

EMBEDDED UHF MODULE M630



PRODUCT DESCRIPTION

The EMBEDDED UHF MODULE M630, which is part of iDTRONIC's new line of UHF readers, is a high-performance dual-port UHF RFID module based on the Impinj E310 reader chips. With its programmable power output of up to 26dBm, the module can achieve reading distances of up to 4 meters (depending on the antenna, transponders, and environment). The Impinj-based E310 reader chip enables fast reading speeds of up to 300 tags per second.

The multiregional capabilities of the EMBEDDED UHF MODULE M630 allow it to operate in both European and US regulatory environments.

iDTRONIC's hardware comes with a well-designed SDK for developing controller, Linux, or Windows-based applications. Along with the documentation, command protocols, and source codes, the SDK includes a Windows-based demo application that provides full functionality of the UHF reader module.

► APPLICATIONS

- RFID Readers
- Industry 4.0
- Warehouse Robots
- Industrial Vehicles

► FEATURES

- Based on the New Generation Impinj E310 reader chip
- Support EPC global Gen2 (ISO 18000-6C)
- 2*MMCX antenna port is good for RFID printer or RFID reader
- 5-26dBm RF power output
- Low power consumption

TECHNICAL DATA

RADIO SPECIFICATIONS

Operating Frequency	840...960 MHz, Configurations for USA: 902...928 MHz (FCC), EU: 865...868 MHz (ETSI)
RFID IC	Impinj E310
RF TX Power	+5...26 dBm, adjustable in steps of 1 dB
RF Sensitivity	-73 dBm
RF Channel Isolation	32 dB
Reading Range	≥3 m, with 2.5 dBi ceramic antenna
RF Impedance	50 Ω
Antenna	2 MMCX connectors for external antennas

ELECTRICAL SPECIFICATIONS

Power Supply	3.6...5 Vdc
Power Consumption	700 mA @ +26 dBm TX Power 50 mA Standby 50 µA Power Down Mode
Connectors	15 pin FPC socket Solder Joints
Communication Interface	UART TTL port
Baudrate	9600...921600 bit/s, 115200 bits/s factory default
GPIO	2 Inputs TTL Levels: Logic low: < 0.8 V, minimum 0V Logic high: > 2 V, maximum 3.3 V
	2 Outputs TTL Levels: Logic low: maximum 0.4 V Logic high: minimum 2.9V, maximum 3.3V
	IO: The maximum output current of the port is 5mA

MECHANICAL SPECIFICATIONS

Dimensions	55.9 × 35.6 × 6.5 mm
Weight	20 g
Material	Aluminium

ENVIRONMENTAL CONDITIONS

Operating Temperature	-25 °C ... +65 °C
Storage Temperature	-40 °C ... +85 °C
Humidity	up to 95 %, non-condensing

SUPPORTED STANDARDS / TAGS

ISO Standard	ISO 168000-63 (EPC Class 1 Generation 2)
Read Rate	≥ 300 tags/s
Tag Cache	≥ 1000 Tags @ 12 Bytes EPC size

SDK INFORMATION

Supported OS	Windows, Linux, Android
Supported Languages	C, C#/.NET, Java
Demo Software	Windows

Other functions and details to be continued and upgraded.

VERSIONS	ORDER CODES
Embedded UHF Module M630 - TTL	OEM-UHF-M633-TTL