USER GUIDE

PANL
Room Manager 3.1.1

BRTSys

Part 1 - Introduction

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1. Introduction

1.1 About PanL Room Manager (PRM) User Guides

The below set of PRM user guides for the following components aims to provide necessary information for PanL Room Manager (PRM) hardware and software installation, configuration, and operating information.

S/N	Components	Document Name
1	Installation & Configuration • PRM Server Installation & Configuration • Mail Server / Calendar Server Setup & Configuration	BRTSYS_AN_038_PRM User Guide - 2. Installation & Configuration
2	PRM Management Console	BRTSYS_AN_039_PRM User Guide - 3. PRM Management Console
3	PRM Supervisor and PanL Hub Supervisor Console	BRTSYS_AN_040_PRM User Guide - 4. PRM and PanL Hub Supervisor Console
4	PRM Outlook Add-In	BRTSYS_AN_041_PRM User Guide - 5. Outlook Add-In
5	PanL PD100 Display	BRTSYS_AN_042_PRM User Guide - 6. PanL PD100 Touch Display

1.2 About this Guide

The guide provides an overview of PanL Room Manager Eco-system, its features and safety guidelines.

1.3 Intended Audience

The intended audience will be System Integrators, Technical / Administrative users who will assist in realizing the capabilities, functionalities, and the full benefits of the product.

> **Note:**
>
> 1. Ensure the firmware version and package version number are up-to-date and update/upgrade accordingly.
> 2. For more information about the latest version and compatibility, contact the BRT Systems sales/support.

2. Safety Guidelines

Important Safety Instructions:

WARNINGS:

- This symbol, ⚠ , when used on the product, is intended to alert the user of the presence on uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

- If the product is damaged and any internal components can be seen through the damaged area; unusual odours or unusual noises are detected; disconnect the device from the electric outlet and contact our support. See the user guide for the appropriate contact information.

ATTENTION:

⚠ - This symbol, when used on the product, is intended to alert the user to important operating and maintenance (Servicing) instruction in the literature provided with equipment.

General Guidelines:

Follow these sensible guidelines:

- Read instructions- Read and understand all safety and operating instructions before installing or using the equipment.
- Retain instructions- Keep the safety instructions for further reference.
- Follow warnings- Follow all warnings and instructions marked on the equipment or in the user information.
- Comply with codes- Install all products in accordance with international, national, and local electrical and building safety codes. Some examples for reference are as follows:

  - In the United States of America, refer to ANSI/NFPA 70, US National Electrical Code (NEC).
  - In Canada. Consult the Canadian Electrical Code, Part I, CSA C22.1.
  - Elsewhere, refer to International Electro technical Commission (IEC) guideline 60364, parts 1-7.

- Avoid attachments- Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous, and they may void the warranty.
- Avoid water – Do not use this or other electrical equipment near water or objects filled with water. Clean the device with dry cloth only.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this equipment during lightning storms or when unused for prolonged periods of time.

WARNING: To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

This equipment shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the equipment.

- Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as when power supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the equipment, the equipment has been exposed to rain or moisture, does not operate normally, or has been dropped.

Grounding (Earthing):

- Grounding faceplates - For products with metal faceplates, ground the faceplates to the product ground, and tie all the products in a system to a common ground. This prevents electrostatic discharge and can prevent video ground loops.
- Do not defeat the safety purpose of the polarized or grounding –type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for user's safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.

Power and Electrical Supply:

- **Appropriate power supply**

  - Use only provided power supplies and power sources with our products. Use of unauthorized power supplies may harm the equipment, may void the warranty, and will void the regulatory compliance status.
  - For power adapters with detachable DC cords, consult the Manufacturer for guidance.
  - Power supplies are intended for continuous operation.
  - Our power supplies are universal input voltage supplies that operate from 100-240 VAC and are intended to function at 50 to 60 Hz. The ambient temperature shall not exceed 50°C and the altitude shall not exceed 2000m. Consult the Manufacturer if the input power supply being used is not provided by us. Make sure to use the appropriate power supply for corresponding models. Ensure that it is marked as "LPS" or "Class 2" if it is an LPS or Class 2 type.

