



OEM READER BOARD READ-WRITE

Frequency:	125 kHz or 134 kHz +/- 3.0 kHz (at RT)								
Antenna:	antenna on board, external antenna (L=191 μ H, R < 5 Ω) can be added in toggle mode								
Read Distance:	Short Range (proximity)								
Housing:	PCB, no housing								
Dimensions:	65 x 55 x 10 mm (2.56 x 2.16 x 0,39 in)								
Power supply:	9..12VDC or 5 VDC								
Typ. Supply current:	Antenna on: 75mA, antenna off 15mA @5VDC (interface active)								
Operating temperature:	0°C to +40°C (32F to +104F)								
Interfaces:	RS232 (V24), USB, RS485 (V24) and TTL								
Standard Firmware:	<table border="0"> <tr> <td><u>Read only :</u></td> <td><u>Read & Write</u></td> </tr> <tr> <td>UNIQUE (EM4x02)</td> <td>Q5</td> </tr> <tr> <td>ISO 11784 /5, (FDX-B),EM4x05</td> <td>HITAG 1</td> </tr> <tr> <td>HITAG-S-32</td> <td>HITAG-S-256 /2K</td> </tr> </table> <p>Other reader firmware for EM4x25, EM4x70, EM4x50, EM4269, TIRIS, ATMEL T555x ASK, PSK, FSK are customized available upon request. (see page 3)</p>	<u>Read only :</u>	<u>Read & Write</u>	UNIQUE (EM4x02)	Q5	ISO 11784 /5, (FDX-B),EM4x05	HITAG 1	HITAG-S-32	HITAG-S-256 /2K
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UNIQUE (EM4x02)	Q5								
ISO 11784 /5, (FDX-B),EM4x05	HITAG 1								
HITAG-S-32	HITAG-S-256 /2K								
Firmware features:	<ul style="list-style-type: none"> • software loader for later firmware updates via serial interface • forth-interpreter, programmable offline functionality in forth • Command-interpreter, including all diagnostic and I/O functions • -SM ; secure mode, AES crypto mode for HITAG-1, HITAG-S 256 /2K • -AM ; ISO11784/5 (FDX-B & HDX) • -QX ; possibility to read different FDX-A modes (ASK, PSK, FSK) <p>The different firmware modules can be optional mixed in order to offer a maximum of customization flexibility. Custom tailored firmware can be designed upon request.</p>								
Technical Certificates:	CE								
Part number:	TLB-11-AA = RS232 (V24) TLB-12-AA = USB TLB-13-AA = RS485 (V24) TLB-14-AA = TTL								



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<p>Features:</p>	<ul style="list-style-type: none"> • Ready to use reader board by connecting power and communication interface • On board amplifiers for higher performance compare to TLM-10 • on board demodulator to increase sensitivity compare TLM-10 • Synchronization of multiple readers via SYNC • 3 / (2) free configurable I/O port, (RS485 with only 2 IO's) • No quartz or external clock needed • 5V input and 9..12VDC • Offline functionality macro programmable by the customer • Application specific firmware versions (ASF) available • Full customized firmware possible on volume demand • Signal amplitude measurement to measure the signal strength of the tag • Command timing at the air interface is adjustable by parameters • External antenna can be easy added and toggled with the internal one, • 2 LED's are already board mounted and can be controlled via the IO's • Low power consumption
<p>Specials:</p>	<p>Reader boards with ASK, FSK or PSK demodulators can be offered on volume demand, as well as multi demodulator reader boards (ASK + PSK + FSK)</p>
<p>Inputs / Outputs:</p>	<p>3 digital I/O's, (RS485 with 2 I/O's), 2LED's on board</p>
<p>Board shape:</p>	<p>65.0mm 2560mils</p> <p>4.6mm 180mils</p> <p>4.0mm 157mils</p> <p>46.0mm 1811mils</p> <p>4.0mm 157mils</p> <p>2.0mm 79mils</p> <p>8.8mm 348mils</p> <p>4.0mm 157mils</p> <p>2.54mm 100mils</p> <p>50.0mm 1968mils</p> <p>8.8mm 348mils</p> <p>4.0mm 157mils</p> <p>4 mounting holes - diameter 2.5 mm</p>

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