

iQUBE³ Fiber-Optic Board Installation

The use of fiber optics allow for an optically-isolated connection between two devices. It eliminates electrical disturbance from being transferred on the communication line between devices. It also resolves potential differences due to a difference in grounding between the devices.

iQUBE³ Parts and Connections

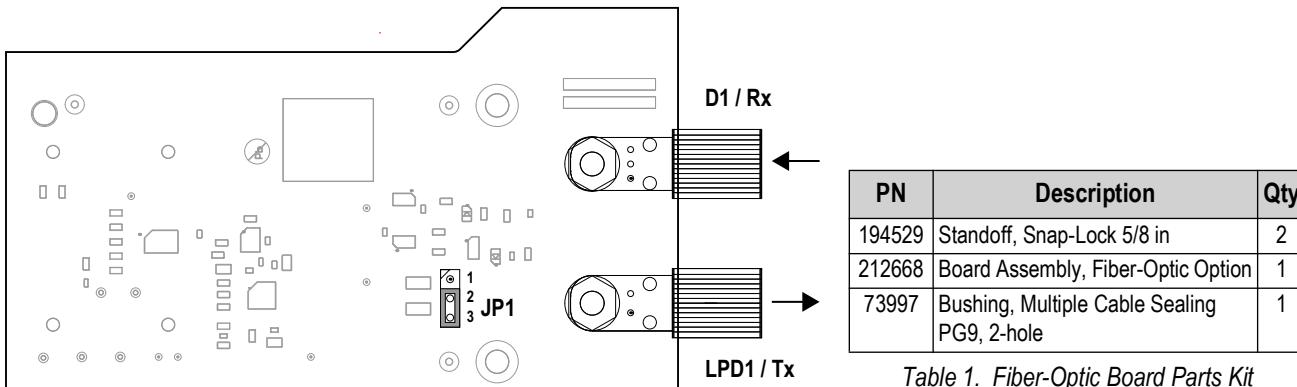


Figure 1. Fiber-Optic Board

iQUBE³ Power Modes

Connector JP1 provides high and low power modes for fibers of varying materials and lengths.

Power Mode	Pin	Fiber Material/Length
High	1 and 2	Any length glass fiber; 170-600 ft plastic fiber
Low	2 and 3	1-170 ft plastic fiber

Table 2. JP1 Power Modes

 **NOTE:** All lengths assume proper termination, cutting and polishing of fiber-optic cable. Glass fiber-optic cables were tested in high power mode up to 1000 ft. If glass fiber-optic cables are required, please contact Rice Lake Weighing Systems specials group for a sales quote.

iQUBE³ Installation

1. Install fiber-optic board into the iQUBE³ CPU board option slots and secure with standoffs.

 **NOTE:** Fiber-optic board may be installed into either option board slot.

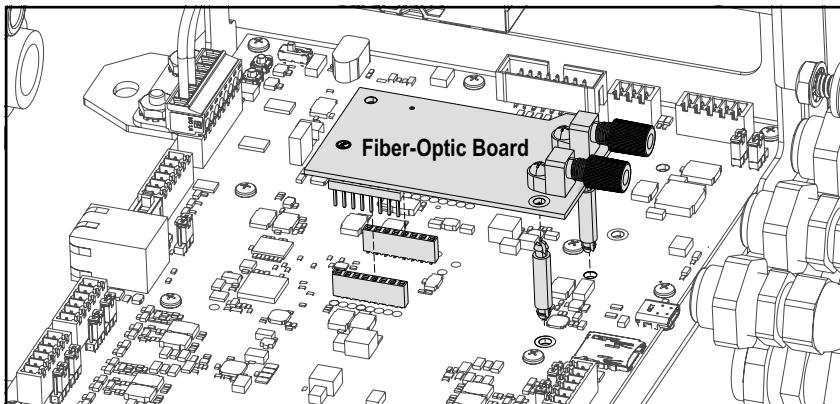


Figure 2. Install Fiber-Optic Board onto iQUBE³ CPU Board

2. Install multiple-cable bushing into a PG9 cord grip.
3. Run fiber-optic cables through gland nut and bushing.
4. Pull cables inside the enclosure to determine necessary length and tighten cord grip to seal.

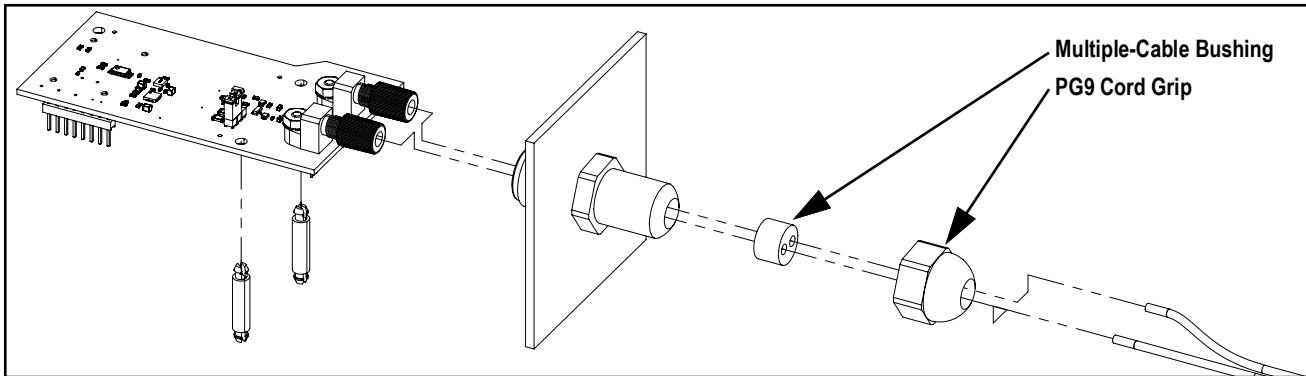


Figure 3. Fiber-Optic Cables through Cord Grip and Bushing

5. Attach fiber-optic cables to connectors D1 (detector/receive) and LPD1 (transmitter/send) (See [Figure 1 on page 1](#)).
6. Hold cable and carefully twist connector to tighten.
7. Power on the device and configure the serial port for the fiber-optic card.

 NOTE: Fiber-optic cable placement is sensitive. Take care not to damage the cable when placing into connectors D1 and LPD1. The end must be clear for the light to travel through. To obtain a transparent cut, use a hot blade when cutting the plastic fiber cable. After installation, if communication is not functional, the placement may need to be adjusted, to focus the light on the optic receiver. If communication is still not functional, test cables with an optical power meter.



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