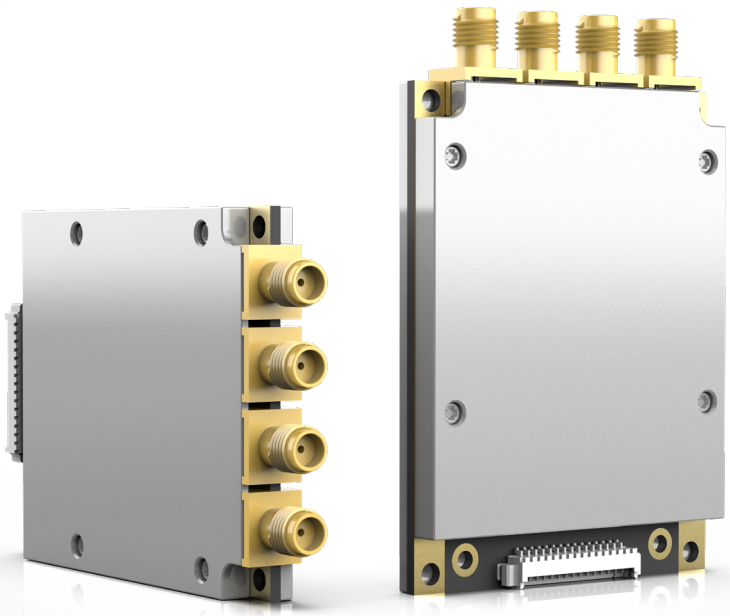
CHAINWAY

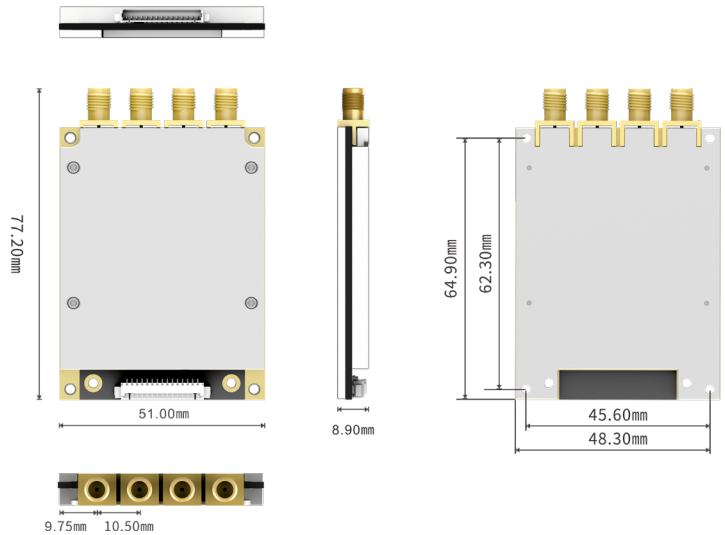


CM710-4

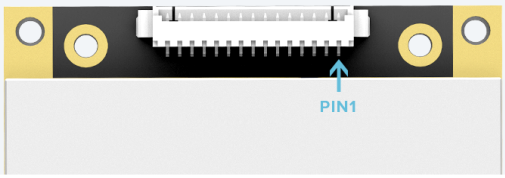
4-Port RFID Module

Chainway CM710-4 is a 4-port RFID module based on Impinj E710 chip that can be used in fixed RFID readers. With the support of Impinj Gen2X, this reliable module offers superior UHF performance while being compact, low in power consumption, and highly stable. It is also resistant to electromagnetic interference and good at heat dispersion. The module appeals to challenging industries like warehousing, logistics, apparel, production lines and such.

Dimensions



Interface Definition (15 PIN)



PIN	Interface	Description
1	GND	Negative
2	GND	
3	VIN	Positive Input voltage range： 3.5-5.25 VDC
4	VIN	
5	GPIO3	Reserved GPIO 3.3V TTL level
6	NC	
7	GPIOI	Reserved GPIO 3.3V TTL level
8	BUZZ	Driving 3.3V buzzer
9	UART_RXD	UART receive 3.3V TTL level
10	UART_TXD	UART send 3.3V TTL level
11	USB_DM	USB_DATA(-)
12	USB_DP	USB DATA(+)
13	GPIO2	Reserved GPIO 3.3V TTL level
14	EN	>1.25V power-on mode <1.18V standby mode
15	NC	

Specification

Model

4-Ports RFID Module	CM710-4
Development Board Module	CM-X_EDCB

Physical Characteristics

Dimensions	77.2 mm x 51.0 mm x 8.9 mm
Weight	52.0 g / 1.83 oz.

