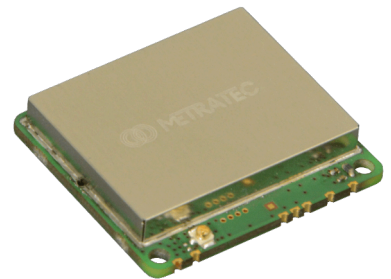# DwarfG2-XR v2 UHF Embedded Module

Art. No.: 22003453

This next generation of the DwarfG2-XR marks a new beginning of RFID modules by Metratec. Based on the Impinj E510 frontend IC, this module delivers great scanning performance and long read ranges in a small package. Bringing UHF RFID functionality into your embedded device has never been easier.

Read modern UHF transponders with up to 4 m range and use all the latest EPC Gen2 v2 features as well as propriety Impinj tag features like FastID and TagFocus. Thanks to the wide operating frequency range, the same module can be used worldwide.

This new product version has the same footprint as the previous module generation but delivers better performance and higher stability under difficult conditions due to the more sensitive RFID IC. The module also uses the same AT commands included in all new Metratec UHF products.

To make your integration task even easier, we supply a C library with examples for embedded Linux, Zephyr RTOS and bare metal programming. For use with PC-based systems, there is also a Java, Python, and .NET SDK. They all can be found on our Github Page.

◎ Small Footprint
◎ 27 dBm Output Power
◎ Up to 4 m Read Range
◎ Worldwide Frequency Range

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Technical Specification

Operating Principle	UHF Embedded RFID SMD Module
Operating Frequency	868 MHz (ETSI) / 902 – 928 MHz (FCC)
Antenna Connector	U.FL and vias
Output Power	0 – 27 dBm (1 – 500 mW)
Read Range	up to 3 m with typical UHF transponder, up to 4 m with Impinj M730
Supported Protocols	EPC Class 1 Gen 2 v2
Connectivity	3V3 UART (115,200 Baud)
Operating Voltage	5V DC
Power Consumption	idle: 50 mA, RF on: max. 750 mA
Temperature Range	-20 °C to +70 °C
Dimensions	39 x 36 x 5 mm

For an easy start, also have a look at our DwarfG2-XR Starter Kit which includes one DwarfG2-XR module, our UDB4 Development Board and some UHF transponders for testing. In case you only need a shorter read range, also have a look at our DwarfG2 or DwarfG2-Mini modules.

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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