

ID-engine Z BRICK

RFID | NFC | Bluetooth® Multi-frequency desktop reader

ID-engine Z BRICK is a versatile desktop reader, e.g. for payment, loyalty programs as well as authentication with computers, printers, or machines. Not only in the office, but also in harsh environments.

ID-engine Z Module inside

ID-engine Z BRICK is the desktop variant of Z Module. Do you use both? Then you can rely on the same functionality and consistent behavior. Learn more in the data sheet *"ID-engine Z Module"*.

Assembly kit variant for more flexibility

The reader is also available as "ID-engine Z BRICK SET", a kit for no-tool self-assembly. It offers particular flexibility:

- **Screw mounting:** If needed, you can fix the base plate with screws and then assemble the reader.
- **Easy stock-keeping:** You need a desktop reader for some projects and a module for others? With the BRICK SET, you always have the right product available.

For detailed mounting instructions, please visit docs.baltech.de/zb-set

Variant for harsh environments available

A potted variant (rated IP55) is available on request, providing protection against dust and moisture for industrial use.

Front stickers based on your own design

Optionally, you can order individually designed front stickers to adapt the readers to your design requirements.

Uncomplicated updates

- Firmware and configuration updates via USB, RS-232, or NFC
- The configuration can also be updated with BALTECH ConfigCard.



What all BALTECH readers have in common:

- **Comprehensive RFID support**
All common card systems and key fobs

Learn more in the data sheet *„Supported card types“*.

- **Autonomous operation – highly customizable**
Configure RFID and host interface, check routines, and I/O behavior with our software tools – no expert knowledge needed.
- **Card-type-independent command set „VHL“**
Develop custom applications with minimal effort.
- **Custom hardware and firmware development**

Learn more in the data sheet *"Cross-product properties"*.

Technical data

Mechanical

| | |
|------------------|------------------------------------|
| Dimensions | 84 x 48 x 17 mm; fixed cable 1.8 m |
| Weight | 100 g net; 150 g incl. packaging |
| Housing material | ABS/PC |

Power supply

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|-----------------------|----------------|
| Supply voltage | 4.75...5.5 VDC |
| I max. supply current | 300 mA |
| I typ. supply current | 120...140 mA |

User interface

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|--------|---|
| LED | RGB-LED Red/Green/Blue/+Mix Configurable color and intensity |
| Beeper | 4000 +/- 300 Hz |

Environmental

| | |
|---------------------------|--|
| Operating temperature | -40...+60°C (-25...+60°C for 10117 product line) Wider temperature range on request |
| Operating humidity (rel.) | 5...90% non-condensing |
| MTBF | 200,000 h |

RFID interface

| | |
|--|---|
| 13.56 MHz | Read range: 20...80 mm typ; Field strength: Hmin = 1.5 A/m @ 20 mm, Hmin = 0.15 A/m @ 80 mm Standards: ISO 14443 A/B, ISO 15693, NFC Optimized for key fob compatibility and metal mounting insensitivity |
| 125 kHz | Read range: 20...80 mm typ; Standards: LF 125 kHz ASK, FSK, PSK |
| Mobile ID/Bluetooth Low Energy v4.2 | Read range 0.2...15 m, adjustable; BALTECH protocol based on Bluetooth Low Energy for BALTECH Mobile ID (smartphone app for access control etc.; learn more in the data sheet „ <i>Mobile ID</i> “ und at docs.baltech.de/mobile-id-overview) Low-level access for the development of custom applications on request |
| RFID scan duration | Full sequential cycle 450 ms (multi-frequency product line) |

Host interfaces

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|----------------|--|
| Out of the box | USB Optional: UART (RS-232 or 5V CMOS) Optional: UART cable DSUB 9 with integrated power supply connection |
| On request | CMOS 3.3 V, Wiegand, Magstripe emulation, I2C |

SAM slot

Slot for a Secure Access Module (SAM), which serves as a secure storage location for project keys and handles encrypted communication with project cards (learn more at docs.baltech.de/sam).

| | |
|--------------|---|
| ID0 SAM slot | Optionally built-in 3.3 V 50 mA (peak 100 mA) ISO 7816 interface for MIFARE SAM AV2, -3 and HID iClass SE Processor. Further SAM support on request |
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More details

For more technical data, please visit docs.baltech.de/id-engine-z

For an overview of standard variants and prices, refer to the ID-engine price list.

