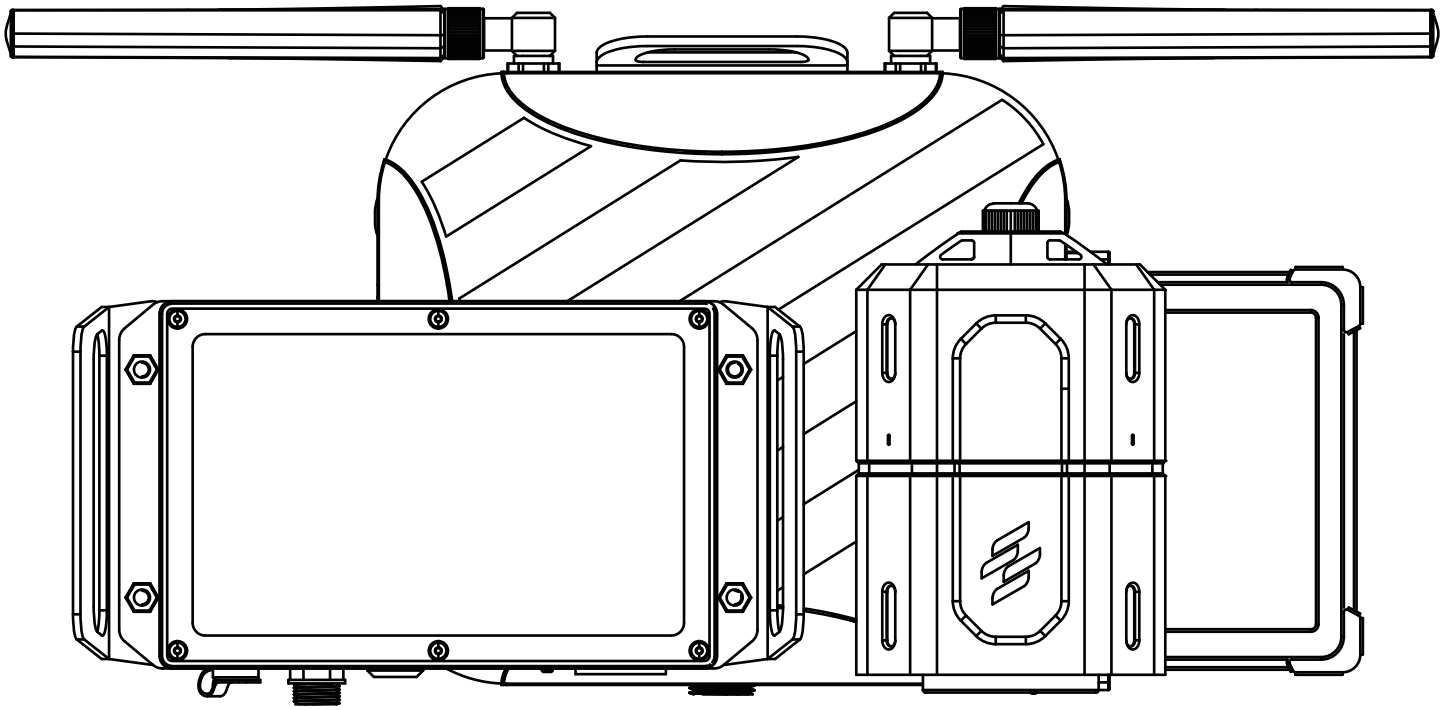
SCARLET | TECH



Hercules

Wireless Crane Camera System

User Guide

Table of Contents

Product List ---- **2**

Product Overview ---- **3**

Product Information ---- **4**

- Hook Camera ---- 4
- Hook AP ---- 5
- Battery Pack ---- 6
- StreamLink Station ---- 7
- Cabin AP ---- 8
- Android Tablet ---- 9

Installation ---- **10**

- StreamLink station Set-up ---- 10
- Hook Camera, Hook AP & Battery Pack Set-up ---- 13
- Cabin AP and Android Tablet Set-up ---- 19

Hercules App ---- **23**

- Login Flow ---- 23
- Login Page ---- 23
- Home Page ---- 24
- Single Camera Page ---- 25
- Menu (Admin Account) ---- 26
- Menu (Operator Account) ---- 27
- Camera Configuration Page ---- 28
- Add New Camera Page ---- 29
- Account Management Page ---- 30
- APP Information Page ---- 31

Account and Password Information ---- **32**

FAQ – Frequently Ask Questions ---- **33**

Warranty & Services ---- **34**

Product List

Main Products

(1) Hook Camera (with Waterproof LAN Cable 1.2M)
(2) Hook AP
(3) Battery Pack
(4) StreamLink Station
(5) Cabin AP
(6) Android Tablet

Antennas

(7) 5 GHz Omnidirectional Antenna x 6pcs
(8) 2.4 GHz Omnidirectional Antenna x 1pc

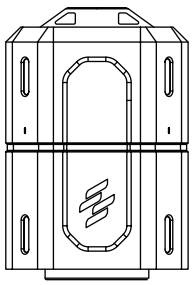
Power Adapters and Cables / Cords

(9) Power Cord 1.2M (Battery Pack to Hook AP)
(10) Three-core Power Cord 50M (StreamLink Station)
(11) Power Adapter and Power Cord (Cabin AP)
(12) Power Adapter & USB C to USB A Charging Cable (Android Tablet)
(13) Power Adapter and Power Cord (Battery Pack)

Other Accessories

(14) Android Tablet Holder with Clamp
(15) Cable Holder with D-ring & Magnet x4pcs
(16) Safety Rope with D-ring x4pcs

(1)



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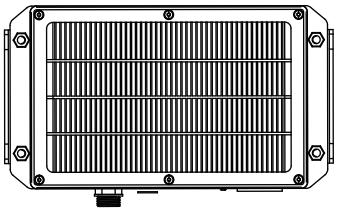
(3)



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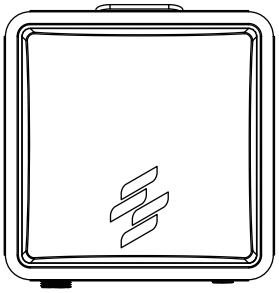

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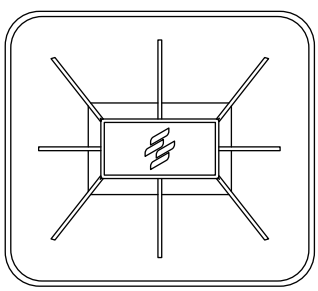

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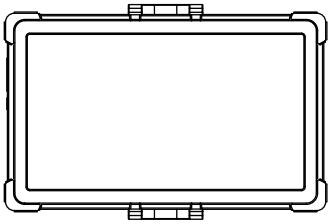
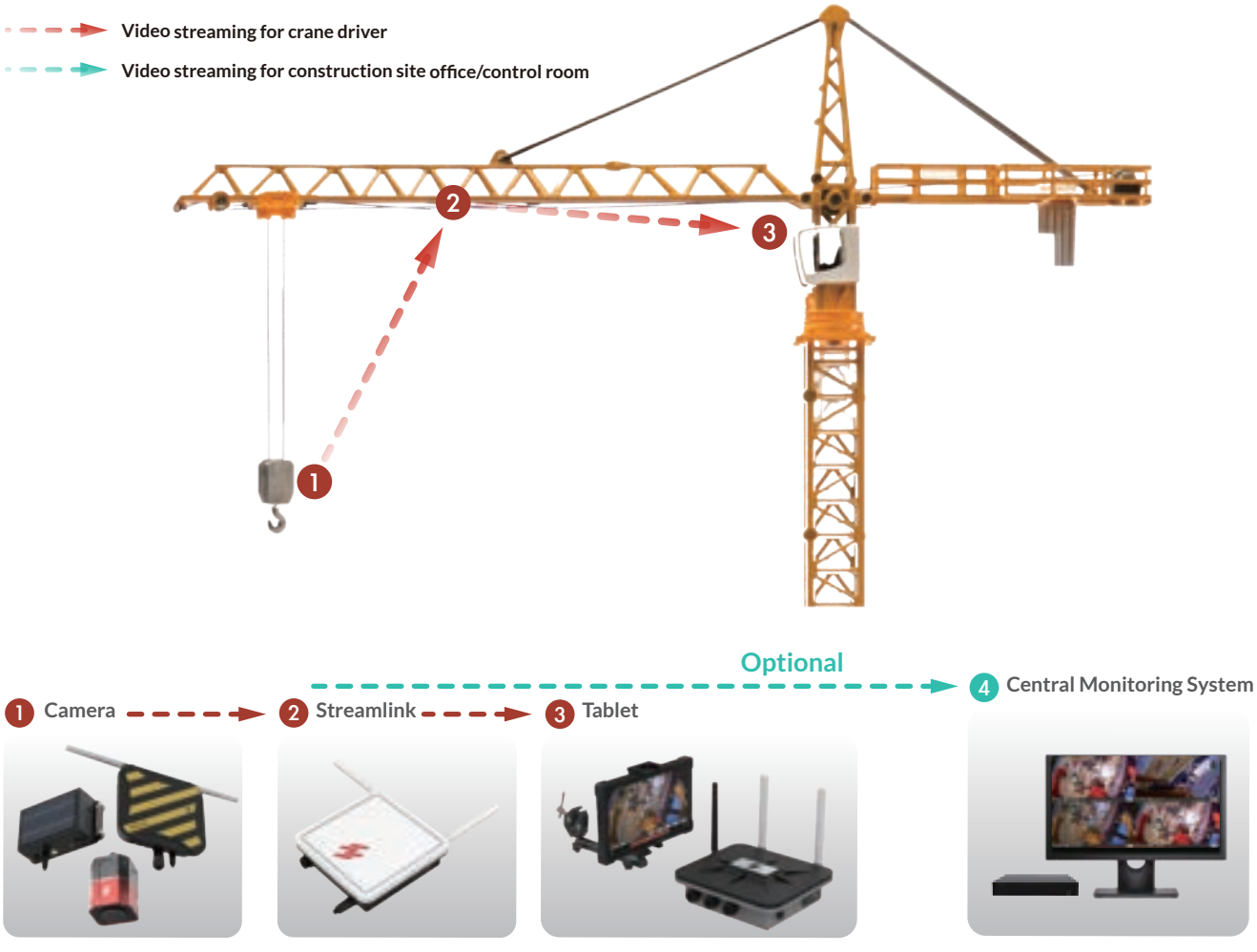


Product Overview

Hercules is ultra-modern wireless crane camera system built for lifting safety and worksite monitoring. The system can be easily deployed by following our step-by-step instructions in less than 1 hour.

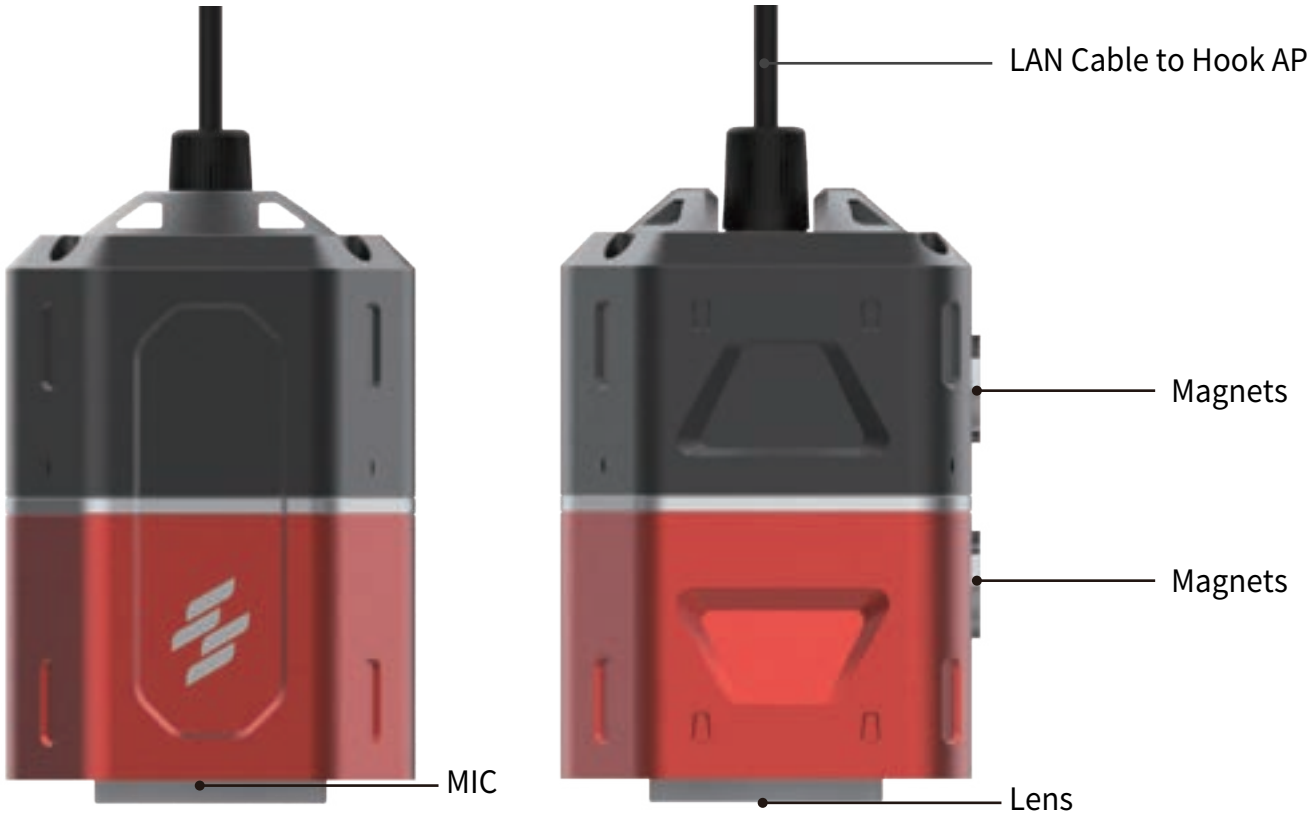
Hercules consists of 4 main parts, Hook-view Camera, StreamLink Station, Android Tablet, and Worksite Monitoring Network. The sound and live-view from camera installed on the crane's hook is transmitted and received wirelessly via the monitoring network to the Android Tablet inside the crane cabin.

This enables the crane operator to get a clear live audio-visual feed of the load and critical surroundings, that was impossible to see and hear without Hercules system. At the same time, manager and supervisor benefit from the system by having access of remote worksite monitoring that is accessible anytime and anywhere from tablet via Hercules App (Free download on iOS and Android).



