

User Manual

Murphy's Bowl Access Portal (MBAP)

Document Revision: 0.3

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1 Overview

The Murphy's Bowl Access Portal (MBAP) operates as a frictionless access portal for numerous locations and purposes, including but not limited to wide-area frictionless ticket validation, door access as well as store entry and exit.

Several frictionless methods are available to grant access. These include face detection and matching, tapping of accepted NFC devices or compatible phones, as well as ticketing / access granting through Bluetooth Low Energy (BLE) and Ultra-wide Band (UWB). Note that the MBAP model 'MBAP nUWB v1.0' does not include a UWB radio.



Power

- 1x Power-over-Ethernet (PoE++) [IEEE 802.3bt Class 6], up to 51W)
- 1x optional DC power port, 42V - 57V

User Interface

- 5" circular full-color Display, 1080x1080 resolution
- 10-point capacitive Touchscreen

Wired Communication

- 1x Gigabit Ethernet, PoE++ capable (51W)
- 2x 10/100 Ethernet, stacked
- 2x USB-A 2.0, stacked
- 1x 12V-compliant OSDP
- 2x dry contact outputs, 30V, 1A max
- 2x isolated inputs, 5V-24V DC

Wireless Communication

- 1x Ultra-wide Band (UWB) Radio
 - Channel 5 and channel 9
- 3x Bluetooth Low Energy (BLE)
- 1x Bluetooth 5.2
- 1x Wifi 6E (2.4 GHz, 5 GHz, 6 GHz supported)
 - IEEE 802.11-2016 and selected amendments
 - IEEE 802.11 a/b/d/e/g/h/i/k/n/r/u/v/w/ac/ax
 - WPA2, WPA3
 - 802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0-MSCHAPv2 (EAP-SIM, EAP-AKA)
 - Dual antenna configuration
- 1x Cat-6 LTE, CBRS-capable, globally certified
 - 300 Mbps download
 - 50 Mbps upload
 - Dual antenna configuration
- 1x NFC HF RFID w/ support for NFC Forum specifications
 - ISO/IEC 14443A
 - Supports MIFARE Ultralight AES cards

Machine Vision

- 1x 8MP (4K) near-field camera (wide-angle lens)
- 1x 8MP (4K) far-field camera (narrow-angle lens)

Regulatory Compliance

- The MBAP complies with the following regulations:
 - FCC Part 15B and ICES-003
 - FCC Part 15.207 / 209
 - FCC Part 15.247 / RSS-247 (BLE)
 - FCC Part 15.250 / RSS-220 (UWB)
 - FCC Part 15.407
 - FCC Part 27 and Part 24
 - FCC KDB 996369 D04 v02
 - IEC / EN 62368-1:2018 3rd Edition
 - UL 62368-1 3rd Edition
 - CSA C22.2 No. 62368-1 3rd Edition
- ROHS: Designed to be compliant
- The MBAP contains the following FCC IDs:
 - FCC ID PD9AX210NG
 - FCC ID XMR2022EM060KGL
 - FCC ID VPYLB2BP

SKUs

The MBAP comes in 2 slightly different SKUs for Indoor and Outdoor use. Their label identifiers and feature descriptions are as follows:

- Indoor MBAP: 'MBAP v1.0' (FCC ID: 2BE69-MBAP01)
 - This MBAP Base contains all functions and features listed above, and is intended for installation in indoor locations only. This SKU must not be operated in outdoor locations - see section [6 Disclaimer and Regulatory Compliance](#).
- Outdoor MBAP: 'MBAP nUWB v1.0' (FCC ID: 2BE69-MBAP01)
 - This MBAP Base contains all functions and features listed above, except for the Ultra-wide Band Radio.
 - This SKU is intended to be installed in outdoor locations, but may be installed indoors well.
 - The exclusion of the Ultra-wide Band Radio addresses Regulatory Compliance restrictions in using UWB in an outdoor environment.

