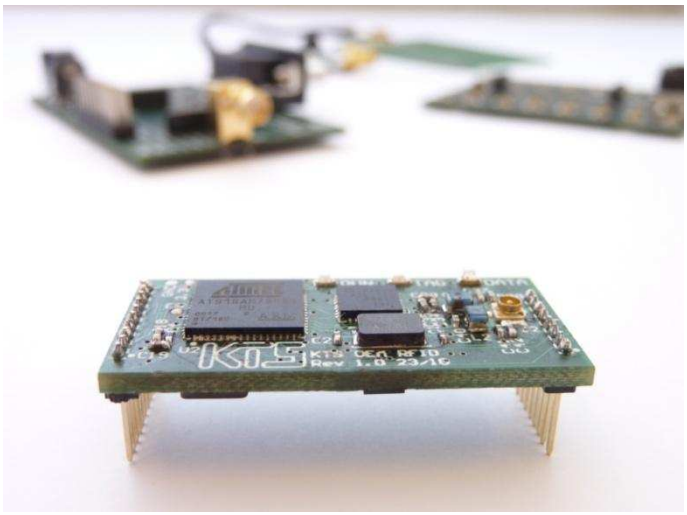
Data sheet
RFID HF Module

Article No.: RFIDM1356-00X



Picture 1 – RFID OEM Module

Description:

The KTS RFID Module provides the functionality to read and write RFID transponders according to ISO 15693 and can be easily integrated into any customer-specific, existing circuit.

It consists of a RFID transceiver which communicates with the transponder as well as of a micro controller providing pin header access to the interfaces needed for control. The interfaces include a UART-compatible serial interface to control the module, a RF interface with 50 Ohm output impedance to connect antennas as well as a proprietary interface to control multiplexers. Both the serial interface and the multiplexer extension have CMOS-compatible logic levels.

The module requires +5V direct current for power supply, which is also fed via pin strip. Both module configuration and data exchange with the transponders are made by a simple AT command which is similar to a modem's configuration. To easily use the module in own circuits, KTS provides a component library for the „Altium Designer" CAD system with schematic symbols and a footprint.

Capability characteristics:

Mechanical sketch of the module:

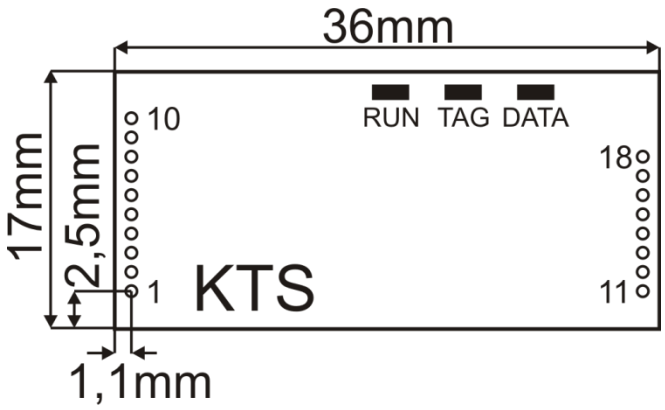


Abbildung 2 - mechanical sketch - NOT technical drawing (for precise dimension please contact)

Status LEDs:

The module has three status LEDs: „**RUN**“, „**TAG**“, „**DATA**“.

The **green „RUN“-LED** signals the module's operational readiness through slow blinking. Once one of the scan modes has been selected and the module does a permanent scan for transponders, it starts blinking quickly.
The **yellow „TAG“-LED** lights up once a transponder has been detected in the reader's field.
The **red „DATA“-LED** signals by blinking, that data are being transferred to the host via the serial interface.

Pin strip configuration

All necessary information can be found on a separate data sheet – by request!

Data sheet supplement - software interface:

All necessary information can be found on a separate data sheet – by request!

Data sheet supplement - component library:

All necessary information can be found on a separate data sheet – by request!

Technical data:

Technical specifications

Product type	RFID OEM Module			
Operating frequency	13.56 MHz			
Antenna connection	Via pin strip or U.FL connector (50 Ohm)			
RF output power	100mW or 200mW, switchable via software			
Power supply	+5V DC			
Power consumption	Ca. 100mA			
Interfaces	Serial (UART compatible) RF interface 50 Ohm output impedance Proprietary interface for multiplexers			
Dimensions (LxW)	36 x 17 [mm]			
Mechanical and electrical connection	2 pin header with 1.27mm grid (10-ways and 8-ways), protected against reversed polarity			
RSSI display	Per software			
Tag types supported	ISO 15693	ISO 14443A	ISO 14443B	ISO 18000-3
	yes	yes (only Inventory)	--	--
Reading range:	ca. 14cm	--		
	NOTE: Reading range depends on both antenna and transponder. Here, an ISO card transponder and a KTS reference antenna were used (Art.-No.: PCBA1356_5-001), 200mW			
Log / command set	Simple commands for tag scanning, reading and writing of tag memory as well as modifications of hardware parameters and firmware update via AT commands			
Communication	UART-compatible serial interface with CMOS level (TX, RX) Interface parameter: 115200, 8, N, 1 (adjustable), as an option with hardware flow control (RTS, CTS)			
Anti-collision	Yes, group-reading supported			
Other	Status LEDs to display various operating conditions			
Order number	RFIDM1356-001 (Pin header)			