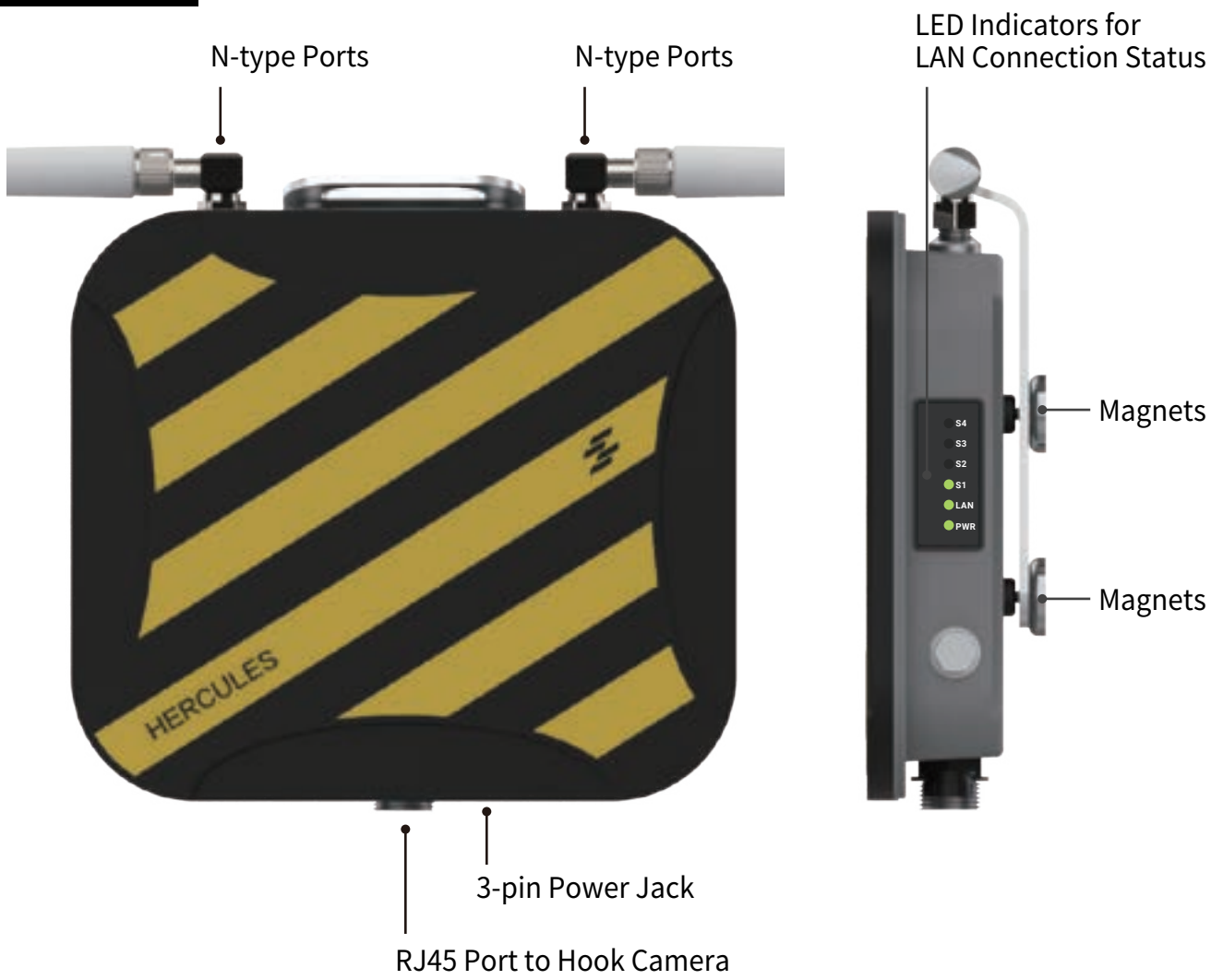
Product Information

1. Hook Camera



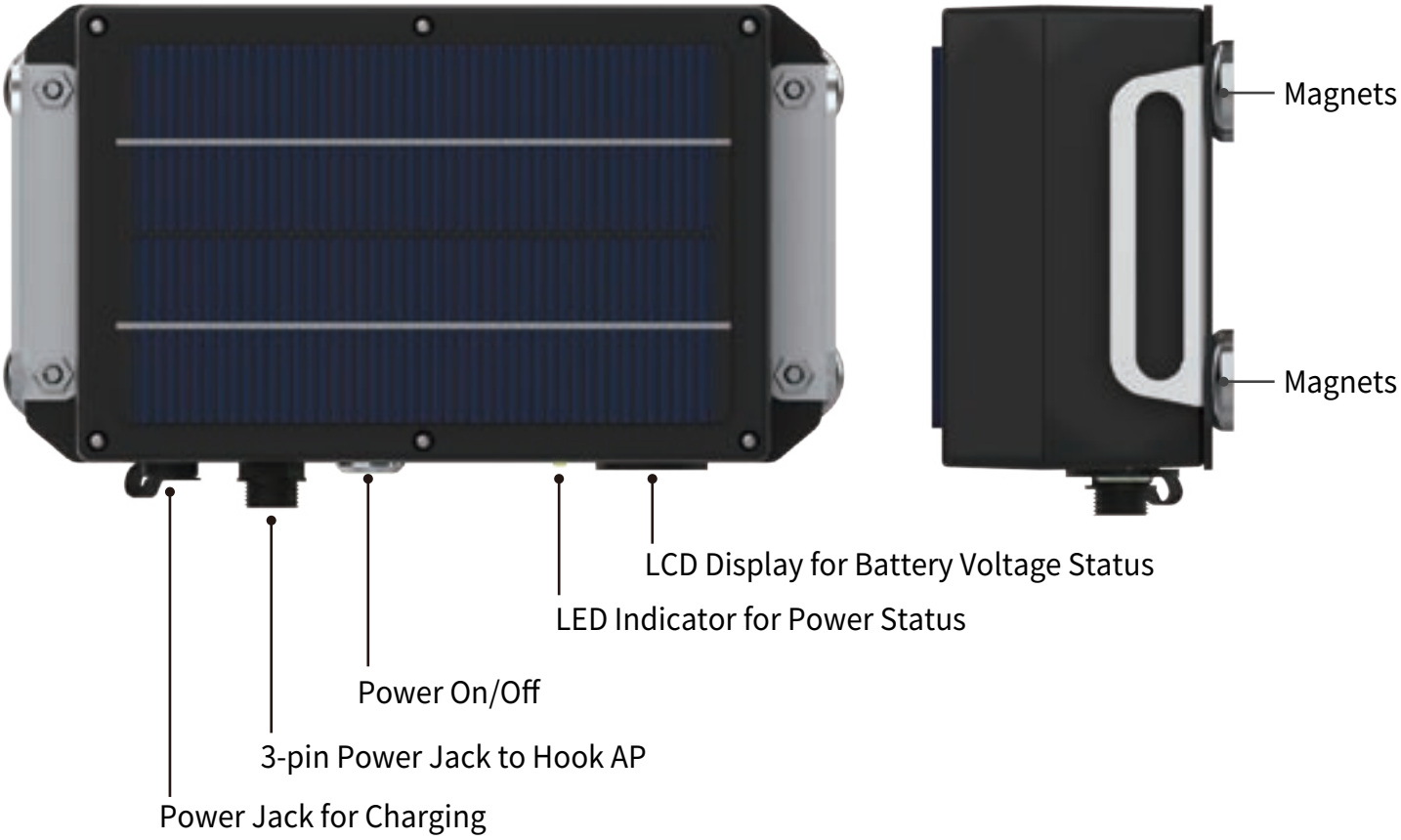
Camera	
Image Sensor	1/2.8" CMOS
Electronic Shutter	1/25s - 1/10000s
Lens	2.8mm
AOV	110°
Night Vision	Starlight Technology
Defog	Digital Defog
Dimension	180 x 122 x 122 mm (excluding cable)
Weight	2.5kg (excluding cable)
Video & Audio	
Resolution & Pixels	2K QHD 2304 x 1296, 3MP / HD 1280 x 720, 1MP
Compression Standard	H.265 / H.264 / MJPEG
MIC	Yes
Two-way Communication	No
Video Storage & Playback	4 full days (24hours per day)
Others	
Power Supply	DC 12V2A / POE (IEEE 802.3af)
Waterproof	IP67
API for Integration	ONVIF
Installation	Mounting by magnets
Operation Temperature	-10°C~60°C

2. Hook AP



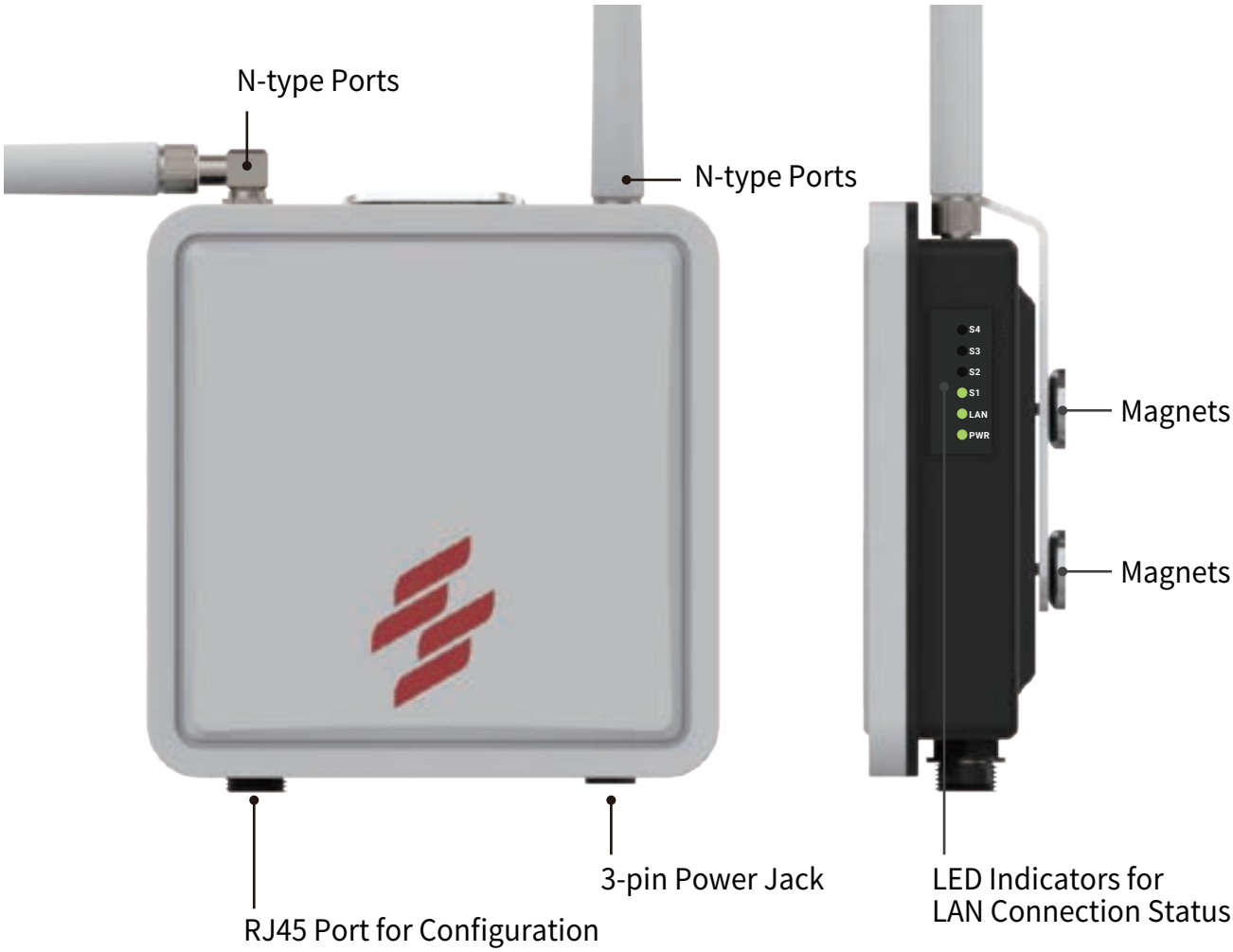
Dimension	265 x 265 x 82 mm (excluding antenna)
Weight	2.2kg
Wireless Technology	Wi-Fi 5GHz (802.11 ac a/n)
Antenna	Omnidirectional 5GHz x2
I/O port	Antenna connector x2 Ethernet port x1 (for Hook Camera) 3-pin power jack
LED Indicator	Power status x1 LAN connection status x1 Signal strength x4
Power Supply	DC 12V
Waterproof	IP67
Installation	Mounting by magnets
Operation Temperature	-10°C~60°C

