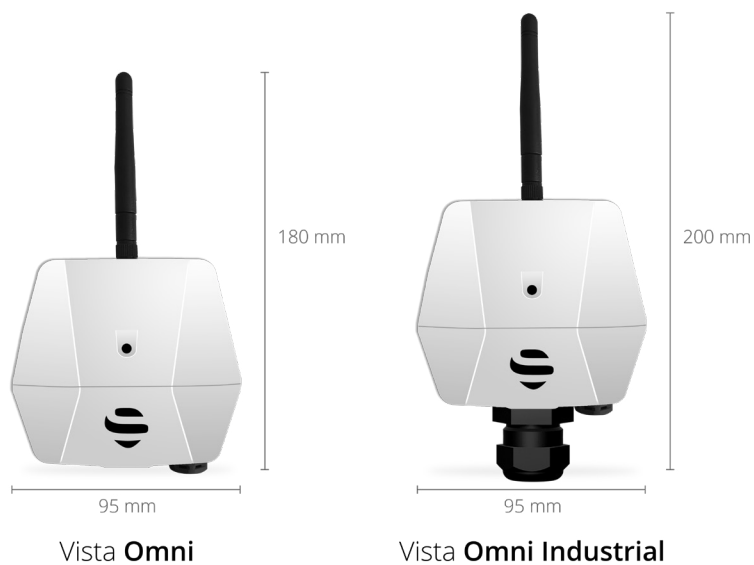


Anchor Vista Omni



Features

- A powerful true 360° omnirange UWB antenna
- Active PoE 802.3af, reducing cabling and allowing remote power management
- Zero warmup time for fast commissioning
- Robust synchronization for stable positioning in harsh conditions
- Wide temperature operation range (-20 °C...+60 °C)
- Robust IP65 housing (dust/water resistant)
- Certified by FCC and RED/CE



Vista **Omni**

Vista **Omni Industrial**

Anchor Vista DirectFive

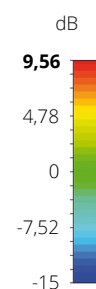
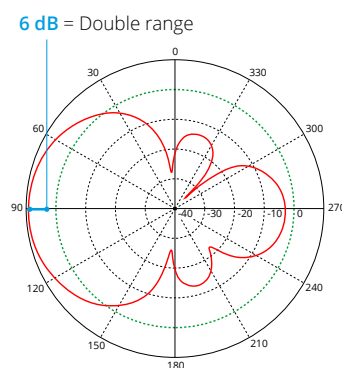
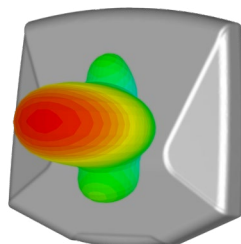
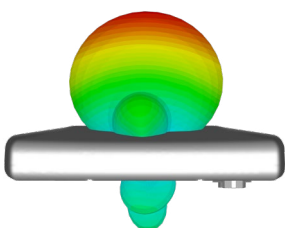


Features

- Reduced cabling with power-over-ethernet 802.3af
- Sewio unique high-gain UWB antenna providing uniform coverage and better range
- Industrial housing
- On-demand anchor identification LED
- Zero warmup time for fast deployment
- Robust sync for stable positioning in harsh environmental condition
- Barometer measurement support



Vista Direct Five

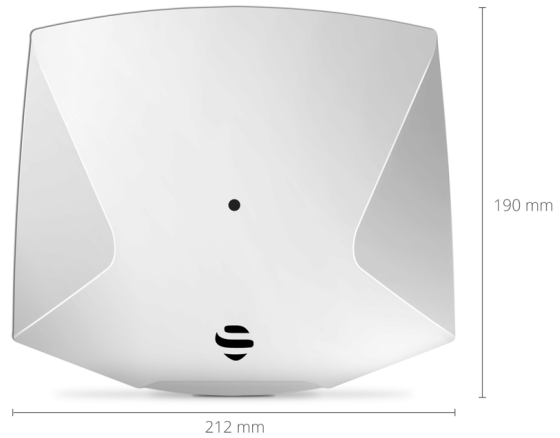


Sewio provides two types of anchors to allow partners and customers to choose the right anchor combination for their project. The anchors are:

- [Vista Omni](#)(see page 4): A true 360° omnirange UWB anchor
- [Vista DirectFive](#)(see page 23): A high-performance directional UWB anchor



