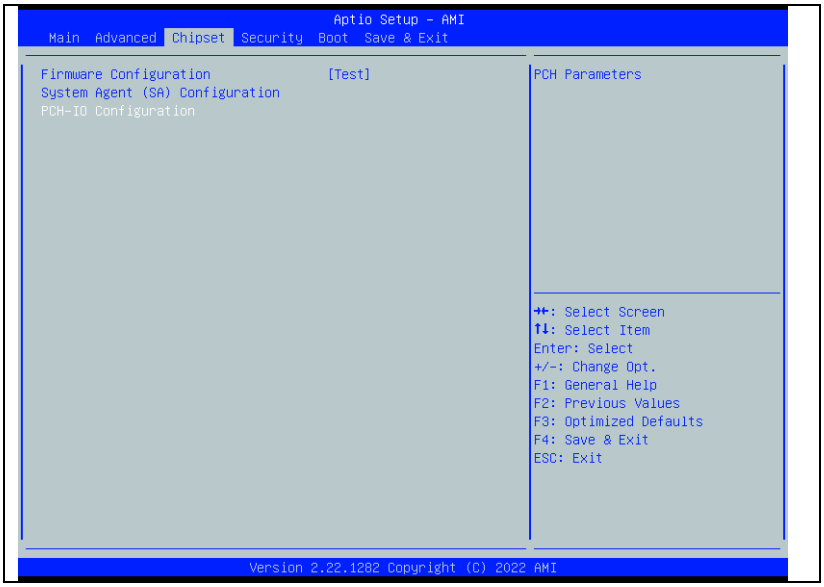
COM1 COM2 RS232/422/485 Select



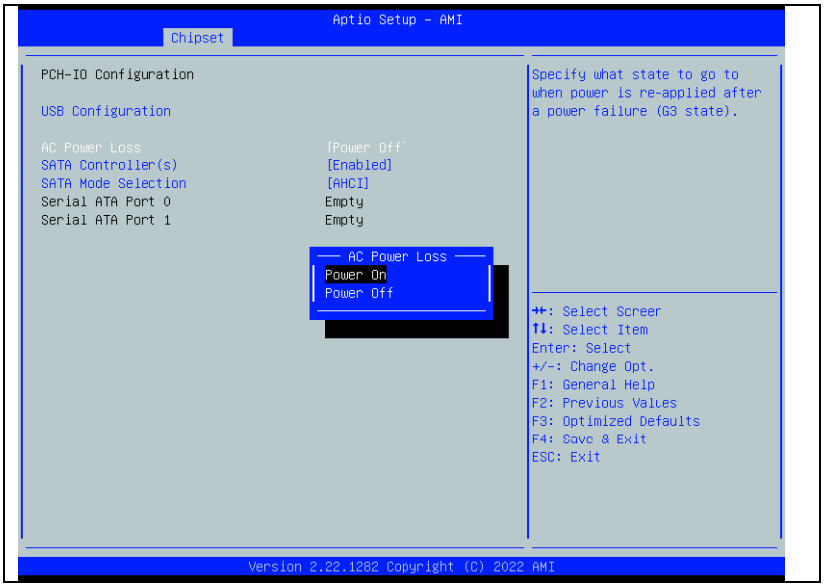
Select “COM1 Mode” and set the COM1 operation mode to RS232, RS422 or RS485