3. Battery Pack



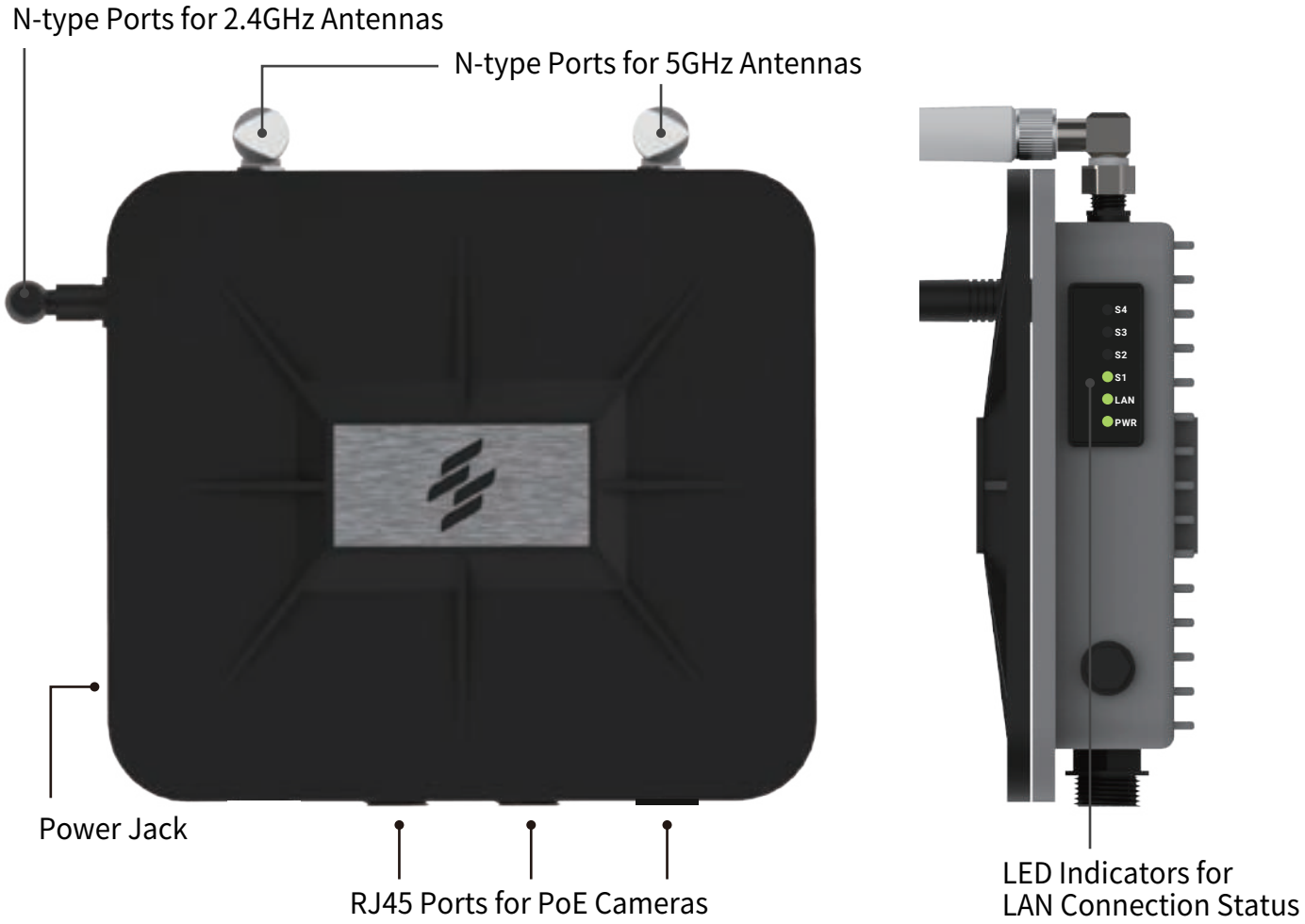
Dimension	272 x 146 x 91 mm
Weight	5kg
Battery Type	Molicel 26700 LiFePO4
Battery Volume	28000mAh
Power Input (Charging by Power Charger)	DC 14.3~14.6V2A
Power Output	12V4A (Max)
Working Hours	35 hours or above
Charging Time	14 hours (from 10V to 13.6V)
I/O port	One 3-pin power connector to Hook AP One power jack for charging
LCD Display	Battery voltage status
LED Indicator	Power status x1
Waterproof	IP67
Installation	Mounting by magnets
Operation Temperature	-20°C~75°C

4. StreamLink Station



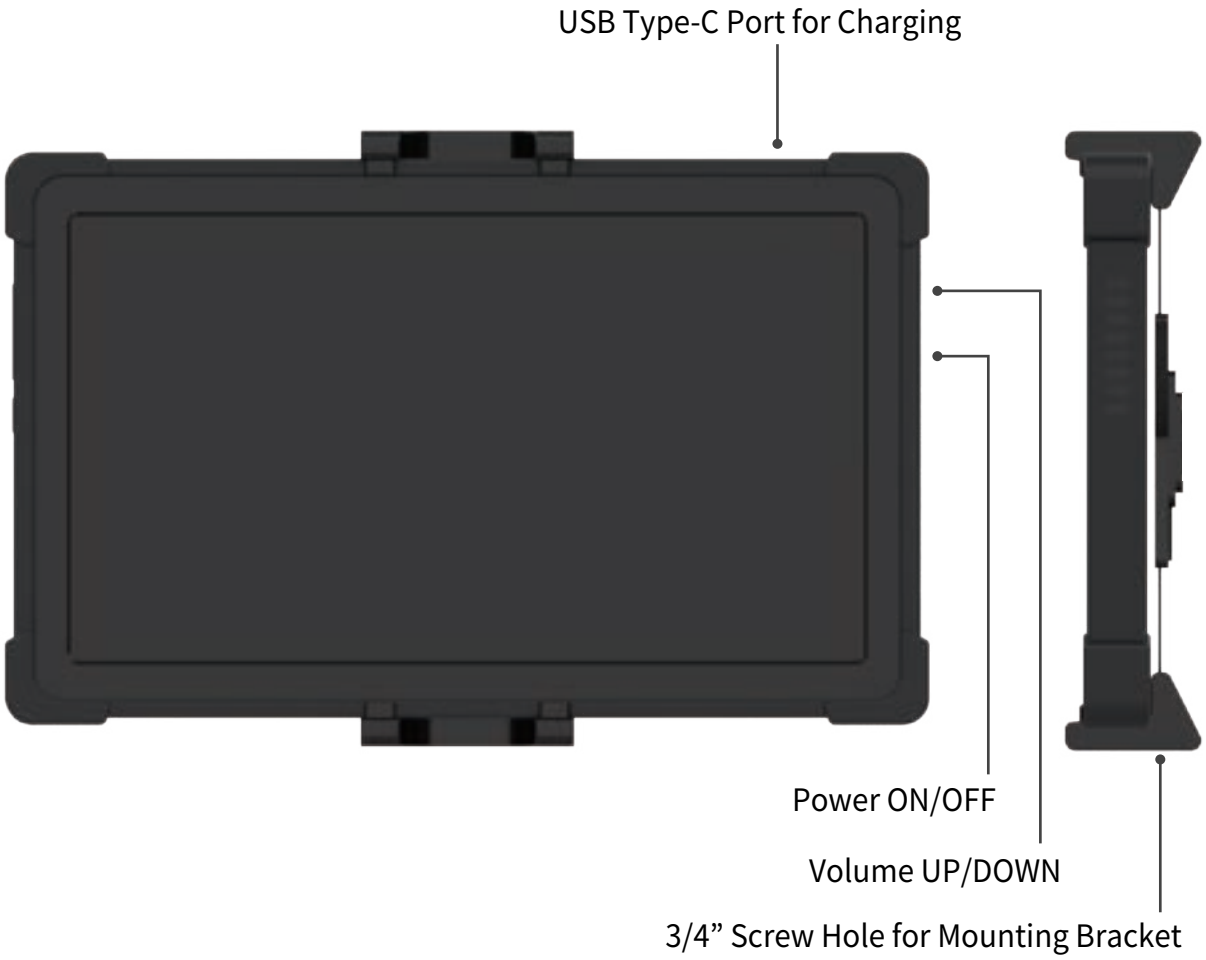
Dimension	230 x 230 x 93 mm (excluding antenna)
Weight	1.1kg
Wireless Technology	Wi-Fi 5GHz (802.11 ac a/n)
Antenna	Omnidirectional 5GHz x2
I/O port	Antenna connector x2 Ethernet port x1 (for config if necessary) 3-pin power jack
LED Indicator	Power status x1 LAN connection status x1 Signal strength x4
Power Supply	DC 24V
Waterproof	IP67
Installation	Mounting by magnets
Operation Temperature	-10°C~60°C

5. Cabin AP



Dimension	269 x 239 x 82 mm (excluding antenna)
Weight	2.6kg
Wireless Technology	Wi-Fi 5GHz (802.11 ac a/n) Wi-Fi 2.4GHz (802.11 b/g/n)
Antenna	Omnidirectional 5GHz x2 Omnidirectional 2.4Ghz x1
I/O port	Antenna connector x3 Ethernet port x3 (for POE cameras) Power jack
LED Indicator	Power status x1 LAN connection status x1 Signal strength x4
Power Supply	DC 52V1.25 A
Waterproof	N/A
Installation	Mounting by magnets
Operation Temperature	-10°C~60°C

6. Android Tablet

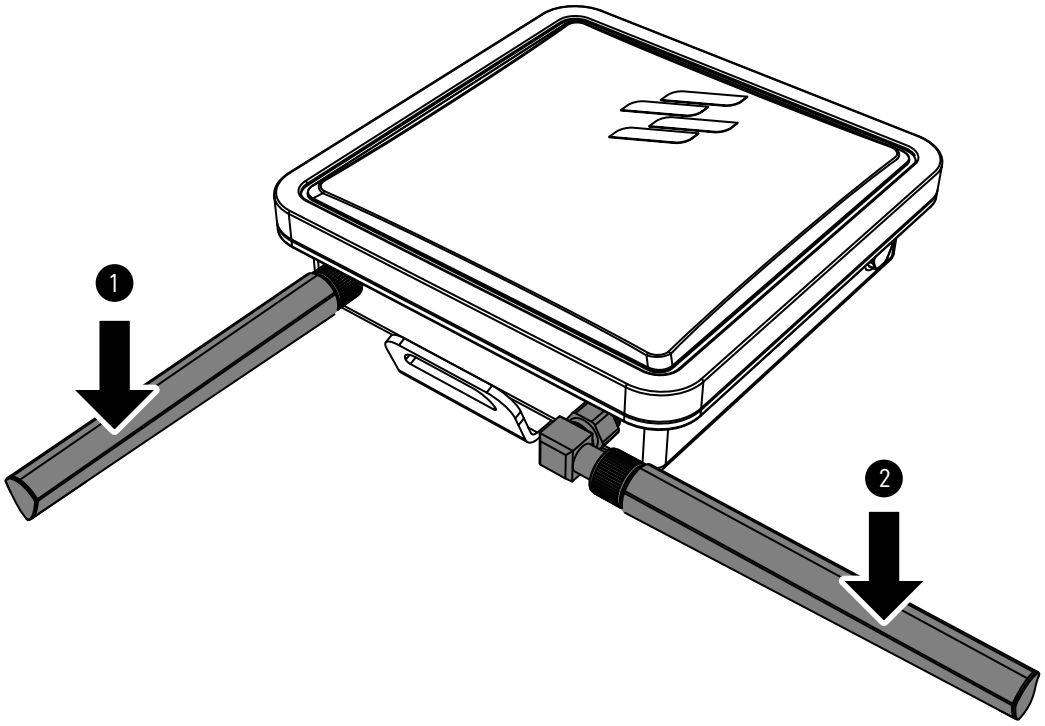


Dimension	247 x 193 x 40 mm (including TPU case & holder)
Weight	700g
OS	Android 10
Display	10” IPS Touch Screen
Resolution	1280 x 800
Wireless Connectivity	Wi-Fi 2.4GHz (802.11 b/g/n)
CPU	Octa-core Processor
Memory	2G RAM + 32G ROM
Power Supply	DC 5V2A
Installation	Mounting by bracket with clamp
Operation Temperature	0°C~45°C

Installation

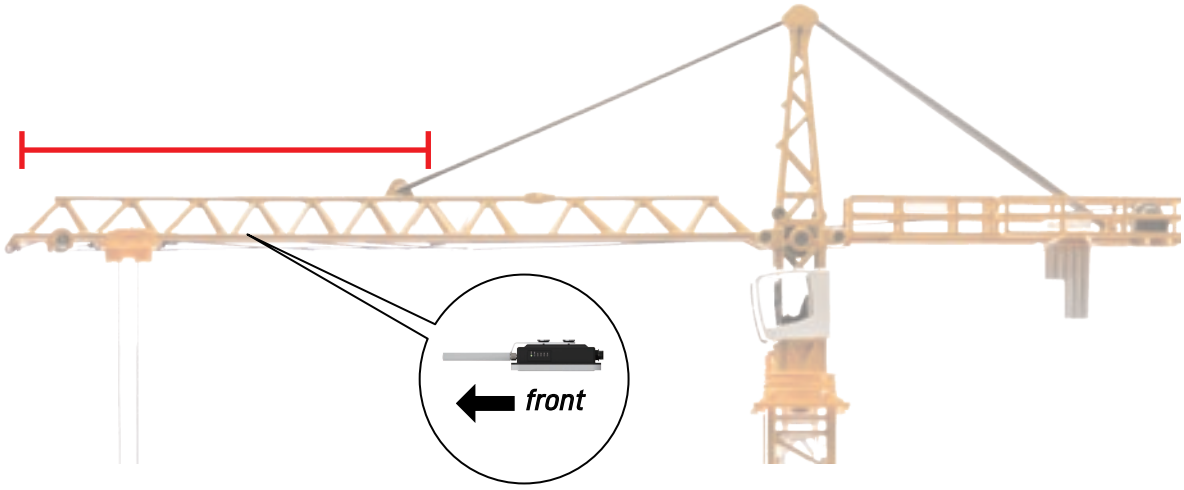
StreamLink Station Set-up

1 Install one 5 GHz omnidirectional antennas on the N-type port of StreamLink station.
2 Install another 5 GHz omnidirectional antenna on the 90° angle antenna transmitter which is pre-installed on the N-type port of StreamLink station.

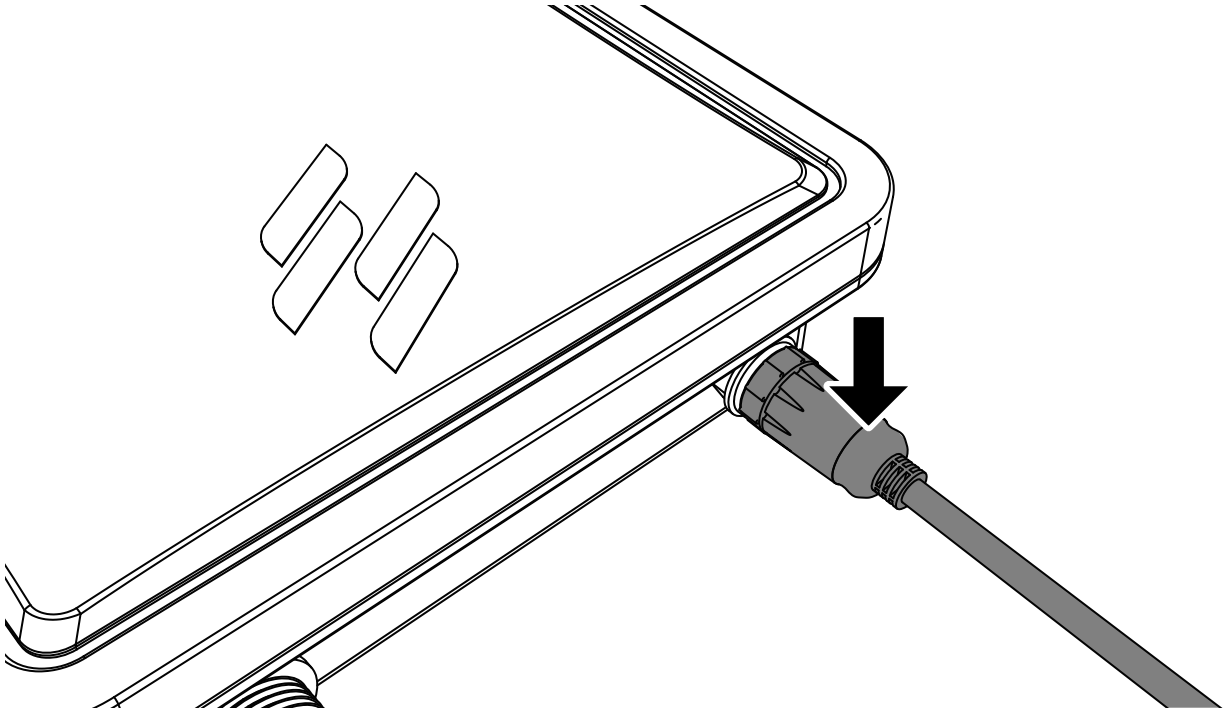


3 Wipe clean the crane jib surface.
4 Mount the StreamLink station on the crane's jib surface and then use safety rope to lock the StreamLink station to the jib for safety.

