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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



**Radio module deRFarm7
25A00**
Datasheet

- The pluggable radio module deRFarm7-25A00 features an AT91SAM7X512 microcontroller and a 2.4 GHz transceiver AT86RF231. The module complies with IEEE 802.15.4 and can be used for ZigBee / 6LoWPAN / RF4CE or proprietary applications.
- The 25A00 module has two 23 pin male connectors (1.27 mm pitch) which give access to most functions of the AT91SAM7X512.
- The chip ceramic antenna provides a transmitting power of +2.5 dBm ERP. Distances of more than 200 m can be reached for line of sight conditions. The integrated transceiver obtains a receiver sensitivity of -101 dBm. A hardware 128-Bit AES encryption engine is part of the transceiver.
- The power supply range is from 3.0 VDC to 3.6 VDC with transmit and receive currents of approx. 45 mA @ 12MHz CPU clock. A current consumption of less then 250 µA can be achieved in sleep mode.
- Special features of the deRFarm7 module family are the integrated Ethernet MAC (EMAC) and the integrated USB device port (UDP)



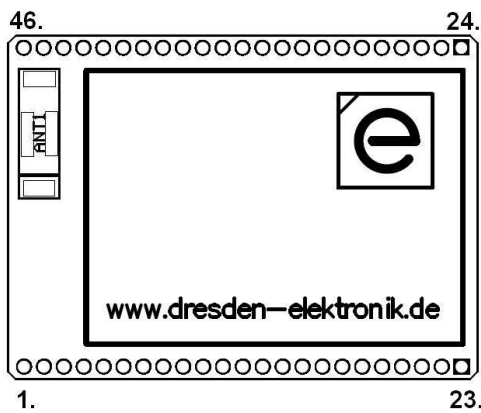
Technical Data

Dimensions	30 x 22.7 x 8.2 mm
Operating temperature	-40 to +85°C
Control and display elements	no
Power supply	3.0 – 3.6 VDC
Power consumption	Active: 45 mA @ 12MHz Sleep: < 250 µA
Connections	2 x 23 pins
Antenna	Chip ceramic
Antenna gain	+1.3 dBi (Peak), -0.5 dBi (Average)
Antenna diversity	no
Range	> 200 m (line of sight)
Frequency range	2.4 GHz
Transmitting power	+2.5 dBm ERP
Receiver sensitivity	-101 dBm
IEEE Standard	IEEE 802.15.4
Data rate (brutto)	250 kbit/s, 500 kbit/s, 1 Mbit/s, 2 Mbit/s
Microcontroller	AT91SAM7X512
Transceiver	AT86RF231
Interfaces	JTAG, DBGU, I2C, SPI, UART, USB, RMII, GPIO, ADC
Certification	CE, ETSI, FCC

Technical Data

Pin configuration

1:	VCC	13:	PA18	24:	VCC	36:	PB28
2:	DGND	14:	PA3	25:	DGND	37:	PB5
3:	ADVREF	15:	PA17	26:	PA27	38:	TCK
4:	USBDM	16:	PB0	27:	PA0	39:	PB7
5:	RSTN	17:	PA16	28:	PA28	40:	TMS
6:	PB3	18:	PB8	29:	PA4	41:	PB1
7:	PA11	19:	PB6	30:	PB9	42:	TDO
8:	PB26	20:	PB18	31:	PB21	43:	JTAGSEL
9:	PA10	21:	PB15	32:	USBDP	44:	TDI
10:	PA1	22:	DGND	33:	PB19	45:	DGND
11:	PB25	23:	DGND	34:	PB27	46:	DGND
12:	PB2			35:	PA14		



Top View deRFarm7-25A00

Connections

Scope of delivery

Radio Module deRFarm7-25A00

Order No.

BN-027264

Order Information

Board variants

Radio Module deRFarm7-25A02
Radio Module deRFarm7-15A02

BN-027265
BN-030974

Variants

More information about the variants are described in detail in the user manual.
Order online: <https://shop.dresden-elektronik.de/>

Contact