



XTER-OS

USER MANUAL

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About this document

Purpose

This document explains the process for installation and configuration of Parafait XTER-OS

Revision History

2025 March. This is the first issue of the document.

Feedback

To send us your feedback on the document, email your comments to info@semnox.com

Introduction

Welcome to the user manual for the XTER Linux RFID Reader. This guide provides essential information on installation, operation, and troubleshooting to help you maximize the performance of your device. Whether you are setting up the reader for the first time or need a reference for advanced features, this manual will assist you in ensuring a smooth and efficient experience.

Operational description

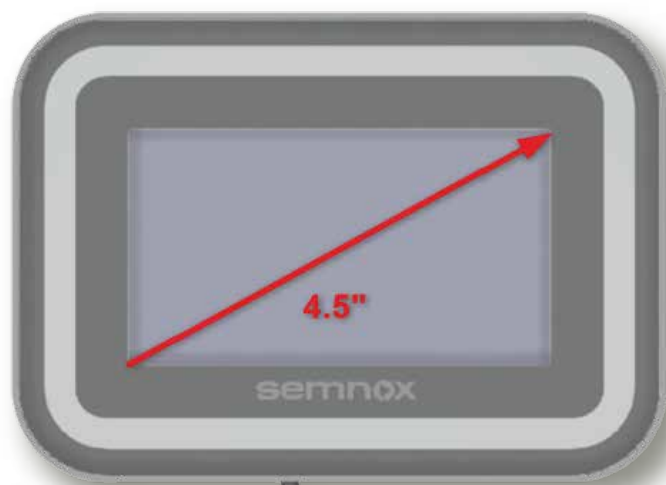
XTER Linux reader is a device that allows the user to access/play in amusement park activities and rides. It features a full-screen tap area and illuminating visuals that provide the user with a good appearance and feedback. It supports POE/Direct AC power to provide hassle-free 'tap-to-play' convenience and wired/wireless networks for better convenience.

The LuminOS features dual-band Wi-Fi supporting 2.4 GHz and 5 GHz, ensuring seamless connectivity. It offers over-the-air firmware updates and media transmission, a 4.5-inch touchscreen for easy interaction, and an advanced graphics engine for a rich multimedia experience. Additionally, it includes functionalities like Multi-Gameplay and Repeat Play for enhanced user engagement.

Product specs

Key Features

- **Intuitive 4.5-inch TFT LCD Touchscreen** – Provides an interactive and engaging user experience.
- **LED Bezel with Software-Controlled Patterns** – Offers dynamic visual feedback.
- **Tap-Anywhere Functionality** – Eliminates the need for precise tag placement.
- **Seamless Connectivity** – Supports dual-band 2.4 GHz and 5 GHz Wi-Fi (select models) and Bluetooth Low Energy (BLE).
- **OTA Firmware Updates & Media Transmission** – Ensures easy software upgrades and content delivery.
- **Customizable Display** – Supports multilingual interfaces and dynamic content for user engagement.
- **Advanced Graphics Engine** – Enhances the multimedia experience with smooth animations.
- **Multi-Gameplay & Repeat Play Features** – Optimized for amusement park interactions.