- **Location of power supplies**
  - External power supplies with either plastic enclosures or metal enclosures with vents must not be located within environmental air handling spaces or a wall cavity.
  - Our power supplies are intended for indoor use only.
  - The power supply must not be permanently fixed to the building or similar structure.

Power Sources:

- This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with the main power system with a grounded_Neutral_conductor or Line to Line. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

WARNING for Class I Products:

Class I products must be connected only to a mains socket outlet with a protective Earthing (Grounding) connection.

- Power and IT system - Consult us before installation if the product will be connected to an IT power distribution system.

WARNING: Disconnect the equipment from the AC main before performing any service to the equipment.

- There are no user serviceable parts inside our equipment.
- Refer all servicing to qualified service personnel. To prevent the risk of shock, do not attempt to service this equipment by yourself because opening or removing covers may expose users to dangerous voltage or other hazards and may void the warranty

Ventilation, Mounting and Temperature:

- Ventilation slots and opening - If the equipment has slots or holes in the enclosure do not block any ventilation opening, as this may cause the product to malfunction. Install the device in accordance with the manufacturer's instructions.
- Temperature – Do not install electronic devices near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. If possible, do not expose the product to direct sunlight. Also see "Rack mounding guidelines" below for temperature guidelines.

Placement Guidelines:

The following guidelines pertain to the safe installation of our device on a desk.

- Ensure that the device is not placed on the desk edges.
- Ensure that the placement is visible to the user.
- If using a glass or slippery desk, ensure that the rubber feet are in place. Use the rubber feet to stick to the bottom of the device. The rubber feet are provided as part of the package.
- The placement desk should be flat (Horizontal to ground), should not be in a slanting position.
- Please do not mount the device on a vertical wall / table.

FCC Statement:
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 building 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 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 Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

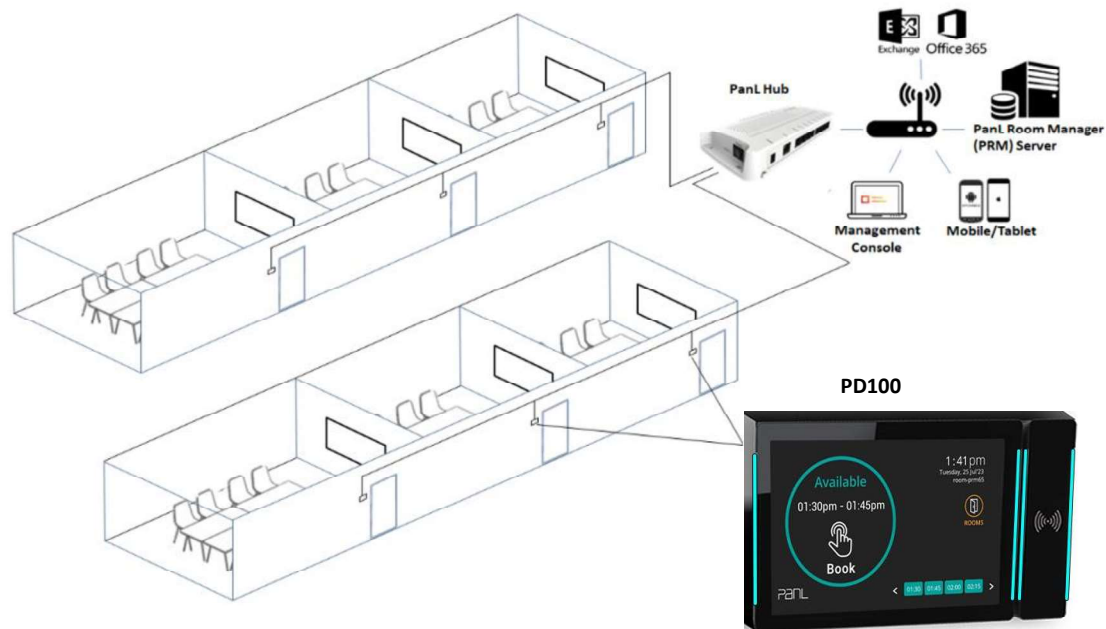Electrical appliances classes defined in IEC 61140, and are categorized into one of the five Classes - Class I, Class II, III, 0 or 01. In a Class I products, the body or casing, which is usually made of metal, is connected to earth via an earth wire and plug. This earth connection provides an alternate path for electric current to flow in case of a fault, such as a failure of basic insulation.

