

HUB



Installation Guide

Redvision CCTV Hub

This Guide covers these products:

RV-HUB-1

RV-24-HUB-1

RV-HUB-2/4

RV-24-HUB-2/4

Quick guide on page 4!

Contents

i. Quick-Guide for essential configuration:	3
ii. Safety guide	6
1.0 Installing the Hub	8
1.1 Pole Mounted	8
1.2 Wall Mounted	10
1.3 Camera installation	12
2.0 Power supply installation & setup	13
2.1 Power supply specifications	13
2.2 24VDC Power supply layout	14
2.3 24VDC PSU connections	14
2.4 Mains power connections	14
2.6 Hub Network and Power Connections	15
3.0 Technical Specifications	16
4.0 Warranty information	17

Contact Redvision:

Redvision CCTV Ltd.
Alpha House
Blacknest Road
Blacknest
Alton
Hampshire
GU34 4PX

Sales & Technical Support: +44 (0) 1420 448 448

sales@redvisioncctv.com

techsupport@redvisioncctv.com

Welcome to Redvision

Thank you for choosing Redvision. Your Hub has been carefully developed and manufactured in the United Kingdom.

This guide is intended to cover the basic installation of your hub, up to and including accessing the internal web servers.

i. Quick-Guide for essential configuration:

The hub uses a built-in web server, to allow configuration from any web-browser application.

The table below lists the default configuration for the equipment on your Hub. To enable remote connections, do not change the network details without speaking with Redvision technical support.

Hub defaults - with recorder				
Device	Default IP	Default IP (Fixed Public IP Sim)	Default Username	Default Password
5G Router	192.168.0.1	192.168.10.1	admin	Redvision17
Recorder	192.168.0.121	192.168.1.100	admin	N/A
Camera Port 1	192.168.0.121:40001	192.168.1.100:40001	admin (if Redvision)	admin (if Redvision)
Camera Port 2	192.168.0.121:40006	192.168.1.100:40006	admin (if Redvision)	admin (if Redvision)
Camera Port 3	192.168.0.121:40011	192.168.1.100:40011	admin (if Redvision)	admin (if Redvision)
Camera Port 4	192.168.0.121:40016	192.168.1.100:40016	admin (if Redvision)	admin (if Redvision)

Hub defaults – with no recorder				
Device	Default IP	Default IP (Fixed Public IP Sim)	Default Username	Default Password
5G Router	192.168.0.1	192.168.10.1	admin	Redvision17
Camera (if Redvision)	192.168.0.120	192.168.1.100	admin	admin

Connecting local to the hub:

The Hub uses a 5G router, with a dual LTE & Wi-Fi antenna. For hard wired connectivity, connect via the Hub's LAN port. Engineering configuration can be completed over the Wi-Fi connection, search for "Redvision CCTV Hub". The password will be the serial number of the unit **(for security, please change this password when first connecting to the Hub).**

Connecting remotely to the hub:

Redvision offer data packages with either a fixed public IP address, or a dynamic public IP address. The hub will be configured for connecting to each camera, or the recorder directly, as per the below.

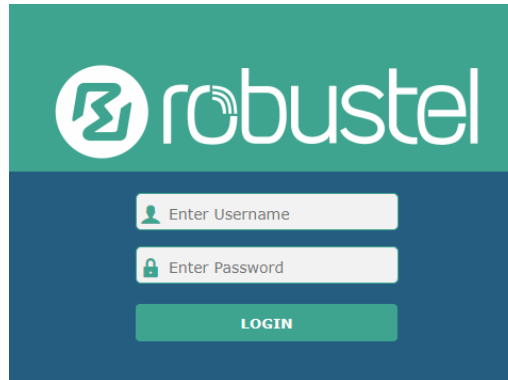
Hub defaults - with recorder		
Device	DDNS Domain/ Fixed Public IP	Port
5G Router	See label on base of Hub (DDNS ONLY)	8888
Recorder	See label on base of Hub	11065 (N/A for fixed Public IP)
Camera Port 1	See label on base of Hub	11071
Camera Port 2	See label on base of Hub	11072
Camera Port 3	See label on base of Hub	11073
Camera Port 4	See label on base of Hub	11074

