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Introduction

The M25, a variant of the Paradox M Head units, is a versatile and powerful wireless/wired hybrid compact head unit. The wireless section uses Gaussian Frequency Shift Keying (GFSK) technology, offered in both 868 MHz and 914 MHz bands. It employs advanced frequency and encryption hopping to protect against unauthorized access, ensuring data security and an ultra-fast connection. It uses the Paradox fourth-generation Identifier ecosystem for fast and reliable 3-channel communication via Ethernet, Wi-Fi, and LTE (LTE Model) with the BlueEye phone application, IPC10 receivers, and PC software.

The M25 wireless console offers quick and easy installation via an application-based configuration. All wireless devices connected to the M25 console are fully upgradable over the air via the Internet. The M25 system is expandable with wireless devices—including hardwired zones, PGM wireless expanders, or Ethernet/Wi-Fi modules such as keypads, repeaters, cameras, and access modules. This installation manual applies to the 868 MHz range and 914 MHz range frequency variants.

NOTE: To enhance security, when using outdoor devices such as cameras and doorbells, it is recommended to set up a dedicated IoT network.

Hardware and Network Requirements

The M25 wireless console requires a router with Power Over Ethernet (PoE) to function. Alternatively, you can use a PoE injector to supply power. The maximum power consumption of the M25 wireless console is 10W.

Quick Installation- Experienced Installers

NOTE: The M25 console includes a free 1-year subscription.

To install M25:

- 1. Install the console at the desired location, not in proximity to large metal objects or electrical panels.
- 2. Internet Connection:
 - Connect via Ethernet with PoE or Wi-Fi using a PoE injector.
 - If PoE is not available on the Ethernet connection, use a PoE injector.
- 3. Create/Add the M system (using the BlueEye application)
 - a. Menu icon > Installer Environment > M System > Install > enter the serial number > Done > enter the site details > Continue.
- 4. Set up the configurations (using the BlueEye application)
 - - (*Owner*) Menu icon \equiv > **Programming**.



- b. Pair and configure hardware devices on the **Hardware** tab.
- c. Configure the settings on the **Firmware** tab.

Built-in status indications of M25:

- Amber (flashing) Power-up /initial sequence/Swan search.
- White Connected to Swan MQTT, Connection with BlueEye possible.
- Red Powered but not connected to Swan MQTT (Hotspot active for Wi-Fi setup. SSID: M25 serial number).
- Red Blinking Battery powered, not connected to Swan MQTT.
- Blue Blinking Firmware upgrade is in progress.
- Green Blinking Connected to Swan MQTT via Wi-Fi, BlueEye connection possible.
- White > Amber > Steady White Reset to the default sequence.

For detailed installation information, refer to the following sections.

The following figure displays the functional elements of the M25 wireless console.



Components of M25

M25 Supported Devices: All Paradox product models ending with M are supported, for example, DCT2M, PMD5M. All other Paradox products are not supported.

Mounting the M25

Locate the M25 close to the center of all wireless devices for balanced reception and power management of the devices. Avoid proximity to large metal objects like metal racks or electric boxes.

NOTE: If you are using a SIM card in the panel for communication, ensure that you insert it with the metallic part facing down. Incorrect insertion may result in the SIM card getting stuck, making it difficult to remove.

To set up the M25 wireless console and connect the console to the internet:

- 1. Select a mounting location near a power source.
- 2. From the wireless console, loosen the **Release/Tighten Screw**, slide down and remove the backplate.
- 3. Position the backplate on the wall and mark the mounting holes. Fix the backplate.

NOTE: One screw must be secured in the tamper hole as per the EN security standards. The use of double-sided tape does not trigger a tamper alarm when the cover is removed and may not meet security approval standards in your country.

4. Run an Ethernet cable from an internet router that supports PoE or use Wi-Fi with PoE injector. If the Ethernet cable does not support PoE, use a PoE injector.