Vista **Omni**



Vista **DirectFive**

1 Anchors Feature Matrix:

Anchor Type	Vista Omni(see page 4)	Vista DirectFive(see page 23)
Product Status	AVAILABLE	AVAILABLE
Released	2021	2019
Size	170 x 96 x 45	212 x 190 x 36
Weight	150g	390 g
Operating Conditions	-20 - 60 °C	-20 - 60 °C
Enclosure	IP65	IP65
Warmup period	Immediate	Immediate
UWB Antenna	Omnidirectional Antenna	high-gain directional
Passive PoE 48V	✓	✓
Active PoE IEEE 802.3af, Cisco Compatible	✓	✓
Battery Power Supply	PoE Power Bank*	PoE Power Bank**
Ethernet Backhaul	✓	✓
WiFi Backhaul	optional	optional
Remote LED Identification	✓	✓
Barometer	✓	✓
Clock Type	TCXO	TCXO

* available through PoE Power bank or USB to PoE converter for Anchor Vista Omni, see [accessories\(see page 17\)](#).

**available through PoE Power bank or USB to PoE converter for Anchor Vista DirectFive, see [accessories\(see page 38\)](#).

 If you have older anchor models **Vista OmniLight** or **Anchor 1.4**, see page [Other Anchors](#).(see page 42)

In this section you can find:

- [Anchor Vista Omni](#)(see page 4)
 - [Technical Parameters - Vista Omni](#)(see page 8)
 - [Power Supply Options - Vista Omni](#)(see page 9)
 - [Device Mounting - Vista Omni](#)(see page 11)
 - [Package Contains and Accessories - Vista Omni](#)(see page 17)
 - [Safety and Regulatory Information - Vista Omni](#)(see page 22)
- [Anchor Vista DirectFive](#)(see page 23)
 - [Technical Parameters - Vista DirectFive](#)(see page 27)
 - [Radiation Pattern - Vista DirectFive](#)(see page 29)
 - [Power Supply Options - Vista DirectFive](#)(see page 32)
 - [Device Mounting - Vista DirectFive](#)(see page 33)
 - [Dimensions - Vista DirectFive + quickMOUNT](#)(see page 35)
 - [Package Contains and Accessories - Vista DirectFive](#)(see page 38)
 - [Safety and Regulatory Information - Vista DirectFive](#)(see page 41)
- [Other Anchors](#)(see page 42)
 - [Anchor Vista OmniLight](#)(see page 43)
 - [Technical Parameters - Vista OmniLight](#)(see page 46)
 - [Power Supply Options - Vista OmniLight](#)(see page 47)
 - [Device Mounting, Vista OmniLight](#)(see page 48)
 - [Wall Mount Bracket Dimensions](#)(see page 49)
 - [Package Contains and Accessories, Vista OmniLight](#)(see page 51)
 - [Safety and Regulatory Information, Vista OmniLight](#)(see page 54)
 - [Anchor 1.4](#)(see page 54)
 - [Technical Parameters, Anchor 1.4](#)(see page 58)
 - [Power Supply Options, Anchor 1.4](#)(see page 59)
 - [Radiation Pattern, Anchor 1.4](#)(see page 60)

2 Anchor Vista Omni

2.1 Feature Set

NEW**Robust IP65 housing****NEW****Wide operation range (-20° to +60°C)****NEW****Protective Vent suitable for harsh environment**

- True 360° omni range
- Decawave UWB Radio
- IEEE 802.3af compliant (Active PoE)
- Atmospheric pressure sensor
- Zero Warm-up Time
- Ethernet (recommended) and Wi-Fi backhaul

 **Please use with RTLS Studio 2.4.x or higher.**

The primary goal of the device is to gather radio signals from mobile locators called Tags and forward them to RTLS Studio where the position is being estimated.

Anchor is an IP network device equipped with an Ethernet/Wi-Fi interface for both data backhaul and/or power supply. Anchors are configured and managed via RTLS Studio software.

They are mounted above Tags which ensures maximum coverage and minimizes obstacles blocking its communication line.