Materials

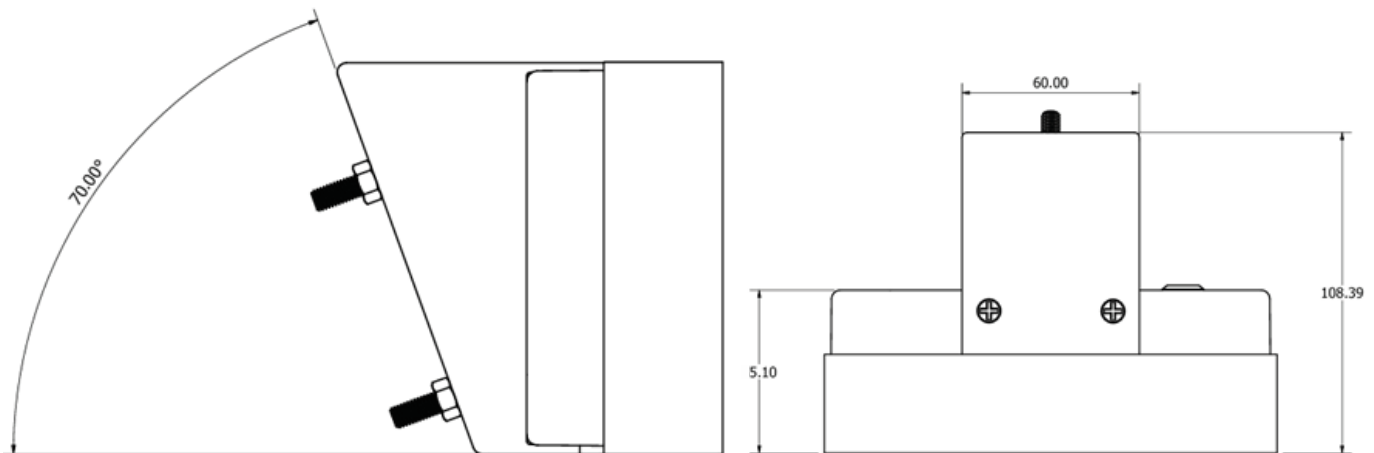
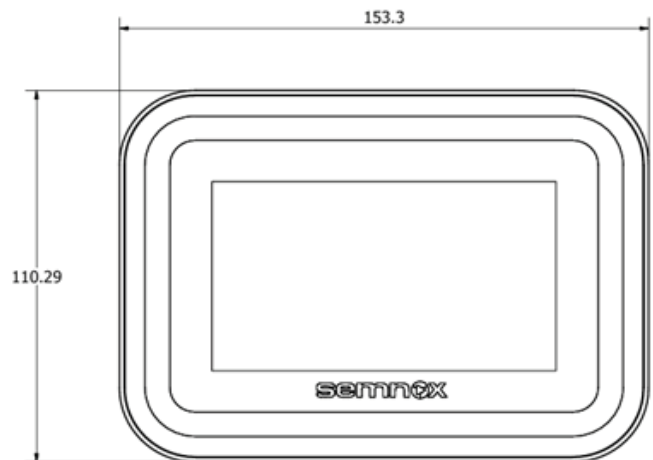
- Gorilla Glass
- Black Polycarbonate (PC) TRIREX
- AL6063
- SUS304 1.2T
- SILICONE RUBBER SHORE 40A
- SILICONE RUBBER SHORE 50A
- PC110

Operational Range

- Operational Voltage: 11.4V to 12.6V
- Operating Temperature: -20~50 °C
- RF Communication Family: Wi-Fi – 2.4 GHz, 5GHz, BLE
- Antenna Type: FPC
- RFID Reading: Mifare
- Current: 2A

Physical Dimensions

- Dimensions (Inc. mounting): 110 x 153.30 x 108.39 mm.
- Connectors: 12V DC Cable.
- Connector Position: Back.
- Mounting Type: On the surface of the arcade machines.