To connect a PoE injector:

- a. Connect an Ethernet cable from the **RJ45 Ethernet Socket** of the M25 wireless console to the PoE (output) port of the injector.
 - b. Connect another Ethernet cable from the LAN (Data Input) port of the PoE injector to the router.
 - c. Plug the PoE injector's power input into an AC power outlet.
- 5. If you are using an Ethernet cable that supports PoE to provide the internet, then connect the cable to the RJ45 Ethernet Socket of the M25 wireless console.
 - If the Ethernet cable is routed from the wall, pass it through the **Knockout** hole (*See Figure A*).
 - If the Ethernet cable is routed from the bottom, use the Ethernet Cable Bottom Entry for routing (See Figure B).





Figure B

- Figure C
- If you provide internet access only via Wi-Fi without using an Ethernet cable, then use a PoE injector to power the M25 wireless console.
 NOTE: If the internet is provided only through Wi-Fi, the console hotspot opens with the Service Set Identifier (SSID) set as the console's serial number.
- 7. Slide the M25 wireless console downward onto the backplate and secure the console by tightening **Release/Tighten Screw** (See *Figure C*).

After the M25 wireless console is powered with PoE and connected to the internet, the Paradox logo on the console lights up in white.

For more information about the LED logo indications on the console, see the <u>LED</u> <u>Indications</u> section.

Power/Reset Button Functions

The Power/Reset button on the M25 console has three functions: Power OFF, partial reset, and reset to default.

Power OFF

This feature is designed to be used when the unit is in transport and can be performed only when no PoE power is connected. Press the power button twice momentarily within 5 seconds to turn off the device. To power on, connect PoE power or press and hold the power button for at least one second to power it ON.

• Deletes all users

Press and hold the power button for 8 seconds (the logo blinks purple every second). After 8 seconds, when the logo starts flashing slowly, press the power button once momentarily within 5 seconds. This deletes all users from the site. If the button is not pressed within 5 seconds, the operation will be canceled.



Logo Sequence: Steady Purple > White Flash > Amber Flashing > Steady White.

Reset to Default

To reset the console to its default settings, press and hold the power button for 8 seconds (the logo blinks once per second). After 8 seconds/blinks, when the logo starts flashing slowly, press the power button three times within 5 seconds. (To back up and restore, see the **Backup and Restore** section in the <u>BlueEye user manual</u>)

After pressing the power button three times, the logo will turn: Steady Purple > White Flash > Amber Flashing > Steady White.

This process resets the console to its default settings and brings it to new installation mode, with the Service Company Lock (ON/OFF) remaining unchanged.

- With Service Company Lock Active: If the lock is active during the reset, the Service Company remains unchanged for the site and cannot be modified. Only the Service Company can access the system to restore a backup or complete the installation.
- With Service Company Lock Not Active: If the lock is not active during the reset, the Service Company remains unchanged, but any installer can log in and complete the installation.

Internal Battery Operation

The M25 console comes with a built-in Lithium backup battery. Once fully charged, it can operate on battery power for up to 26 hours. The battery is expected to last for the product's lifetime, with no service or replacement required by the installer/dealer.

NOTE: The device is delivered with a battery charge of 10% or less.

LED Indications

After the M25 wireless console is powered on, it provides LED indications to signal different states or events that are happening in the console. The Paradox logo on the front of the console illuminates in white, red, green, or blue, depending on the state of the console.

The following table lists the indications displayed by the logo and the event.

Table 1

LED Indication	Event
Amber (flashing)	Power-up /initial sequence/Swan search
White	Connected to Swan MQTT, Connection with BlueEye possible
Red	Powered but not connected to Swan MQTT (Hotspot active for Wi-Fi setup. SSID:
	M25 serial number)
Green Blinking	Connected to Swan MQTT via Wi-Fi, BlueEye connection possible
Red Blinking	Battery powered, not connected to Swan MQTT
Blue Blinking	Firmware upgrade in process
White >Amber >steady White	Reset to the default sequence

Cloud Services Annual Fees

The M25 wireless console connects to Swan cloud services, allowing users and installers to access, program, receive push notifications, and monitor the system. An annual fee is required for cloud services, which can be paid by the Service Company or System/Site Owner.