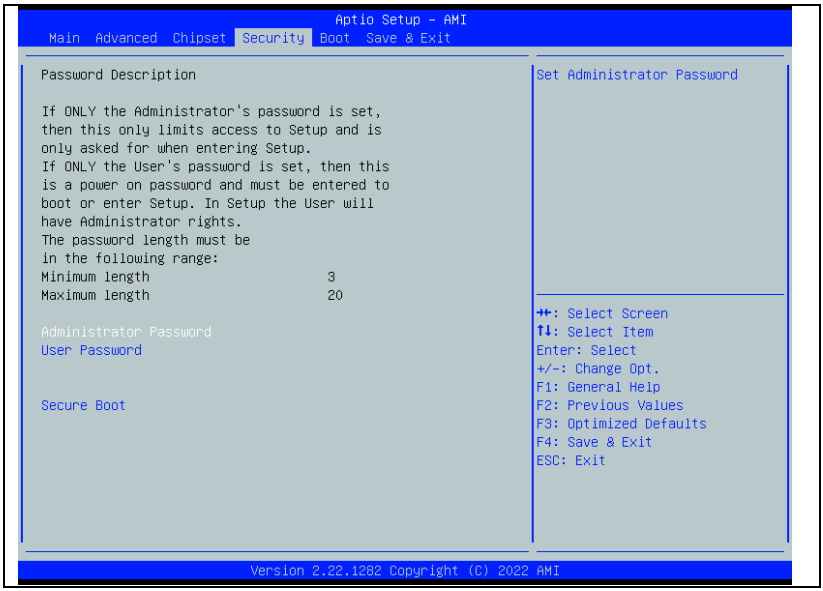
Chipset



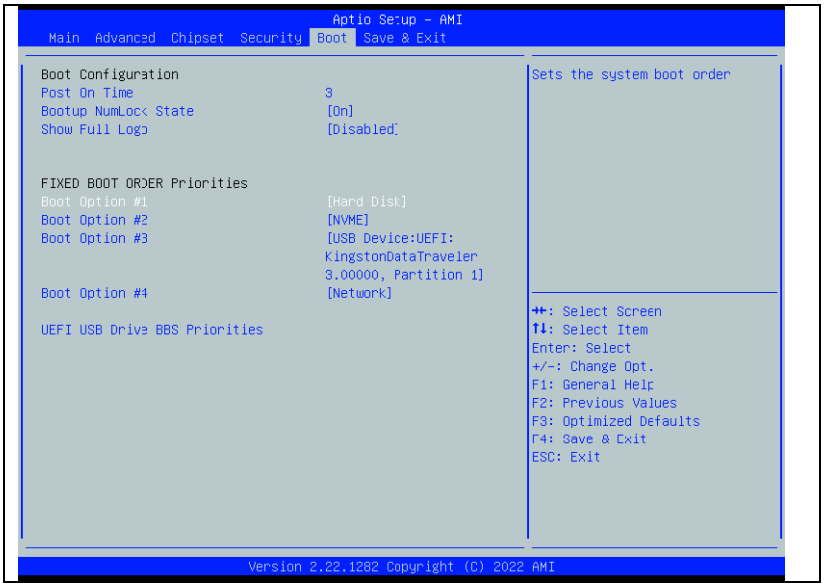
Restore AC Power Loss



Security



Boot


Aptio Setup – AMI
Main Advanced Chipset Security Boot Save & Exit
Boot Configuration
Post On Time 3
Bootup NumLock State [On]
Show Full Logo [Disabled]
FIXED BOOT ORDER Priorities
Boot Option #1 [Hard Disk]
Boot Option #2 [NVME]
Boot Option #3 [USB Device:UEFI: KingstonDataTraveler 3.00000, Partition 1]
Boot Option #4 [Network]
UEFI USB Drive BBS Priorities
Sets the system boot order
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
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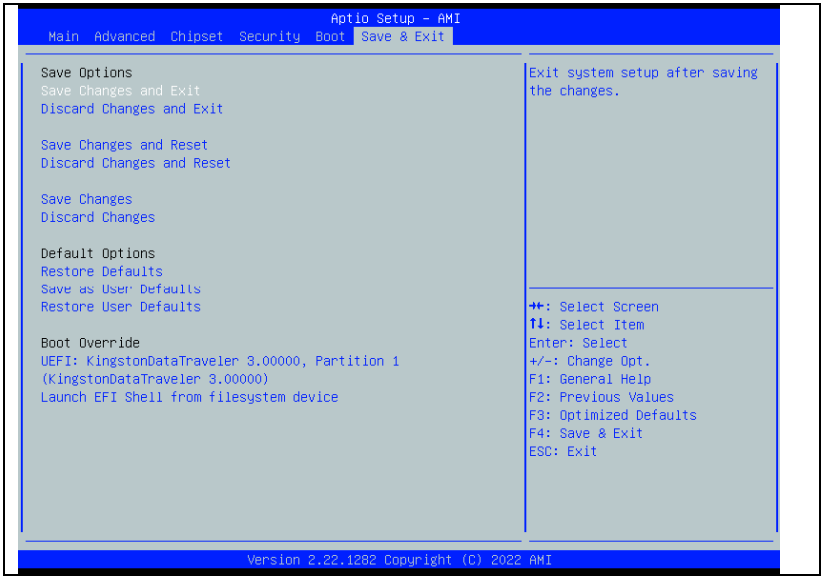
Save & Exit


