



CASTLES TECHNOLOGY

S1U2 POS Terminal

Book 2

User Manual

S1U2

Version 1.1

Nov. 2022

CRT-S1-14-02-V1.1-CE-FCC-IC-UL-CB

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Revision History

<i>Version</i>	<i>Date</i>	<i>Descriptions</i>	<i>Author</i>
1.0	Oct.07, 2022	Initial creation.	Dustin
1.1	Nov.14, 2022	1. Modify Terminal to S1U2. 2. Modify value of Voltage and Current. 3. Add Warning on page 14.	Dustin

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1. Introduction

This document provides a guideline for operating and configuring Castles S1U2 terminal.

The scope of this document includes setting up the terminal, basic operation, application lifecycle, and some advanced features.

Regulatory instruction of usage

- Before using the terminal, please check has it been disassembled, modified, or showed abnormal situation. If yes, please do not use.
- Please stay away from strong electromagnetic waves.
(Example) Microwave ovens, magnets, shoplifting prevention devices, high-voltage wires, automatic doors, communication antennas, etc.
- Condensation can occur when moving from a cold place to a warm place. If condensation occurs, do not use the unit until the connected water droplets evaporate.
- Static electricity may occur in some places (such as where you use a carpet).
- Please do not leave it in the sun for a long time.
- Please operate the unit carefully as it is a precision instrument. Do not apply impact, drop or heavy objects on top of the unit.
- Do not attach dust, oil, etc. to a part of the power terminal. Also, please do not scratch.

2. Hardware Setup

2.1. Parts of the Terminal

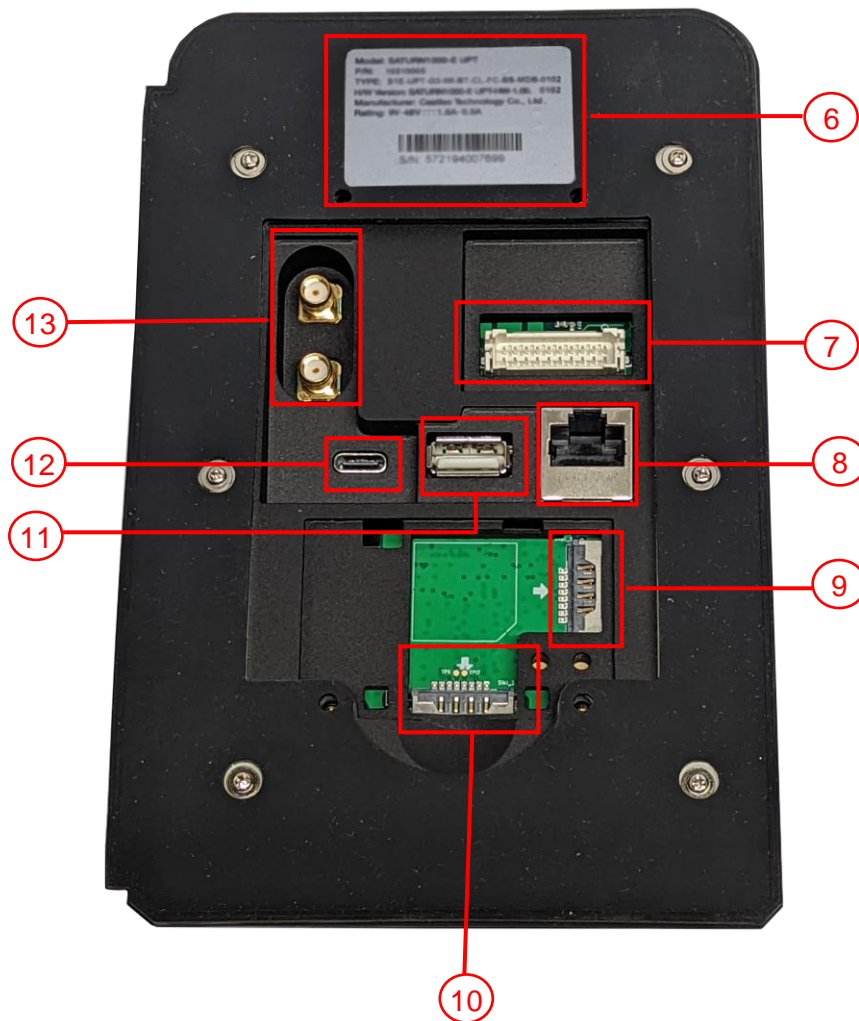
Front



S1U2

1. Contactless Card Landing Zone
2. LCD Display
3. Smart Card Reader
4. Magnetic Stripe Reader
5. Front Camera

Rear



S1U2

- 6. Product Label
- 7. MDB Port
- 8. Ethernet Port
- 9. GSM Micro SIM Card Slots
- 10. SAM Card Slots
- 11. USB Type A Slot (5Vdc, 0.5A max.)
- 12. USB Type C Slot (5Vdc, 0.5A max.)
- Note: USB Type A Slot + USB Type C Slot: 0.5A max.**
- 13. Antenna Slot

