PLRM Long Range UHF RFID Reader/Writer OEM Module

Art. No.: 22003419

Sometimes your RFID system just needs more - more output power, more antenna ports or just a robuster device for higher temperature ranges. For those cases, metraTec has developed the PLRM Long Range UHF OEM module.

With up to 2 Watt RF output power you can read large tag populations and thanks to the high sensitivity of the E710 from Impinj, even tags in difficult positions can be read without problems. Modern UHF transponders can be read with a distance of up to 12 m. The aluminum housing protects the module against mechanical stress and allows an efficient heat dissipation. That way, you can use the module even a higher environment temperatures of up to 85°C.

Typical application of the PLRM are inside other machines, logistics vehicles like AGVs or robots, as well as self-checkout stations.

With the help of the ReaderControl 3 software included with the device, supported transponders can be read and written to. Also included with the device are different programming libraries for Java, .NET, Python as well as ANSO-C, which you can use to write your own applications in a short time without prior knowledge of RFID. Using the easy-to-learn low-level AT protocol you can also connect the device to other systems, e.g. an embedded PC or even a PLC.

- ◎ Up to 12 m read range
- ◎ 4 antenna connectors
- ◎ High temperature range
- ◎ Robust design

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Technical Specification

Operating Principle	Long-Range UHF RFID Reader/Writer OEM Module
Operating Frequency	868 MHz (ETSI) / 902 – 928 MHz (FCC)
Antenna Connector	4x MMCX
Output Power	0 – 33 dBm (1 - 2,000 mW)
Read Range	up to 12 m with typical UHF transponder
Supported Protocols	EPC Class 1 Gen 2 v2
Connectivity	3V3 UART (serial with configurable Baud rate)
Operating Voltage	5V DC (via USB)
Power Consumption	idle: 30 mA, RF on: max. 2 A
Temperature Range	-20 °C to +85 °C (duty cycle restrictions apply)
Dimensions	85 x 50 x 15 mm

For an easy start with the PLRM, have a look at the PLRM Starter Kit which contains a UART to USB adapter and some UHF tags. As an antenna, have a look at the metraTec Echo-5P or Echo-6P. If you need a special shape, you can also make use of the metraTec antenna design service where we design and produce a custom UHF tuned for your application.

About Metratec

Metratec is a manufacturer of RF electronics specialized in wireless "Identification" (RFID) and "Localization" (RTLS). We serve a variety of markets from the manufacturing industry and logistics to vending machines and medical devices. Our customers include OEM customers, IoT system integrators and research facilities worldwide.

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