2 Safety Warnings

2.1 Trained Installation and Service Personnel Warning

Warning! Only those individuals that are trained and authorized by Murphy's Bowl LLC are permitted to install this equipment.

No unauthorized modifications can be made to the equipment.

Read and follow all warning notices and instructions included in the documentation. Before installing the product, read the rest of this manual and follow specific product instructions.

When installing, the placement of the device must also satisfy the following installation requirements:

- Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.
- Installation must at all times conform to local regulations.

2.2 Important Safety Instructions

When using this device, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons.

Do not use this product near water.

2.3 Explosive Safety Warning

Warning! Do not operate this device near explosive devices, unshielded blasting caps or in an otherwise explosive environment unless the device has been approved for such use by qualified personnel.

Warning! Do not disconnect the power or any other cabling in an explosive environment until such qualified personnel, trained specifically in explosive environment handling, have determined it is safe to do so.

2.4 Lightning Warning

Warning! Do not connect or disconnect cables or otherwise work with the device hardware during periods of lightning activity.

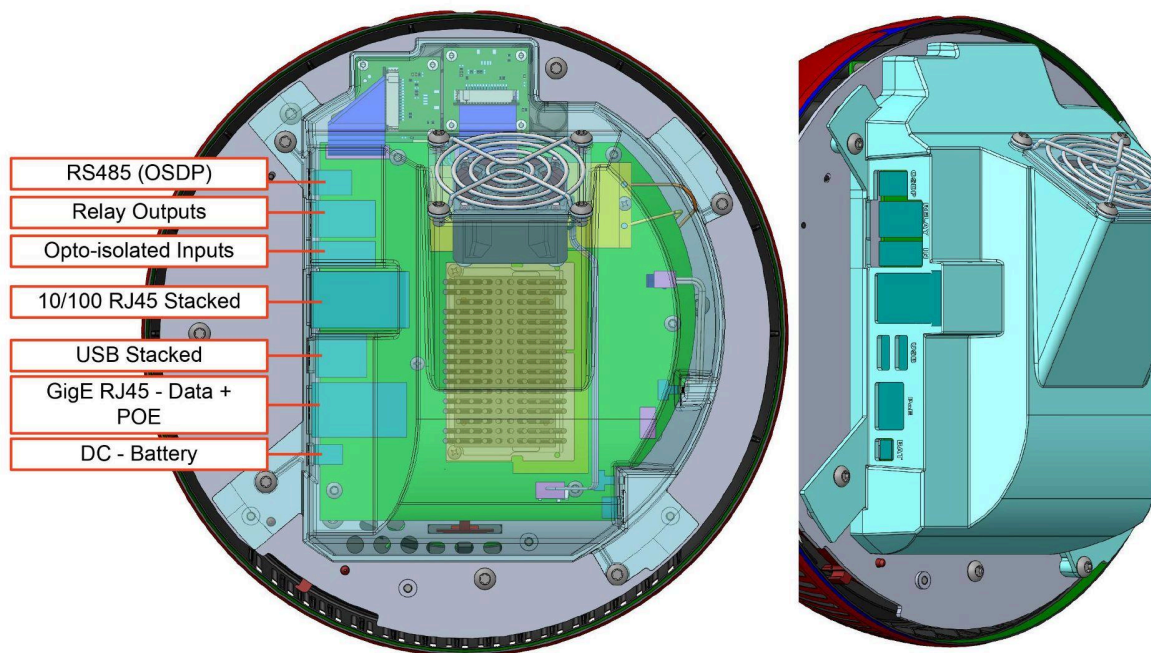
Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

