UHF RFID · 865–868 MHZ INDIA BUILD · EMBEDDED MODULE

ID-UM3210

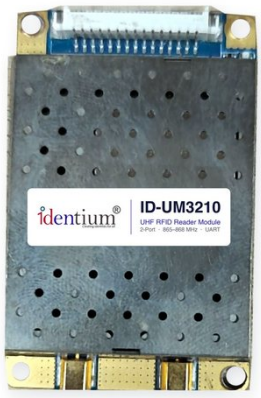
A slim two-port UHF reader module with a 3 W peak draw, driven over UART.

E310 reader IC | 2 × MMCX antenna ports | UART + 2 in / 2 out GPIO | EPC Gen2 | 3.6–5 V DC

Two antenna ports in a 5.9 mm module.

The **Identium ID-UM3210** is a 55.88 × 35.56 × 5.9 mm UHF RFID reader module with an E310 reader IC and two MMCX antenna ports. It reads EPC Gen2 tags at over 300 tags per second, and at over 3 m with a 2.5 dBi ceramic antenna, depending on the tag and its surroundings.

It draws 3 W at peak (0.6 A at 5 V), so it fits battery-powered and compact designs such as handhelds, industrial label printers, robots and smart cabinets. Your host board drives it over a 3.3 V TTL UART on a 15-pin FPC connector.



>300/s	2	26 dBm	5.9 mm	3 W
Peak read rate	MMCX antenna ports	Max. output, adjustable	Module height	Peak power, 0.6 A at 5 V

WHAT IS INSIDE

Reader, two ports and interface on one board

READ
E310 with two ports

- EPC Gen2 (ISO 18000-6C) tags, over 300 tags/s
- Two MMCX ports for two antennas or read zones
- 5–26 dBm output, adjustable (±1 dB)
- Tag RSSI and antenna detection

CONNECT
UART and GPIO

- 3.3 V TTL UART, 9600–921600 bps
- Default 115200 bps
- 2 inputs and 2 outputs at 3.3 V TTL
- 15-pin FPC connector with shutdown and reset

POWER
Low power, 3.6–5 V DC

- 3 W peak (0.6 A at 5 V) at full output
- 0.75 W standby
- Real-time module temperature detection
- Metal base plate with 4 mounting holes

WHERE IT WORKS

Where it gets built in

Handhelds	Label printers	Robots and AGVs	Smart cabinets	Desktop encoders	Kiosks
Portable RFID terminals	RFID encoding in printers	Reading on the move	Two shelves, one module	Tag encoding at the desk	Self-service counters

HOW IT WORKS

From two antennas to your host board over one UART

EPC Gen2 tags
UHF tags tuned for the same band, in front of either antenna

Two antennas
Connected to the MMCX ports, e.g. two shelves or two sides of a lane

ID-UM3210
2-PORT UHF READER MODULE
- Inventory with anti-collision
- Switch between the two ports
- Report EPC and RSSI
- Buffer up to 1,000 tags
- Switch 2 outputs, read 2 inputs

Your host
MCU, Linux board, Windows PC or Android device over 3.3 V UART

Host API for C, C#/.NET and Java
Build the module into your own software; API access and integration support with your quotation.

WHY THE ID-UM3210

Two read points from one small module

Two antenna ports
Two MMCX ports cover two shelves, two trays or both sides of a lane from one module and one UART.

3 W peak draw
0.6 A at 5 V at full output and 0.75 W in standby: easy on batteries and on small power supplies.

5.9 mm high
A 55.88 × 35.56 mm footprint that fits inside printers, handhelds and slim cabinets.

Over 300 tags/s
Anti-collision for moving or stationary tags, with a 1,000-tag buffer at 96-bit EPC.

Tag RSSI and diagnostics
RSSI per tag, antenna detection and real-time module temperature, so your software sees what is happening.

Power you can set
5–26 dBm output, adjustable: turn it down to keep reads close to an encoder or tray.

Host API in three languages
C, C#/.NET and Java APIs to build the module into your own application.

India band build
Preset for 865–868 MHz; other bands within 860–960 MHz on request for export products.

PINOUT

15-pin FPC connector

PIN	SIGNAL	PIN	SIGNAL
1, 2	GND	9	RXD (data in, TTL)
3, 4	VCC, +5 V	10	TXD (data out, TTL)
5	GPIO1 (OUT1)	11–13	Not connected
6	GPIO2 (OUT2)	14	SHUTDOWN: high = run
7	GPIO3 (IN1)	15	nRST: reset, low
8	GPIO4 (IN2)		

GPIO at 3.3 V TTL. Drive SHUTDOWN higher than VCC – 0.3 V to run the module. Impinj is a trademark of Impinj, Inc.

AT A GLANCE

- Two MMCX antenna ports on one module
- India build 865–868 MHz, 5–26 dBm

IN THE BOX

- ID-UM3210 2-port UHF reader module
- Antennas and MMCX cables quoted with your order
- Host API access and integration support with your quotation

ORDERING

ID-UM3210	2-port UHF reader module, E310 reader IC, UART. India build 865–868 MHz; tell us the destination for export builds.
ID-UM01	UHF module with a built-in 2.5 dBi ceramic antenna, up to 33 dBm, UART.

SPECIFICATIONS

Technical data

RF	
Chip	Impinj E310
Protocol	EPCglobal UHF Class 1 Gen 2 (ISO 18000-6C)
Frequency	India build 865–868 MHz; other bands within 860–960 MHz on request
Output power	5–26 dBm (±1 dB), adjustable
Rx sensitivity	–73 dBm at 10 % BER
Antenna ports	2 × MMCX
Hopping	Fixed frequency or frequency hopping

PERFORMANCE	
Read range	Over 3 m with a 2.5 dBi ceramic antenna; depends on antenna, tag and surroundings
Read rate	Over 300 tags/s
Tag buffer	1,000 tags at 96-bit EPC

INTERFACE AND SOFTWARE	
Host interface	UART, 3.3 V TTL, 9600–921600 bps; default 115200
GPIO	2 inputs, 2 outputs, 3.3 V TTL
Connector	15-pin FPC
Diagnostics	Tag RSSI, antenna detection, module temperature
Host API	C, C#/.NET, Java

POWER AND ENVIRONMENT	
Supply	3.6–5 V DC
Consumption	3 W peak (0.6 A at 5 V); 0.75 W standby
Operating temp.	–25 °C to +65 °C
Storage temp.	–40 °C to +85 °C
Humidity	5–95 % RH, non-condensing
Weight	21 g

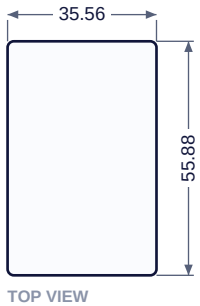
WHICH MODULE?

ID-UM3210 or ID-UM01

	ID-UM3210	ID-UM01
Antenna	Two external antennas on MMCX ports	Built in, 2.5 dBi ceramic patch
Output power	5–26 dBm	5–33 dBm (30 dBm India build)
Peak power draw	3 W	6.5 W
Size	55.88 × 35.56 × 5.9 mm	45.5 × 45.5 × 9.3 mm
Made for	Printers, robots, two-zone cabinets	Handhelds, encoders, kiosks

MECHANICAL

Dimensions



TOP VIEW



SIDE VIEW

Top and side views, mm. 4 corner mounting holes. 21 g.

Ask for a module quotation.

Tell us your quantity, the destination market and band, your host platform and the antennas you plan to use, and we will quote the module with cables, API access and integration support.

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Read range depends on the card or tag, its size and the environment. Specifications are indicative and may change without notice; confirm details for your order in the quotation.