SDI010-MOD OEM Integration Manual

Version 1.0

SCOPE

The scope of this document is to explain the fine points of integrating the SCM SDI010 Rev 0.2 dual interface reader modules into other devices.

Figure 1: Top View of SDI010-MOD

Figure 2: Bottom View of SDI010-MOD
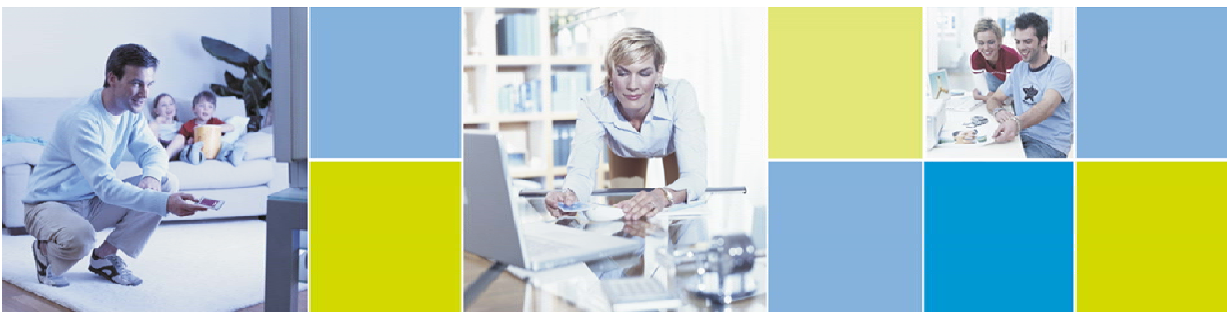
MOUNTING

It is recommended that the module is mounted so that the antenna that runs along the periphery of the PCBA is parallel to the card placement position inside the device. The board has two mounting holes located diagonally across. It is recommended to use nylon (non-metallic) screws in these mounting holes. It is also recommended that there is no metal in proximity of the antenna to ensure that signal strength is not degraded.

CABLES & CONNECTORS

The board has two external connectors: one host USB header (J1) and a control header (J2) to enable/disable the contact and/or contact less operation. The headers J1 and J2 are located on the top of the board. The bottom of the board has the ISO7816 contact connector below which the card guide mechanism has to be placed. It is recommended that none of the cables pass over the antenna region.

LABELING

If the module is integrated in such a way that the label is not visible outside, then the integrator has to display a exterior label referring to the enclosed module. The exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: MBPSDI010MOD02" or "Contains FCC ID: MBPSDI010MOD02". Any similar wording that expresses the same meaning may be used.

PRODUCT DOCUMENTATION

The end product documentation should include the FCC ID of the device and also include the wording "The 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 (2) This device must accept any interference received including interference that may cause undesired operation.

TROUBLE SHOOTING

1. Unit does not power up
   Check to ensure that the host USB cable is plugged in at proper orientation.

2. Host displays message that device is asking for more power
   The device draws power from the host through the USB connector. The maximum power draw is 150mA at 5V. So the device has to be plugged into a root port or into a port on a self-powered hub. This message occurs when device is plugged into a bus-powered hub.

3. Device appears with yellow bang (!) on device manager
   This could happen when drivers are not found for this device or when drivers fail to load. The drivers for this device are available on Windows Update or can be downloaded from http://www.scmmicro.com. If the failure is due to driver load failure, then the reason for driver load failure can be inferred from the device manager message at the General tab.

4. Contact less cards are not detected
   This could happen when module is placed in proximity to something made out of metal. Ensure that there is not metal in proximity between the antenna and the card.

5. Contact card is not detected
   Check the connections on the two pin header. The terminals should be continuous when a card is inserted.

6. Contact card cannot be read
   Ensure that the cables between (both five and four pin) headers and the smart card connector are of same length and type.

DISCLAIMER

The module has been tested and determined to be compliant with the FCC rules for intentional radiators.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.