3 Connector Specifications

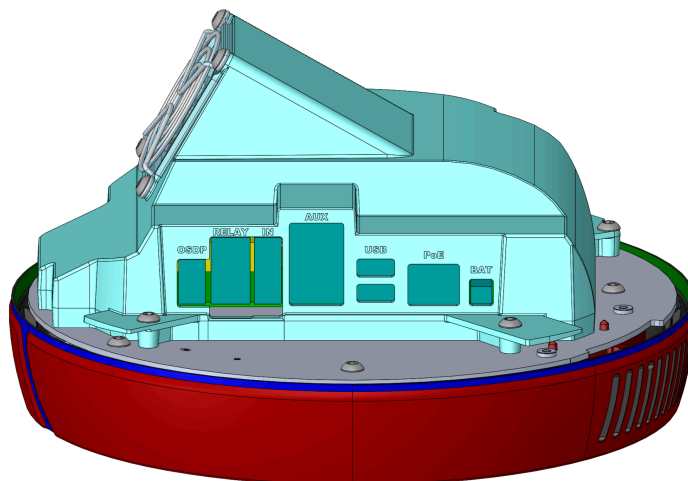
In the following, all pinouts are represented by looking at the MBAP's connector - see the Connector View below. MBAPs ship from the factory with the mating connector plugged into their respective connector on the MBAP.

This section applies to both models of the MBAP.

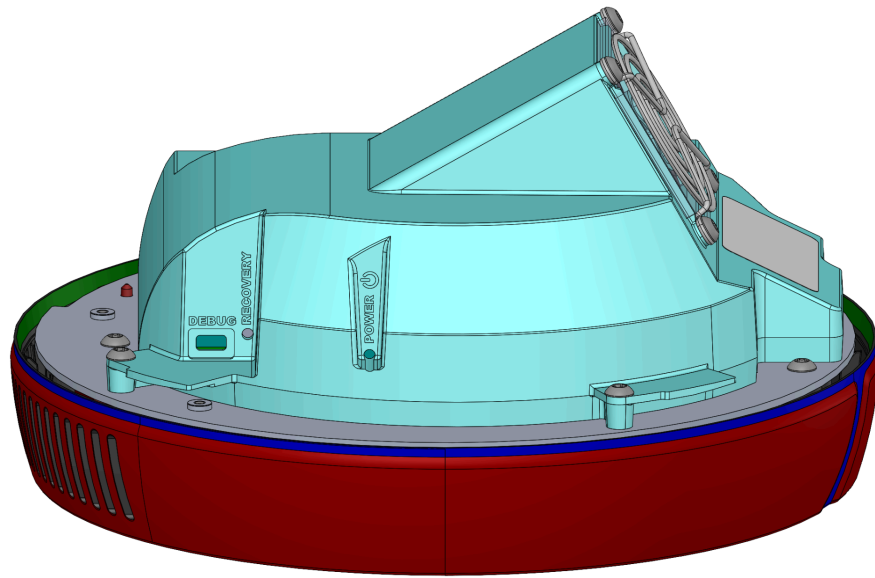
MBAP Overview:



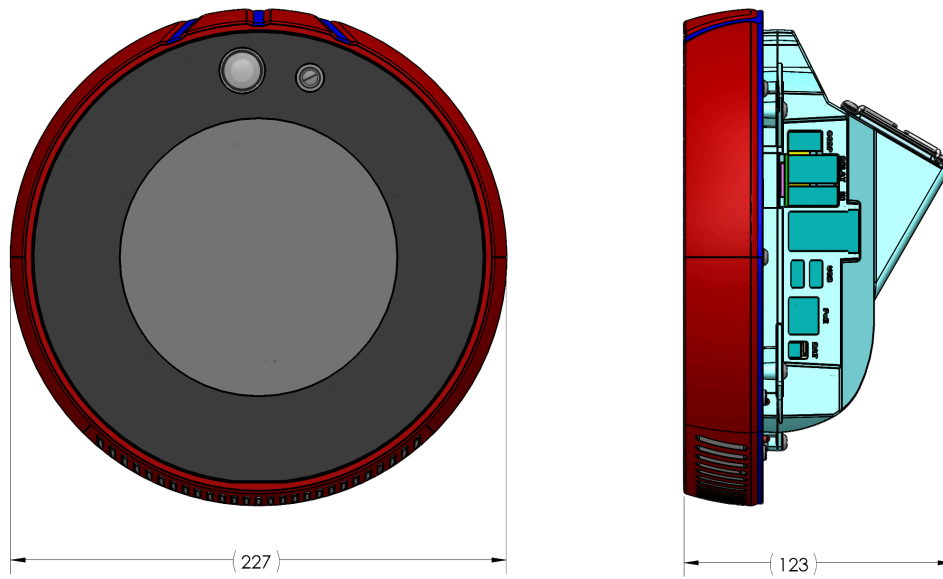
Connector View:



