Product Manual

IZON®
Wireless Monitoring Solutions

Contents

1. Warnings

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

- This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Note:

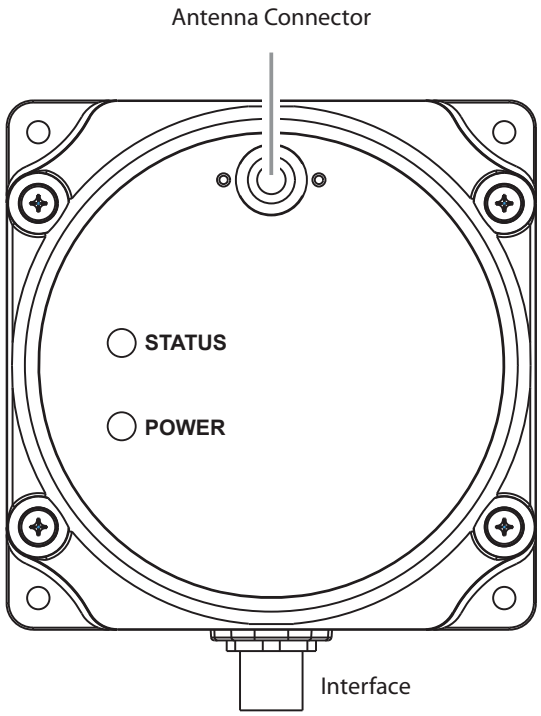
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

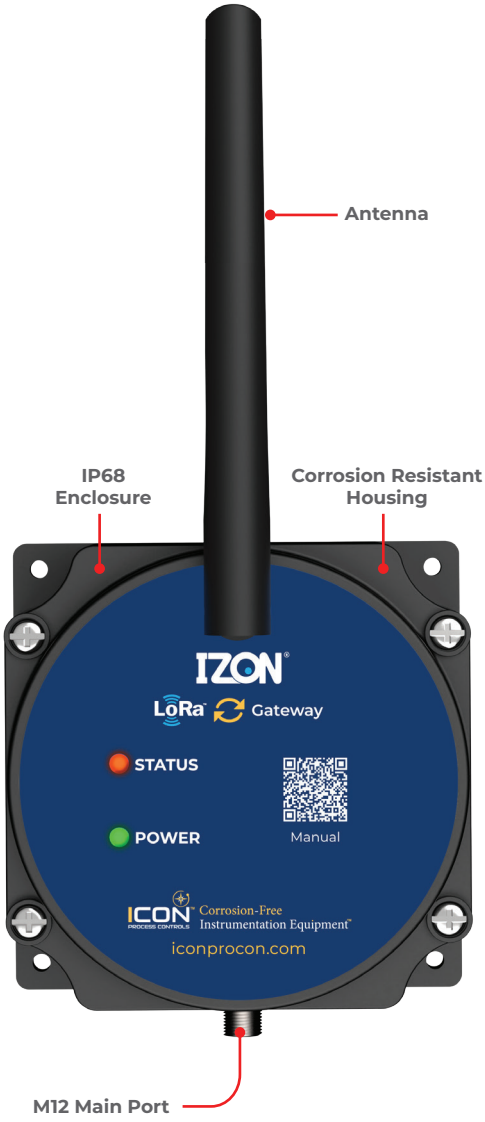
(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC ID : 2BUXBLRT-4000

2. Product Introduction





3. Description

IZON® LRT-4000 LoRa Gateway is a high-performance communication gateway designed for reliable long-range wireless data transmission. Operating within the 902-928 MHz frequency band, it ensures stable and secure connectivity across industrial and remote monitoring applications.

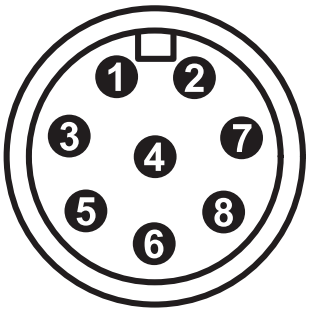
Built for seamless integration, the gateway supports efficient data collection from multiple LoRa-enabled devices and transmits information to centralized monitoring systems with minimal power consumption. Its robust design makes it ideal for demanding environments where dependable communication is critical.

The Izon® LoRa Gateway delivers extended coverage, strong signal penetration, and scalable network capability, making it a smart solution for modern IoT deployments.

