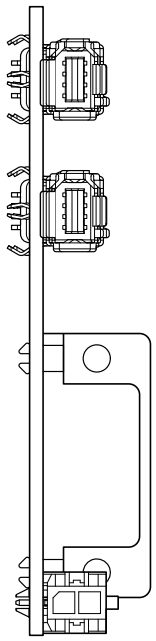
sbRIO-9860 Getting Started

2025-03-22

Contents

Overview 3
Connecting the sbRIO-9860 4
sbRIO-9860 Hardware 4
Inserting and Removing the NI-XNET Transceiver Cable. 5
Inserting and Removing the Power Cable 5

Overview



This document describes how to connect to the sbRIO-9860.

Note Before you begin, complete the software and hardware installation procedures in your chassis documentation.

Note The guidelines in this document are specific to the sbRIO-9860. The other components in the system might not meet the same safety ratings. Refer to the documentation for each component in the system to determine the safety and EMC ratings for the entire system. Refer to the ***sbRIO-9860 Safety, Environmental, and Regulatory Information*** for safety and EMC information specific to the sbRIO-9860 module.

Note The sbRIO-9860 must be installed inside a suitable shielded enclosure prior to use.

Connecting the sbRIO-9860

The sbRIO-9860 has two ports for connecting to transceiver cables (required to connect to the CAN/LIN bus) and a two-position connector for use with an external power supply.

For more information about transceiver cables, refer to the ***Vehicle Communication Buses*** page on our website.

The sbRIO-9860 requires an external power supply of +9 V to +30 V to power the transceiver cables. Supply power to the sbRIO-9860 V_{SUP} connector on the module front panel using the supplied power cable. The exposed lead wires at the end of the power cable are routed as follows: black wire—COM, red wire—V_{SUP}. The power cable lead wires may be daisy-chained to the controller power port when the controller supply voltage is in the appropriate range.

Note Power on V_{SUP} is required for transceiver cable operation.

Note When using more than four transceiver cables with your CompactRIO chassis, refer to the transceiver cables on the ***Vehicle Communication Buses*** page for mounting guidelines to limit the thermal impact to your CompactRIO system.

Related information:

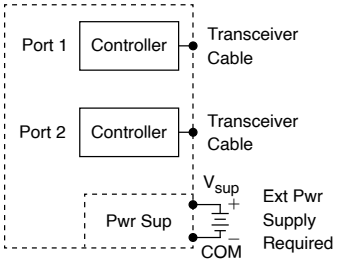
- Vehicle Communication Buses

sbRIO-9860 Hardware

The sbRIO-9860 is a two-port C Series board based on the XNET architecture. Users can choose the physical bus protocol by plugging in the corresponding transceiver cable. The sbRIO-9860 supports hot-swapping of transceiver cables and can detect and identify transceiver cable types.

For more information about transceiver cables, refer to the ***Vehicle Communication Buses*** page on our website.

Figure 1. sbRIO-9860 Hardware Diagram



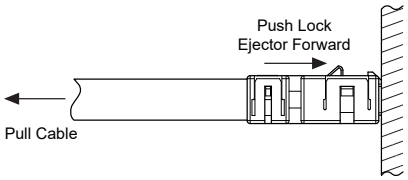
Related information:

- Vehicle Communication Buses

Inserting and Removing the NI-XNET Transceiver Cable

The NI-XNET Transceiver Cable connects to a host device with an active latching connector. To connect the NI-XNET Transceiver Cable to a host device, push the connector assembly into the host receptacle until the internal latch snaps into position. The latch emits an audible click when engaged. To remove the NI-XNET Transceiver Cable, push the lock ejector forward to disengage the latch and simultaneously pull the NI-XNET Transceiver Cable, as shown in the following figure.

Figure 2. Inserting and Removing the NI-XNET Transceiver Cable

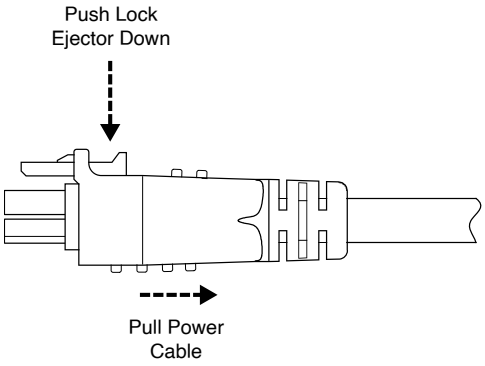


Inserting and Removing the Power Cable

The sbRIO-9860 connects to the provided power cable with an active latching connector. To connect the power cable, push the end of the power cable into the two-position connector until the internal latch snaps into position. The latch emits an audible click when engaged.

To remove the power cable, push the lock ejector down to disengage the latch and simultaneously pull the power cable away from the module, as shown in the following figure.

Figure 3. Removing the Power Cable



© 2025 National Instruments Corporation.