Hub defaults – with no recorder		
Device	DDNS Domain/ Fixed Public IP	Port
5G Router	See label on base of Hub (DDNS ONLY)	8888
Camera	See label on base of Hub	11070 (N/A for fixed Public IP)

Router Login via web browser

If connecting locally (over Wi-Fi or LAN), type the router's IP address into the web browser address bar; e.g. 192.168.0.1 and press enter. If connecting remotely, type in the DDNS followed by port 8888 e.g. rc303010.ddns.net:8888.

The login page is then shown, as per below:

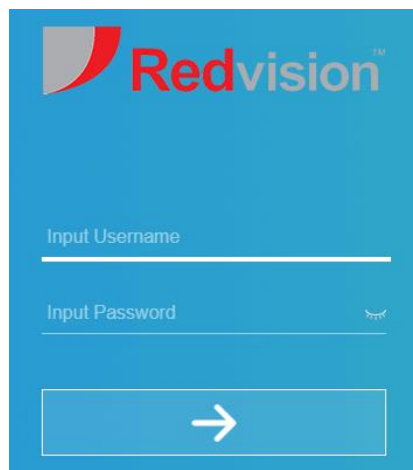
The image shows the Robustel login page. It has a green header with the Robustel logo. Below the header, there are two input fields: 'Enter Username' with a person icon and 'Enter Password' with a lock icon. Below these fields is a green button labeled 'LOGIN'.

- Enter the username and password.
- The default user name is **admin**. The default password is **Redvision17**. Change the password when you log in to the system for the first time to ensure system security.

Recorder Login via web browser

If connecting locally (over Wi-Fi or LAN), type the recorder's IP address into the web browser address bar; e.g. 192.168.0.121 and press enter. If connecting remotely, type in the DDNS followed by port 11065 e.g. rc303010.ddns.net:11065; or the fixed public IP address.

The login page is then shown, as per below:

The image shows the Redvision login page. It has a blue background with the Redvision logo at the top. Below the logo, there are two input fields: 'Input Username' and 'Input Password'. Below these fields is a large blue button with a white right-pointing arrow.

- You will be prompted to setup a username and password upon first login to the system.

ii. Safety guide



**THIS CAMERA SYSTEM MUST BE INSTALLED, OPERATED AND MAINTAINED
IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.**

1. Installation of this system must be carried out by a skilled person in accordance with local electrical codes.
2. This equipment must be connected to a protected earth.
3. This equipment has been designed to BS EN 62368-1:2020 and has no serviceable parts.
4. Do not open the equipment.
5. Do not drop the product.
6. Avoid the use of alcohol or solvent-based cleaners. The Hub should be cleaned with clean water and non-abrasive material.
7. The camera system should be installed where it cannot be tampered with by unauthorised personnel.
8. The products should be securely fastened to a structure of sufficient strength to support it. Allowance should be made for additional loads caused by local wind effects.
9. For best results, it is recommended once installed, that the hub be powered as soon as possible, to allow the internal heater and fan devices to operate. It is not recommended to leave the hub in storage or unpowered for extended periods of time.

iii. Router information

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the router is used in a normal manner with a well-constructed network, the router should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Redvision accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the router, or for failure of the router to transmit or receive such data.

- The router generates radio frequency (RF) power. When using the router, care must be taken on safety issues related to RF interference as well as regulations of RF equipment.
- Do not use your router in aircraft, hospitals, petrol stations or in places where using cellular products is prohibited.
- Be sure that the router will not be interfering with nearby equipment. For example: pacemakers or medical equipment. The antenna of the router should be away from computers, office equipment, home appliance, etc.
- An external antenna must be connected to the router for proper operation. Only uses approved antenna with the router. Please contact authorized distributor on finding an approved antenna.
- Always keep the antenna with minimum safety distance of 20 cm or more from human body. Do not put the antenna inside metallic box, containers, etc.
- RF exposure statements 1. For mobile devices without co-location (the transmitting antenna is installed or located more than 20 cm away from the body of user and nearby person)
- FCC RF Radiation Exposure Statement