Aptio Setup – AMI
Main Advanced Chipset Security Boot Save & Exit
Save Options
Save Changes and Exit
Discard Changes and Exit
Save Changes and Reset
Discard Changes and Reset
Save Changes
Discard Changes
Default Options
Restore Defaults
Save as User Defaults
Restore User Defaults
Boot Override
UEFI: KingstonDataTraveler 3.00000, Partition 1 (KingstonDataTraveler 3.00000)
Launch EFI Shell from filesystem device
Exit system setup after saving the changes.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
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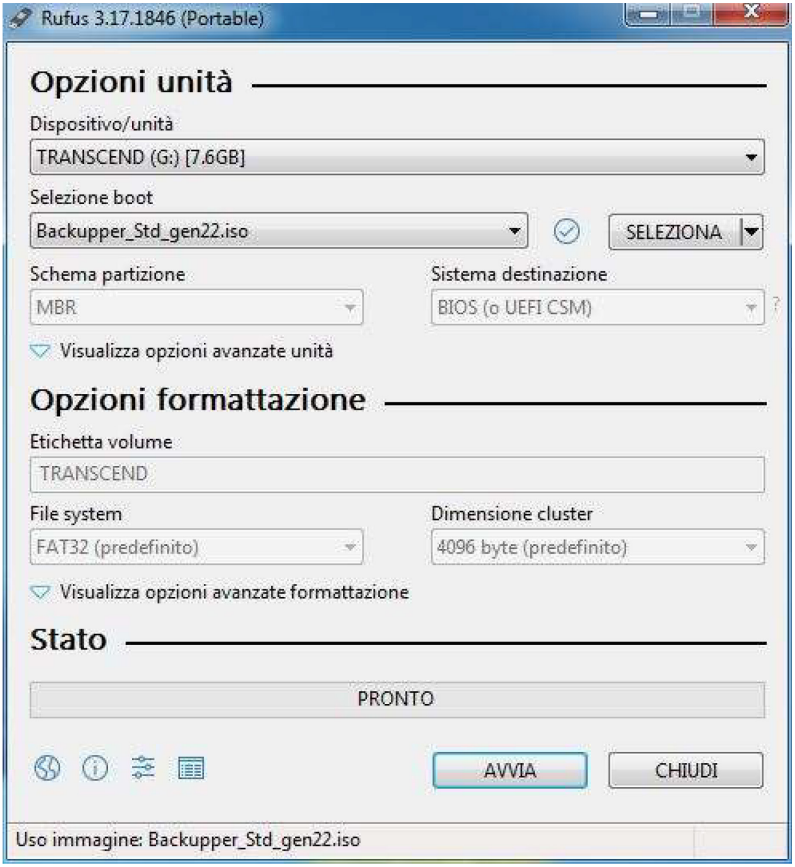
Chapter 5
Operating System Recovery