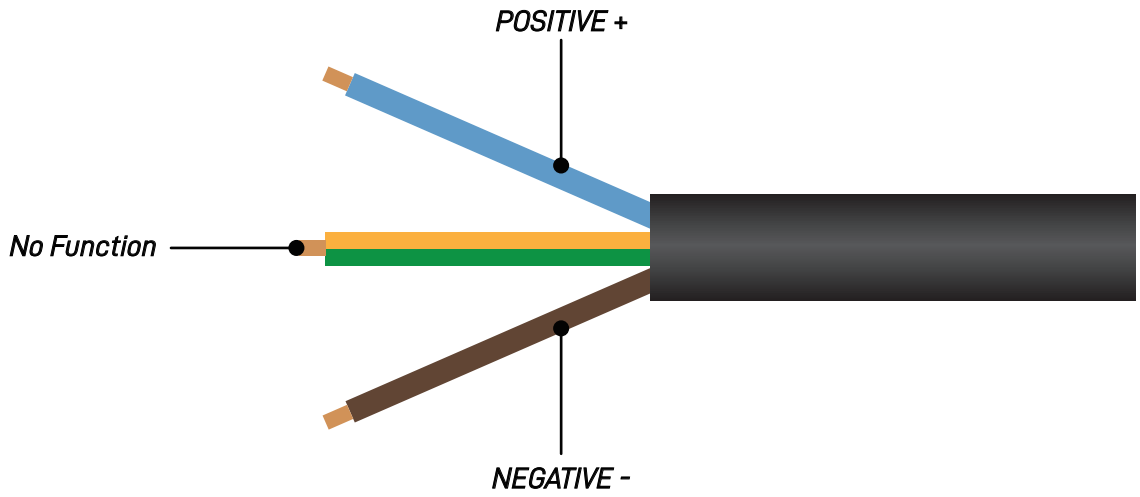
- StreamLink station should be placed as least half of the jib length and closer to the crane hook.
- One antenna should point to the front direction and another one point to the left or right direction. These two should be parallel to the ground.



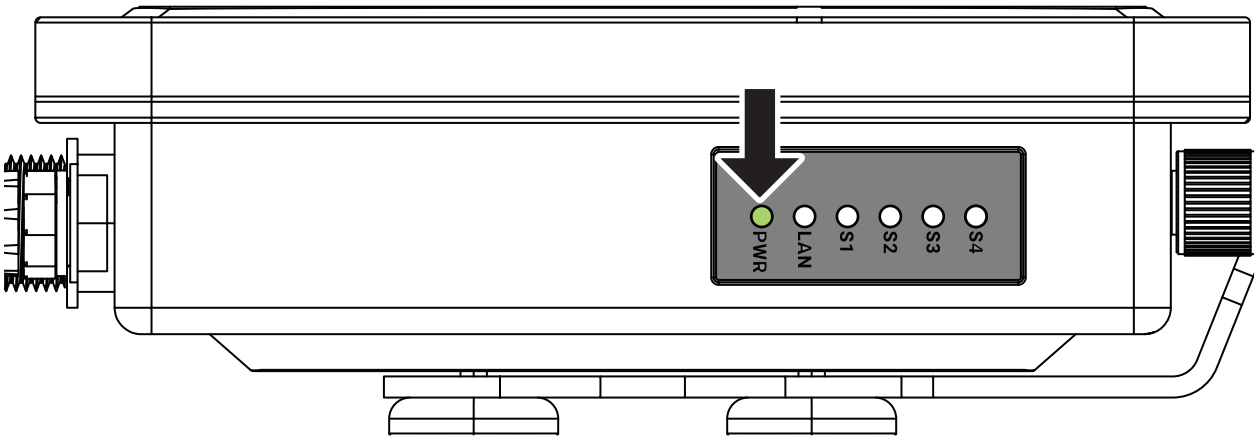
5 Connect the 3-pin power cord (50 meters) to the StreamLink Station.



6 Do wire stripping for the power cord and then connect to your **DC 24V** power source.



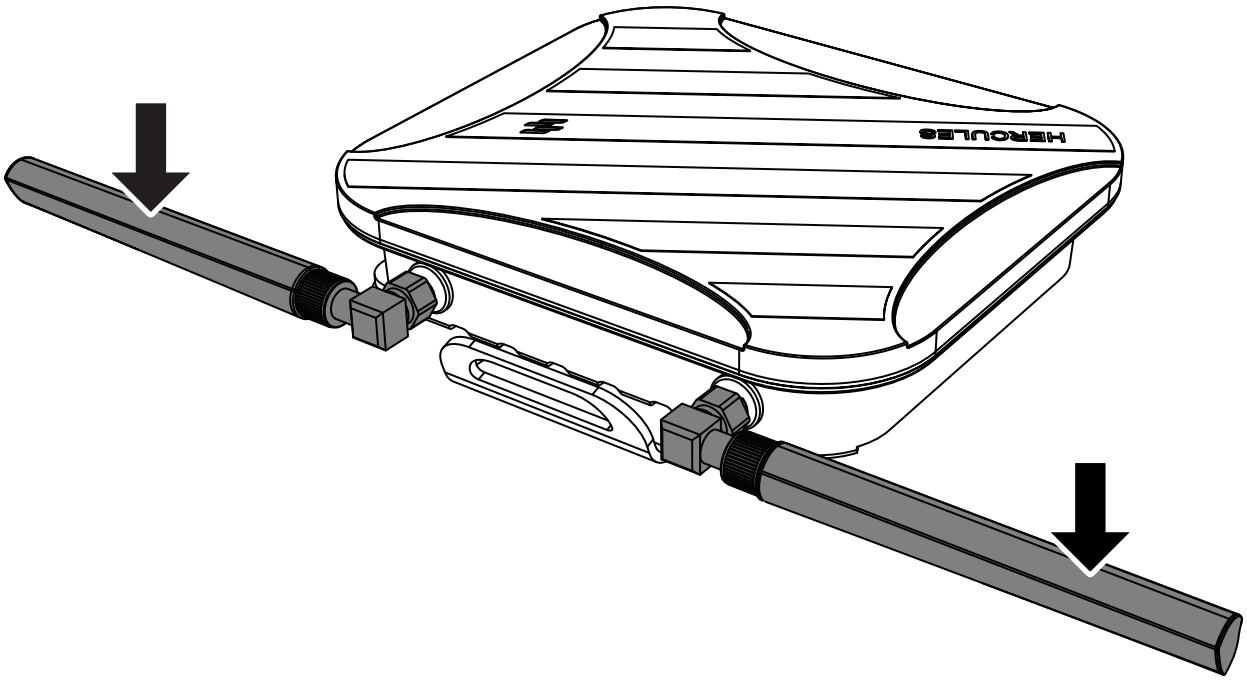
7 Check the LED indicator on the StreamLink Station. If the PWR becomes green steady, it means the StreamLink Station is boot-up successfully.



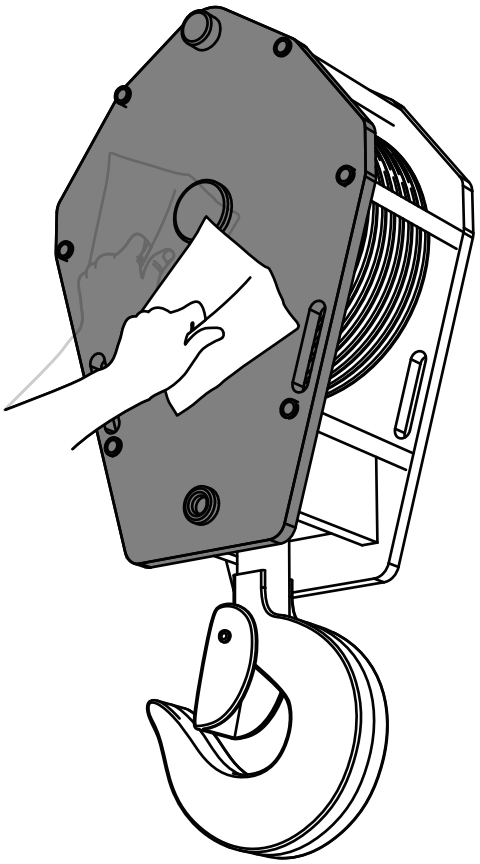
	Description	Definition
PWR	Power status	OFF: No power Steady Green: Power ON
LAN	Data transmission status of configuration port	OFF: No data transmission Flashing Green: Data transmission is on-going
S1, S2, S3 & S4	Shows wireless signal strength status between StreamLink station and other connected devices.	OFF: No signal S1 Steady Green: Signal strength very bad S2 Steady Green: Signal strength bad S3 Steady Green: Signal strength normal S4 Steady Green: Signal strength good

Hook Camera, Hook AP & Battery Pack Set-up

1 Install two 5 GHz omnidirectional antennas on the 90-degree angle antenna transmitter which is pre-installed on the N-type port of Hook AP



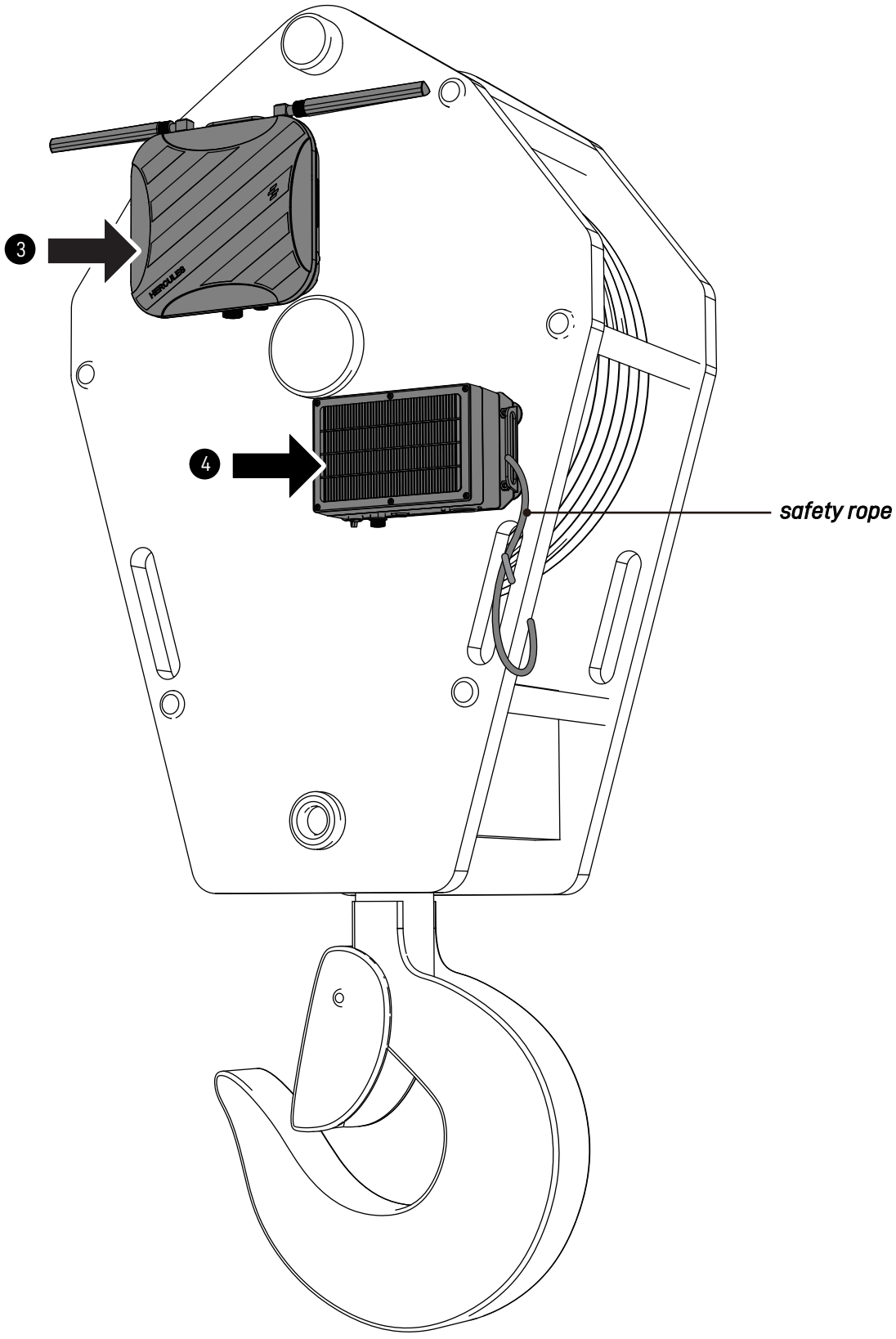
2 Wipe clean the crane hoist surface.



