



BRICK

Quick Start Guide (Short Information for Use)

V 1.0

b-plus technologies GmbH
www.b-plus.com

Valid for

Part-Number	Name
B17575-BCC-1xx-xxxx	BRICK CORE COMplus 6820EQP632Gxxxxx



Note

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Bitte beachten Sie, dass die folgenden Informationen in englischer Sprache verfasst wurden. Sofern Sie deutsche Unterstützung benötigen, wenden Sie sich bitte an support@b-plus.com.

General Conditions

These general conditions apply between you ("customer") and b-plus technologies GmbH, Ulrichsberger Straße 17, 94469 Deggendorf ("b-plus"). Conflicting, deviating or additional terms and conditions of the customer are rejected.

- 1 The delivery items shall only be used for research purposes or prototypical applications, at customer's own risk and for customer's own evaluation and development purposes ("authorized use"). The delivery items are not suitable for serial use and may only be used in suitable test environments and by qualified personnel. Neither a certain quality for the purpose of serial use has been agreed upon, nor is a defect-free suitability for such purposes assumed. Any necessary approval or conformity assessments shall be carried out by the customer. The delivery items may only be used in such a way that a danger to body and considerable financial loss is excluded.
- 2 The customer is specifically advised to his special testing obligation, as b-plus cannot test the interaction of the delivery item with the components specifically used by the customer. In this context, the client must carefully and appropriately test the interaction, in particular prior to use in areas which represent a danger to life, limb or property or which can lead to considerable financial losses.



Support

Product Documentation

www.b-plus.com

Download

<https://www.b-plus.com/en/support/download-portal>



Download Information

Login: brick

Password: brick_8769

Support

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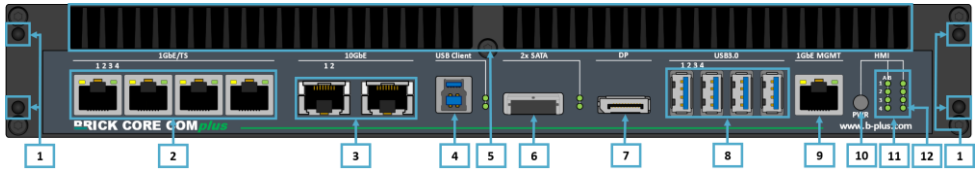
Safety



- ▶ Read the safety notes and warning messages before you use the product.
- ▶ For safe and proper operation, obey the instructions in this document which you can find in the shipping unit.