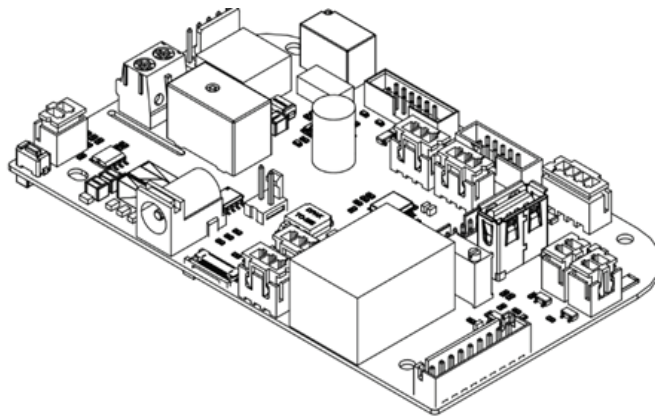


Overview

Hardware Components

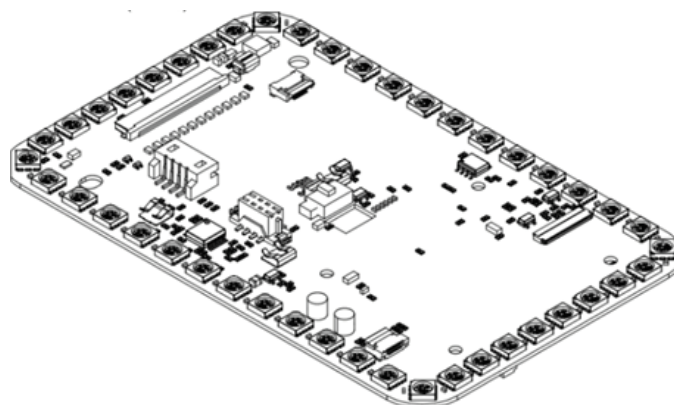
1. LAN Interface Board

Allows the system to communicate with a LAN network for real-time data transmission. It converts and transmits the information processed by the Main Board to servers or management systems via Ethernet. It can also include security measures such as data encryption and authentication to ensure the integrity and privacy of the transmitted information.



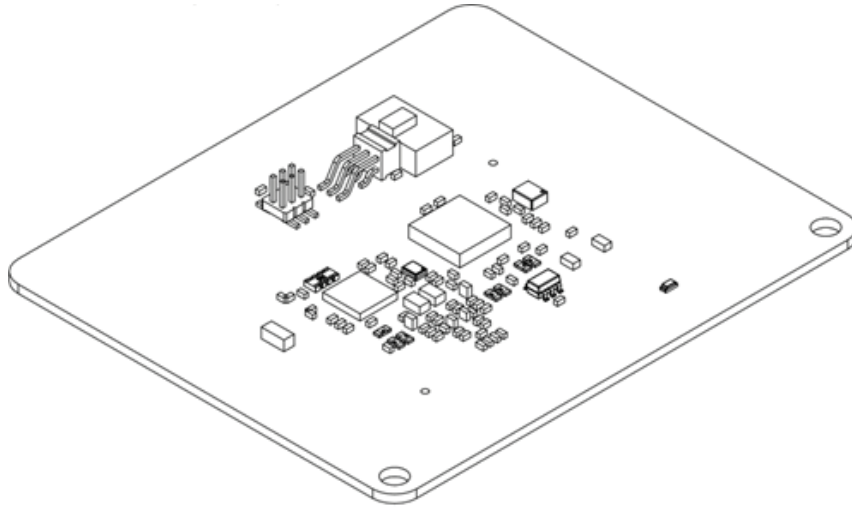
2. Main Board + Phycore (AM335X)

It is the core of the system and manages the information received from the MIFARE Board. Its main function is to validate credentials, process data and manage additional functions. In addition, it acts as a bridge between the RFID Reader Board and the LAN Interface Board, ensuring that the information is processed and sent correctly within the system.



3. Mifare board - RFID reader

This board is responsible for detecting and reading RFID cards by means of radio frequency signals. It integrates an antenna and a specialized circuit that identifies the cards within its operating range, processes the information stored in them, and transmits it to the Main Board. Its function is fundamental in authentication and access control systems.