RFID Features

RF Chip	Impinj E710
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
Output Power Flatness	+/- 0.2dB
Antenna Interface	4-channel 50Ω RF connector SMA Receptacle
Regions Supported	FCC 902-928 MHz; ETSI 865.6-867.6 MHz; China 920-925 MHz; Others for customization (865-868, 902-928 MHz)
Receive Sensitivity	< -86 dBm
Tag RSSI	Supported
Antenna Detector	Supported
Ambient Temp Monitor	Supported
Working Mode	Single/DRM

Communication Interface

Connector	15 PIN W-TO-B Connector
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	7.5W
Power Consumption in Standby (EN high TTL level)	0.175W
Power Consumption in Power Down (EN low TTL level)	42.5μW

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	950+ tags/s
Reading Range	Up to 34m (with 6dBi antenna & M750 tag)

Notice: Product specifications are subject to change without prior notice. / Model: CM710-4 / Update Date: 2025-07-04

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FCC Warning:

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

Conditions on using Lumatas BioSystems Inc regulatory approvals:
A. Customer must ensure that its product (The " Lumatas RFID US kit") is electrically identical to Lumatas BioSystems Inc reference designs. Customer acknowledges that any modifications to Lumatas BioSystems Inc reference designs may invalidate regulatory approvals in relation to the CUSTOMER Product, or may necessitate notifications to the relevant regulatory authorities.
B. Customer is responsible for ensuring that antennas used with the product are of the same type, with same or lower gains as approved and providing antenna reports to Lumatas BioSystems Inc.
C. Customer is responsible for regression testing to accommodate changes to Lumatas BioSystems Inc reference designs, new antennas, and portable RF exposure safety testing/approvals.
D. Appropriate labels must be affixed to the CUSTOMER Product that comply with applicable regulations in all respects.
E. A user's manual or instruction manual must be included with the customer product that contains the text as required by applicable law. Without limitation of the foregoing, an example (for illustration purposes only) of possible text to include is set forth below:

2.2 List of applicable FCC rules
FCC Rules and Regulations Part 15 Subpart C Section 15.247

2.3 Specific operational use conditions
Radio Technology: RFID
Operation frequency: 902.75 MHz to 927.25 MHz
Channel No.: 50 channels
Channel Separation: 0.5MHz
Modulation: GFSK
Antenna Type: Circular Polarization Antenna, max gain 3dBi
(Antenna information is provided by applicant.)

The module can be used for mobile or fixed applications with a maximum 3dBi antenna. The host manufacturer installing this module into their product must ensure that the final composit product complies with the FCC requirements by a technical assessment or evaluation to the FCC rules, including the transmitter operation. The host manufacturer has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

2.4 Limited module procedures
Not applicable. The module is a Single module and complies with the requirement of FCC Part 15.212.

2.5 Trace antenna designs
The antenna used is the Circular Polarization Antenna on the module.

2.6 RF exposure considerations
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
The antennas used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

2.7 Antennas

Antenna Specification are as follows:
Antenna Type: Circular Polarization Antenna
Antenna Gain (Peak): 3dBi (Provided by applicant)
Manufacture: Sheen BroadRadio RFID Technology Co,LTD
Antenna Model: 30001010077
This device is intended only for host manufacturers under the following conditions:

The transmitter module may not be co-located with any other transmitter or antenna;
As long as the conditions above are met, further transmitter test will not be required. However, the host manufacturer is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

2.8 Label and compliance information

Host product manufacturers need to provide a physical or e-label stating "Contains FCC ID: 2BPYH-CM710-4-NA" With their finished product.

2.9 Information on test modes and additional testing requirements

Radio Technology: RFID
Operation frequency: 902.75 MHz to 927.25 MHz
Channel No.: 50 channels
Channel Separation: 0.5MHz
Modulation: GFSK
Antenna Type: Circular Polarization Antenna, max gain 3dBi
(Antenna information is provided by applicant.)

Host manufacturer must perfom test of radiated & conducted emission and spurious emission, etcaccording to the actual test modes for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.
Only when all the test results of test modes comply with FCC requirements, then the end product canbe sold legally.