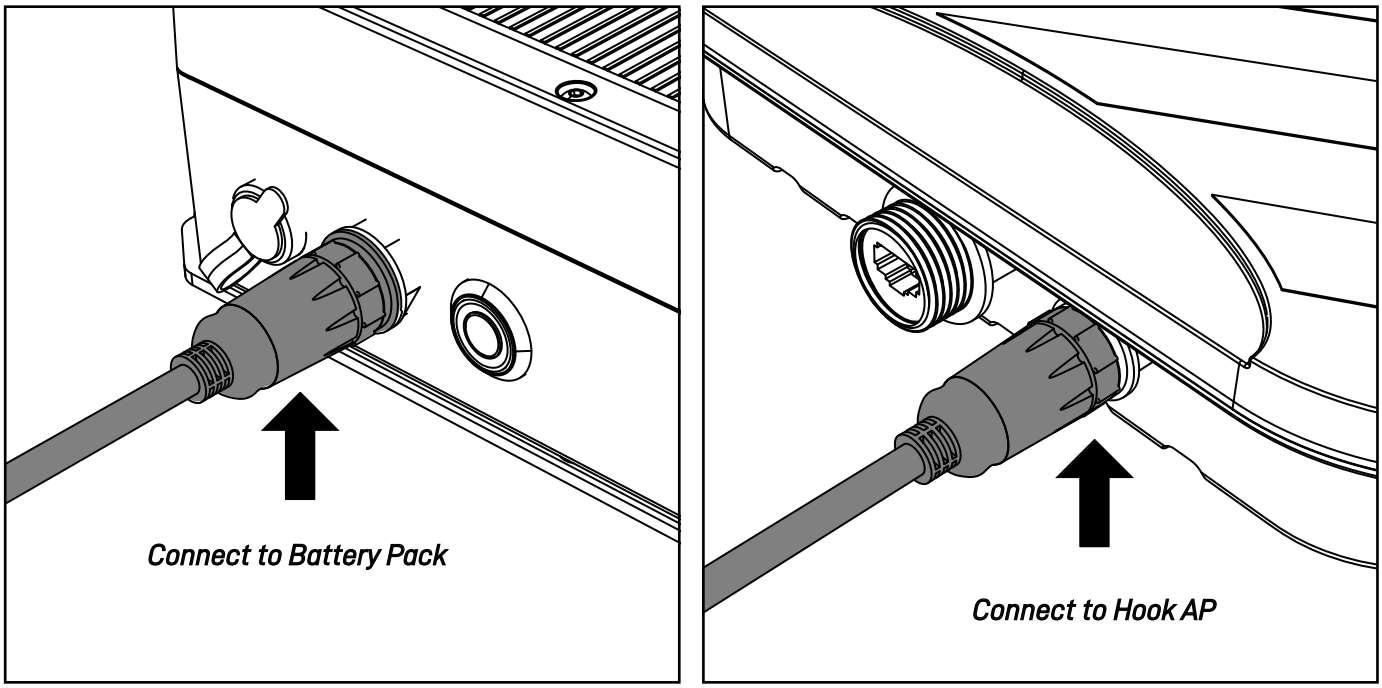
3 Mount the Hook AP on the crane's hoist surface and then use safety rope to lock the Hook AP to the crane hoist for safety

Note: For better wireless signal quality, two antennas of Hook AP should be parallel to the ground.

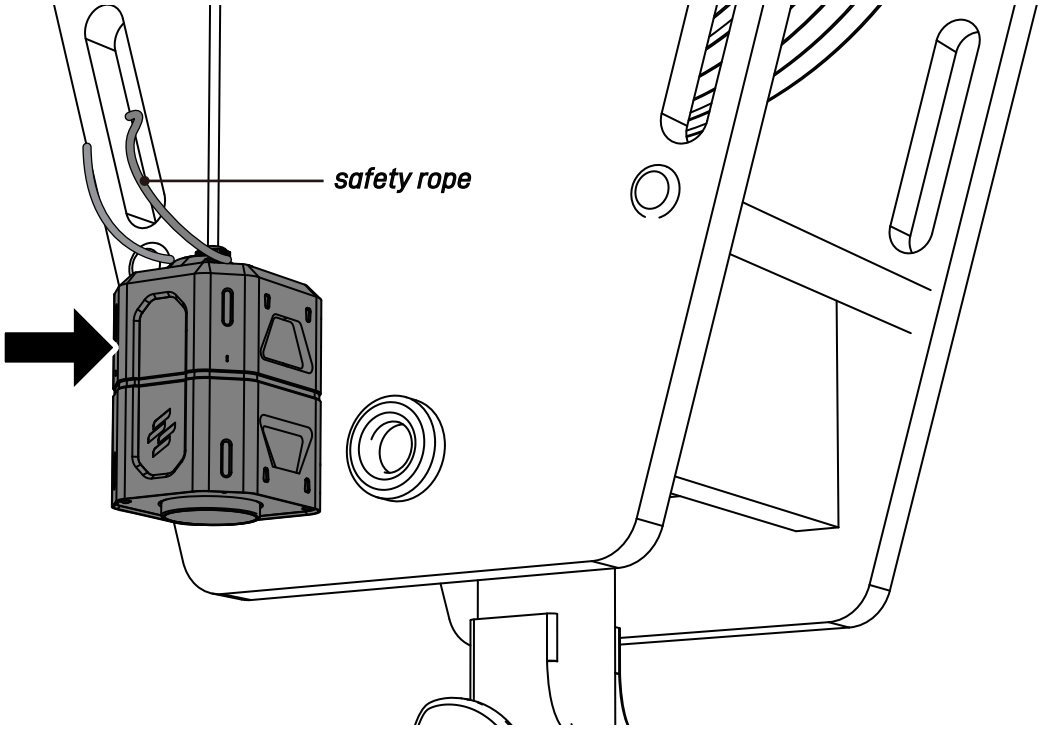
4 Mount the battery pack on the crane's hoist surface and then use safety rope to lock the battery pack to the crane hoist for safety.



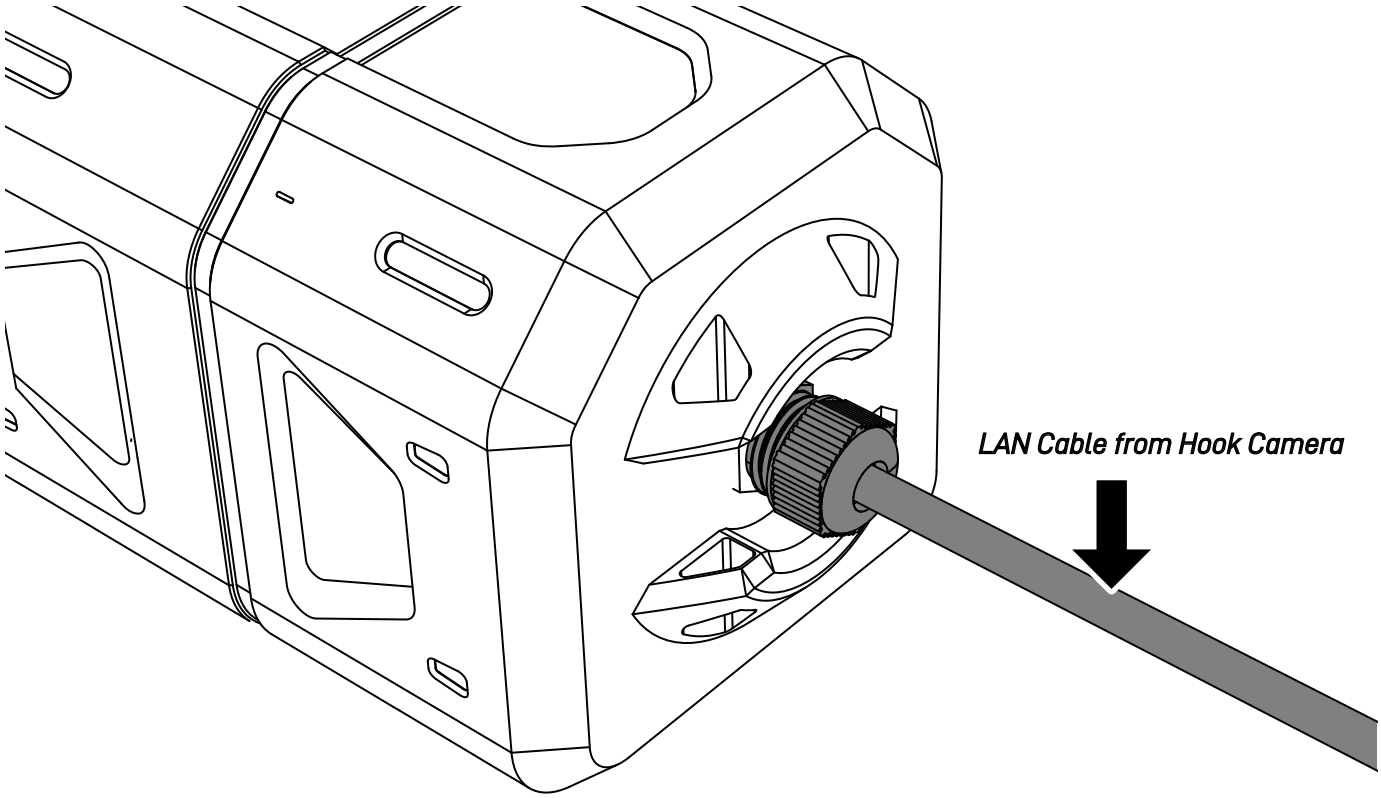
5 Connect the battery pack and the Hook AP using 1.2 meters power cable.

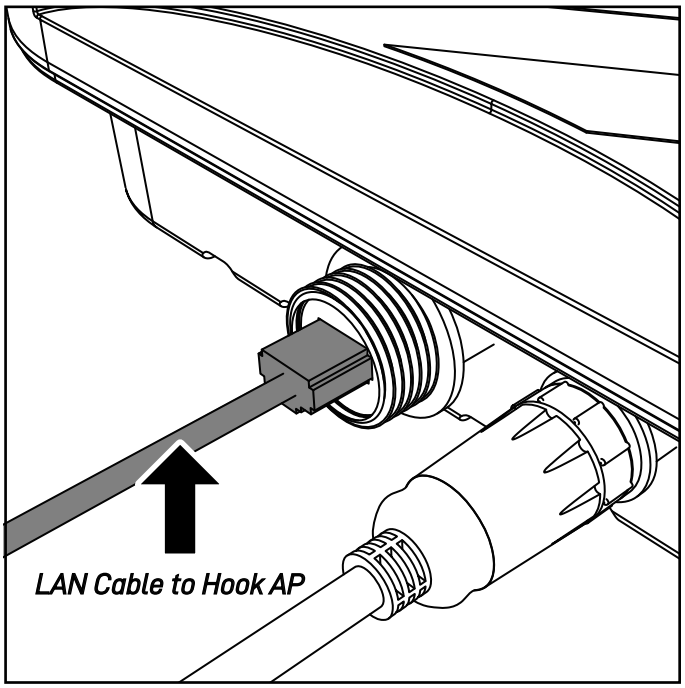


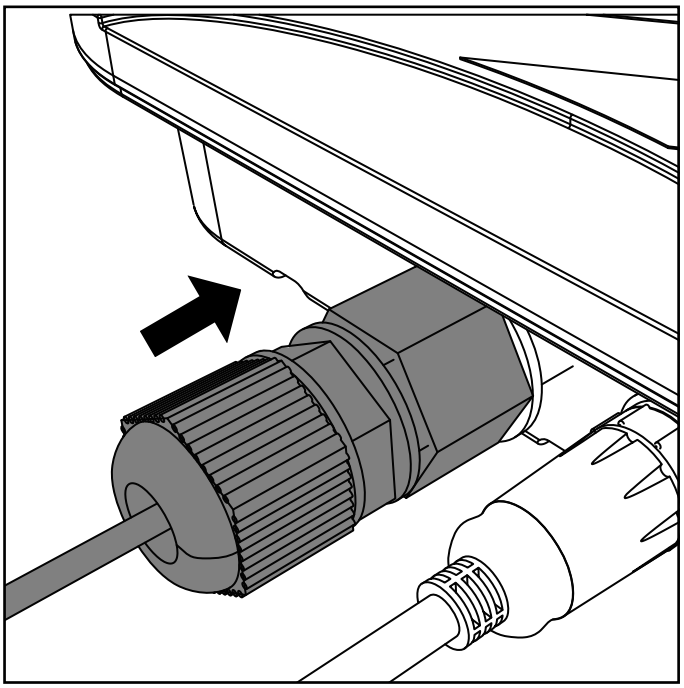
6 Mount the Hook Camera on the crane's hoist surface and then use safety rope to lock the Hook Camera to the crane hoist for safety.



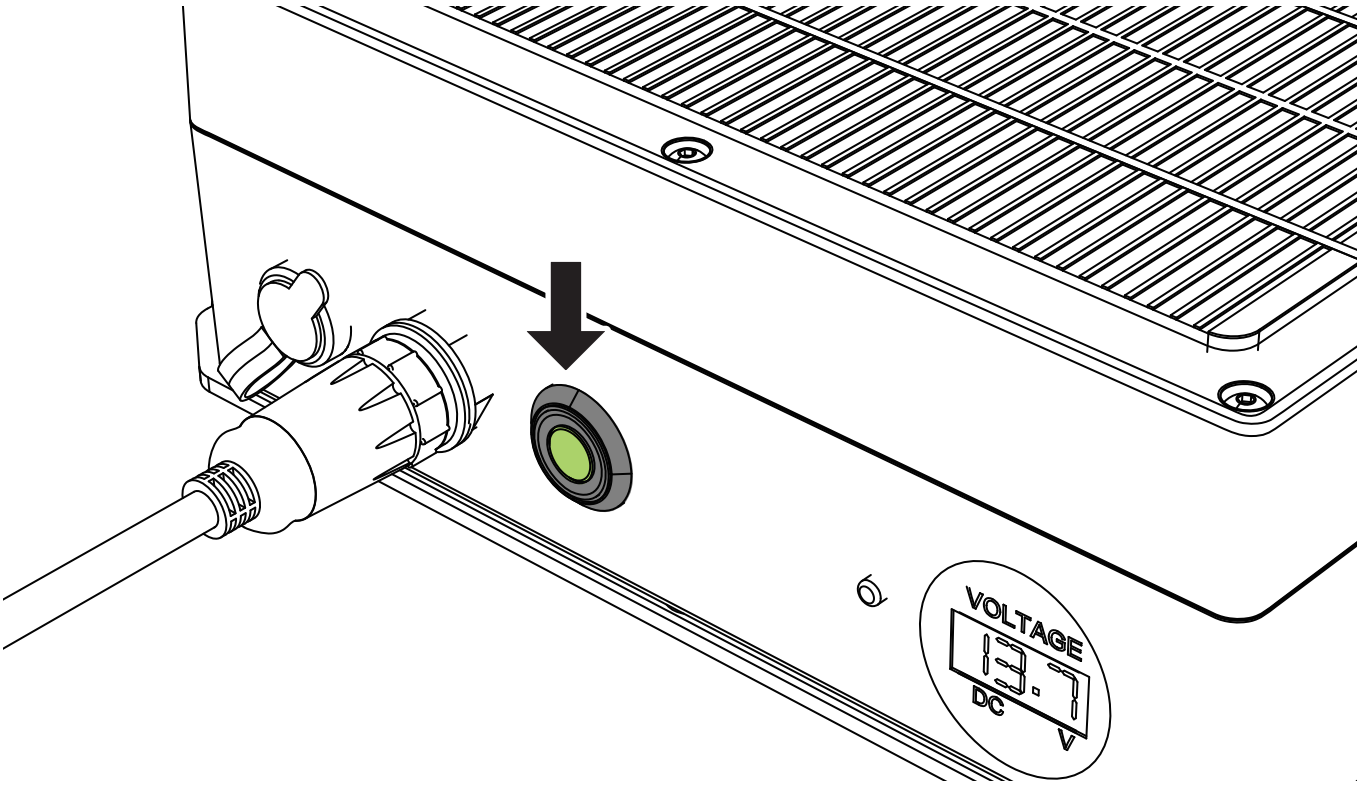
7 Connect the Hook Camera and the Hook AP using waterproof LAN cable.



