ID-engine® XM BRICK

RFID NFC Desktop Read/Write Devices

Universal RFID Reader Family

BALTECH ID-engine XM BRICK readers are compact and powerful desktop devices, available with USB- or RS232/-COM-interface. For special applications, the RS232/COM-interface can be ordered with 5 V or 3,3 V level for direct connection to microcontrollers or hosts without standard drivers. Choosing the 5 V level option allows configuration to output magstripe (clock&data) or wiegand (d0&d1) format.

BALTECH's unique VHL instruction set allows handling of sophisticated encrypted Smart Card technologies with easy to use unified read/write instructions. The benefits are a significant increase of transaction speed, one application software implementation independent of the transponder type and a significant increase of security. Project- and transponder type-specific configuration settings are made using BALTECH's ToolSuite software. The configuration data output is transferred to the readers through the host interface or BALTECH ConfigCards via the RF-interface.

Configurations can include script programs for autonomous/standalone operation including selection of the host interface type and control of communication parameters as well as LED and buzzer operation.

Standard low-level access is provided with direct access to the instruction set of supported transponders. The built-in transparent mode allows full control of the RF-interface to support non-standard transponder types.

Customization is offered both for firmware and hardware, ranging from implementation of a proprietary host communication protocol to customized front sticker design, housing color and packaging. In-house engineering, design and manufacturing enables BALTECH to offer competitive and high quality products with reasonable R&D efforts for every customization requirement.

RF-STANDARDS

ISO14443 A/B, 106 to 848kbit/s
ISO15693
NFC *(initiator)*
JIS X 6319-4 (FeliCa)
LF 125 kHz
Multi-Frequency

RF-ENCRYPTION

Mifare Classic, Plus
Mifare DESFire EV-1 (DES, 3-DES, AES)
Legic Prime, Advant
HID iClass/SIO; SAM (ISO7816) *optional*

HOST INTERFACES

USB 2.0 full speed
RS232 - 12V, 5V, 3,3V options
Mag/Clk-Data, Wiegand

APPLICATION INTERFACE

USB-HID, USB-Keyboard-Emulation
CCID (PC/SC)
CDC (Virtual COM port)
DLL for MS Windows
SDK

SPECIAL FEATURES

BALTECH VHL instruction set
ConfigCard technology
AES encrypted host communication
Firmware upgradeable

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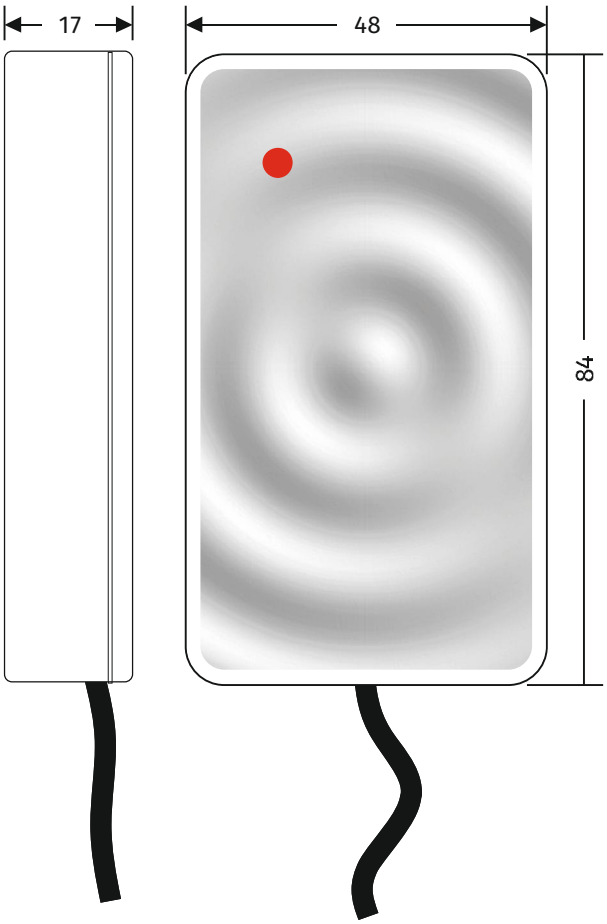
ID-engine® XM

IDE-XM-BRICK Scale 1:1 +/- 0,5 mm



Technical Data

Supply Voltage:	USB 4,5 ... 5,5 VDC
Supply Current:	300 mA max. operating
	150 mA typ.
	20 ... 50 mA idle
	sleep on request
Operating Temperature:	-20° ... +60°C
Operating Humidity:	5% ... 90% rel., non cond.
MTBF:	500.000 h

Read / Write Distance

ISO15693:	50 ... 100 mm typ.
ISO14443:	20 ... 80 mm typ.
125 kHz:	20 ... 80 mm typ.

Miscellaneous

Certifications:	CE, RoHS2, UL, model spec.
	int. certifications on req.
Cable USB:	1,8 m, Type A connector
Cable RS232/COM:	1,8 m, DSUB 9-Pole female
	with coaxial DC socket

Transponder types

See „ID-engine X Supported Transponders“ for details on supported transponder type functionality