Bottom

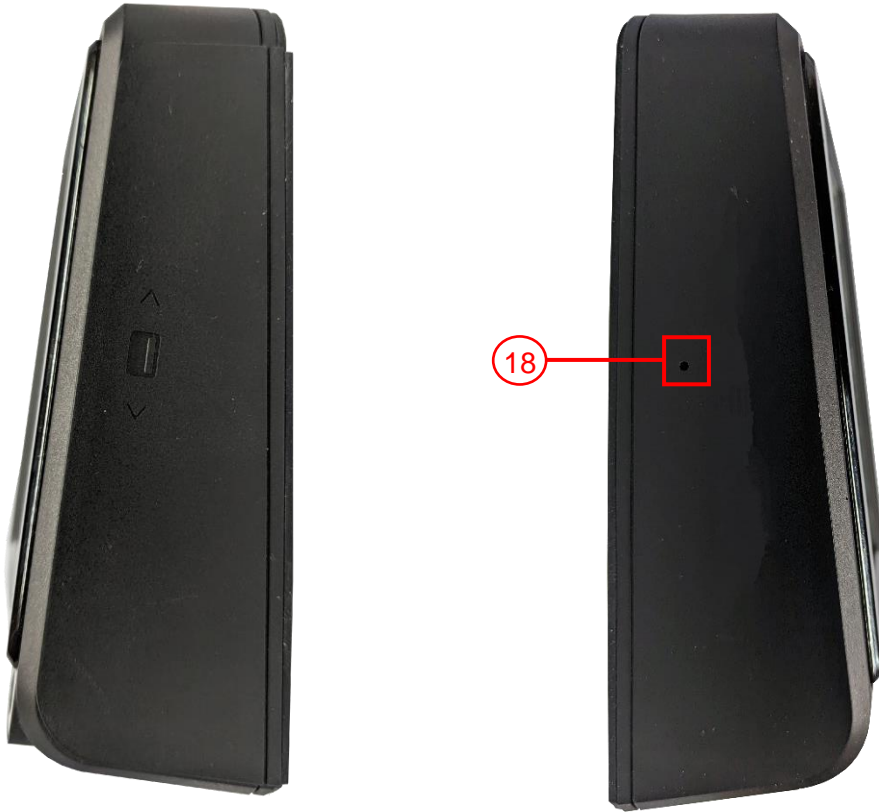


S1U2

- 14. Aiming LED
- 15. Barcode scanner
- 16. Illumination
- 17. Speak

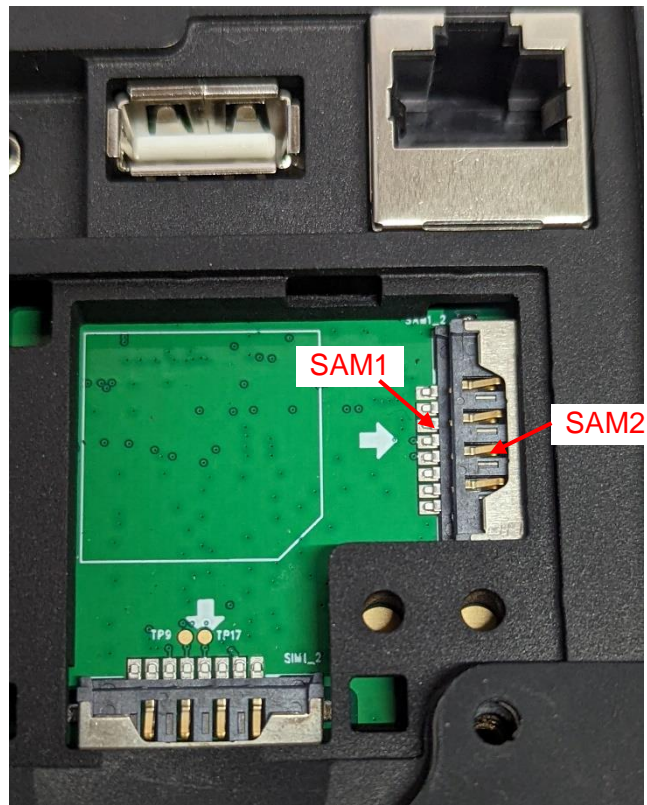
Left side

Right side



18. microphone

2.2. Insert SAM Card

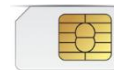


S1U2

Insert SAM card into desire slot.