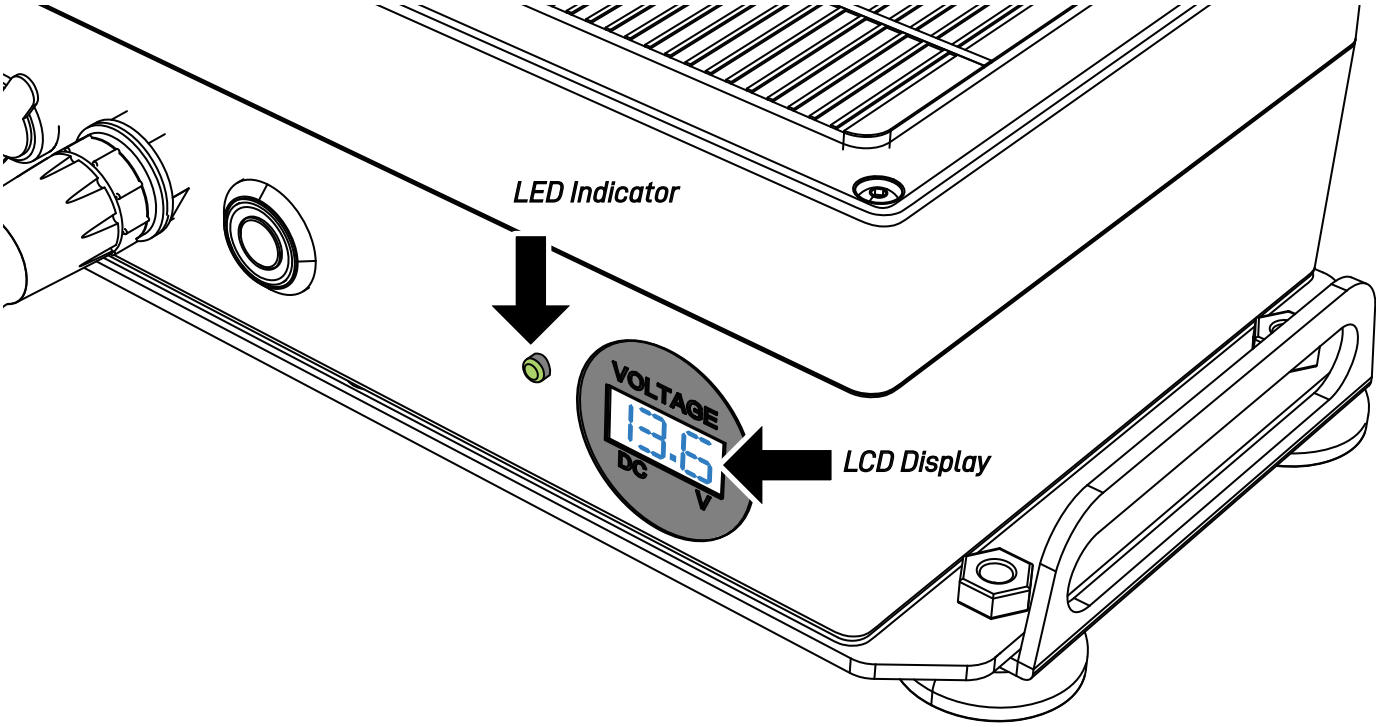




8 Press the power ON button to supply battery power to Hook AP and Hook Camera.

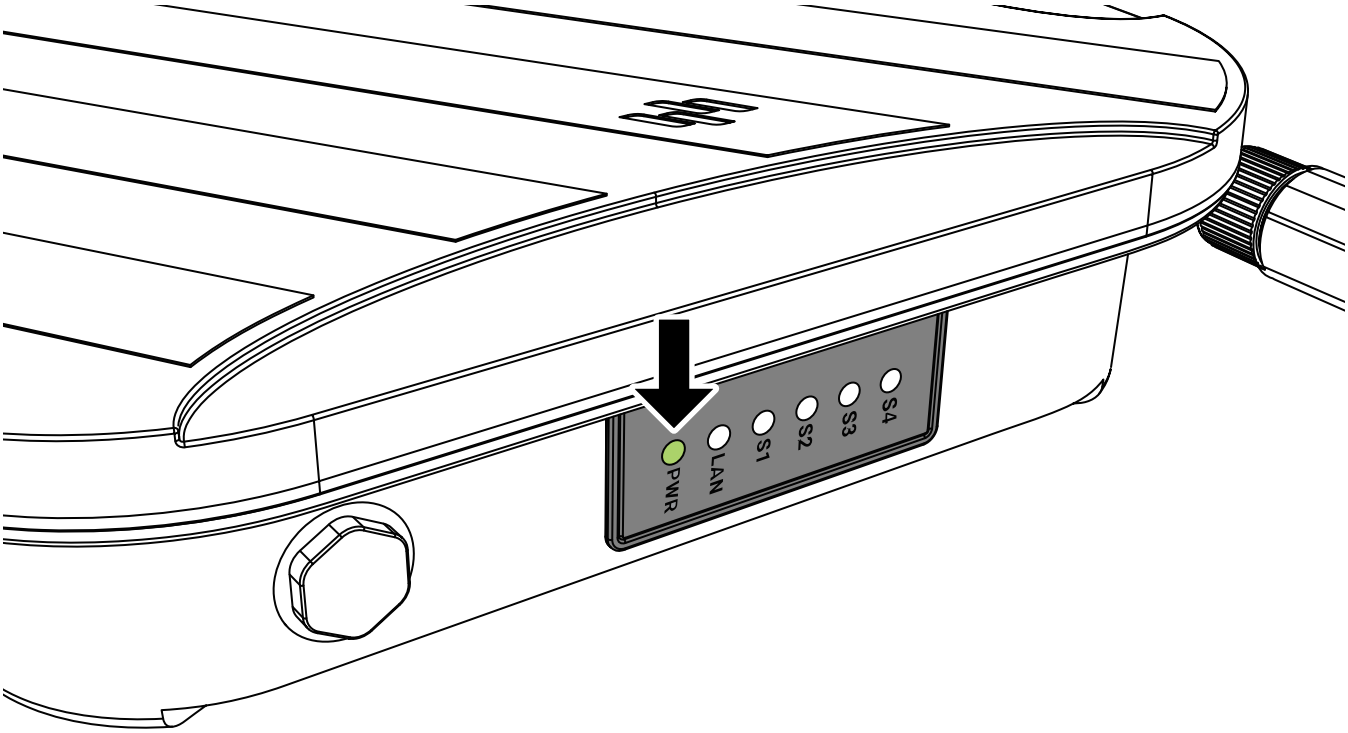


9 Check the LCD display and LED indicators on the battery pack.



	Description	Definition
LCD Display	Voltage information	>=14V: Full charged <=12V: Low voltage, camera will shutdown
LED Indicator	Battery life status	OFF: No power Steady Red: Battery life is less than 3 hours. Steady Green: Battery life is longer than 3 hours.

10 Check the LED indicator on the hook AP. If PWR is green steady, it means the hook AP is boot-up successfully

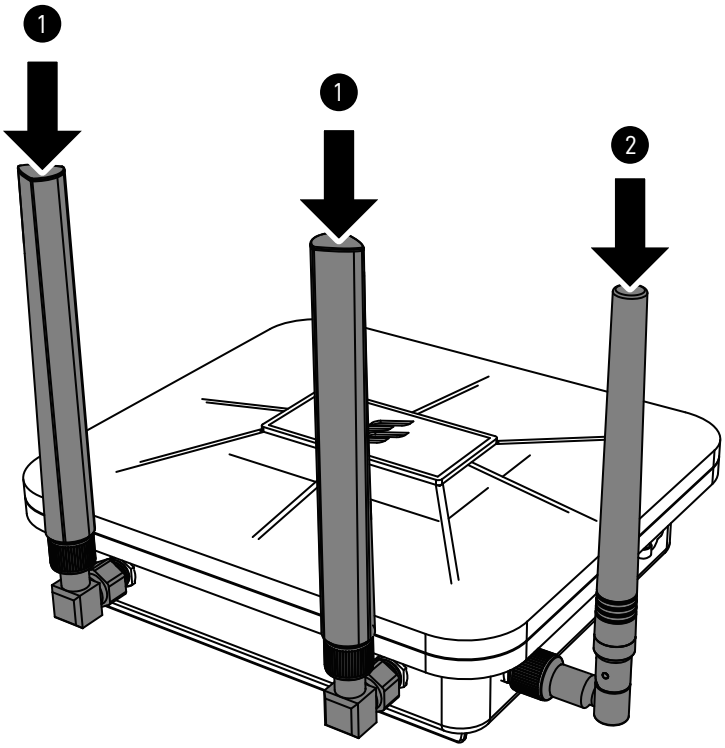


	Description	Definition
PWR	Power status	OFF: No power Steady Green: Power ON
LAN	Data transmission status	OFF: No data transmission Flashing Green: Data transmission is on-going
S1, S2, S3 & S4	Wireless signal strength between Hook AP and StreamLink Station	OFF: No signal S1 Steady Green: Signal strength very bad S2 Steady Green: Signal strength bad S3 Steady Green: Signal strength normal S4 Steady Green: Signal strength good

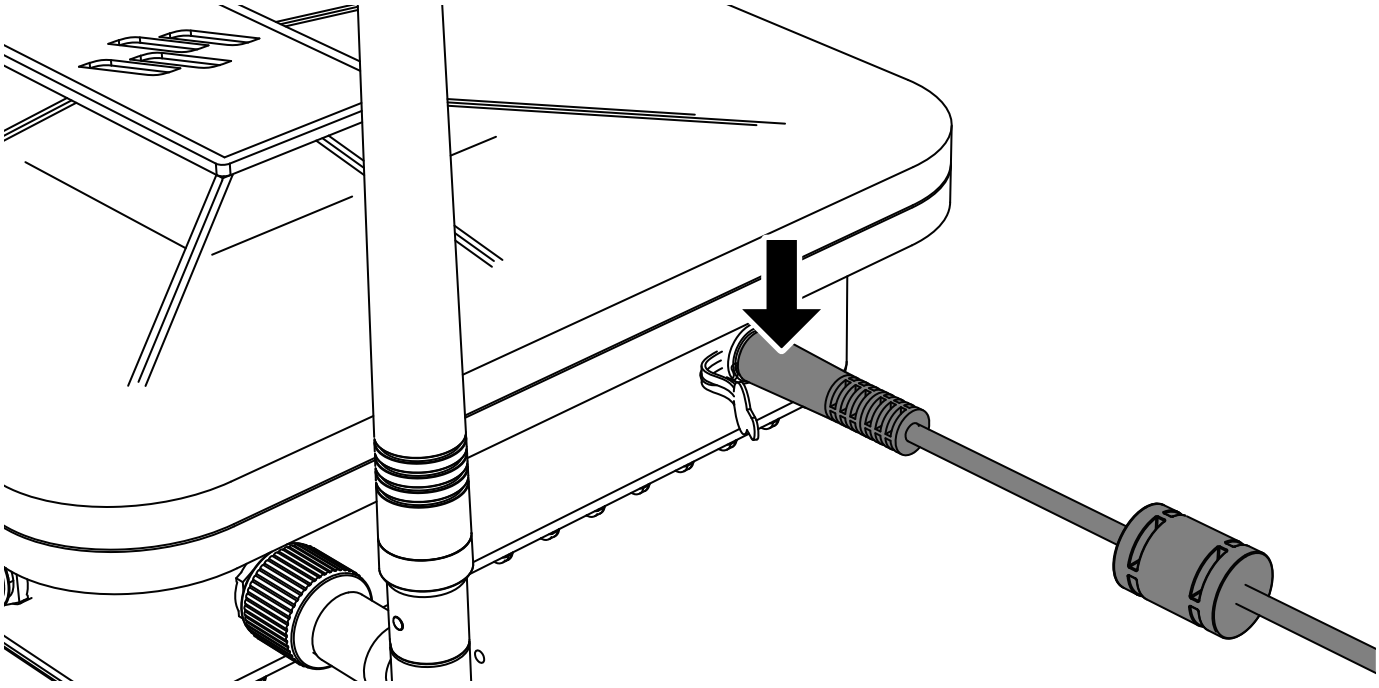
Cabin AP and Android Tablet Set-up

1 Install two 5 GHz omnidirectional antennas on the 90-degree angle antenna transmitters which is pre-installed on the N-type ports on the rear side of cabin AP.