Bootable key creation with Aomei Backupper 6.7.0

Create a boot key using the Rufus utility, available at https://rufus.ie/it/, and download the portable version.
Launch Rufus with the USB stick to be formatted already inserted, select the Backupper_Std_670_gen22.iso file



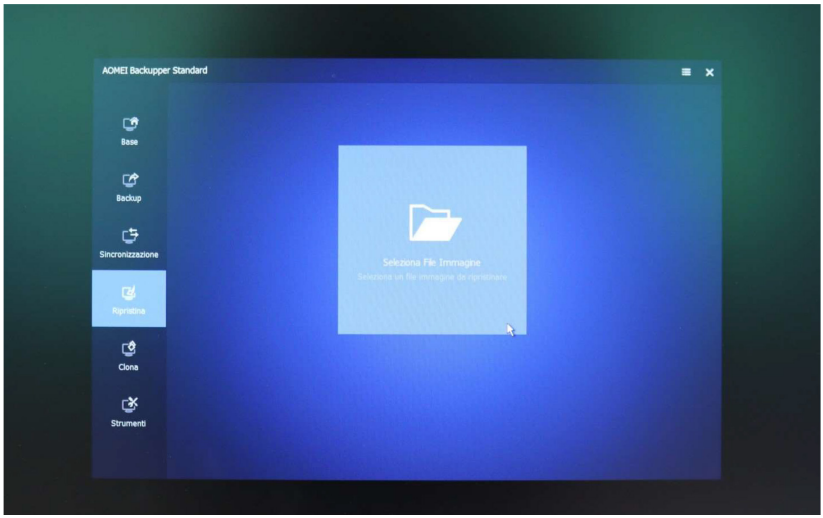
Confirm operation with **Start/Launch**.

Starting Operating System Recovery

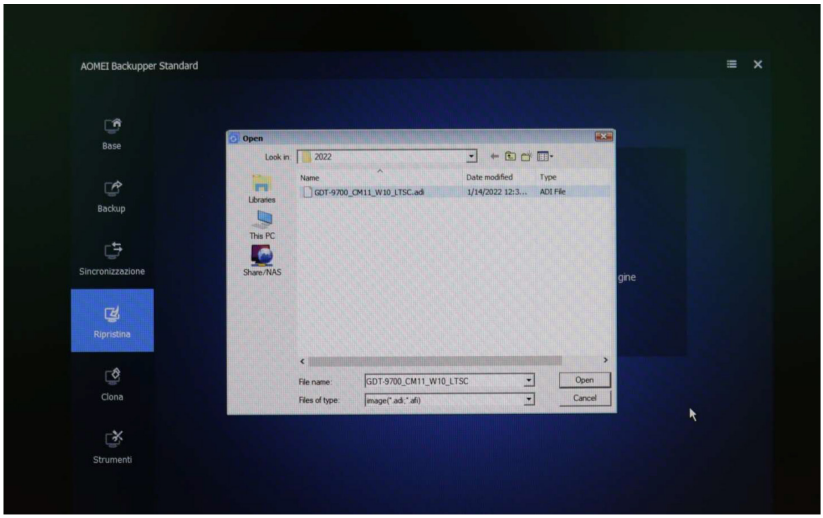
Insert the USB stick into the system to be restored, when turning it on press **F7** for the Boot device and select:

