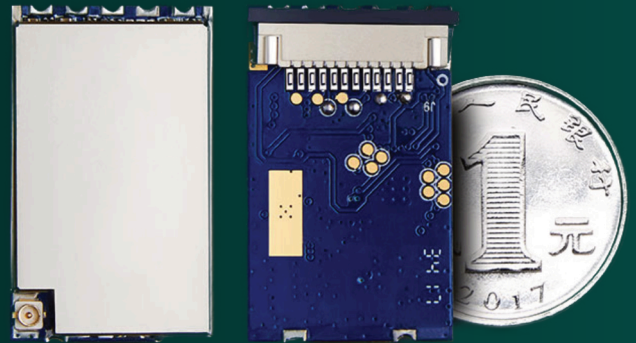# IDCR@FT
RFID & NFC EXPERTS

UHF | RAIN - Reader Module
CHAINWAY - CM-XN

- EPCglobal Gen2 (ISO18000-6C)
- Based on Impinj E710 / E510 / E310 chipsets
- Adjustable RF output power up to 30 dBm
- UART host communication (3.3V TTL)
- Very small footprint and lightweight design

UHF | RAIN - Reader Module
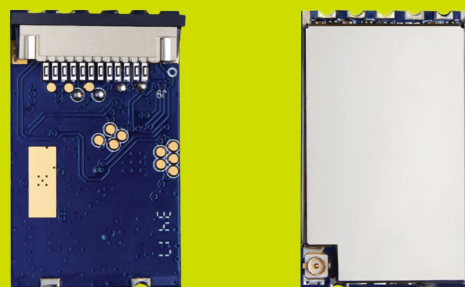## Compact UHF RFID Module

The Chainway CM-XN series is a compact UHF RFID module designed for embedded applications where size, power efficiency and reliability are critical. Based on Impinj E710, E510 or E310 chipsets and supporting Gen2X, the module delivers stable UHF performance in short-range reading and writing scenarios.

With its extremely small form factor, low power consumption and robust RF design, the CM-XN is well suited for handheld devices, card issuers and integrated all-in-one systems. Its strong resistance to electromagnetic interference and efficient heat dissipation ensure reliable operation in demanding environments such as logistics and medical applications.

Common Applications

- Embedded RFID terminals
- Warehouse and logistics solutions
- Medical asset and supply tracking
- Production line automation
- Mobile RFID readers

CHAINWAY

TECHNICAL SPECIFICATIONS

Physical Characteristics

Dimensions	31 mm x 19 mm x 3.1 mm
Weight	3 g / 0.11 oz.

RFID Features

Impinj Gen2X	Supported
Air Interface Protocol	EPCglobal Gen2 (ISO18000-6C)
Working Frequency	865-868 / 920-925 / 902-928 MHz (custom-design for frequency band)
Output Power	5-30dBm adjustable; 1dB step interval; +/- 1dB precision
Antenna Interface	I-PEX coaxial connector (U.FL-R-SMT-1)
Regions Supported	FCC 902-928 MHz; ETSI 865.6-867.6 MHz; China 920-925MHz; Others for customization (865-868, 902-928MHz)

Communication Interface

Connector	PCB stamp hole welding
Host Communication	UART 3.3V TTL level Baud Rate: 115200bps

Power Supply

Input Voltage	DC 3.5-5.25V
Power Consumption in RF Output Mode	4.3W@27dBm
Power Consumption in Standby (EN high TTL level)	0.175 W
Power Consumption in Power Down (EN low TTL level)	42.5 µW

User Environment

Operating Temp.	-13°F to 149°F / -25°C to 65°C
Storage Temp.	-40°F to 185°F / -40°C to 85°C
Humidity	10% - 95%

Reading Performance

Fastest Read Rate	> 50 tags/sec
Reading Range	CM-7N: Up to 30m (with 4dBi antenna & M750 tag) CM-5N: Up to 20m (with 4dBi antenna & M750 tag) CM-3N: Up to 10m (with 4dBi antenna & M750 tag)

Model

RFID Module	CM-7N / CM-5N / CM-3N