In this section you can find:

- [Technical Parameters - Vista Omni](#)(see page 8)
- [Power Supply Options - Vista Omni](#)(see page 9)
- [Device Mounting - Vista Omni](#)(see page 11)
- [Package Contains and Accessories - Vista Omni](#)(see page 17)
- [Safety and Regulatory Information - Vista Omni](#)(see page 22)

2.2 Key Features of Anchor Vista Omni Industrial

Robust IP65 housing	Industry ready solution	The IP65 housing, wide temperature operation range and protective vent means the Omni anchor is ready to take on any industrial scenario. The Industrial housing which was specifically designed for harsh environments. It also perfectly suits industrial environments where a lot of dust or dirty impurities are present.
Wide operation range (-20° to +60°C)		
Feature	Benefit	Description
PoE 802.3af	Remote Power Management	PoE Enables continuous power integrity health-check. In case of outage or system shutdown it enables to make power restart procedure remotely which might be crucial since anchors are not usually easily reachable.
	Reducing Cabling	Anchor consumes just 2W thus, empowering PoE In/PoE Out network extender device is feasible. It enables significantly reduce long cables coming inherent for Ethernet star topology. PoE In / PoE Out can be reduce multiple long cables to single cable with star cabling only within given location cell.
True 360° omni range	No need for device orientation adjustments.	This design provides uniform omni-directional pattern, thus there is equal range in 360°. Therefore no need for an additional and painful device orientation adjustments especially once the anchor is deployed and becomes physically unreachable.
Zero Warmup Time	Fast commissioning	Precise location requires sub-nano second synchronization. It takes around 20 minutes for synchronization stabilization for previous Anchor 1.4. Now, Anchor is ready immediately after the power-up.
Robust Sync	Stable Positioning robust against environmental conditions.	TDoA requires sub-nano second synchronization. Anchor Omni is sensitive to rapid airflow or sudden changes in temperature which causes troubles with anchor's synchronization. It might lead to incorrect positioning at the end. After a long research we have designed a new approach where Anchor Vista is able to be very resilient against various environmental condition.

Robust IP65 housing	Industry ready solution	The IP65 housing, wide temperature operation range and protective vent means the Omni anchor is ready to take on any industrial scenario. The Industrial housing which was specifically designed for harsh environments. It also perfectly suits industrial environments where a lot of dust or dirty impurities are present.
Wide operation range (-20° to +60°C)		
Feature	Benefit	Description
Barometer Sensor on board	Possibility to measure Z-axis via barometer¹ .	Measuring Z-axis via UWB requires diagonal 3D anchors placement at different heights, which is quite impractical for most of applications outside the lab environment. Latest advances in MEMS sensors allow to incorporate very precise barometer sensor. Sewio on the top of it has developed Z-axis estimation based on relative barometric measurements between tag and anchors. It can be precise at dm-level of accuracy without any requirements on anchor infrastructure.

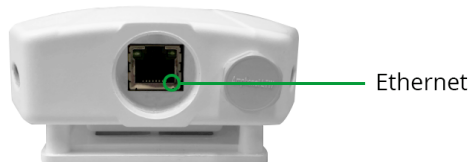
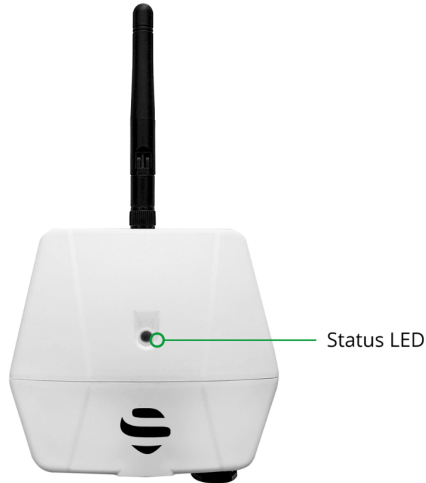
2.3 Partnumber

PN	Name	Contains	Usage
SWA09-00-02	Anchor Vista Omni	Anchor Vista Omni + QuickMount + Cable Gland	Industrial
SWA09-01-02	Anchor Vista Omni WiFi	Anchor Vista Omni + QuickMount + Cable Gland	Industrial
SWA09-00-01	Anchor Vista Omni Compact	Anchor Vista Omni + WallMount	Office, Building
SWA09-01-01	Anchor Vista Omni Compact WiFi	Anchor Vista Omni + WallMount	Office, Building
SWA09-00-00	Anchor Vista Omni (w/o Accessories)	Anchor Vista Omni	Office, Building

i Difference between **Anchor Vista Omni** and **Anchor Vista Omni Compact** is only in accessories included in the package. For more details see [Package Contains and Accessories - Vista Omni](#).(see page 17)