M25 24/7 Supervision

The M25 system is continuously monitored for online connectivity. If the system remains offline for more than 20 minutes, both the owner and installer will receive a push notification alert. Additionally, the Central Monitoring Station (CMS) will be notified of the system's offline status.

EN 50131-5-3 Standards Compliance

The M25 wireless console complies with the EN 50131-5-3 standards. According to the requirements specified in Table 1 of the EN 50131-5-3 standard, during the auto-learn mode, the M25 wireless console and all unlearned devices transmit at +6dBm, and not at the maximum power of +14dBm. After the device is successfully added to the system, it continues normal operation, managing power between -6dBm and +14dBm for optimal battery management. The M25 wireless console continues to be at +14dBm full power transmission after auto-learn mode ends.

Qualifying Installer Requirements

To install an M system, you must first register as an M system user in the Paradox-secured identifier ecosystem. Additionally, you must obtain a Paradox Company ID (PCI), which is a 6-character alphanumeric code.

NOTE: The PCI is currently used only for M systems. Other Paradox systems continue to follow their existing installation process.

For detailed information, see the following sections in the <u>BlueEye user manual</u>:

- Sign Up for the M System
- Obtaining PCI

All systems installed using this PCI will be displayed under the company environment in the BlueEye app or the <u>Service</u> <u>Company Portal</u>.

• Invited to Install Under Another Service Company ID

A Service Company can add you as an installer under their company ID by sending you an invitation. You can then install systems under their company ID.

NOTE: In the BlueEye app or the <u>Service Company Portal</u>, you must select the service company environment you want to work with (your own or invited by another company).

• Service Company Sites

Each time you enter the Service Company environment, the sites displayed will be based on your user type, as captured in the table below.

User Type	Access to Sites		Permissions	Deletion Rights
Service Company	All sites associated	٠	Can add or remove users	Can delete the company only
Owner	with the company	٠	Can transfer sites to another	if no sites are registered
			company	NOTE: Existing sites must be
				transferred to another service
				company before the company can
				be deleted.
Service Company	All sites associated	٠	Can add or remove users	Can delete themselves from
Master	with the company	٠	Cannot delete the Service	the Service Company
			Company Owner or the	
			company	
User Installer	Only sites they have	•	Can install new systems	No deletion rights
	been granted			
	permission to access			

Table 2

• Swan Service Payment

Upon completing the installation, the Service Company invites the System Owner to the site. At this stage, the installer is prompted to select who will be responsible for paying for Swan services.

NOTE: After the site payment transaction is complete, the site will be added to the Service Company's site list.

- If the Service Company chooses to pay:
 - They will be directed to complete the payment process. After the payment is made, the Service Company Lock will turn ON.
 - For more information, see the Service Company Lock section in the BlueEye user manual.
 - Renewal payments will be directed to the Service Company through BlueEye or the <u>Service</u> <u>Company Portal</u>.

NOTE: If the service company fails to renew the payment after the expiration date, within a two-week grace period, the System Owner will be asked to pay for the renewal to regain access to the site.

- > If the installer selects the System Owner as the payer:
 - Upon their first access to the site, the System Owner must complete the payment for Swan services, including all future renewals. In this case, the Service Company can turn ON the Service Company Lock if needed.

NOTE: The System Owner must first register as an M user via the BlueEye app. For details, see the **Sign Up for the M System** section in the <u>BlueEye user manual</u>.

• Service Company Lock

After the payment is initiated and completed by the Service Company, the Service Company Lock for the site will be activated.

For details, see the **Service Company Lock** section in the <u>BlueEye user manual</u>.

• Portal Batch Payment

Batch payments can be made for multiple sites based on their expiration dates through the <u>Service Company</u> <u>Portal</u>. For more information, see the **Single or Batch Payments** section in the <u>Dealer Portal user manual</u>.

Configuring M25

NOTE: Ensure that your M25 wireless console is powered on and connected to the internet. If the internet is provided only through Wi-Fi, the console hotspot opens with the SSID set as the console's serial number. Connect to the hotspot. After your phone is connected to the console hotspot, open the BlueEye application and configure the settings mentioned in the following sections.