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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

1.0 Installing the Hub

1.1 Pole Mounted

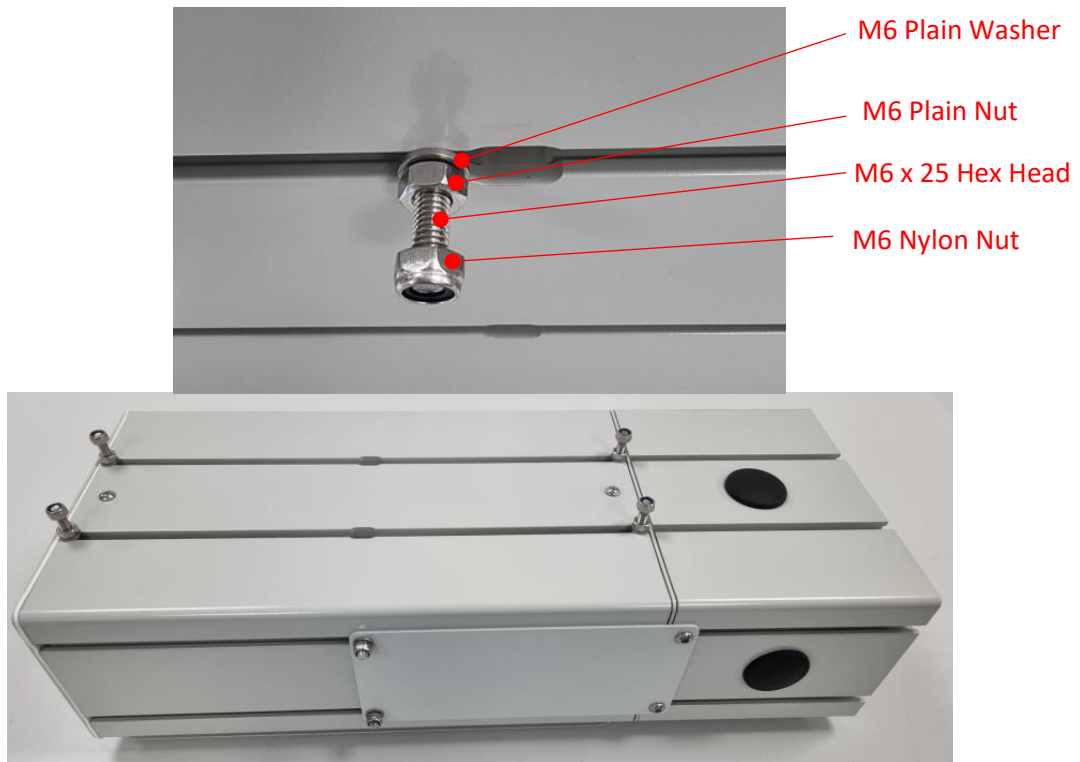
Contents:

- 1 x Hub Pole Bracket
- 4 x M6 x 25 Hex Head Bolts
- 4 x M6 Plain Nuts
- 4 x M6 Nyloc Nuts
- 4 x M6 Plain Washer