4. Specifications

Product Type	Indoor / Outdoor LoRa Gateway
Air Stream Protocol	LoRa Wireless Protocol (LoRaWAN not supported)
Operating Frequency Range	902MHz~928MHz
Sensitivity	Up to -137dBm@SF=8 / 10.4K bandwidth
Transmit RF Power	Maximum 100mW
Interface	Analog 4-20mA or Digital Input x 1 | RS-485 x 1 | Digital Output x 1
RS-485 Protocol	Modbus RTU
Serial Baud Rate	1200bps / 2400bps / 4800bps / 9600bps / 19200bps / 38400bps / 57600bps / 115200bps / 230400bps / 460800bps
Transmit Encryption	AES 128 / 256 Encryption Function
Analog Input	Analog Input Support 0~10 V / 0~20 mA / 4~20 mA / ADC (0~10 V)
Digital Input	Digital Input Support High / Low Signal Judge
Digital Output Type	Open Drain
Digital Output Mode	Digital Output Support PWM / Latch Mode
Operating Temperature	-40°C ~ 85°C | -40°F ~ 185°F
Topology	Broadcast / Group / Peer to Peer
Main Unit Dimensions	10 x 10 x 4.8 cm (Does not include antenna and external connect)
Weight	184 g
Waterproof	IP68
Input Power Supply	12V – 36VDC / 1A
Output Power Supply	Main Port: Vin=Vout / 40mA (Max.)
Power Consumption	24V 2.75mA @ 920MHz (Receive) 24V 85mA @ 100mW 920MHz (Transmit)
Special Specification	Flame Retardant

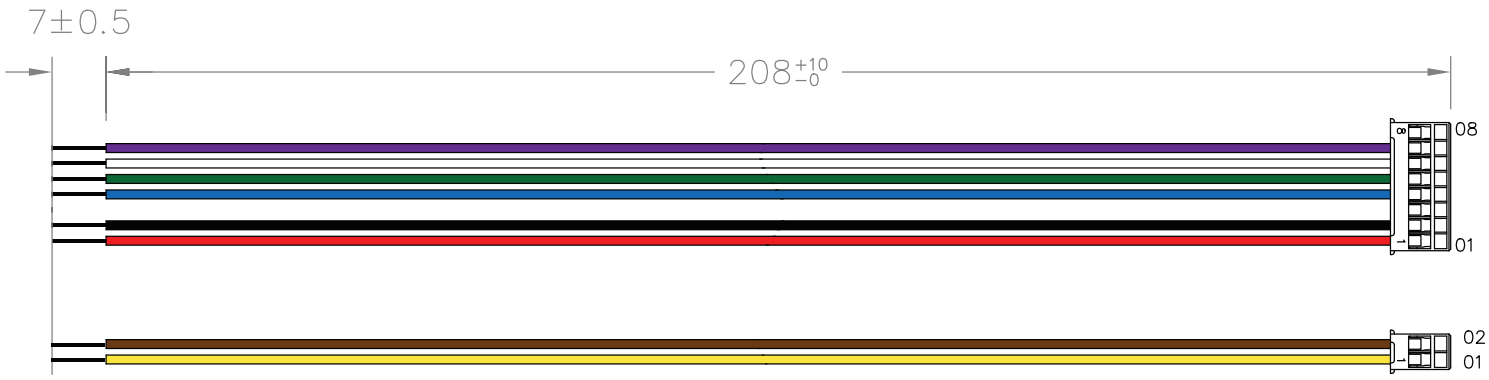
5. Main Port M12 Pin Assignment



Antenna Connector: RP-SMA-Female

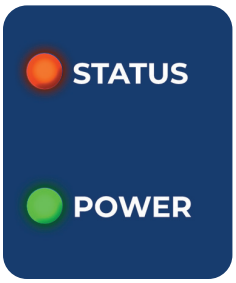
Pin	Description
1	DC in+: 12V to 36V DC / 1A
2	DC in-: GND
3	DC out+: Vin = Vout / 40mA MAX / Sensor+
4	DC out-: GND
5	RS-485 A: Non-isolator differential interface, Data-
6	RS-485 B: Non-isolator differential interface, Data+
7	A / D input: Analog Input Support 0~10 V / 0~20 mA / 4~20 mA / ADC (0~10 V) Digital Input support High / Low signal judge
8	D Output / Sensor-