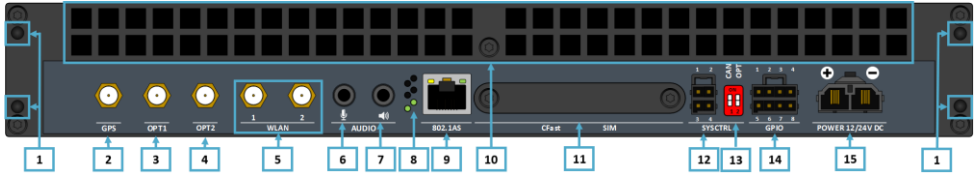


Front View



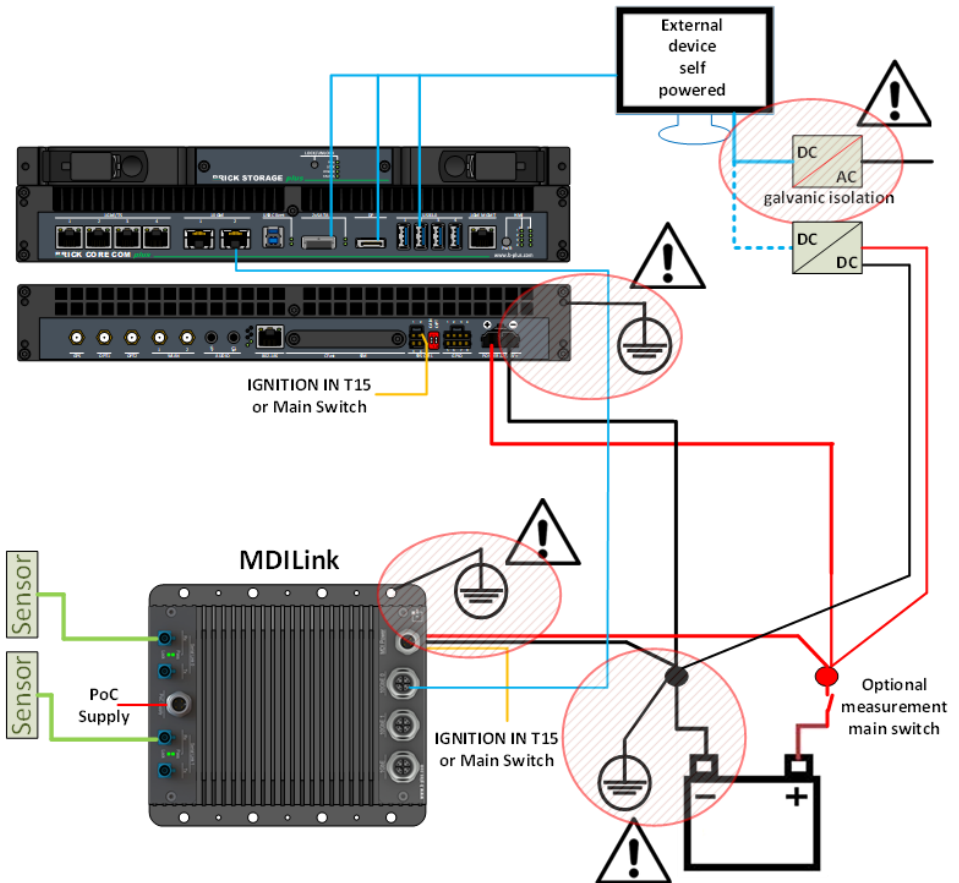
Pos.	Designation	Description
1		Mounting holes with inner thread M4 (depth approx. 11.5 mm)
2	1 GbE/TS 1,2,3,4	1 Gb Ethernet port
3	10 GbE/TS, 1,2	10 Gb Ethernet port
4	USB Type B	not supported
5		Openings left and right for the active cooling
6	DP	Port for display
7	2x SATA	2x SATA 6G via SFF8088 Only lane 1 and 2 are supported.
8	USB3.0 1,2,3,4	4x USB3.0 port
9	1GbE MGMT	1 Gb Ethernet port Management
10	HMI PWR	On/Off power button
11	HMI LEDs	User LED (controlled via SIODI API)
12	HMI LED B4	Operating status indication (power LED)

Rear View



Pos.	Designation	Description
1	-	Mounting holes with inner thread M4 (depth approx. 11.5 mm)
2	GPS	GPS antenna connection
3	OPT1	HF SMA optional connector (i.e., LTE)
4	OPT2	HF SMA optional connector, project specific
5	WLAN 1,2	WiFi antenna connection (Prim, Aux)
6	MIC Symbol	Audio input, stereo microphone
7	SPK Symbol	Audio output, stereo headphones
8	Temp	Opening for temperature sensors for system temperature management
9	802.1AS	1Gb Ethernet port (optional: with specific time synchronization function)
10		Air intake opening left and right for dynamically controlled cooling system
11	Cover plate for CFast and miniSIM socket	CFast slot (optional) miniSIM socket (option LTE necessary)
12	SYSCTRL	BRICK system control connector
13	SYSCTRL SW	DIP-switch for CAN termination for the system control connector
14	GPIO	4 GPI and 4 optional GPO
15	POWER	Power supply connector

BRICK System Installation Guideline



ATTENTION Grounding of external devices necessary

External devices which are connected on interfaces like DP Port or USB must be on the same ground level or galvanic isolated.

- ▶ Make sure to have a correct ground connection of all devices.
 - ▶ Only trained, qualified, and experienced persons are permitted to install the product.
- ▶ See more information on the grounding in the manual.



Initial Operation

This chapter describes how to start your BRICK CORE COM*plus* product.

- 1 Connect the DC supply cable of the power supply unit to the power supply connector on the rear side of the BRICK CORE COM*plus* system (Rear View, pos. 15).
- 2 Connect a suitable monitor to DP (Front View, pos. 7).
- 3 Connect a compatible mouse to the USB port (e.g., Front View, pos. 8).
- 4 Connect a compatible keyboard to the USB port (e.g., Front View, pos. 8).
- 5 Connect the desktop type power supply AC to the main supply which b-plus offers as accessory. Use the country-specific network supply cable for this.
- 6 You can insert the BRICK STORAGE(plus) in the BRICK STORAGE BAY.
- 7 Start the BRICK system via the power button (see Front view, pos. 10). Hold the button down until the LED B4 (see Front view, pos. 12) turns green.
- 8 The system will boot the operating system which is defined in the scope of delivery. The color of the LED B4 (see Front view, pos. 12) changes from red to green.

Scope of Delivery



Scope of Delivery

The scope of delivery depends on the ordered system or set configuration.

- ▶ Do a check of the scope of delivery.