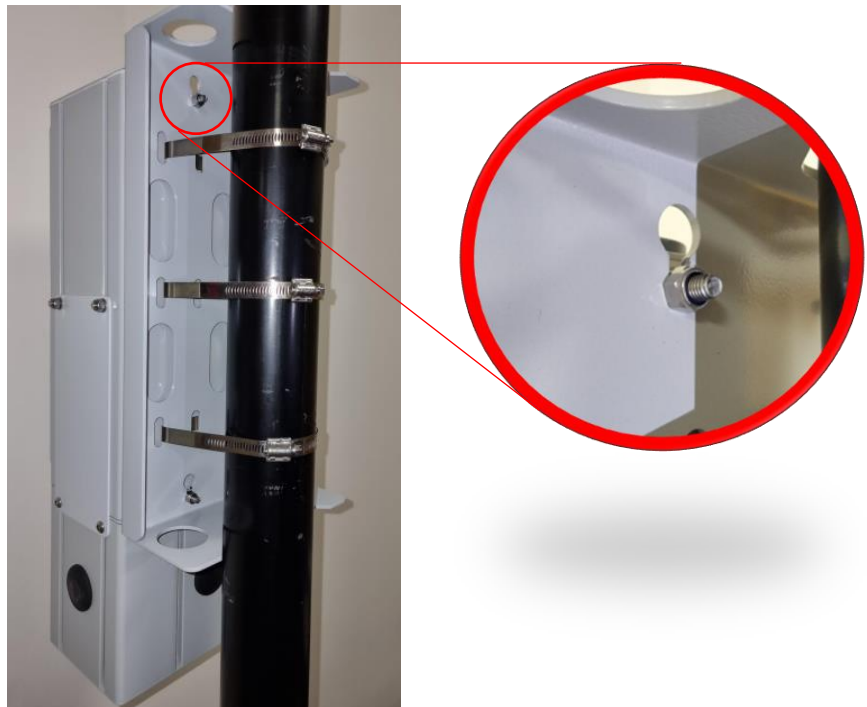
- 1) Using three off stainless steel Jubilee bands, fasten the pole bracket to the pole. Note, there are wide and narrow slots in the pole bracket, use the suitable slots for the pole diameter.



- 2) Using a M6 plain nut, M6 washer, and M6 Nylon Nut, secure 4 off M6 x 25 Hex Head bolts at the extremities of the Hub rails. Allow a sufficient gap between two off M6 nuts.



- 3) Slot the hub onto the pole bracket, ensuring the bracket is in the gap of the two M6 nuts. Fasten the M6 Nylon Nut to secure the Hub.



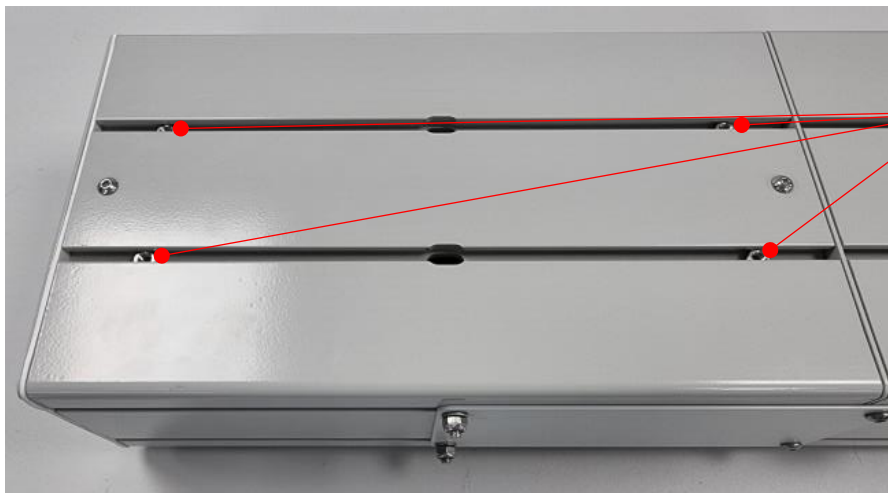
1.2 Wall Mounted

It is important to use adequate quality fixings to safely support the complete Hub assembly when mounting the Hub to a wall.

