Remote Fiber-Optic Module Installation
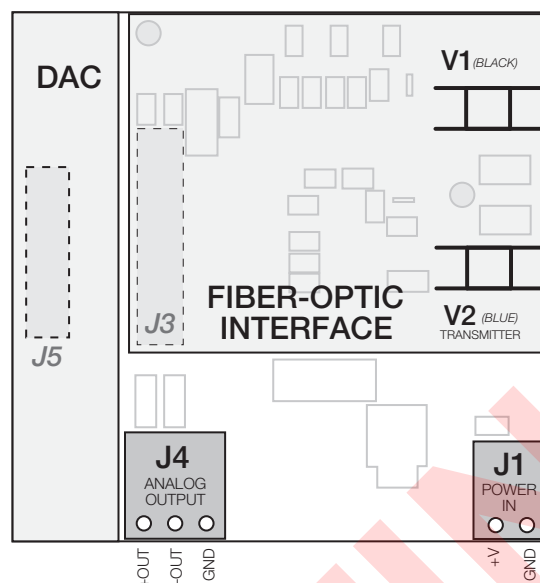

Figure 1. Remote Fiber-Optic Interface (PN 77789), Including DAC

⚠️ **WARNING** *Disconnect all power before opening the units being updated.*

⚠️ **CAUTION** *Use a wrist strap for grounding and to protect components from electrostatic discharge (ESD) when working inside the iQUBE enclosure.*

Fiber Optic Transceiver Installation

Use the following procedure to install and set up the fiber-optic transceiver in the *iQUBE* junction box:

1. Disconnect power to the *iQUBE*.
2. Remove the *iQUBE* enclosure cover.
3. Connect *iQUBE* to a PC via connector J7 on the main board. Set DIP switch 6 on the core module to **OFF**. Apply power to the *iQUBE*.
4. Use *Revolution III* (*iQUBE* module) to enable remote output by selecting the check box for *Enable Remote Analog Output Board Support (Fiber Optic Output)* in Core Configuration, General tab.
5. Set *Weight value at Zero Output*, *Weight Value for Max Output*, *Averaging Value*, and *Source System in the Analog Output section* of *Revolution III*. See Figure 4.
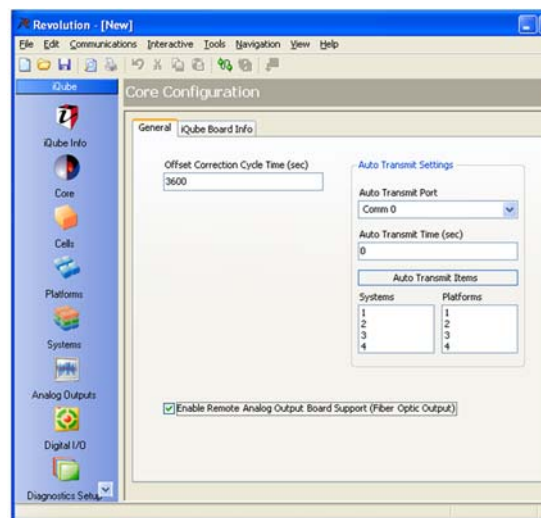

Figure 2. Revolution III Fiber Optic Setup Screen

6. Save the configuration file and download to the *iQUBE*.

7. Mount the *iQUBE* internal fiber optic transceiver (PN 77143) to connector J6 (expansion module) using standoffs provided in parts kit.

8. Install the duplex cable gland in an unused cord grip for routing the fiber optic cable into the *iQUBE* enclosure.

9. Connect fiber optic cables to the transmit/receive connectors of the fiber optic card of the *iQUBE*.

10. Ensure DIP switch 6 on the core module is OFF.

11. Restore power to the *iQUBE*. The TXD (transmit) LED on the fiber optic transceiver blinks with each update sent to the remote module. Communication to the remote module is simplex (transmit only), therefore there is no activity on the RXD (receive) LED.
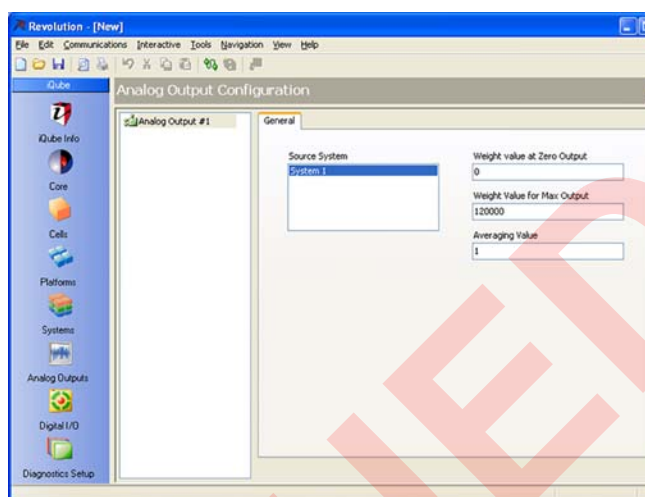

Figure 3. Revolution III Analog Output Configuration

Remote Fiber-Optic Module Setup

Use the following procedure to set up the fiber-optic module for communication with the *iQUBE* junction box:

1. Ensure AC power is disconnected from fiber-optic module

2. Remove remote module enclosure cover.

3. Mount the 4-20mA or 0-30mV DAC interface card on connector J5 of the module main board.

4. Connect the analog output (J4) of the module board to inputs on remote device (indicator). Analog output wiring must include ground wire.

5. Connect fiber optic cables from *iQUBE* to the black receive (V1 - Detect) and blue transmit (V2) connectors of the fiber optic interface card (see Figure 4). The flashing red fiber optic cable connects to V1 of the interface card.

6. Apply power to the remote module. The module RXD (receive) LED on the fiber optic interface card flashes with each update received from the *iQUBE*.

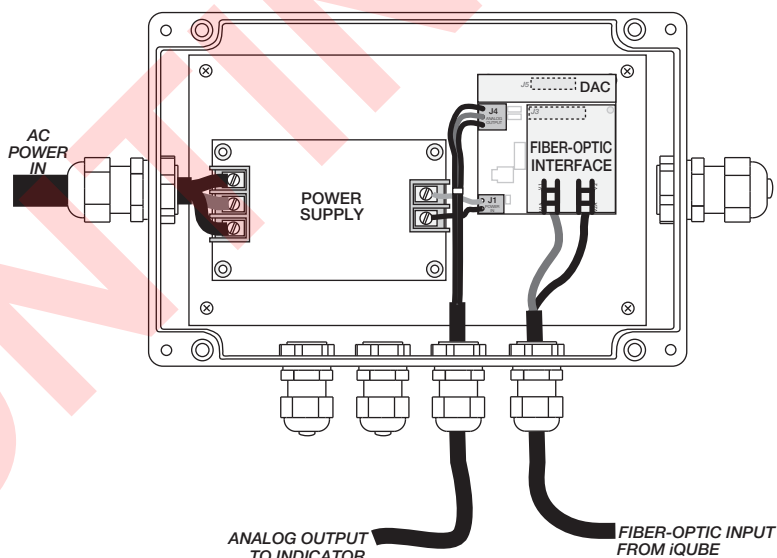7. Calibrate the remote analog device (indicator) per device manual.

Figure 4. iQUBE Remote Fiber-Optic Module

Specifications

AC Input	115 or 230 VAC
Operating Voltage	7.5 VDC
DAC Resolution:	14 bit

Fiber Optics

Physical Medium	2.2mm plastic fiber @ 640 nm
Max Transmission Length	246 ft. (75 m)