The table as follows is valid for these systems:

BRICK CORE COM*plus* Set:

- BRICK CORE COM*plus* 6820EQP632G
- BRICK CORE COM*plus* 6820EQP632GST
- BRICK CORE COM*plus* 6820EQP632GSTSPC



Table: Scope of Delivery of BRICK CORE COMplus

Category	Description	BRICK CORE COMplus Set
✓ included / ☒ order separately		
Power and Supply	B17575-ACC-004-0001 Desktop type power supply AC 110 – 240 V 50/60 Hz, 220 W, 24 V, 9.5 A w/ power connector BRICK with power cable IEC-C13 to CEE 7/7 (typ E+F)	☒
	A1003447 Power cable IEC- C13 to Type-I AS 3112 (CN)	☒
	A1002272 Power cable IEC-C13 to NEMA 5-15, 3-pol (USA, JP, KC)	☒
Accessories and Cables	GPS-Antenna	✓
	2x WiFi-Antenna 2.4 GHz, RP-SMA	✓ only in WiFi version
	Swivel Antenna 4 G/LTE/GPS, 2JW0124 SMA/M	☒
	B17575-ACC-006-0001 ■ PWR cable, red-black, pigtail, 4 mm ² , 1.5 m ■ SYCCTRL cable, pigtail, IGN T 15 yellow, FLRY 0.5 mm ² , 1.5 m ■ GPIO cable, pigtail, 8x white FLRY 0.75 mm ² , 1.5m	✓
	OS recovery stick for Windows® / Linux	✓
Documentation	Download Manual Quick Start Guide BRICK CORE COMplus which you can find in the shipping unit (this leaflet)	✓

Specifications and Approvals

» See the related data sheet or manual for more information.

Safety Notes and Warning Messages



ATTENTION Damage by transport or incorrect storage possible

The product has undergone a comprehensive final check to make sure that it leaves the production location in a perfect condition. Transport or incorrect storage can cause damage to the product.

- ▶ Examine the product for damage before initial operation.
- ▶ If the product is damaged, do not start the operation.



CAUTION Injury by heavy product possible

The product has a weight of 5 kg or more.

Products that fall can cause injuries or permanent damage of the products.

- ▶ Be careful when you lift the product.

Heavy products which are not fastened can move and hit persons, e.g., in a test carrier environment. This can cause serious injuries and permanent damage of the product.

- ▶ Fasten the product with suitable straps and fixation during installation and transportation.
- ▶ Use the front M4/M5 threads at the front and rear side to fasten the product.

b-plus recommends to use the installation set which you can find in the Accessories order list (see data sheet or manual).




CAUTION Fire by incorrect cable connectors and cross sections possible

The product uses currents up to 200 Watt. Incorrect cable connectors or cross sections can cause shortage, cable fire, and high temperatures.

The cable fire can cause smoke poisoning. Skin contact can cause burns. Damage of the product can occur.

- ▶ Use the cables and the correct connectors which are in the shipping unit and which b-plus recommends.
- ▶ Only use cables with the correct cross section.
- ▶ Only use the desktop type power supply AC which b-plus recommends (order separately, see Scope of Delivery).
- ▶ Connect the product grounding to the ground of your test carrier.
- ▶ See manual for more information on the grounding.

 **CAUTION** High temperatures of the housing possible

High system loads and high environmental temperatures can cause hot surfaces on the housing.

Contact with hot surfaces can cause mild burns.

- ▶ Do not touch the hot surface.
- ▶ Cool the product before you touch it.
- ▶ Use the product in the specified environmental temperatures.
- ▶ Wear protective gloves if you cannot avoid contact.

 **WARNING** Injury by incorrect handling of the battery possible

The product contains a lithium-ion CMOS battery which is not rechargeable. There is risk of heat or explosion by incorrect handling.

Fire can cause smoke poisoning. Skin contact can cause burns. Damage of the product can occur.

- ▶ Only trained, qualified, and experienced persons are permitted to use the product.
- ▶ Do not charge the battery.



ATTENTION Electromagnetic interference possible


All connectable cables are specified to be shorter than 3 meters. Electromagnetic fields can cause disturbances and incorrect operation of the product and near devices.

- ▶ Do not use cables with a length of more than 3 meters.

This product is compliant with Class A of EN 55032. In a residential environment this product can cause radio interference.

- ▶ Only use this product in industrial environments.



 **ATTENTION** Damage by use outside of the power voltage range

The correct supply voltage for the product 10 - 28 V (6 - 32 V DC Engine Crank safe according to ISO 7637-2 Pulse 4, 10 – 28 V DC permanent).

The use outside of this range can cause permanent damage of the product.

