The MIL-C2113 comes equipped with SC-type connectors and supports Fast Ethernet in both half and full-duplex mode. For network budget constraint, the MIL-C2113 uses 150 nanoseconds (approximately 30 meters of cable) during conversion in each direction.

To maximize the fiber cable distance, use one meter of CAT 5 UTP cable when connecting directly to a node (subject to fiber budget of 16dBm and collision domain restrictions). In full-duplex environments, use up to 100m of CAT 5 UTP and:

- 2Km of multi-mode optical fiber for MIL-C2113;
- 15Km of single-mode optical fiber for MIL-C2113-15;
- 40Km of single-mode optical fiber for MIL-C2113-40;
- 70Km of single-mode optical fiber for MIL-C2113-70;
- 100Km of single-mode optical fiber for MIL-C2113-100.
Installation
1. Attach a UTP cable from the network to the RJ-45 port. (Use screened UTP cabling for CISPR 22 class B installation.)
2. Cross-connect the fiber cables: Attach both fiber cables TX to RX and RX to TX from the fiber network cabling to the ST-type connectors on the MIL-C2113.
3. Apply power to the unit:
   A. Insert the power adapter's receptacle into the power plug.
   B. Insert the power adapter into a wall outlet.

Diagnostic LEDs and Conditions Indicated
There are five LEDs, including power and:
- TX/ACTIVE: Receiving packets from the 100BASE-TX port.
- FX/ACTIVE: Receiving packets from the 100BASE-FX port.
- TX/LINK: An active connection on the 100BASE-TX port.
- FX/LINK: An active connection on the 100BASE-FX port.

MDI-X/MDI Switch
The MDI-X/MDI switch allows for quick configuration of the 100BASE-TX port. Cables used when the switch is in the MDI-X position (the “left” position):
- For a hub/repeater use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2).
- For a workstation/PC, use a straight-through cable (pins are connected 1 to 1, 2 to 2, 3 to 3, and 6 to 6).
Cables used when the switch is in the MDI position (the “right” position):
- For a hub/repeater use a straight-through cable (pins are connected 1 to 1, 2 to 2, 3 to 3, and 6 to 6).
- For a workstation/PC, use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2).

Note: The MIL-C211X media converters operate at full duplex. Therefore, when connecting the Copper UTP port, be sure to force the link partner to 100 Full duplex. Failure to force link partner may result in a duplex mismatch when connecting to an auto negotiating device.

Link Sentry Configuration
The Link Sentry feature on the MIL-C2113 is configured through a 4-position DIP switch (refer to Table 1).
Link Sentry is a troubleshooting feature that allows MiLAN media converters to monitor link states on both fiber and copper ports in the event of a physical link down. If a link down is detected, the converter will automatically notify the end device of the link down by disabling the TX signal of the neighboring port. (see Figure 2.)

![Link Sentry Configuration Diagram](image-url)

The following table displays the Link Sentry dip switch settings needed when the MIL-C211X is installed in a single media converter environment (not back to back).

<table>
<thead>
<tr>
<th>Switch</th>
<th>UP</th>
<th>Down</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fiber TX to RX Link Sentry Disabled</td>
<td>Fiber TX to RX Link Sentry Enabled</td>
<td>Fiber TX link down causes Fiber RX to link down</td>
</tr>
<tr>
<td>2</td>
<td>NA</td>
<td>NA</td>
<td>Reserved, must remain in up position</td>
</tr>
<tr>
<td>3</td>
<td>Copper to Fiber Link Sentry Disabled</td>
<td>Copper to Fiber Link Sentry Enabled</td>
<td>Copper link down causes Fiber link down</td>
</tr>
<tr>
<td>4</td>
<td>Fiber to Copper Link Sentry Disabled</td>
<td>Fiber to Copper Link Sentry Enabled</td>
<td>Fiber link down causes Copper link down</td>
</tr>
</tbody>
</table>