6. Wiring – Flying Lead



Cord end Terminal Color		Pin Function		
Purple		Master	A / D input	Node A / D input
White			RS-485 B	RS-485 B
Green			RS-485 A	RS-485 A
Blue			DC out-	DC out-
Black			DC in-	DC in-
Red			DC in+	DC in+
Brown			Sensor- input	D output (Open Drain)
Yellow			Sensor+ input	DC out+

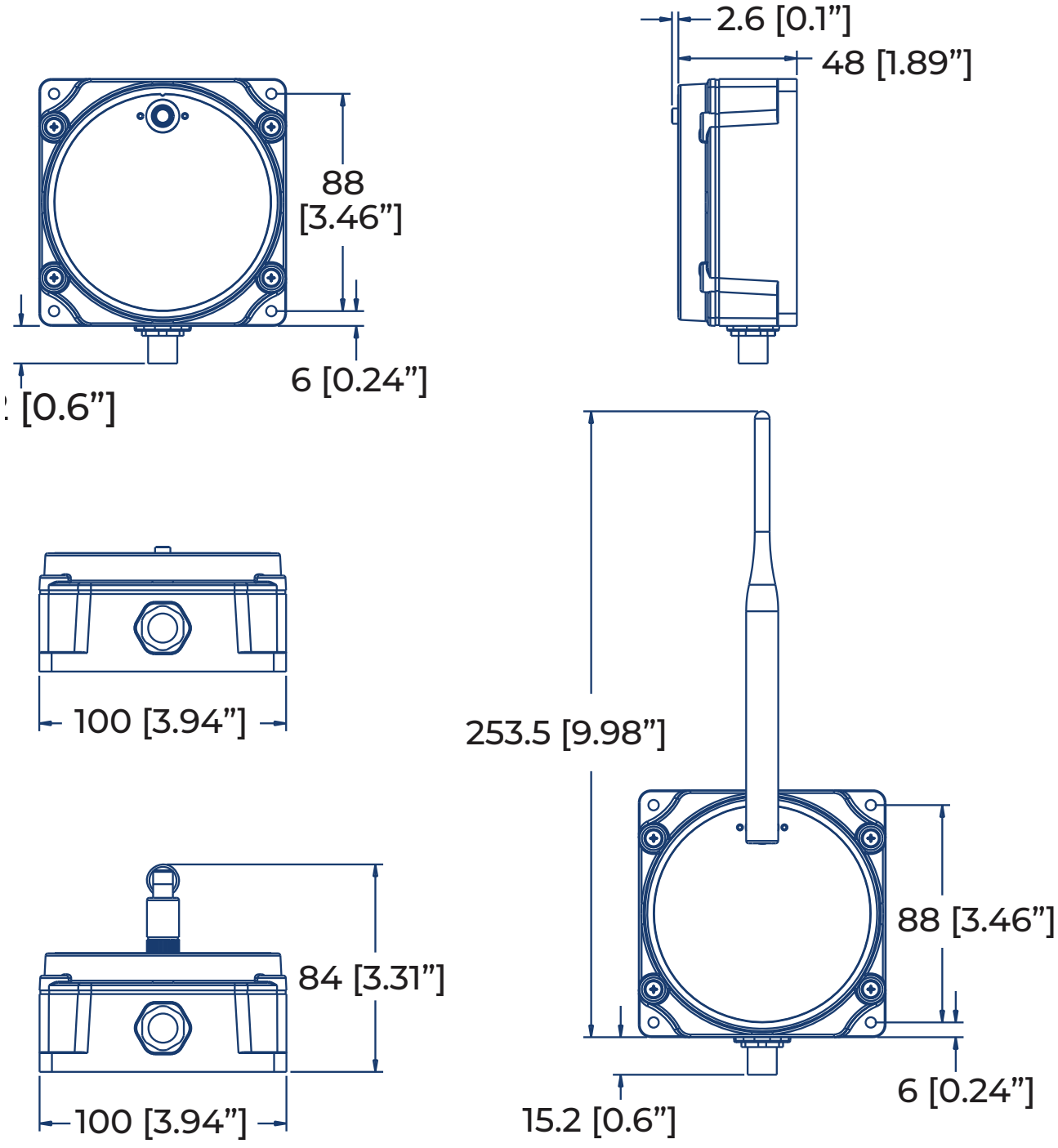
7. LED Indicator



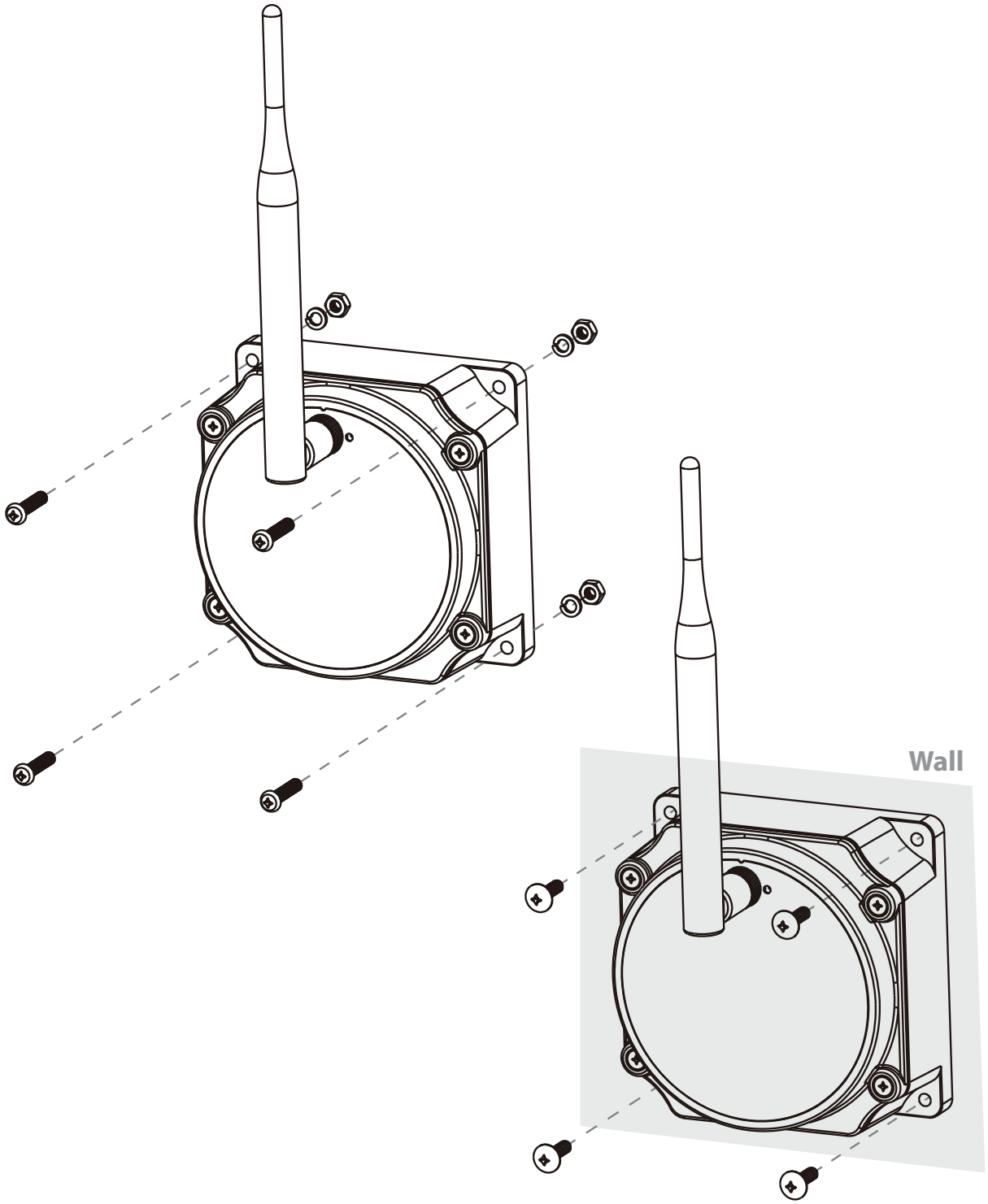
Status Indicator	
Green Light On	Wireless data is being recieved
Red Light On	Wireless data is being transmitted

Power Indicator	
Green Light On	Power is ready
Red Light On	Device is in Setup Mode
Green + Red Light On	Device is in Boot Mode

