MMR6500 RFID Reader Module
Integration Manual

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Version 0.0
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Table of Contents

1. Introduction

The MMR6500 RFID Reader Module is an FCC Part 15.247 compliant embedded device that enables host devices to read from and write to EPC Global C1G2 passive tags, and ISO 18000-6 revision 1, Type C, Manchester mode, Class 3 battery assisted passive tags. The Module operates in the UHF 902-928 MHz ISM band.

The MMR6500 reader is designed in a PCMCIA/PC card mechanical format for integration into handheld and mobile RFID readers. The reader uses standard PC card connectors, but the electrical interface is a non-standard, proprietary serial interface that cannot be used in standard PC card slots in laptops or general computing devices.

1.1. Reference Documents

EPC Global Class 1 Gen 2 Protocol v1.2.0
ISO/IEC 18000 Radio Frequency Identification for Item Management Part 6: Parameters for air interface communications at 860 to 960 MHz

2. Labeling Requirements

2.1. Host Device Labeling

If the module is placed inside a host product and the label on the module is not visible, a label with the following information shall be placed on the exterior surface of the host product
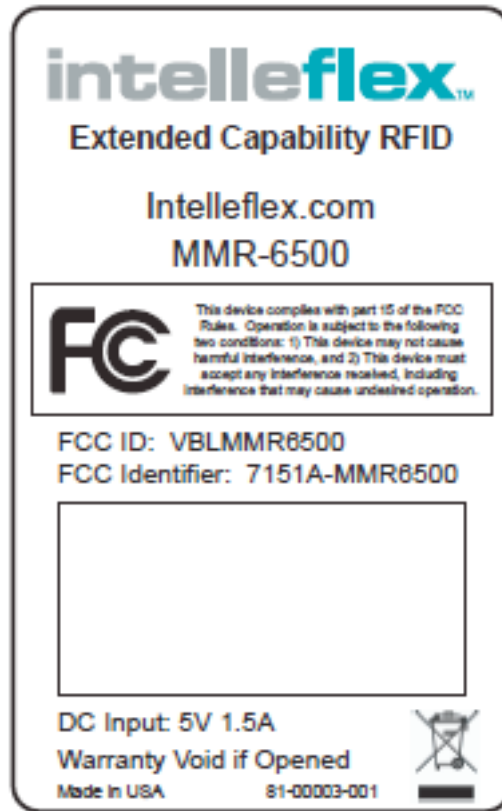
Contains FCC ID: VBLMMR6500
       IC: 7151A-MMR6500
       Model No. MMR6500

2.2. Module Labeling

The MMR6500 module has one label which contains Intelleflex company name, model and serial number, and the FCC/IC ID.

intelleflex™

Extended Capability RFID

Intelleflex.com

MMR-6500

This 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, and 2) This device must accept any interference received, including interference that may cause undesired operation.

FCC ID: VBLMMR6500
FCC Identifier: 7151A-MMR6500

DC Input: 5V 1.5A
Warranty Void if Opened
Made in USA   81-00003-001

3. Antenna Requirements

The host device shall connect one or two antennas to the MMR6500 MMCX antenna connectors. The antennas shall be one of the approved antenna types in the MMR6500 RF certification.

4. FCC and Government Guidelines

Intelleflex MMR6500 Reader Module
FCC ID: VBLMMR6500
IC ID:

The MMR6500 module is REQUIRED to be professionally installed by a properly trained technician. Improper installation could void the user's authority to operate the equipment. The device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation.

NOTE: For FCC compliance, the following text MUST be included in module host devices' manuals and user's guides.

The antenna of this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The device should be installed so that people will not come within 22 cm (9 in.) of the antenna.

This equipment has been tested and found to comply with Part 15 of the FCC Rules. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver disconnected.
• Consult the dealer or an experienced Radio/TV technician for help.

4.1. FCC Guidelines for Devices Containing a Transmitter Module

The following is an extract from **Section 15.212(a)1(vi)A of the FCC Rules:**

 (A) If using a permanently affixed label, the modular transmitter must be labeled with its own FCC identification number, and, if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

4.2. Safety Information

Observe the following safety guidelines.

1. Use only in module slots designed to support RFID readers.
2. Ensure proper heat sinking from the module.
3. Provide appropriate power, ground, and power controls to the module.
4. Not for use in potentially explosive or heat sensitive environments.