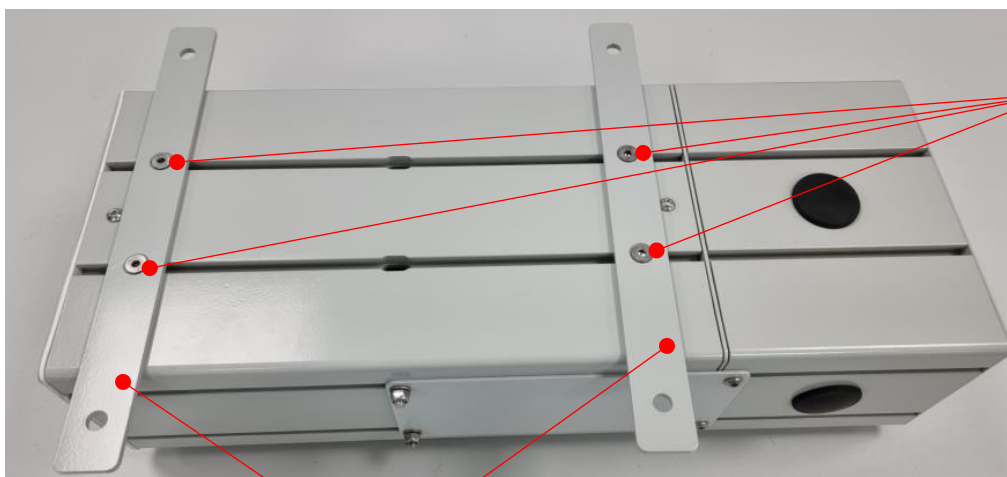
Contents:

- 2 x Hub Wall Brackets
- 4 x M6 x 12 CSK Bolts
- 4 x M6 Plain Nuts
- 1 x M4 Allen Key

- 1) Position the 4 off M6 Nuts in the rails (2 per each rail). It is recommended to locate the nuts towards the Hub extremities.



- 2) Fix the 2 off Hub Wall Brackets to the Nuts using the 4 off M6 x 12 CSK Bolts.



2 x Hub Wall
Brackets

- 3) Use the external mounting holes to fix the Hub to a wall.



Wall Mounting
Holes



OBSERVE THE FOLLOWING PRECAUTIONS WHEN INSTALLING:

1. Mount the Hub in a position where it cannot be interfered with either intentionally or accidentally.
2. The mounting surface should be capable of supporting the weight of the hub, the camera(s) and mounting brackets under all expected conditions of load, vibration and temperature.
3. The mounting brackets should be fitted in accordance with instructions and should observe all appropriate safety precautions & local building regulations.
4. Ensure the Camera station is in the correct orientation.



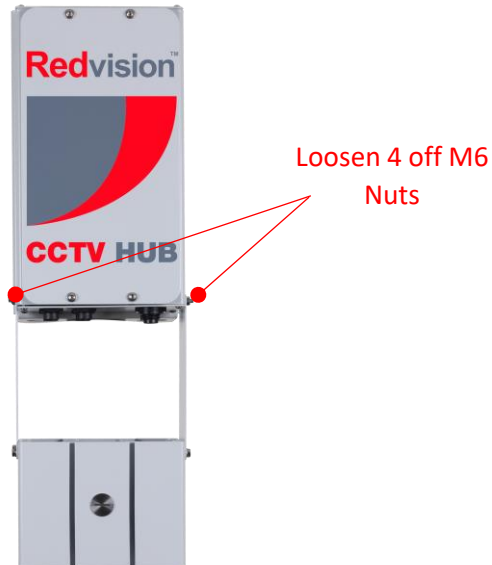
EMC Information

WARNING: THIS IS A CLASS A PRODUCT. IF INSTALLED IN A STATIC ENVIRONMENT, RADIO INTERFERENCE MAY BE CAUSED, IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES TO PREVENT IT.

1.3 Camera installation

The Hub has been designed to allow up to 4 cameras to be directly mounted and powered.

- 1) Loosen (do not fully remove) the 4 off M6 Nylon nuts on the side plates and slide the camera mount assembly away from the main Hub enclosure.



- 2) Connect cables as required to associated Hub ports, and run through the 30mm extrusion holes. Note, please ensure correct weatherproofed cable fittings are used. WARNING: Only use Redvision supplied Hub mains cable to power mains version of Hub.
- 3) Slide the camera mount assembly back flush with the main Hub enclosure, and fasten the 4 off M6 nuts on the side plates to secure.
- 4) Connect associate camera brackets to the Hub rails, and mount the cameras.



2.0 Power supply installation & setup



WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE WORKING ON THE HUB. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON

UMBILICAL CABLE: A pre-made cable with connector must be purchased with all Redvision Hubs. The female connector connects directly to the male connector on the base of the Hub.