Push-button View:



4 Product Dimensions



Dimensions shown are in mm

5 Installation Specification

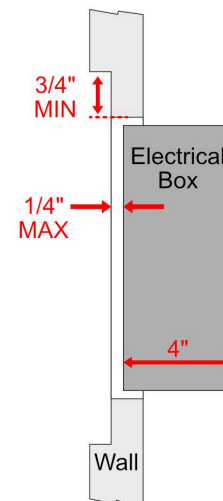
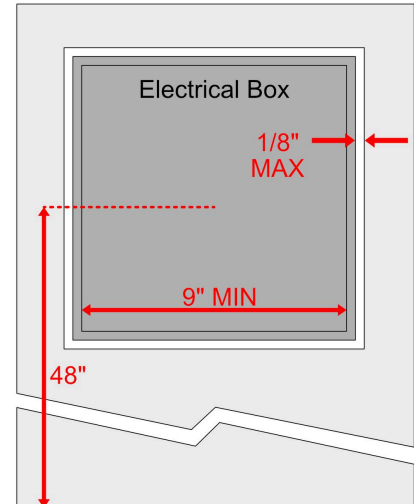
5.1 Electrostatic Discharge Warning

Warning! Wear an anti-static wrist strap or take other suitable measures to prevent electrostatic discharge when handling this equipment.

5.2 Indoor Wall Installation

The MBAP shall be installed into 10" electrical boxes pre-mounted within the walls. The electrical boxes and mounting components will be covered with a cosmetic cover plate. Thus, the electrical boxes shall meet the following:

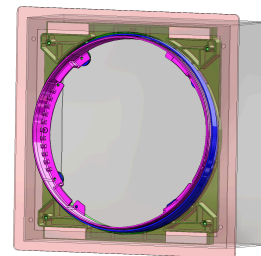
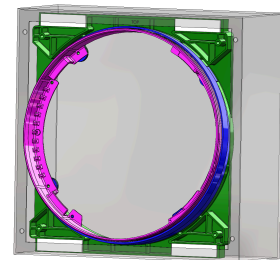
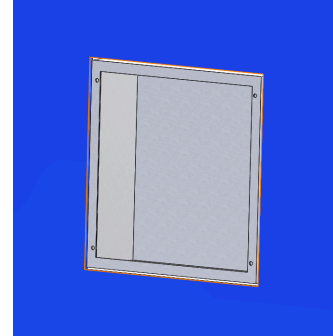
- The center of the electrical boxes shall be 48" from the ground to comply with ADA requirements.
- There shall be no gap larger than $\frac{1}{8}$ " between the electrical box and the surrounding wall so that there is no visible gap once the cover plate is attached. The cover plate will cover the edges of the electrical box and overhang by $\sim\frac{1}{2}$ ".
- No part of the electrical box shall protrude from the surrounding wall such that the cover plate will be flush with the wall.
- No part of the electrical box shall be more than $\frac{1}{4}$ " subflush from the surrounding wall.
- The surfaces surrounding the electrical box shall be flush with the wall for at least $\frac{3}{4}$ " in order to not interfere with the cover plate.
- The box shall be square and level to the wall.
- Any finishing materials surrounding the electrical boxes shall be smooth, and the front of the electrical box shall be clear of anything but a thin layer of paint.
- The electrical boxes shall not be deformed or crushed to fit, and the internal box opening shall remain within the part drawing specification - otherwise the wall mount plate will not fit.
- Inside of the box, the inner edge of the box, top and bottom, must be clear for the wall mounting plate.