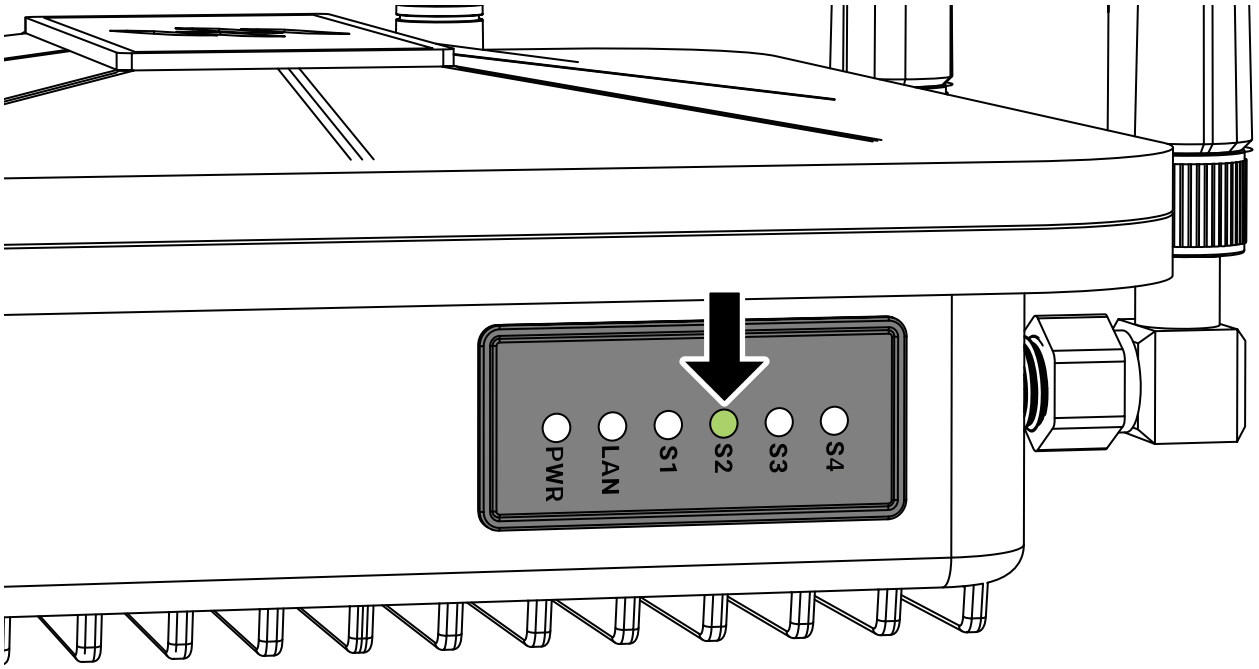
2 Install one 2.4 GHz omnidirectional antenna to the port on the right side of cabin AP.



3 Connect the cabin AP, power cable and power adapter, then plug the power.



4 Check the LED indicator on the cabin AP.



	Description	Definition
PWR	Power status	OFF: No power Steady Green: Power ON
LAN	Data transmission status	OFF: No data transmission Flashing Green: Data transmission is on-going
S1, S2, S3 & S4	Wireless signal strength between Cabin AP and StreamLink Station	OFF: No signal S1 Steady Green: Very bad signal strength S2 Steady Green: Bad signal strength S3 Steady Green: Normal signal strength S4 Steady Green: Good signal strength

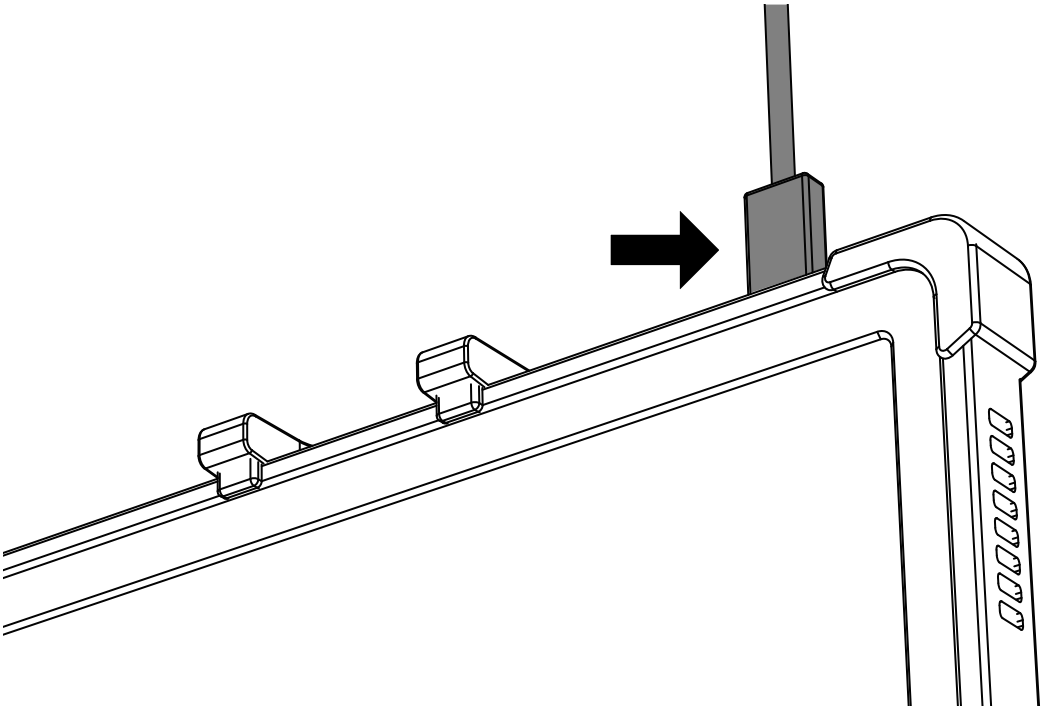
Place Cabin AP next to crane operator seat

Place monitor where it is visible to crane operator

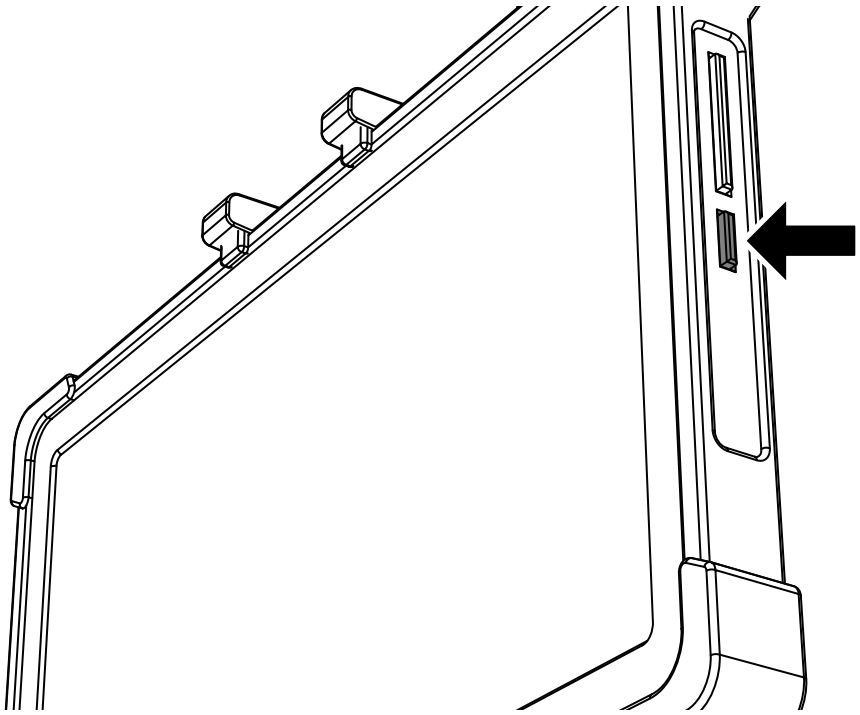
5 Take the Android Tablet and remove the screen protector.

Note: For better wireless signal quality, the distance between Android Tablet and Cabin AP should be less than 8 meters.

6 Connect the Android Tablet, Charging Cable and Power Adapter, and then plug the power.

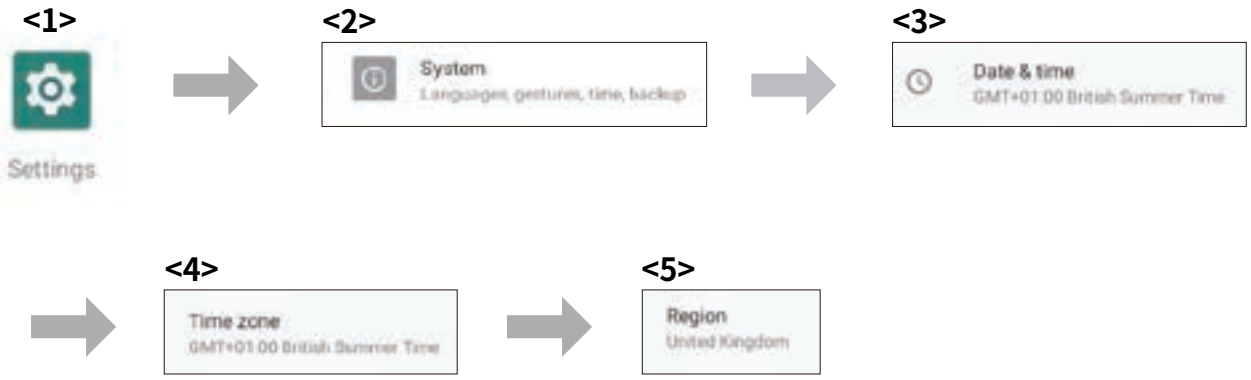


7 Power ON the Android Tablet.



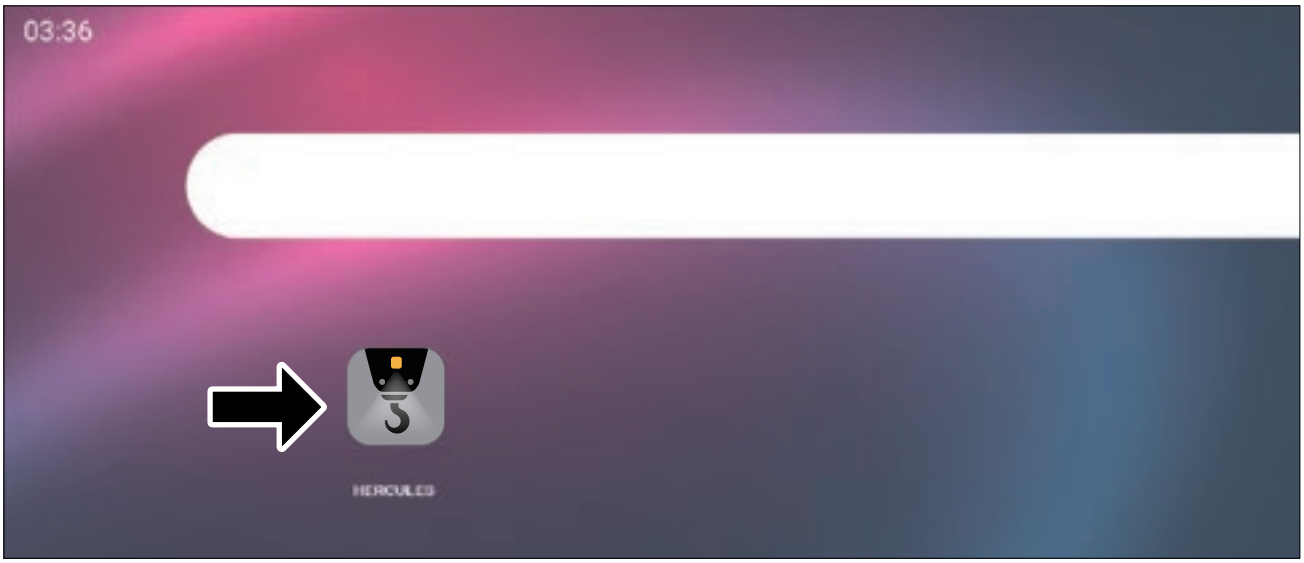
8 After boot-up, check the Wi-Fi status. If the SSID "2.4_Hercules_XXX" (XXX = 001 ~ 999) is connected, it means this Android Tablet can receive the video streaming from the Hook Camera now.

9 Set the date and time of Android Tablet to your local time before using Hercules App: Swipe up -> Select "SETTINGS" icon -> Go to "SYSTEM" -> Set your local time in "DATE & TIME".



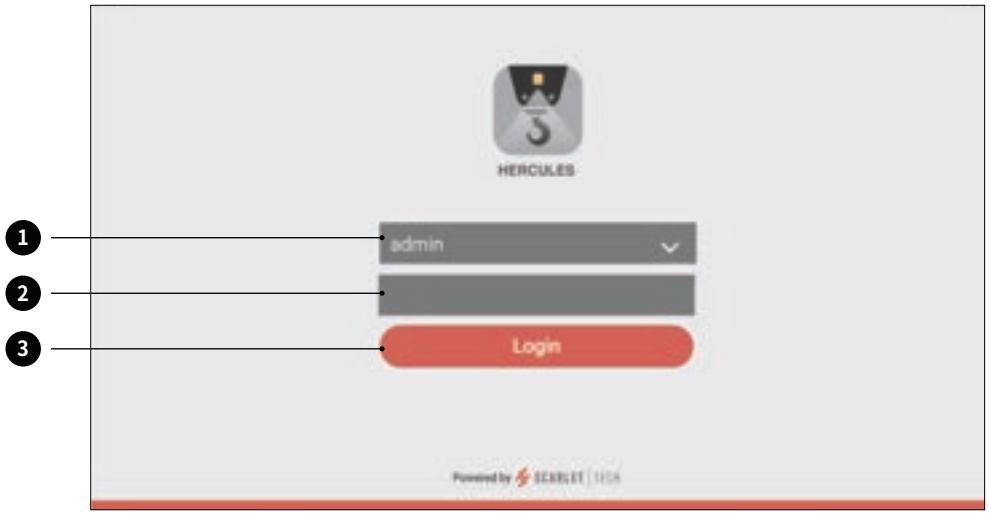
10 Launch the Hercules App and then you can start the operation.

Note: After adding your camera to Hercules APP, please first sync the camera date & time with the Android Tablet via APP (Please do this first).