4. Harnesses and accessories

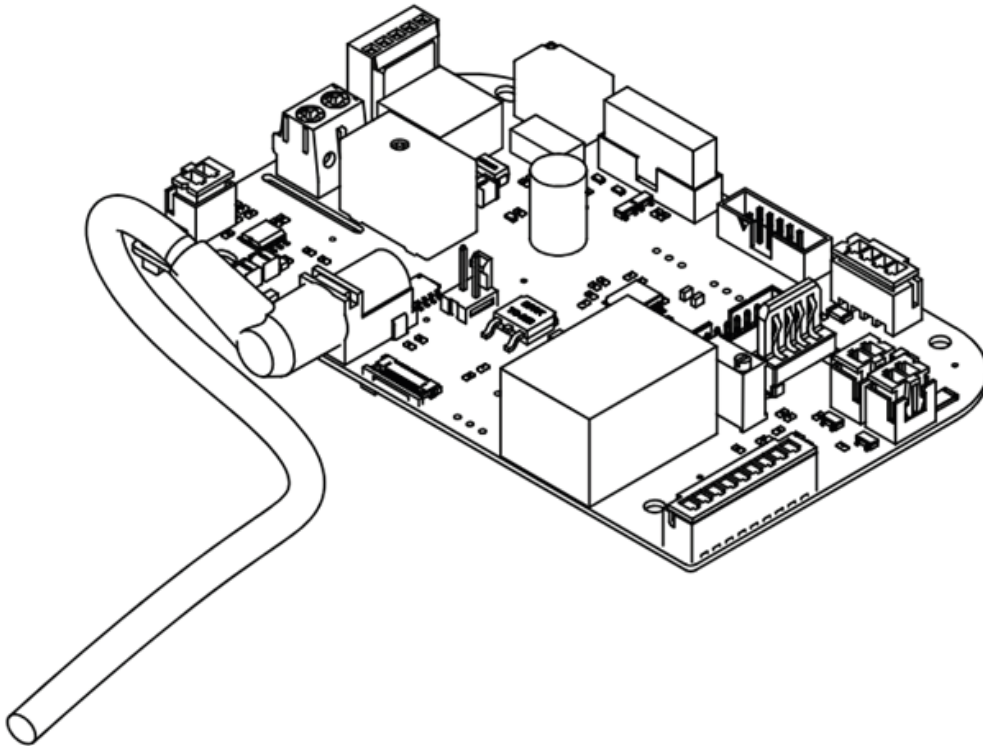
The device is equipped with the following accessories, which are essential to ensure correct operation.

Reset switch: If it is necessary to reset the XTER-OS, press the switch located on the back of the card reader for 5 seconds. The XTER-OS will restart automatically.



Buzzer: The XTER-OS has an internal buzzer that emits an audible signal to indicate the reading of the device.

12V DC Cable: The unit has a 12V cable that connects to the LAN Interface Board for supplying power. For proper operation, use a 12V-2A adapter.



Mounting

The XTER-OS is designed for seamless integration into various access points, such as walls and turnstiles, ensuring a safe, practical, and optimized installation that enhances visitor flow. Below, you will find detailed instructions for a quick and secure setup, guaranteeing stable and efficient operation.

Mounting Requirement

For NON-ductile materials (wood or concrete wall)

The recommended minimum wall thickness is 30 mm. Use a #14 (1/4-inch) tapping screw with a 1-inch length. For concrete walls, select an appropriate wall anchor accordingly.

Mountig screw	#14*1 inch*self tapping Screw / truss Head/zinc Plated	2	
Wall anchor	#14 plastric wall anchor, 1-1/8 inch long	2	

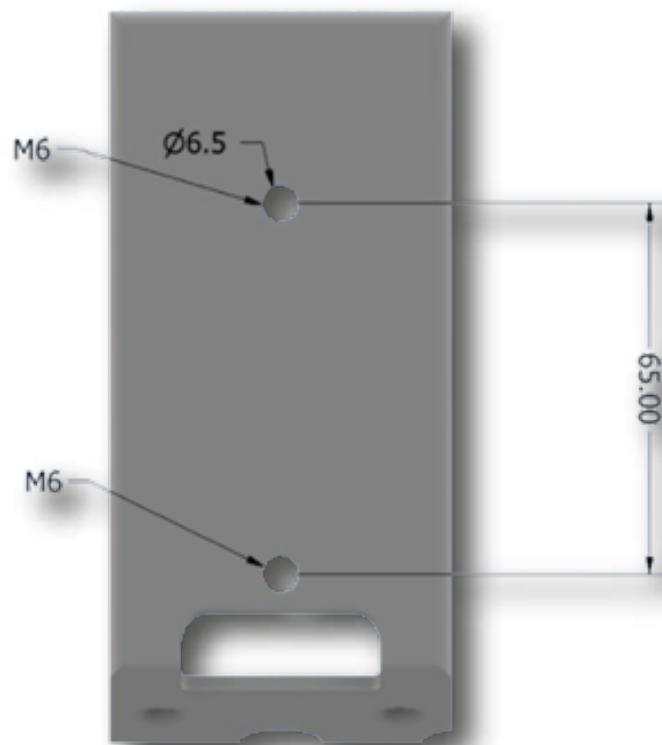
For ductile materials (metal, plastic):

The recommended minimum wall thickness is 2 mm for metal walls, using an M6 bolt. For plastic walls, a minimum thickness of 20 mm is required.