- If a 24VDC version, mount the Redvision PSU in a position so it cannot be interfered with intentionally or accidentally. Ideally use a lockable cabinet.
- If a 24VDC version, securely fix the Redvision PSU using appropriate size screws and ensure the cable glands have sufficient clearance to allow the cables to enter.
- Ensure cable glands face downwards at all times, and securely tightened.
- If a 24VDC version, all cables should be channelled through the appropriately sized gland holes.
- Only use Redvision supplied umbilical/multicore cables for connecting the Hub. Warranty will be void if these cables are extended between the camera and PSU. Extending cables could also compromise safety. Contact Redvision Technical Support if in doubt.

2.1 Power supply specifications

Mains versions:	
Power input voltage range	100-240 VAC
Frequency range	50/60Hz
Max. output power	140W
Operating temperature range	-10°C ~ + 50°C
24VDC versions:	
Power input voltage	24VDC
Max. output power	120W
Operating temperature range	-10°C ~ + 50°C

2.2 24VDC Power supply layout

It is the installer's responsibility that a regulated 24VDC, 5A supply is used for powering the Hub.

2.3 24VDC PSU connections

Umbilical Wire	24VDC POWER
+24VDC	BROWN 24VDC
0VDC	BLUE 0VDC
EARTH	GREEN/YELLOW

SAFETY: ENSURE MAINS INPUT & EARTH CONNECTIONS ARE SECURELY STRAIN RELIEVED.

CAUTION: TAKE CARE WITH POLARITY OF POWER CONNECTIONS

2.4 Mains power connections

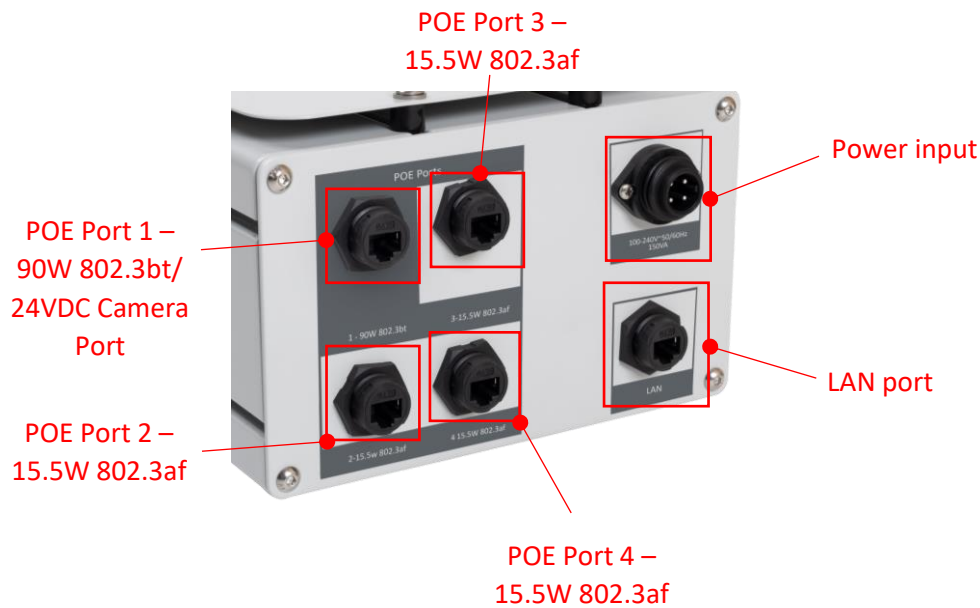
Umbilical Wire	MAINS POWER
L	LIVE (BROWN) 100/240 VAC
N	NEUTRAL (BLUE)
EARTH	GREEN/YELLOW

SAFETY: ENSURE MAINS INPUT & EARTH CONNECTIONS ARE SECURELY STRAIN RELIEVED.

CAUTION: ENSURE EARTH IS CONNECTED TO PROTECTED EARTH POINT.