3. Product Overview

The **PanL Room Manager (PRM)** is designed to support from large to small organizations to automatically manage meeting room booking issues such as room booking conflicts, ghost bookings, under-utilized rooms, etc. PRM can mitigate or eliminate these common problems and potentially help to reduce the number of rooms needed while increasing room utilization. Booking experience is further enriched with the use of intuitive touch displays with RFID/Passcode feature. Consequently, minimal efforts are needed to book rooms and fruitful meetings can happen without interruptions increasing overall employee productivity.

The PRM ecosystem is illustrated in Figure 1 consisting of PRM Software installed on an on-premises server which is fully integrated with supported major calendaring systems such as Microsoft Exchange and Microsoft 365 through configuration via a simple web console interface. Single or multiple PanL PD100 Touch Display Panels placed outside meeting rooms are linked to the PRM network via PanLHub through RJ45/Ethernet cable. PRM enables the panels and the calendars to be integrated seamlessly, synchronizing all scheduling data across all platforms on the same network. All communications in between are encrypted to ensure data security. The number of displays can scale up according to the number of rooms by simply adding more PanLHubs. The PRM centralized hub architecture enables cost effective PanL panels to be used while providing an effortless way to power up the panels without any need for additional power supplies. It also provides a platform where automatic control functions can be added in the future such as controlling a room air-conditioner or a projector.

Figure 1 – PanL Room Manager Ecosystem

Users have the option to book a meeting room right from the panel, Outlook or through mobile devices using Outlook Web Access (OWA). The panels are synchronized with the configured calendar and displays meeting information such as meeting times, meeting hosts and the meeting subject. Users can view the room's meeting timeline for the day and perform on-spot booking on free timeslots. One touch claim, extend and end meeting functions are also available on the panel without users having to go through their own devices. With the claim and end meeting functions, PRM ensures unused rooms are always available for the next user. Users can browse/book/modify/cancel meetings of other rooms from the PanL using the Rooms function button. The display panel also comes with built in LED indicators to help users to view room availability status from afar through distinct colour schemes. The web management console (PRM

Management Console) serves as a single administrative interface to configure PRM to function optimally. It allows system administrators/IT personnel to configure calendar, assign infrastructure layouts across local or multi-site locations, setup PD100 Display panel operating hours and authorization access (via Passcode or RFID Authentication) and configure a variety of room booking policies such as maximum claim time limit for auto room release, maximum booking and extend limit hours, etc. A dashboard which displays booking statistics data provides valuable insights to building management to understand and manage room booking behaviour to further improve utilization. Administrators are also able to fan out room information, catering and equipment ordering options to users through Microsoft Outlook Add-In feature via PRM Management Console.

4. Features

The following are the key features offered by PanL Room Manager (PRM) -

❖ Make room reservations right from the PanL Display panels, Outlook or mobile devices or Outlook Web Access (OWA).

❖ PRM Software provides seamless integration with supported calendaring systems such as Microsoft Exchange and Microsoft 365.

❖ Room release through claim and end meeting feature preventing unnecessary room hogging.

❖ Able to view detailed meeting information for the day on panel and perform on spot room booking.

❖ PanL PD100 Touch Display panels with built-in LED light indicators allow users to locate a vacant room from afar – LED color code: Green (Available), Yellow (Awaiting Room Claim), Red (Meeting In Progress).