M6 Bolt	M6*30mm machine/ truss head + M6 NUT + M6 lock washer	2	
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Mounting Instructions

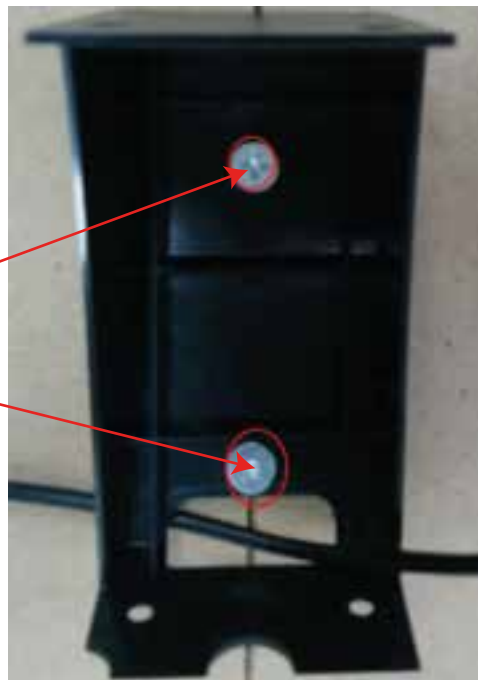
The mounting surface of the XTER-OS has two M6 holes for installation. For both inclined and flat bracket types, the distance between the holes is 65 mm.



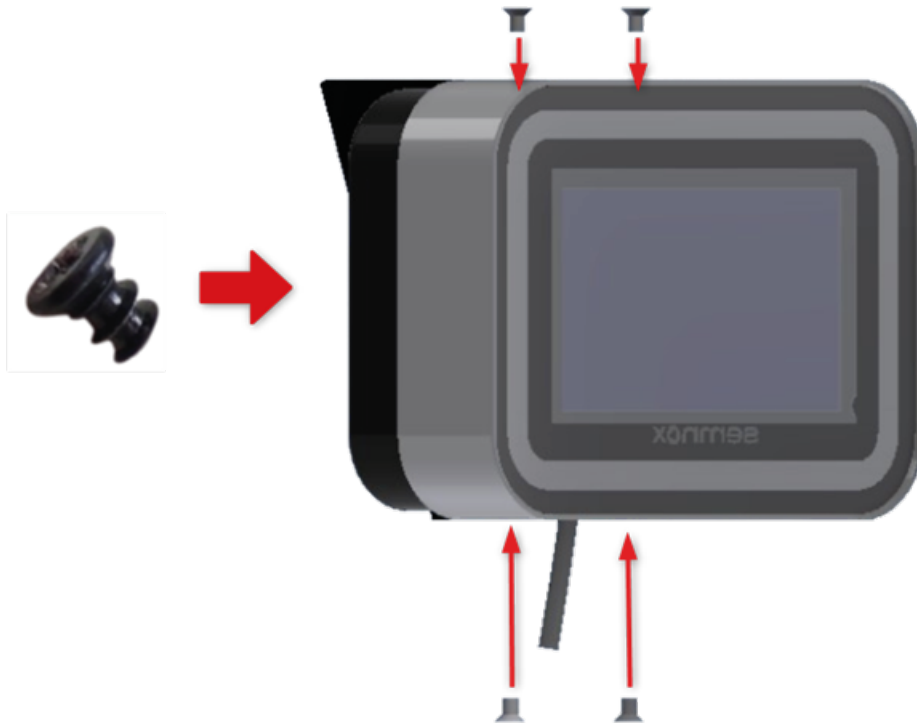
Run the 12V cable through the hole in the mounting plate, as shown below.



Attach the mounting plate to the clamping surface using the appropriate screws according to the type of surface.



Secure the card reader to the mounting plate using four M4x6 screws and complete the installation.



Compliance

FCC compliance and advisory statements

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.

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

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