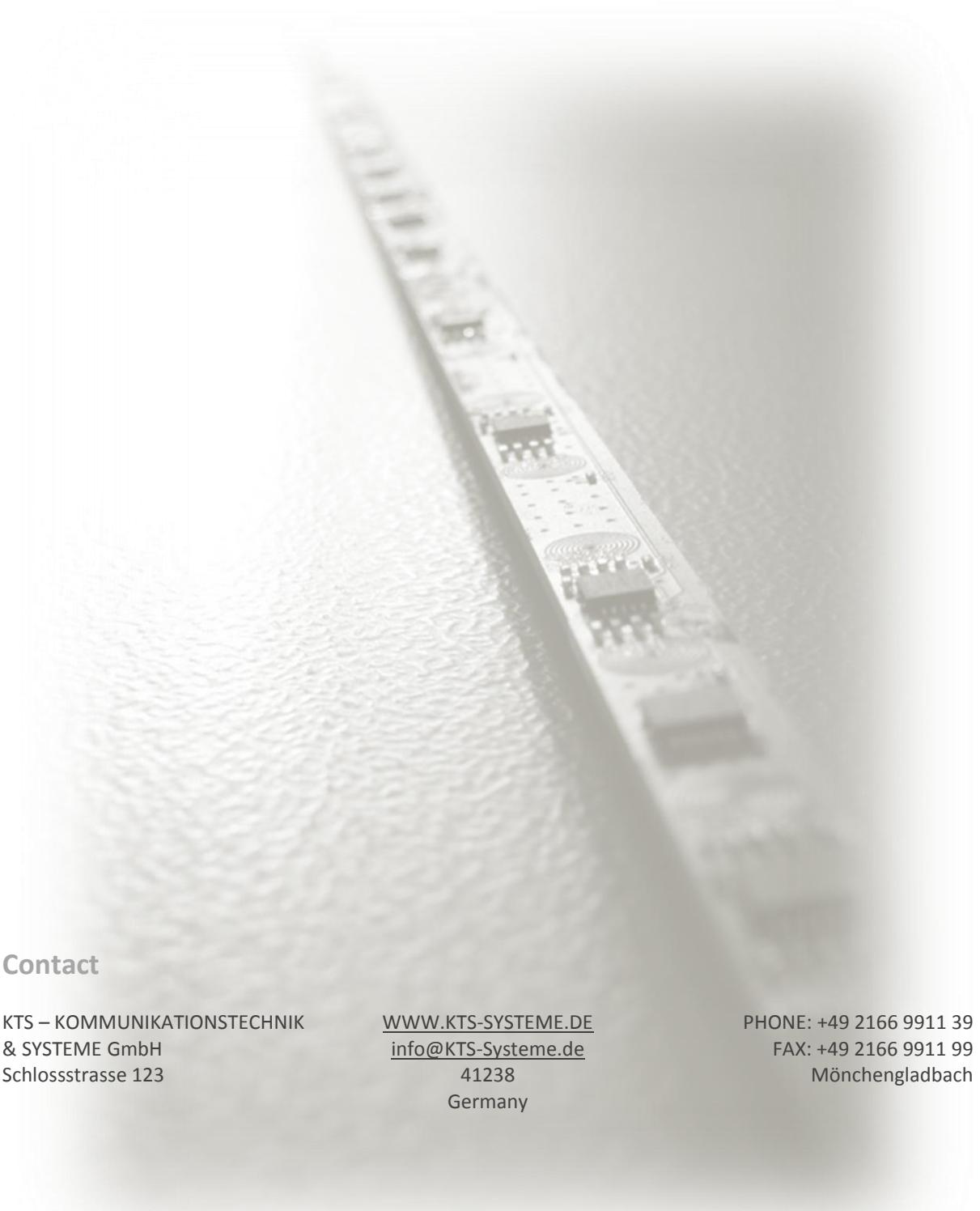
Further KTS RFID components:

SRR1356 – ShortRange Reader

MRR1356 – MidRange Reader

RFIDM1356 - RFID OEM Module

PMUX1356 – Power Multiplexer



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