- **UEFI: USB name**

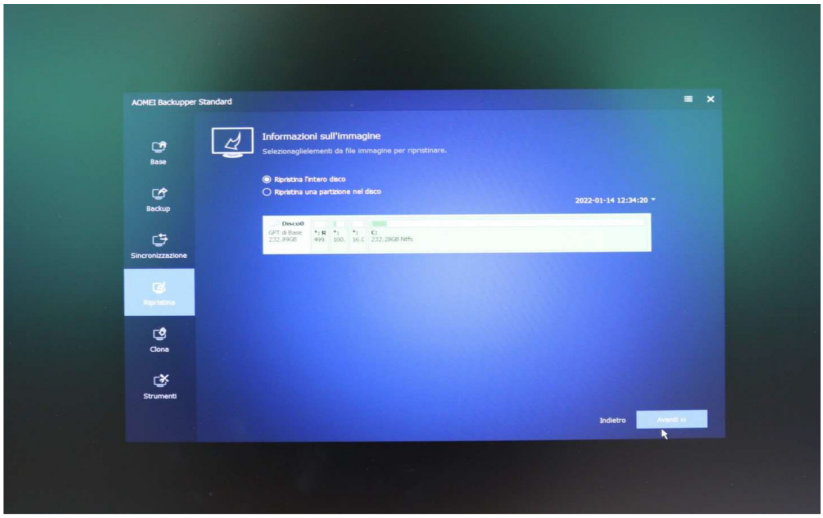
Once the AOMEI_Backupper graphical interface has started, close the screen with the offer, select the **Restore and Image File Selection** task**.**



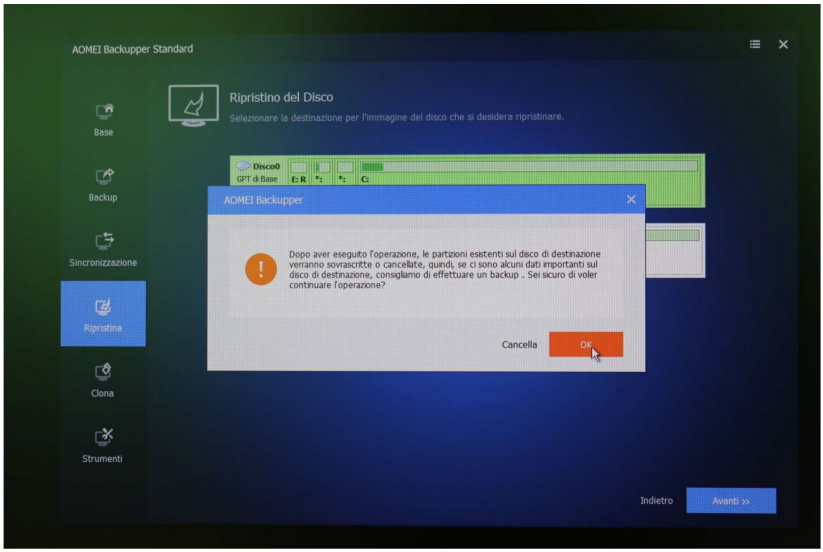
Browse external disk and select the "WTC6E_W10_Pro_21H1_*Ita/Eng*" file, confirm with **Open**.



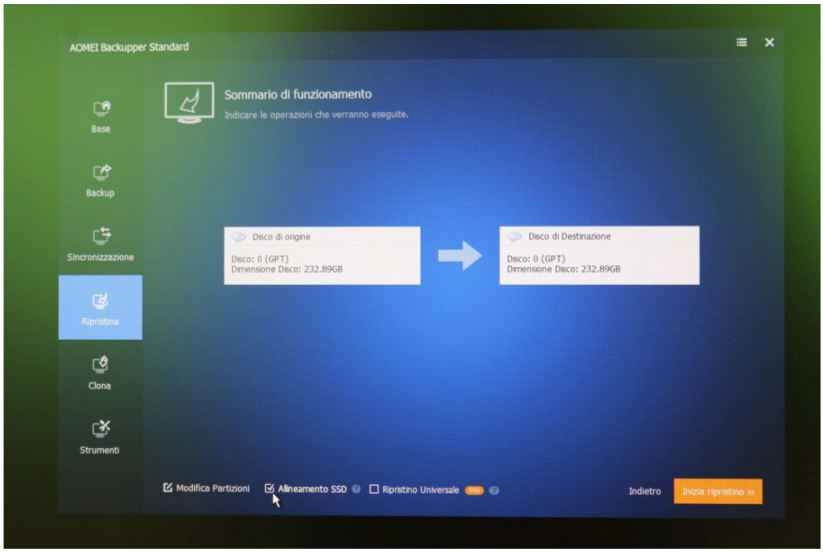
Check that "Restore entire disk" is checked, click on the Disk 0 box, it turns green, and confirm with **Next**.