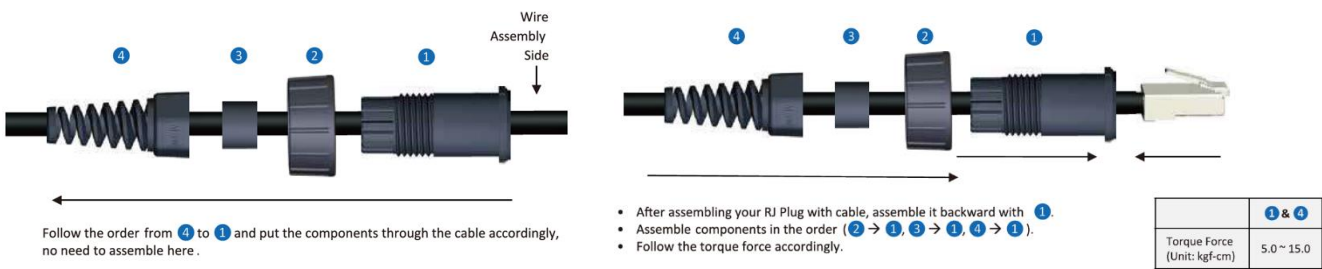
2.6 Hub Network and Power Connections

Ensure the hub is mounted with all connections facing down. The Hub is equipped with the following connections



An IP67, weather-resistant cable-shroud is provided for each RJ45 port. This covers and protects the Cat5e cable and when mated with the RJ45 socket forms a complete IP67-rated connection. The Hub is provided with RJ45 connector caps for all RJ45 sockets. Ensure these are securely fitted for any unused connectors.

This connector must be used at all times, camera/ Hub warranty may be invalidated otherwise.



3.0 Technical Specifications

Video	
IP Channels	Up to 4
Power Over Ethernet	1 Port 802.3bt (90W), up to 3 ports 802.3af (15.4W)
Recording*	Local HDD
Recording Resolutions*	8MP, 6MP, 5MP, 4MP, 3MP, 1080p, 720p, D1
Recording Modes*	Manual, Scheduled, Regular, Continuous, Event
Mobile App	RedVu Go™
Synced Playback*	4, 1
Event Triggers	Motion Detection, Alarm Input, Video Loss, IVA
HDD*	1 Internal SATA, 12TB max.
Backup Modes*	Network (LAN, WiFi, 4G)

Live Viewing	
Mobile App	RedVu Go™
Tablet App	RedVu Go™
Remote PC Client	RedVu CMS™ Free Download
VMS1000	Redvision VMS1000™ Powered by Digifort

Network	
Interface	1x Ethernet RJ45 LAN Connection, up to 4 x PoE Ethernet PoE Connections
Protocols*	HTTP, HTTPS, TCP/IP, IPv4, UPnP, UDP, RTSP, SMTP, NTP, DNS, DHCP, 802.1x, SNMP, ONVIF, SDK
Remote Users	8 Simultaneous Users
Cloud Storage*	Supported
Security	Base-64 authentication, HTTPS (SSL), 802.1x, IP Address Filtering

Security and Remote Maintenance	
Password	Cameras and Hub
Diagnostics	Secure, remote diagnostics and maintenance available
Reboot	System remote reboot via secure SMS

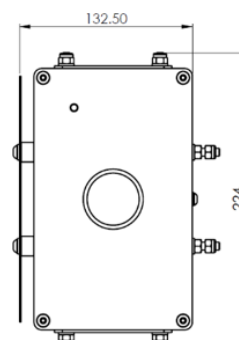
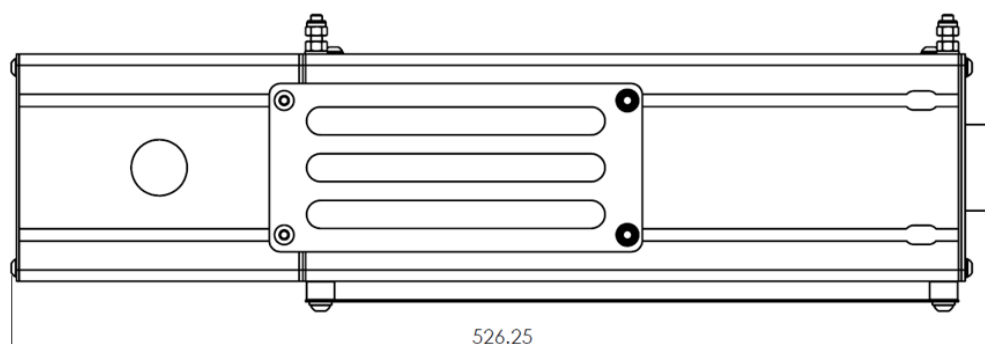
I/O	
Audio*	1 Input, 1 Output, Line-Level
Alarm Inputs*	8
Alarm Output*	1