- ▶ Use a power supply in the specified range.
- ▶ Do not connect the product directly to an alternating current supply voltage, e.g., 110 – 240 VAC.
- ▶ b-plus recommends to use a voltage stabilizer which lowers the voltage to 12 V if you use an on-board supply system with a higher voltage.

 **ATTENTION** Connect the correct polarity

Polarity reversal can cause permanent damage of the product.

- ▶ Make sure that the connection to the power supply has the correct polarity.

 **CAUTION** Interference by Wireless Communication Device possible

If you use wireless communication devices incorrectly, interferences with other (possibly safety-related) devices can occur. This can result in incorrect operation of the (possibly safety-related) devices. The expiration of the operating license can occur.

- ▶ Only use the antenna which b-plus recommends and which is supplied with the product.
- ▶ Only use the product in closed rooms if you use the 5 GHz band.
- ▶ Only use the product in non-restricted rooms.
- ▶ For safe and proper operation, obey the additional instructions about wireless communication devices in the manual which you can find in the download portal or the documentation of the wireless communication device, or contact b-plus.


Installation

 **ATTENTION** Use protection against overcurrent

Overcurrent can occur by, e.g., a bolt of lightning. This can cause damage of the product or cable fire.


- ▶ Use a suitable fuse for overcurrent protection.



 **ATTENTION** Damage by incorrect position possible

An incorrect position can cause damage to the product.

- ▶ Do not use the product with the upper side downwards.

 **ATTENTION** Avoid unwanted material in the product

Unwanted material, e.g., liquids, foreign objects, or dust, can cause damage to the product.


- ▶ Keep unwanted materials out of the product by correct position or storage.

 **ATTENTION** Sufficient air flow necessary

Overtemperature can cause damage to the product.


- ▶ Make sure that the airflow is sufficient.
- ▶ Keep at least 50 mm installation distance at the rear side of the product.
- ▶ Obey the additional instructions which you can find in the manual.

Operation

 **CAUTION** Product contains moving parts

Moving parts, e.g., fans, can cause personal injury.

- ▶ Do not touch the fans with your fingers or other body parts.

 **CAUTION** Injury by loud volume of the audio device possible

Too much sound pressure can cause hearing loss.

- ▶ Before you use headphones, headsets, or earphones, make sure the volume level is low.
- ▶ Do not use headphones, headsets, or earphones for an extended period to avoid hearing loss.

Maintenance



ATTENTION Damage by incorrect configuration possible

The product is a complex system with high performance components in a verified configuration.

If you add or replace components, an unreleased configuration can cause damage of the product and results in loss of warranty.

- ▶ Contact b-plus before you modify the supplied product.
- ▶ Only use components which b-plus recommends.
- ▶ Note that the approvals are only valid for the supplied configuration.



ATTENTION Unserviceable product by update interruption possible

For example, power loss can make the product unserviceable.

- ▶ Make sure that the update procedure is not interrupted.

Transport and Storage



ATTENTION Damage by incorrect handling and storage

If you bring the product from an environment with low temperature to an environment with high temperature, condensation can occur.

This condensation can lead to permanent damage of the product if you power the product immediately on.

- ▶ Therefore, store the product in the new environment for at least 2 hours before you power it on.

The weight of devices on top of each other can lead to housing damage.

- ▶ Do not stack more than 3 devices on top of each other.
- ▶ See the additional information about storage in the manual.



Disposal



Waste Regulation for Electrical & Electronic Equipment

- ▶ Refer to the European WEEE directive to dispose electrical and electronic equipment.
- ▶ Do not dispose electrical and electronic equipment with consumer waste. Its components must be recycled or disposed apart from each other. Otherwise, contaminative and hazardous substances can pollute our environment.
- ▶ You as a user are committed by law to dispose electrical and electronic products to the producer, the dealer, or public collecting points at the end of the product lifetime for free.
- ▶▶ See the support section of b-plus.com for more information about the RMA handling.

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Correct Disposal of Batteries in This Product

Applicable in the European Union and other European countries with separate battery return systems.

- ▶ Where marked, the chemical symbols Hg, Cd, or Pb indicate that the battery contains mercury, cadmium, or lead above the reference levels in newest EC Directive. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.
- ▶ The marking on the battery, manual, or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life.
- ▶ To protect natural resources and to promote material re-use, separate batteries from other types of waste and recycle them through your local, free battery return system.
- ▶ Only trained, qualified, and experienced persons are permitted to open the housing and remove the used CMOS battery which is on the mainboard. Contact support@b-plus.com for more information.
- ▶ Dispose used batteries and rechargeable batteries according to the manufacturer's instructions. When you dispose batteries, comply with local laws, ordinances, and regulations.
- ▶▶ See the support section of b-plus.com for more information about the RMA handling.

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