

DwarfG2-Mini v2 UHF Embedded Module

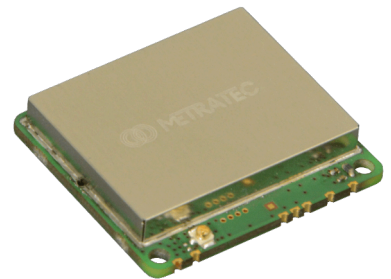
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The Metratec DwarfG2-Mini is one of the smallest UHF RFID modules on the market. At the same time, it is one of the most cost-effective RFID modules available today and can even be used in applications where you would traditionally find HF readers, such as vending machines, tracking consumables, or product authentication. Thanks to the new Impinj E310 frontend IC, this module delivers good performance, despite its size. Bringing UHF RFID functionality into your embedded device has never been easier.

Read modern UHF transponders with up to 50 cm 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 you find 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
- 9 dBm Output Power
- Up to 50 cm 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 – 9 dBm (1 – 8 mW)
Read Range	up to 30 cm with typical UHF transponder, up to 50 cm 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. 350 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-Mini Starter Kit which includes one DwarfG2-Mini module, our UDB4 Development Board and some UHF transponders for testing. In case you only need a longer read range, also have a look at our DwarfG2 module.

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About Metrattec

Metrattec 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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