

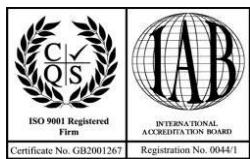
User Manual



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History

Version	Date	Modifications	Approved By	Date	Sign
1.0	23 rd July 2010	First version	DAC	23 rd July 2010	
1.1	5 th August 2010	FCC ID changed. Additional FCC text added.	DAC	5 th August 2010	
1.2	17 th August 2010	Add IC ID. Add details of approved antenna.	DAC	18 th August 2010	
1.3	14 th January 2010	Add details of additional approved antennas.	DAC	14 th January 2010	
1.4	27 th January 2011	Add RF Exposure and Installation instructions in French	DAC	27 th January 2011	

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1. Connections

1.1. Connection locations



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1.2. Data and power connector details

The data and power connector is an 8 way Molex 52745 series (0.5mm pitch, top contact) FFC-FPC connector. A Molex 98266-007x / 21020-07x cable should be used with this connector.

Pin	Function
1	5V ±5% DC supply. Average operating current 800mA, peak operating current 1.5A. Connect to both pins
2	5V ±5% DC supply. Average operating current 800mA, peak operating current 1.5A. Connect to both pins
3	GPIO2
4	GPIO3
5	Serial data from reader to host. 3V3 logic levels.
6	Serial data from host to reader. 3V3 logic levels.
7	Data and power common. Connect to both pins.
8	Data and power common. Connect to both pins.

1.3. Antenna and connector details

The antenna connector is a Hirose U.FL receptacle. The antenna characteristics have a significant effect on overall reader performance. A 50Ω antenna with return loss better than 10dB over the operating frequency range should be used.

The following antennas, available from Technology Solutions (UK) Ltd are the only ones approved for use with the 1116-01-UHF:

Part Number	Description
1095FCC	Circularly polarised patch antenna
AQUA920S_7908-TSL1101	Circularly polarised 79x79mm antenna
AQUA920S_4010-TSL	Circularly polarised 40x40mm antenna

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2. Installation

The reader should be secured using three M2 pan head screws of a suitable length. The mounting holes are connected to pins 7 and 8 (common).

If the reader is to be operated continuously at high ambient temperatures it is recommended that the mounting surface for the reader provides additional heatsinking.

3. Regulatory information

3.1. Labelling requirements

If the module label is not visible when the module is installed in the final product then the final product label must contain the text:

“Contains FCC ID: S6J-1116 IC ID: 8948A-1116”

3.2. Information to the user - FCC

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 that may cause undesired operation.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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3.3. Information to the user - IC

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Operation is subject to the following two conditions:

- 1) This device may not cause interference, and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.

3.4. RF exposure and installation

This RFID reader module is a spread spectrum transmitter operating under 47 CFR §15.247. The module has been assessed to the Uncontrolled Exposure limits of 47 CFR 1.1310 with a separation between the antenna and user's body of 5cm.

In any product using the 1116 module the antenna should be located so that the direction of maximum radiation is away from the user. Only antennas listed in Section 1.3 shall be used. It is recommended that the user manual for the final product incorporating the RFID reader module indicates where the antenna is located.

Ce module lecteur RFID est approuvés pour utilisation par le grand public (environnement non contrôlé) comme un Dispositif soutenu par le corps. Le module a été évaluée dans les limites d'exposition non contrôlée de CNR-102 avec une séparation entre l'antenne et le corps de l'utilisateur de 5cm.

En tout produit utilisant le module 1116 de l'antenne doit être situé de telle sorte que la direction du rayonnement maximum est loin de l'utilisateur. Antennes Seuls ceux énumérés dans la section 1.3 doit être utilisé. Il est recommandé que le manuel d'utilisation du produit final intégrant le module de lecture RFID indique où se trouve l'antenne.

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TSL designs and manufactures both standard and custom embedded, snap on and standalone peripherals for handheld computer terminals. Embedded technologies include:

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- GPRS/GSM
- IrDA
- Contact Smartcard
- Fingerprint Biometrics
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Utilizing class leading Industrial design, TSL develops products from concept through to high volume manufacture for Blue Chip companies around the world. Using the above technologies TSL develops innovative products in a timely and cost effective manner for a broad range of handheld devices.

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