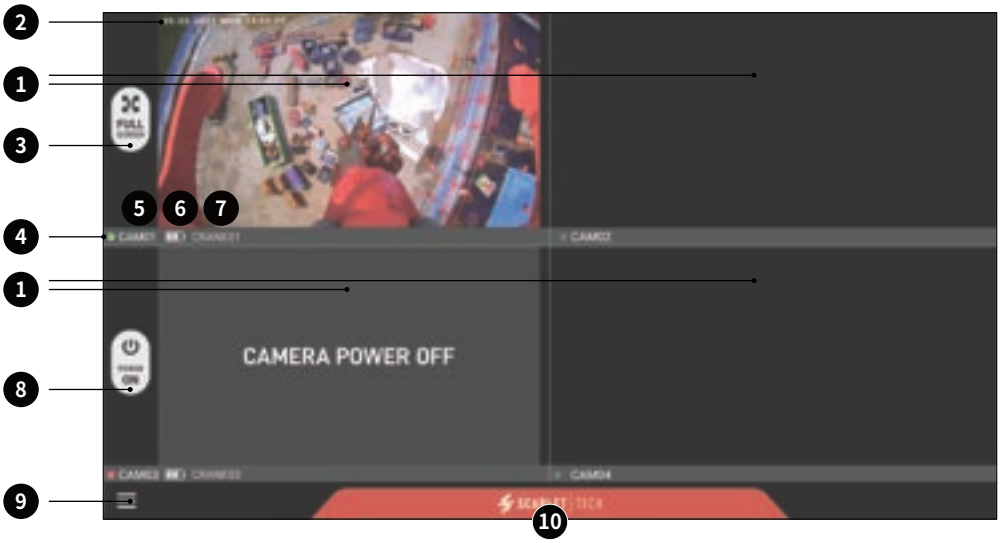
Hercules App

Login Page



Item	Name	Description
1	Account	Select “admin” or “operator” account Account Access: • admin: Live-view, camera configuration and account management • operator: Live-view
2	Password	Input the password of Hercules App
3	Login	Select account and input password, then press login

Home Page

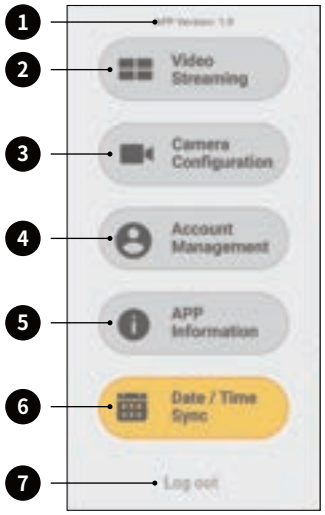


Item	Name	Description
1	Video Aera	Video Streaming: Real-time video streaming for this camera Camera Power Off: This camera is connected but in power-off mode No Camera: No camera is connected in this channel
2	Camera Date & Time	Date & time of this camera
3	Full Screen	Switch to full screen of this camera
4	Camera Status	Green: Video streaming on Red: Camera is off for power saving Grey: No camera
5	CAM #	Camera number of this channel (4 channels in total)
6	Power Status	Battery level icon: if the camera is powered by battery pack > 25 hours > 15~24 hours > 4~ hours < 3 hours (a low battery notification will pop-up every hour to remind users) : If the camera is powered by PoE *PoE (Power over Ethernet) means the power supplied directly from the Ethernet connection of Hercules system. Users do not need to charge from power plug
7	Camera Name	Camera name assigned by admin account
8	Camera Power ON	Power ON to start video streaming
9	Menu	Show the Menu to go to other pages
10	Home Page	Back to Home page

Single Camera Page

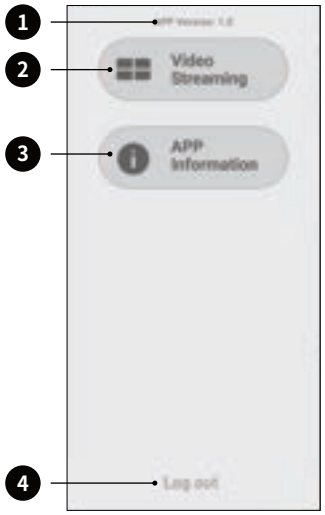
Item	Name	Description
1	Video Area	Real-time video streaming for this camera
2	Camera Date & Time	Date & time of this camera
3	Camera Status	Green: Video streaming on Red: Video streaming off Grey: No camera
4	CAM#	Camera number of this channel
5	Power Status	Battery Level icon: If the camera is powered by battery pack > 25 hours > 15~24 hours > 4~ hours < 3 hours, (a low battery notification will pop-up every hour to remind users) : If the camera is powered by PoE *PoE (Power over Ethernet) means the power supplied directly from the Ethernet connection of Hercules system. Users do not need to charge from power plug
6	Camera Name	Camera name assigned by admin account
7	Screenshot	Take a picture of current screen
8	Current Video Resolution	2K icon: Video quality 2304 x 1296 (default) HD icon: 1280 x 720
9	Volume Up & Volume Down	Volume Up icon: Increase the video volume Volume Down icon: Decrease the video volume
10	Menu	Show the Menu to go to other pages
11	Home Page	Back to Home page

Menu (Admin Account)



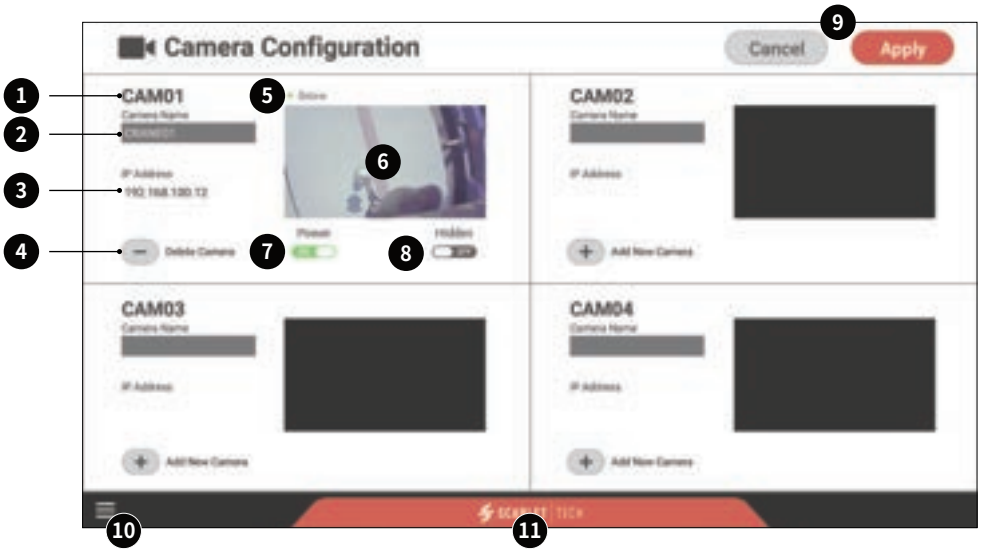
Item	Name	Description
1	App Version	Show the version of the Hercules App
2	Video Streaming	Go to Home page
3	Camera Configuration	Go to Camera Configuration page
4	Account Management	Go to Account Management page
5	App Information	Go to App Information page
6	Date / Time Sync	Synchronize the date and time of connected camera with this Android Tablet Note: Before pressing the sync button, please make sure the date and time of the Android Tablet is correct
7	Log out	Log out from current account

Menu (Operator Account)



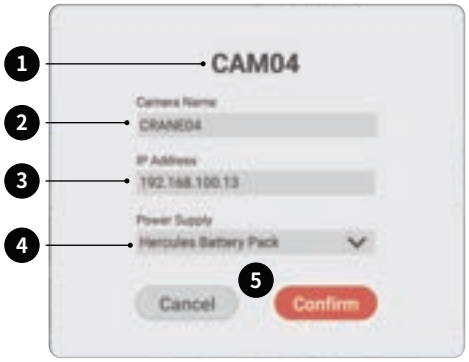
Item	Name	Description
1	App Version	Show the version of Hercules App
2	Video Streaming	Go to Home page
3	App Information	Go to App Information page
4	Log out	Log out from current account

Camera Configuration Page



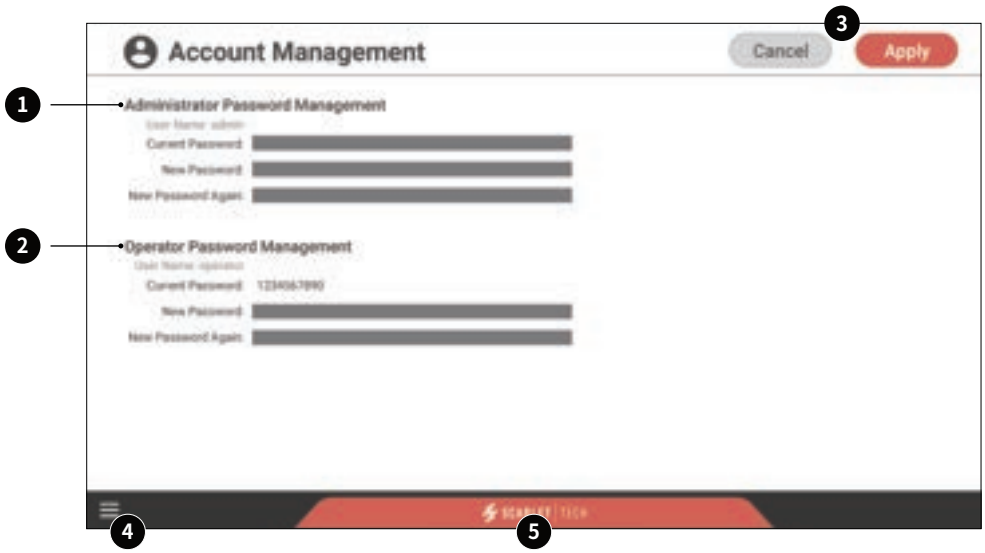
Item	Name	Description
1	CAM #	Camera number of this channel
2	Camera Name	Camera name assigned by admin account
3	IP Address	Camera IP address edition
4	Add New Camera & Delete Camera	Add or delete camera for this channel
5	Camera Status	Green: Video streaming On Red: Video streaming Off
6	Video Aera	Video Streaming: Real-time video streaming for this camera Camera Power Off: This camera is connected but in power-off mode No Camera: No camera is connected in this channel Camera Hidden: This camera is connected but hidden in the Home page
7	Power ON/OFF	Camera power ON/OFF switch Power ON: The camera is working for video streaming Power OFF: The camera is powered-off for power saving Note: If the camera is powered by PoE (Power over Ethernet), this button will be no use
8	Hidden On/Off	Video hidden ON/OFF switch Hidden ON: The video will not be showed on Home page but the camera is still working Hidden OFF: The video is showed on Home page
9	Apply & Cancel	Apply button: Save changes Cancel button: Cancel changes
10	Menu	Show the Menu to go to other pages
11	Home Page	Back to Home page

Add New Camera Page



Item	Name	Description
1	CAM #	Camera number of this channel
2	Camera Name	Camera name input by admin account
3	IP Address	Camera IP address input by admin account
4	Power Supply	Select one power supply for new camera: **Hercules Battery Pack:** This camera is connected to Scarlet Hercules Hook AP & Battery Pack: The Hercules App can detect battery status. The battery level will be shown on home page **Power Plug:** This camera is powered by power adapter or other power source. The power plug icon will be shown on home page
5	Confirm & Cancel	Confirm button: Confirm to add new camera Cancel button: Cancel to add new camera

Account Management Page



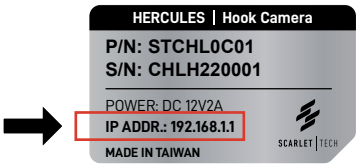
Item	Name	Description
1	Administrator Password Management	Current Password: Input current password of account “admin” (default password: 1234) New Password: Input new password New Password Again: Input new password one more time for confirmation
2	Operator Password Management	Current Password: Input current password of account “operator” (default password: 1234) New Password: Input new password New Password Again: Input new password one more time for confirmation
3	Apply & Cancel	Apply button: Save changes Cancel button: Cancel changes
4	Menu	Show the menu to go to other pages
5	Home Page	Back to Home page

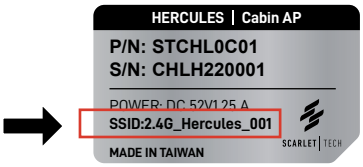
App Information Page

Item	Name	Description
1	Information	Scarlet Tech & Hercules information
2	Menu	Show the Menu to go to other pages
3	Home Page	Back to Home page

Account and Password Information

Item	Account	Password	Note
Wi-Fi SSID (Tablet connecting to Cabin AP)	N/A	Scarlet168 (default)	SSID: Please check the label
Hercules App Login	admin	1234(default)	N/A
	operator	1234(default)	N/A





FAQ – Frequently Ask Questions

Q: What is the recommended distance between every device for better wireless signal?
A: Below is the recommended distance for video streaming without latency:

- 300 meters in open space between StreamLink Station and Hook AP/Cabin AP
- 8 meters in open space between Cabin AP and Android Tablet

Q: How many receivers can be connected to one camera at the same time?
A: Two. For example, 1 camera connected to 2 Android Tablet or to 1 Android Tablet and 1 NVR. If you need more receivers, please email to Scarlet Sales team at info@scarlet.com.tw

Q: Can I increase the camera's storage memory size?
A: No, Hercules Hook Camera has a default memory size setting. If you need more storage memory size, please email to Scarlet Sales team at info@scarlet.com.tw

Q: Can I change the video recording resolution from 2K to HD to have more recording days?
A: No, Hercules Hook Camera only supports 2K resolution for video recording. If you wish to have more recording days, please email to Scarlet Sales team at info@scarlet.com.tw

Q: Can the camera lens rotate?
A: Yes, the black front cover should first be removed, so the camera lens can be rotated. However, it is recommended to only rotate the lens 90° clockwise or counterclockwise when necessary. Rotating to more degrees of angles may cause cable damage inside the camera.

Q: How much time do Hook AP, StreamLink Station and Cabin finish the boot-up process?
A: It will take 90 seconds to finish the boot-up process . Then the video streaming will start transmitting to Android Tablet.

Warranty & Services

Warranty Conditions

This instrument is guaranteed for one-year warranty against material or production defects, in accordance with our general sales conditions. During the warranty period the manufacturer reserves the right to decide either to repair or replace the product.
Should you need any reason to return the instrument for repair or replacement, take prior agreements with the local distributor from whom you bought it. Do not forget to enclose a report describing the reasons for returning (detected fault). Use original packaging. Any damage occurred in transit due to non-original packaging will be charged anyhow to customer.

The Warranty does **NOT** apply to:
• Accessories and batteries (not covered by warranty)
• Repairs made necessary by improper use or improper combination with incompatible accessories or equipment.
• Repairs made necessary by improper shipping material causing damages in transit.
• Repairs made necessary by previous attempts for repair carried out by non-skilled or unauthorized personnel.
• Instruments for whatever reason modified by the customer himself without explicit authorization of our Technical Dept.

The contents of this manual may not be reproduced in any form whatsoever without the manufacturer's authorization.
Our products are patented. The logotypes are registered. We reserve the right to modify characteristics and prices as part of technological developments which might require them.

Services

Should you find the instrument not work properly, before contacting your distributor make sure that batteries are correctly installed, fully charged and working.

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