Electrical & Physical	
Power Supply	110~240VAC or 24VDC
Power Consumption	Max 12W (without cameras)
Operating Temperature	-10°C ~ +50°C
Relative Humidity	< 90%
Compliance	CE/ FCC
Weight	9.1kg (without cameras)
Dimensions	MAX 527mm x 224mm x 133mm
Body Material	Marine grade Aluminium
Colour	RAL7035 Grey. Custom RAL to Order
Ingress Protection	Meets IP67 Standards
Corrosion Testing	ASTM B117 1000 hour Salt-Spray Test

Bandwidth Optimisation	
Smart Encode	Enabled – video stream optimisation to save up to 80% of bandwidth compared with H264 1080p (Redvision cameras only)
Advanced Video Codec	

Cellular Interface	
Number of Antennas	1 (dual WiFi and 4G)
SIM	1* (3 V & 1.8 V) Standard SIM or eSIM
Frequency Bands	4G: LTE FDD: B1/ B3/ B7/ B8/ B20/ B28A 3G: WCDMA: B1/ B8 2G: GSM: B3/ B8

* denotes features not available with RV-HUB-1-P/W



4.0 Warranty information

Redvision CCTV limited (Redvision) warrants the buyer that the product will, on the date of shipment, be free from defects in material & workmanship and will conform to Redvision's specifications, provided to the buyer. If any defect in material or workmanship appears in the product, Redvision will, at its discretion, either repair or replace the defective product without charge at Redvision's customer service centre or authorised repair facility or credit or refund the purchase price of the defective product, provided:

- The defect appears within **36** months from the date of purchase.
- Examination of the product confirms that the claimed defect actually exists.

Buyer shall follow Redvision's instructions regarding return of the defective product and no product will be accepted for repair, replacement, credit or refund without:

- Buyer or an authorised representative of the buyer first contacting Redvision Technical Support for assistance and actual confirmation of suspected defect or fault.
- Written authorisation of Redvision or in accordance with Redvision's written instructions, including an official **Return Merchandise Authorisation number (RMA)**, issued by Redvision CCTV Ltd.

In the case of any such return the buyer shall bear the risk of loss or damage and shall prepay all transportation charges to Redvision. The replaced product shall become Redvision's property. In no event shall Redvision be responsible for de-installation or reinstallation of the product or for the expenses thereof. If it is determined that returned product is not defective, the buyer shall pay Redvision all costs of handling, inspection, repairs and transportation at Redvision's then prevailing rates.

With respect to product not manufactured by Redvision, to the extent permitted, extends the warranties and affords the remedies to the buyer given to Redvision by its vendor of said products.

The foregoing warranties do not extend:

- to expendable items, including SD Cards and Hard Disks
- to experimental or development products
- to product which has been subjected to misuse, neglect, accident or abuse;
- to the unauthorised repair or alteration by anyone other than Redvision;
- to improper installation, storage or maintenance by anyone other than Redvision; to product used in material violation of Redvision's instruction or to product which has had its serial number or month and year of manufacture or shipment removed, defaced or altered or to software.

The term "**software**" means a set of logical instructions and table of information which guide the functioning of a processor. Such set may be contained in any medium whatsoever including, without limitation, hardware containing a pattern of bits representing such set, provided, however, the term "software" does not mean or include the medium.

Redvision shall charge for the repair of all product returned out of warranty. Call Redvision customer service +44 (0)1420 448 448 for an RMA number or visit www.redvisioncctv.com for more information.