

# ID-engine® XG

## RFID NFC Read/Write Modules with Antenna



### Universal RFID Reader Module Family

BALTECH ID-engine XG modules are powerful and flexible standard products for integration into e.g. terminals, vending machines, industrial computers. The form factors provided ensure easy integration and best RF performance even in challenging installation environments.

ID-engine XG modules are available in different variants to optimize cost and functionality. More hardware options include buzzer, LED and host interface choices to connect to a wide range of host systems without the need for additional converters.

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 special antenna designs and full custom products. In-house engineering, design and manufacturing enables BALTECH to offer competitive and high quality products with reasonable R&D efforts for customization tasks.

### 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-2 (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/Clock-Data, Wiegand, I2C

### 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

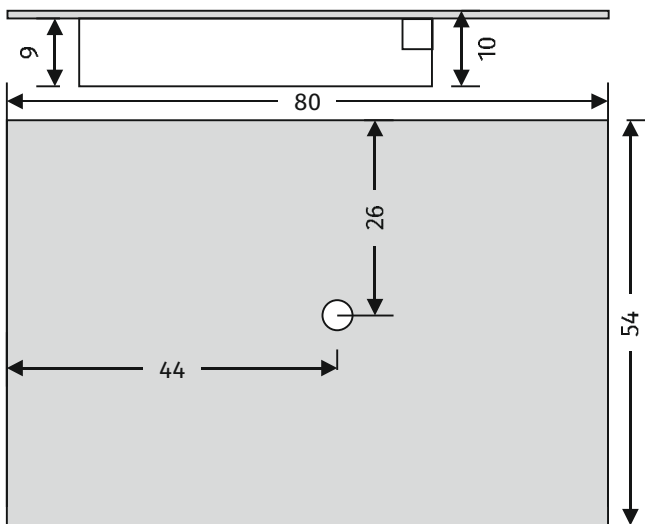
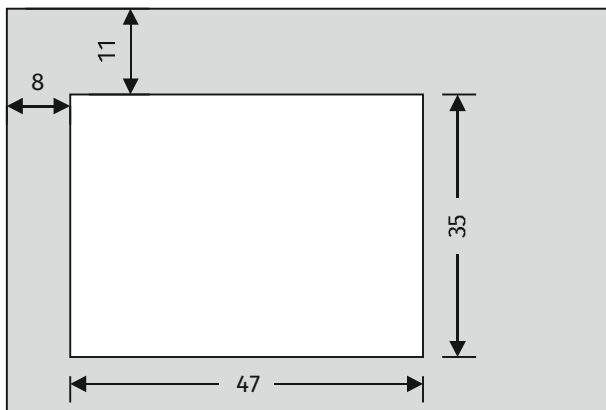
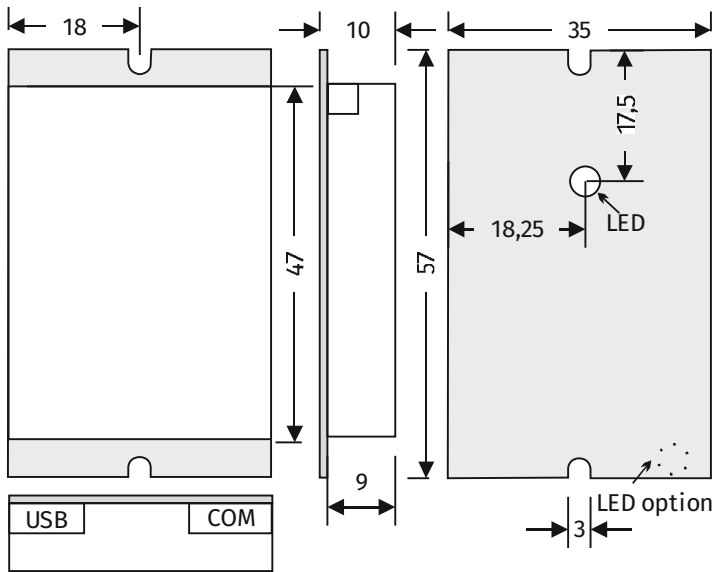
Buzzer & 3-color LED

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# ID-engine® XG

Drawings IDE-XG-...-ANT1 and -ANT2. 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.
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## Transponder types

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