❖ Passcode entering and RFID Card access authentication options for panel booking.

❖ Easy remote management and firmware updates of display panels and hubs through PRM Management Console and Supervisor.

❖ Number of panels can be scaled accordingly, and settings can be centrally managed and synchronized across multi-site locations.

❖ Easy deployment of panels powered by PanLHub through RJ45 Ethernet cable. Operating hours for panels can be set for power savings.

❖ Booking statistical data dashboard provides insights on room utilization, booking behaviours to better optimize user experience.

❖ A single admin console interface provides a one stop management of calendar settings, infrastructure assignment, room booking policy settings and display panel and Hub configurations.

❖ Secure communications between the clients and server over https. Database encryption over user account credentials.

❖ Easily accessible room layout information such as room size, occupancy limit and equipment availability.

❖ Convenient ordering of catering and equipment for meetings upon booking request.

❖ Customizable notification email template.

❖ User and system activity log file available through PRM Management Console.

5. What's New in PRM 3.1.1?

❖ An additional authentication mechanism that uses client credentials on the server side and Open ID Connect (OIDC) on the client side.

❖ The security features of various components, including the server, WMC, Add-Ins, Supervisor, PanLHubs and PanL displays, have been enhanced.

❖ In place of the default password, administrator and superadmin passwords are set during the installation stage.

❖ The Supervisor Management Console and the PanLHub / PRM server connections have been upgraded from http to https.

❖ Web Management Console updates for a better user experience and consistency.

6. Known Issues & Limitations

• The supervisor Web Management Console may not load properly sometimes due to browser cache. To fix this, clear the cache or close and reopen the browser to reload the Web Management Console. The issue is only noticed during PRM server upgrade and not afterward.

• Sometimes, Ad-Hoc or Outlook Add-In booking may be delayed because the network or O365 server is busy. Please wait and retry after a while.

7. Compatible Client Applications

The following client applications are compatible -

• PanLHub80/44: 5.1.0 – 3.2.0

• PD100: 1.2.0-3.5.0 (2.7)

• Outlook Add-In: 2.6.0 – 3.2.0

8. Appendix

8.1 Glossary of Terms, Acronyms & Abbreviations

Term or Acronym	Definition or Meaning
ANSI	The American National Standards Institute is a private nonprofit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.[3] The organization also coordinates U.S. standards with international standards so that American products can be used worldwide.
FCC	The Federal Communications Commission is an independent agency of the United States government that regulates communications by radio, television, wire, satellite, and cable across the United States.
HTTPS	Hypertext transfer protocol secure is the secure version of HTTP, which is the primary protocol used to send data between a web browser and a website. HTTPS is encrypted to increase security of data transfer.
IEC	International Electrotechnical Commission is an organization that prepares and publishes international standards for all electrical, electronic, and related technologies.
LED	Light Emitting Diode is a semiconductor device that emits light when current flows through it.
NEC	The National Electrical Code is a regionally adoptable standard for the safe installation of electrical wiring and equipment in the United States.
NFPA	The National Fire Prevention Association is a global, non-profit organization that promotes safety standards, education, training, and advocacy on fire and electrical-related hazards
OTA	Over-The-Air update is an update to an embedded system that is delivered through a wireless network, such as Wi-Fi or a cellular network.
OWA	Outlook on the web (formerly Outlook Web App) is the browser-based email client for users to access email, calendars, tasks, and contacts from Microsoft's on-premises Exchange Server and cloud-based Exchange Online.
PRM	The PanL Room Manager is designed to support from large to small organizations to automatically manage meeting room booking issues such as room booking conflicts, ghost bookings, under-utilized rooms, etc.
RFID	Radio-Frequency Identification uses electromagnetic fields to automatically identify, and track tags attached to objects.

8.2 List of Figures

8.3 List of Tables

NA

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Version 1.0	Initial release for PanL Room Manager (PRM) V2.5.0	14-08-2023
Version 2.0	Updated release for PanL Room Manager (PRM) Ver. 3.1.1	04-07-2024