- Once installed the MBAP will sit about 2.2" into the electrical box and will need additional clearance for wires, up to 2.5".

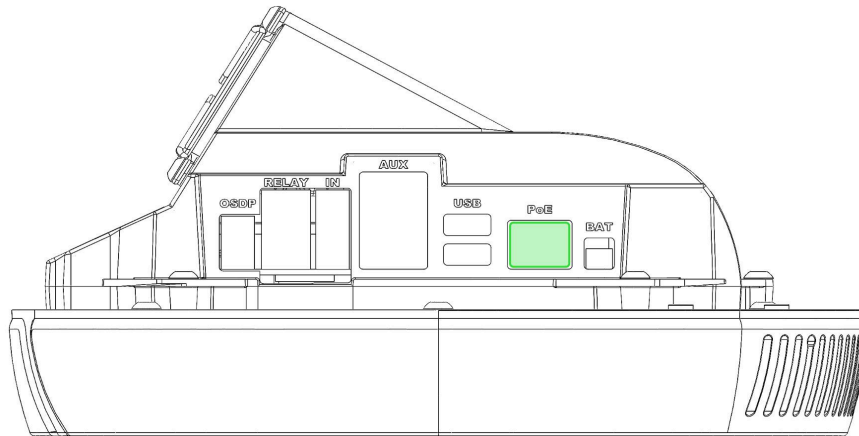
Installing the Wall Mount:

1. Insert the wall mount adapter assembly into the electrical box.
2. Remove the lining on the adhesive foam and position the mounting assembly. **Do not install an MBAP until the cover plate and HMI cover are installed in the following steps.**
3. Attach the cover plate using the 4 tamper resistant and color matched screws which are provided with the cover plate. The screws will attach to the wall mount adapter assembly.
4. After the cover plate is installed, if there are any gaps between the cover plate and the wall, or if anything is uneven, the cover plate screws can be loosened to allow for the wall mount assembly and cover plate to be adjusted.



Connect the following cables when installing an MBAP:

- POE



6 Disclaimer and Regulatory Compliance

6.1 Indoor use only for SKU 'MBAP v1.0'

This equipment may only be operated indoors. Operation outdoors is a violation of 47 U. S. C. 301 and could subject the operator to serious legal penalties.

6.2 FCC Compliance 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 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 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. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

6.3 FCC RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with a minimum distance of 20 cm (7.9 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

6.4 ISED non-interference Disclaimer

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

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

This device complies with the Canadian ICES-003 Class B specifications. CAN ICES-003(B) / NMB-003 (B).

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempt de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

6.5 ISED RF Exposure Statement

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm (7.9 inches) between the radiator and any part of your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations ISED CNR-102 établies pour un environnement non contrôlé. Une distance de séparation d'au moins 20 cm doivent être maintenue entre l'antenne de cet appareil et toutes les personnes. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

6.6 UL Certification

This equipment has been tested and found to comply with the limits for Information Technology / Audio Video Equipment (ITAV) according to the standards:

- UL 62368-1 3rd Edition - Audio/video, information and communication technology equipment - Part 1: Safety requirements
- CSA C22.2 No. 62368-1 3rd Edition - Audio/video, information and communication technology equipment - Part 1: Safety requirements

These standards are designed to reasonably reduce the risk of injury due to Fire, Shock and Casualty Hazards.

7 Revision History

Revision	Date	Description
0.3	04-24-2024	Minor wording changes
0.2	04-23-2024	Finalized Installation Instructions
0.1	04-22-2024	Initial draft release