

A528

*Muon*

**Compact Embedded  
UHF RFID Reader**



The perfect  
**match**  
to your devices

#### Features

- Multi-Regional Support
  - ETSI EN 302 208
  - FCC part 15
- EPC C1 G2, ISO 18000-6C Compliant
- Compact Size
- External Antenna Connector
- SW programmable output power up to 500mW (27dBm) conducted

#### Applications

- Handheld Devices
- Multiregional Label Printers and Applicators
- Point of Sales Devices
- Self-service Kiosks
- Industrial Automation Read Points

#### General Info

The *Muon* (Model A528) is an OEM UHF multiregional compact reader of the **easy2read® Family** for high performances UHF RFID applications.

With programmable output power in 8 steps from 10dBm to 27dBm, the reader can detect tags up to 3m of distance\*.

Due to its form factor, the module is specifically designed to be easily embedded either in battery powered mobile devices, such as industrial handhelds, or fixed reading point devices, such as printers, point of sales, self-service kiosks or industrial automation readers.

The radio frequency core of the module allows to achieve fast reading/writing and operation in dense reader and dense tag environments for top-class rated performances.

The A528 complies with and can operate in both European and US regulatory environments and, due to its multiregional capabilities, it's ideal for integration in devices requiring compliance to different geographical regions.

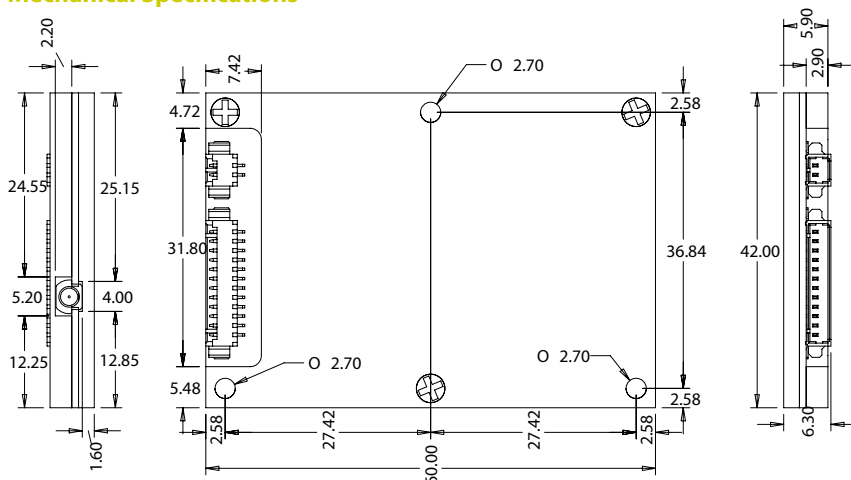
\* depending on antenna and tag dimensions

## Technical Specifications Table

<b>Frequency</b>	902÷928 MHz (FCC part 15) 865.600÷867.600 MHz (ETSI EN 302 208)
<b>Output Power</b>	Programmable in 8 levels from 10 dBm to 27 dBm (from 10 mW to 500 mW) conducted
<b>Antenna Connectors</b>	MMCX P.N. 82MMCX-S50-0-2/111 (Huber Suhner)
<b>Frequency Tolerance</b>	±10 ppm over the entire temperature range
<b>Number of Channels</b>	10 channels (compliant to ETSI EN 302 208) 50 hopping channels (compliant to FCC part 15.247) <sup>1</sup>
<b>Standard compliance</b>	EPC C1 G2/ISO 18000-6C
<b>Digital I/O</b>	4 I/O lines (3.3 V out, 5 V tolerant)
<b>UART Serial Port</b>	Data rate: up to 115 kbit/s Databits: 8 Stopbits: 1 Parity: none Flow control: none
<b>Dimensions</b>	(W) 42 x (L) 60 x (H) 6.3 mm <sup>3</sup> (1.65 x 2.36 x 0.25 inches <sup>3</sup> )
<b>Supply Voltage Range</b>	4.75V ÷ 5.25V
<b>Current Consumption</b>	1 A peak @ 5 V (TX/RX mode) 230 mA @ 5 V (idle mode)
<b>Operating Temperature</b>	-20 °C to 60 °C
<b>Weight</b>	16 g

1 All subsets of FCC band are supported

## Mechanical Specifications



- OEM Readers
- Fixed Readers
- Desktop Readers

easy2read®

## easy2read® Family

The easy2read® family constitutes a complete and reliable product line of readers for any Auto-ID need. A reading range from a few centimetres up to 7-8 metres distance makes the easy2read® family suitable for applications such as access control, UHF gates, desktop reading or OEM modules for integration into handheld or printer devices.

## Electrical Interfaces

**Antenna Port Connector:** MMCX jack (P.N. 82MMCX-S50-0-2/111 HUBER SUHNER)

**Supply and Communication Connector:** PCB Headers Molex type 53261-1290 (to be used with Molex Type 51021-1200 + 12pcs crimp terminal type 50058-8100)

### Supply and I/O connector pinout table

Pin#	Signal	Description
1	VIN (+5V)	Input supply voltage
2	/RESET	Reset (active low)
3	GPIO0	General Purpose IO #0
4	GPIO1	General Purpose IO #1
5	GPIO2	General Purpose IO #2
6	GPIO3	General Purpose IO #3
7	TST-RECOVERY	Test Recovery
8	USB PUP	USB Pull-Up
9	RXD	UART RX from host
10	TXD	UART TX to host
11	GND	Ground
12	GND	Ground

## Ordering Options

Code Description

WA528XAAAAAA A528 - UHF Multiregional Compact Reader

### Development kits

WA528DKEUXAA A528DKEU - Development kit with A528 reader, antenna, tags

WA528DKUSXAA A528DKUS - Development kit with A528 reader, antenna, tags

### Accessories

WALIM0000002 A528 - auxiliary power supply

WA528ADATX01 A528ADAT - A528 USB RS232 adapter board

WANTENNAX004 Linear polarized 3db gain 870 MHz PIFA antenna

WANTENNAX008 Linear polarized antenna for handheld units 865 - 870 MHz

WANTENNAX009 Linear polarized antenna for printers 865 - 870 MHz

WANTENNAX010 Linear polarized 3db gain 915 MHz PIFA antenna

WANTENNAX011 Linear polarized antenna for handheld units 902 - 928 MHz

WANTENNAX012 Linear polarized antenna for printers 902 - 928 MHz



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