SAM 1:

Cut corner is on the upper left side.

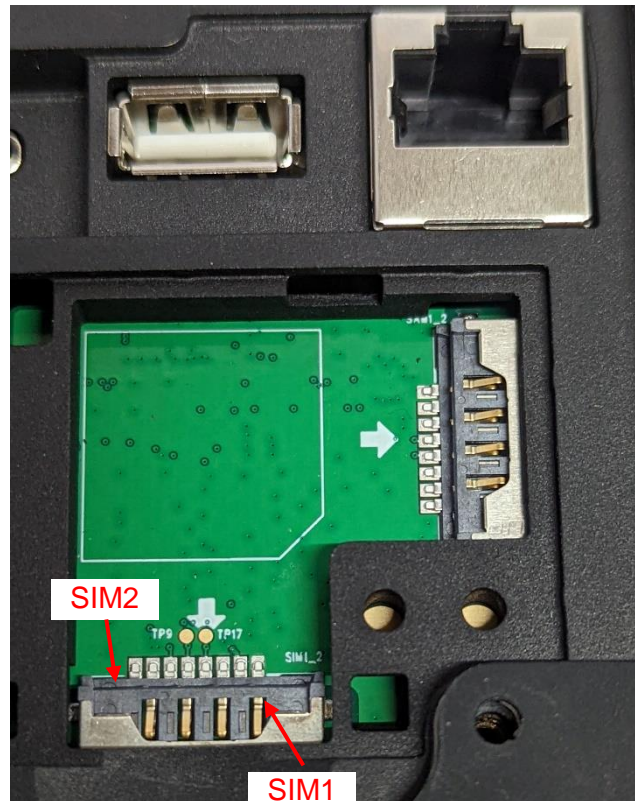


SAM 2:

Cut corner is on the bottom left side.



2.3. Insert GSM Micro SIM Card



S1U2

Insert GSM Micro SIM card into desire slot.

SIM 1:

Cut corner is on the upper left side.



SIM 2:

Cut corner is on the upper right side.



3. Appendix

3.1. CE

Operations in the 5.15-5.35GHz band are restricted to indoor usage only

3.2. FCC

Federal Communication Commission Interference Statement

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.

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 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 is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

Operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

3.3. IC

Industry Canada statement

This device complies with ISED's licence-exempt RSSs. 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. Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20 cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

Caution :

- (i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (ii) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Avertissement:

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

- (i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- (ii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués.

3.4. UL / IEC 62368-1

- **Warning:**

Power cord shall be connected to a socket-outlet with earthing connection.

- **Warning:**

Risk of explosion if battery is replaced by an incorrect type. Dispose of expended battery in accordance with local disposal regulations.

- **Warning:**

This product is intended to be supplied by a Listed Power Adapter or DC power source marked "L.P.S." (or "Limited Power Source"), rated 9-48 Vdc, 1.5-0.5 A minimum, Tma = 40 degree C minimum.

- **Attention:**

le cordon d'alimentation doit être branché sur une prise secteur avec mise à la terre.

- **Attention:**

Risque d'explosion si la batterie est remplacée par une de type incorrect Éliminer la pile usagée conformément à la réglementation locale en vigueur.

- **Attention:**

Le produit est destiné à être alimenté par un adaptateur secteur ou source d'alimentation CC répertorié « L.P.S. » (ou "Source d'alimentation limitée") et est évalué à 9-48 Vdc, 1.5-0.5 A min., Tma = min. 40 degrés C.

- **Warning:**

The equipment is only suitable for mounting wall at height ≤ 2 m.

- **Attention:**

L'équipement ne convient que pour un montage mural à une hauteur ≤ 2 m.

3.5. Detachable Antenna Usage

This radio transmitter [IC: 27350-S1U2001] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio [IC: 27350-S1U2001] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Manufacturer	Model	Antenna Type	Max Gain (dBi)	Impedance (Ω)
ADVANCED WIRELESS & ANTENNA INC	WWAN	Dipole Antenna for LTE application	2.66 dBi	50 ohm
ADVANCED WIRELESS & ANTENNA INC	WLAN	PIFA Antenna for WIFI application	4.427 dBi	50 ohm
SPORTON INTERNATIONAL INC	NFC	Loop antenna	N/A	50 ohm

Note:

The POS Terminal will install in vending machine or gas station machine in the future and the antenna will install on top of machine.