

springcard®

Prox'N' Drive

Power-effective RFID HF/ NFC coupler for automotive applications

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Prox'N'Drive

Contactless RFID/NFC coupler for automotive

Being both compact and flexible, Prox'N'Drive is ideal for in-vehicle mounting. A single cable conveys both single 12V DC power and the RS-232 interface.

The front panel has 3 high-luminosity LEDs for user information and is customizable with any personal logo.

The innovative low power card detection system makes it possible to put both the reader and its host system in a deep standby mode until a contactless card, RFID tag or any NFC object is put over the antenna.

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TYPICAL APPLICATIONS

- Car-sharing
- Battery-powered fleets
- Active display windows

KEY FEATURES

- Reads cards and tags through windscreen and windows
- Single cable and connector for both power and serial interface (RS-232)
- Low Power Card Detection
- Self-adhesive device made for automotive environments

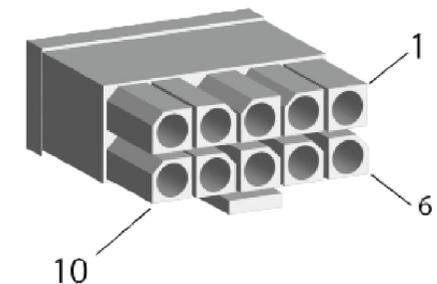
Pin Out

PIN Assignments	Active state	Input/Output (I/O)	MIN (V)	MAX (V)	Low Level	High Level	Signal Designation	
1	WAKE-UP	High*	O (note 2)	4.7	5	0.1V	4.9V	The product can be used in low powered mode: this signal indicates that the product as woken up from a detection of a badge
2	\RESET	Low	I (note 1)	0	5	<2.4V	>2.63V	Reset - used for programming mode (note 3)
3	FLASH	High	I (note 1-3)	0	5	<2.4V	>2.63V	Programming : operating mode (note 3)
4	GND	-	GND	N/A	N/A	N/A	N/A	Ground
5	N/A	-	-	N/A	N/A	N/A	N/A	
6	VIN	5V-24V	GND	-15	24	N/A	N/A	Min 3.3V-24V (Imax=250mA at 5V)
7	FP_TxD	-	O	-15	15	RS232		RS232 transmit - also used for programming mode (note 3)
8	FP_RxD	-	I	N/A	15	RS232		RS232 receipt - also used for programming mode (note 3)
9	GND	-	GND	N/A	N/A	N/A	N/A	Ground
10	N/A	-	-	N/A	N/A	N/A	N/A	

* Tension at high state: 3.3V-5V Tension at low state: 0V
 - If FLASH is not used connect it to GND

Note 1	Buffered input with buffer trigger gate : ref SN74L-VC1G17 (texas instruments)
Note 2	Iout=1,1mA
Note 3	programming mode setting

Synoptic Molex- male



Technical data

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Prox'N'Drive																					
RFID/NFC Standards	ISO 14443 A-B, ISO 15693, NFC peer-to-peer (ISO 18092 initiator, passive communication mode), ISO 21481																				
Carrier frequency	13.56MHz (RFID HF, NFC)																				
RF field level	Typ.: 2A/m																				
Operating distance	Typ.: 8 cm (depends on card/tag)																				
Card/tag baudrate	106 kbps																				
Communication with host	Serial interface RS-232																				
Interface	Serial - 38400 or 115200bps SpringProx binary or ASCII protocol																				
SDK	Free SDK featuring 'SpringProx API' (full ANSI C source code + binary for Windows and Linux)																				
In-field firmware upgrade	No physical action on the device using SpringCard FUU application (provided that the RESET pin is controlled by the host)																				
Visual	3 LEDs (RYG)																				
Power	3.3V to 24V DC																				
	<table border="1"> <thead> <tr> <th>Consumption</th> <th>3.3V</th> <th>5V</th> <th>12V</th> <th>24V</th> </tr> </thead> <tbody> <tr> <td>Standby</td> <td><1800µA</td> <td><1000µA</td> <td><600µA</td> <td><400µA</td> </tr> <tr> <td>Typical</td> <td>105mA</td> <td>75mA</td> <td>50mA</td> <td>35mA</td> </tr> <tr> <td>Maximum</td> <td>210mA</td> <td>145mA</td> <td>70mA</td> <td>50mA</td> </tr> </tbody> </table>	Consumption	3.3V	5V	12V	24V	Standby	<1800µA	<1000µA	<600µA	<400µA	Typical	105mA	75mA	50mA	35mA	Maximum	210mA	145mA	70mA	50mA
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Size (LxWxH) - weight	88 x 55 x 7 mm - ca 75 g																				
Cable / connector	1m / Male: Molex 43025-1000 / Female: Molex 43045-1000																				
Temperature	Operating: -20°C – +70°C / Storage: -40°C – +85°C																				
Humidity	0 – 90% (non condensing)																				
MTBF	500 000 hours																				
Approvals	EN50082, EN55022 class B																				
Environmental approvals	RoHS, WEEE																				
Warranty	2 years																				

SpringCard

SpringCard offers a wide range of products to answer the largest possible amount of needs and uses. With 18 years of experience in contactless smartcards, communication technologies and the development of mobile and embedded systems, R&D SpringCard's team is a valued partner to help you create your own solution or product.

Our locations

Angers - Paris
San Diego - San Francisco - Sydney



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