To configure the M system, you must:

- 1. Create the M25 site in the BlueEye application (See the *Creating an M site* section in the <u>BlueEye user manual</u>).
- 2. Configure the settings in the **Hardware** and **Firmware** tabs in BlueEye.

For details, see the <u>BlueEye user manual</u>.

Pairing Wireless Devices with M25

NOTE: Ensure that all wireless devices that you want to pair with the wireless console are within the range of the console. For details, see the installation manuals of the respective devices.

To pair a device with the M25 wireless console:

1. In BlueEye, when in the Hardware tab, tap + on the top right of the page > Auto learn wireless devices. A rotating radar icon is displayed with a 6-minute countdown. All unpaired devices pair within 6 minutes and appear at the top of the device list with а new tad and voice announcements. You can open the front cover of the device and press the Learn button momentarily, or open and close the zone for immediate pairing.

To identify the device, you can trigger the device tamper. A T symbol appears on the device tab in the BlueEye application.

For details, see the installation manuals for each device. A link to the installation manual can be found at the bottom of the device screen in the BlueEye application.

Configuring Devices

To configure a device:

- 1. When in the **Hardware** tab, tap the device that you want to configure.
- 2. Enter the necessary details and tap **Save**.

M25 Event Icons

The following table lists the M25 event icons displayed in the BlueEye application.

Table 2	ible 2		
Event Icons	Description		
	M25 Reset		
	M25 Firmware Upgrade Completed		
	M25 Firmware Upgrade Start		
	Tamper Open		
	Tamper Close		
	Bell Limit/Clock Lost/Communication Failed on M25		

5	Restore
	Bell Absent on M25
2	Time Lost on M25
	Panel Auxiliary Overload on M25
	RF Antenna Cut/GSM No Service/RF Jam on M25
	Backup Available

Upgrading Firmware

To upgrade the firmware version of the console:

- 1. In the BlueEye application > **Hardware** > tap the console.
- 2. On the **Device Details** page, scroll down and tap **Check for Upgrade**.
- 3. If an upgrade is available, tap **Upgrade** when prompted.

Keep track of the progress in the BlueEye application to ensure that the upgrade is completed successfully. The process may take a few minutes depending on the network quality.

NOTE: If the devices are connected through repeaters, the firmware upgrade is transmitted via the repeater, ensuring that devices located farther from the main console still receive the update.

Generating Logs

To generate logs for a console or device:

- 1. When in the M site, go to Firmware > Service Logs.
- 2. Select the console or device for which you want to generate a log.
- Tap Generate logs. The logs are generated as a ZIP file.

Signal Strength and Transmit Power Monitoring

The BlueEye application provides insights into each device's received signal strength and transmission power to optimize performance.

To view the RSSI and transmit power range:

- 1. When in the M site, tap the ⁽ⁱ⁾ icon next to the **Wireless** tab. A pop-up window with the RSSI and transmit power range is displayed.
- 2. Maximum power transmitted by M25:
 - 868 MHz: +14 dBm
 - 914 MHz: +22 dBm



Tap on any listed device to view signal strength and additional device metrics. The following parameters are displayed for each device:



- **P** Received signal strength at the panel.
- **N** Received signal strength at the device.
- \checkmark Transmit power of the device.

- Current temperature reading of the device.
- Battery level of the device.

A higher P and N value indicates stronger and clearer communication between the console and the device.

- If **P** is low, the console struggles to receive signals from the device.
- If **N** is low, the device struggles to receive signals from the console.

NOTE: Values below -93 with maximum Tx power are not recommended values, and RPT5M can be used to extend the range.

Power transmission impacts only P:

- When power transmission increases, the P value at the console generally improves, as a stronger signal is sent.
- If the P value is good, the device can reduce its transmission power to save battery life.