8. Dimensions (mm)



9. Installation



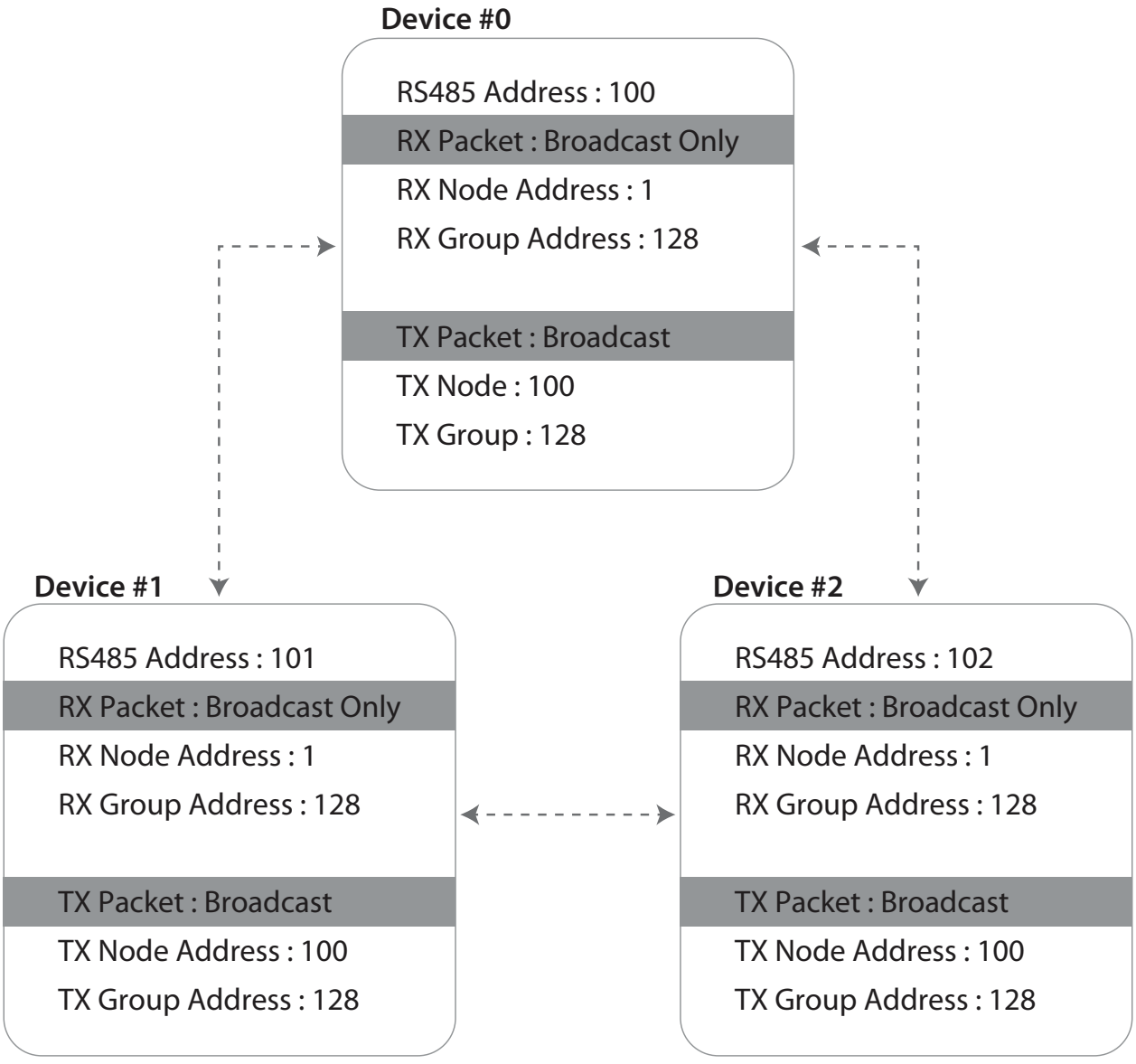
10. Communication

Broadcast Mode

This is the simplest transfer method, and we recommend using it when switching from wired to wireless.

When the RX Packet setting is set to “Broadcast Only,” the device will receive broadcast packets only. In this mode, the RX Node Address and RX Group Address are not used.

When the TX Packet setting is set to “Broadcast,” the device will transmit a broadcast packet to all devices, and the TX Node Address and TX Group Address are not used.



Master / Node Mode

If you have a master device and you don't want the node devices to communicate with each other, you can configure them as follows. When the Master RX Packet setting is "Group Only" and the RX Group Address is 130, and both Node1 and Node2 have their TX Packet setting set to "Group" with a TX Group Address of 130, it means Node1 and Node2 will transmit only to the master.

As a result, the nodes will not communicate with each other. When the Master TX Packet setting is "Broadcast," and Node1 and Node2 have their RX Packet setting set to "Broadcast Only," the nodes will receive only broadcast packets. This ensures that Node1 and Node2 receive packets from the master only.