

## EMBEDDED UHF MODULE

# M620



## PRODUCT DESCRIPTION

The iDTRONIC RFID EMBEDDED UHF Module M620 is a high-performance UHF RFID module based on the IMPINJ New Generation reader chips (E310/E510/E710). This is an ultra-high frequency RF reader and writer chip with high sensitivity and long range reading distances combined with low power consumption and excellent performance. The RFID module was developed for the integration into RFID handheld devices, mobile applications or portable PCs.

The M620 UHF module has a MMCX antenna interface that supports a power output of max. 33 dBm, which enables it to rapidly read between 350 and 1,000 tags per second (depending on the IC Chip).

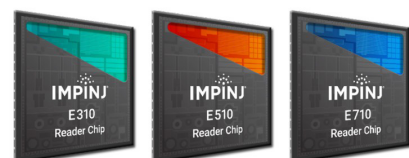
iDTRONIC's hardware comes with a useful SDK for the development of controller, Linux or Windows based applications. In addition to the documentation, command protocols and source codes, the SDK includes a Windows-based demo application providing full functionality over all supported UHF RFID standards.

### ▶ APPLICATIONS

- Printer applications
- Stationary readers
- Production machines

### ▶ FEATURES

- Based on the latest generation Impinj chipsets E310/E510/E710
- EPC C1 GEN2 | ISO 18000-63
- 33 dBm RF power output
- MMCX Antenna Interface
- UART - TTL
- Metal housing for heat dissipation



## TECHNICAL DATA

RADIO SPECIFICATIONS	
Operating Frequency	840...960 MHz, Configurations for USA: 902...928 MHz (FCC), EU: 865...868 MHz (ETSI)
RF TX Power	+5...33 dBm, adjustable in steps of 1 dB
Reading Range	Up to 9 meters*
RF Impedance	50 Ω
Antenna	1 MMCX connector for ext. antenna
ELECTRICAL SPECIFICATIONS	
Power Supply	5 Vdc
Power Consumption	1300 mA @ +33 dBm TX Power 50 mA Standby 50 µA Power Down Mode
Connectors	S12 pin SFW12R-1STE1LF connector 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 mm
Weight	25 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 18000-63 (EPC Class 1 Gen 2)
Tag Cache	≥ 1000 Tags @ 12 Bytes EPC size

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

\* READING DISTANCE DEPENDS ON TAG, ANTENNA AND ENVIRONMENTAL CONDITIONS.

## AVAILABLE VERSIONS

	E310	E510	E710
UNIQUE SPECIFICATIONS			
Description	EMBEDDED UHF MODULE M620 - TTL - 310	EMBEDDED UHF MODULE M620 - TTL - 510	EMBEDDED UHF MODULE M620 - TTL - 710
RFID IC	IMPINJ E310	IMPINJ E510	IMPINJ E710
RF Sensitivity	-73 dBm	-80 dBm	-87 dBm
Reading Rate	≥ 350 tags/s	≥ 600 tags/s	≥ 1000 tags/s
Applications	Mobile and Desktop Applications / USB-powered Devices / Short Range	Industrial Applications and Devices / Logistics and Asset Tracking	Demanding Retail and Inventory Applications / Long Range
ORDER CODES			
	OEM-UHF-M623-TTL	OEM-UHF-M625-TTL	OEM-UHF-M627-TTL