Technical Specifications

The following table lists the technical specifications of the M25 wireless console. **NOTE**: *The specifications are subject to change without prior notice.*

Table 3

Component	Specifications
Power Supply	PoE, 10W max
Battery	3.7V Lithium-ion battery, 5000 mAh.
Battery Backup Time	26H on Ethernet, 24H on Wi-Fi, 20H on LTE
Ethernet/Wi-Fi	Built-in Wi-Fi – 2.4 GHz B/G/N
LTE	Built-in (LTE Model), main channel, or backup.
Users	128; one owner, masters, users, guests, and maintenance.
BlueEye Users Access	Optional, enabled by owner or master per user
JPEGs for User and Partition	Yes, from the gallery or camera
Partitions	10
Bell Output	Only wireless
Total Zones	100
Remotes	128 maximum per system, up to four per user
Wireless Devices	75 per system
Adding Devices	Via auto-learn feature (wireless and Ethernet), QR scan, or manual serial number input for pre-programming
Wireless Repeaters	Maximum of 4 per system. Ethernet or wireless
Programmable Outputs	Up to 48 with wireless expanders; regular, restricted to selected users, or installer-only.
PGM Activation	Controlled by manual activation, schedule, system events, sunset/sunrise, or temperature reading.
PGM Status Verification	PGM status with zone verification and timer-based error display per PGM.
Ethernet Expansion Devices	Up to 45 total: repeaters, keypads, cameras, and access modules
Video Verification	Up to 16 cameras (available starting May 2025)
Access Control	Up to 16 doors (available starting July 2025)
Arming Options	Stay, Sleep, and Full Arm
Auto Arm	On schedule or no movement

Component	Specifications
Auto Disarm	On schedule, Sleep to Stay, Stay to Disarm
Security Events	1000
Disarmed Events	1000 (available starting May 2025)
Automation Events	1000 (available starting May 2025)
Access Events	7500 (available starting May 2025)
	868 (865.05 - 867.95) MHz or 914 (902.25 - 927.55) MHz; certain
Wireless Frequency Range	countries may have limited or different frequencies.
Modulation Type	GFSK with frequency and encryption hoping
Wireless Transmission Power	868 MHz band (+14 dBm), 914 MHz band (+22 dBm), coin battery devices limited to +14 dBm.
Installation	By registered installer with Paradox Company ID (PCI) from BlueEye or Service Company Portal.
Service Company Access	Permanent access or as granted by System Owner.
Service Company Lock	Available. Enables automatically when the Service Company subscribes to the Swan service.
Service Company Portal	Available for all registered Service Companies/Installers with Paradox Company ID (PCI).
Temperature Display and Control	Site and areas temperature display, temperature activation for PGM (cool or heat), custom alerts via push notification and BlueEye message center display.
Cloud Services	Paradox Swan 4G (subscription required)
Reporting	Up to four receivers, two channels with backup. Up to three transmission channels: Ethernet, Wi-Fi, and LTE.
Programming	Via BlueEye application or PC software
Operating Temperature	-25°C to +55°C (-13°F to 131°F) Battery charge disabled bellow -5°C and above +55°C internal temperature
Certifications	CE, EN 50131-3, EN 50131-6, EN 50136-1, EN 50136-2, EN 50131-5-3, FCC 15.247, Grade 2, Class II.
Dimensions	12.4W x 12.4H x 3.55D cm (4.89W x 4.89H x 1.4D in.)
Weight	0.26 kg

FCC 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.

Changes or modifications not expressly approved by the party responsible for compliance 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:

- 1. Reorient or relocate the receiving antenna.
- 2. Increase the separation between the equipment and the receiver.

- 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4. Consult the dealer or an experienced radio/TV technician for help.

WARNING – RF EXPOSURE COMPLIANCE: This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

FCC ID: KDYM25M

IC: 2438A-M25M

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

IC Statements

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-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.

Warranty

For complete warranty information on this product, see the <u>Limited Warranty Statement</u> document, or contact your local Paradox distributor.

Patents

US, Canadian, and international patents may apply. Paradox is a trademark or registered trademark of Paradox Security Systems (Bahamas) Ltd.

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