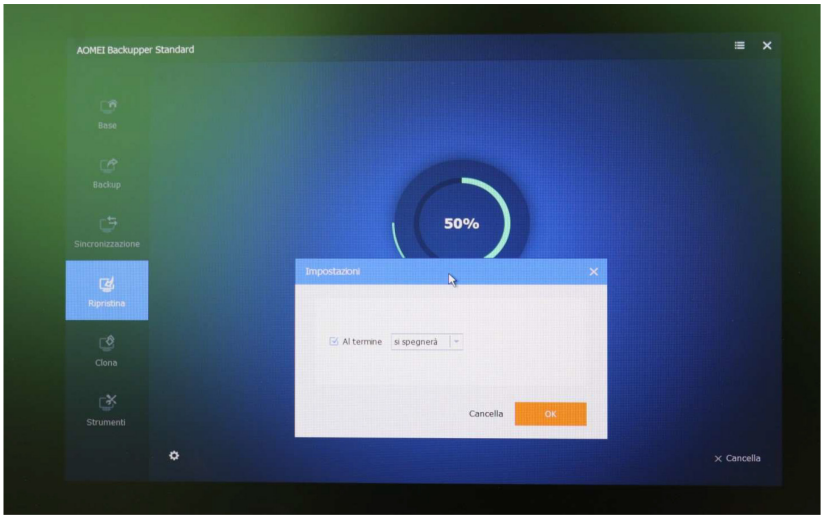
Check that Disk0 is highlighted (green), continue with **Next**, and confirm the overwriting with **OK**.



On the final screen, check **SSD Alignment** and start the operation with **Start recovery >>**



With the restore operation in progress, click on the cogwheel and check **When finished** (it will go out), confirm with **OK**.



Once the activity is finished, the PC will turn off. (disconnect external USB drives)

End of Procedure

When you turn it back on, the system will start with the initial Windows configuration, with the request to select country - language, etc...

Chapter 6
Technical features

General	
Processor	Intel® Celeron J6412 2.0GHz TDP 10W, 1.5MB L2 Cache
RAM	DDR4 3200MHz 4GB, MAX 32GB
Power Supply	External AC/DC 12V/5A, 60W
Integrated Storage	1x M.2 128GB SSD (256GB / 512GB / 1TB)
WiFi	Optional (WiFi/Bluetooth/4G/5G)
Wall Mount	208x100mm / 208x60mm
Chassis	Aluminum alloy chassis in grey/silver/black colors
Audio	Realtek ALC897
TPM	TPM 2.0
Fanless	Passive heat dissipation
Video	
Graphical Chipset	Intel® UHD Graphics for 10th gen. Intel® processors
I/O Ports	
Video	1x DP 1x HDMI
LAN	3x 10/100/1000/2500 Mbps Intel®225-V GbE LAN
USB	4x USB 3.0 6x USB 2.0
COM	2x RS232 4x RS232/422/485
Audio	1x Audio-out and Mic-in Φ3,5mm Jack
Power Supply	2-pin terminal with 9~36VDC Alimentation
Other	1x Power SW Extension
Dimensions and Weight	
Dimensions (W x D x H)	220 x 145 x 62 mm Weight: 1,5 Kg
Quality	
Temperature	Operative: -20~70°C (-4~158°F) Storage: -30~80°C (-22~176°F)
Relative Humidity	5%~95%@40°C, non-condensing
Vibration Range	1.5 Grms, IEC 60068-2-64, random, 5~500Hz, 1hr/axis
Certifications	CE, FCC, Class A, ROHS
Compatible Operating Systems	Windows 10/11 IoT, Windows 11 PRO, Linux Ubuntu

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