¹ <https://docs.sewio.net/display/PUB/Z-Axis+with+Barometer%2C+Configuration>

2.4 Technical Parameters - Vista Omni



Size	170 x 96 x 45
Weight	150g
Power Supply	2.5W

Power Requirements	PoE 802.3af or DC 48V (Passive PoE)
Operating Conditions	-20° - 60 °C 20 – 85% humidity without condensation
Enclosure	IP65 Vista Omni Cable gland shall be mounted properly to provide IP65 rating.
Warm-up Time	Immediate
Environment	Industrial Warehouse Manufacturing Retail Sports Tracking Livestock
Placement	Indoor / Outdoor
UWB Antenna	Omnidirectional Antenna
WiFi 2.4 GHz (optional)	Omnidirectional Antenna
Frequency range	3774 –4243.2 MHz (CH2) 6240 –6739.2 MHz (CH5)
UWB Radiated Power CH2	-41.3 dBm/MHz
UWB Radiated Power CH5	-41.3 dBm/MHz
Approvals	RED/CE, CH5 and CH2. FCC, CH5 only

2.5 Power Supply Options - Vista Omni

2.5.1 Power Over Ethernet (Active PoE)



Connect the anchor to a network switch supporting PoE IEEE 802.3af standard via Ethernet cable.

Once the Anchor is connected to a stable power supply, a blue LED blinks² several times that indicates the anchor was turned ON. Then the LED is turned OFF.

2.5.2 DC 48V, Passive PoE

The anchor can be powered from a single or multiple port PoE injector with DC 48V output. Power is supplied via Ethernet cable (pairs 4,5 positive terminal, 7,8 negative terminal).


Single-port Injector

<p>Injector with an integrated power source for AC.</p>	<p>Injector which requires an external DC 48V power source.</p>
<div style="text-align: center;">  <p>(Ubiquiti POE-48)</p> </div>	<div style="text-align: center;">  </div>

Multi-port Injector for 19" rack

"Data LAN" ports are connected to the network switch, "Power+Data" ports are connected to the anchors.



Always use a galvanic isolated  48V power adaptor with short circuit protection for passive PoE injection. Never connect "Power+Data" injector ports to the computer or other network devices.

Recommended PoE Injector power adaptor PN: [GS36E48-P1J](https://www.meanwell-web.com/en-gb/ac-dc-wall-mount-adaptor-output-48vdc-at-0-75a-gs36e48--p1j)³ or [GST36E48-P1J](https://www.meanwell-web.com/en-gb/ac-dc-industrial-desktop-adaptor-output-48vdc-at-0-gst36e48--p1j?returnurl=%2fen-gb%2fsearch%3fq%3dgst36e48-p1j%23gst36e48-p1j)⁴ Meanwell. Available through whole-sellers Mouser, Digikey, or Farnell worldwide.

Power Bank

! The USB connector is not available in Anchor Vista. Thus either a PoE power bank should be used or a USB to PoE converter and standard USB power bank. Please see the [accessories](#)(see page 9).

² <https://docs.sewio.net/display/PUB/Anchor+LED+Indication>

³ <https://www.meanwell-web.com/en-gb/ac-dc-wall-mount-adaptor-output-48vdc-at-0-75a-gs36e48--p1j>

⁴ <https://www.meanwell-web.com/en-gb/ac-dc-industrial-desktop-adaptor-output-48vdc-at-0-gst36e48--p1j?returnurl=%2fen-gb%2fsearch%3fq%3dgst36e48-p1j%23gst36e48-p1j>

On this page:

- [Power Over Ethernet \(Active PoE\)](#)(see page 9)
- [DC 48V, Passive PoE](#)(see page 10)
 - [Single-port Injector](#)(see page 10)
 - [Multi-port Injector for 19" rack](#)(see page 10)
 - [Power Bank](#)(see page 10)

2.6 Device Mounting - Vista Omni

Anchor Vista Omni is suitable for Industrial environment as well as for office environment. Therefore, Sewio delivers two types solution:

- **Vista Omni** : Anchor + QuickMount + Cable Gland
- **Vista Omni Compact**: Anchor + WallMount (or Tripod + Tripod Adapter)



Vista Omni assembly guide:



Vista Omni Compact assembly guide:



i The difference between **Anchor Vista Omni** and **Anchor Vista Omni Compact** is only in accessories included in the package. For more details see [Package Contains and Accessories - Vista Omni](#).(see page 17)

Anchor Vista Omni is typically deployed at the height of 3 - 6 meters above the floor.

Recommended **mounting is with Mikrotik quickMOUNT PRO LHG**. Antenna should be in straight position in order to get maximum possible performance.



Optionally, together with Mikrotik quickMOUNT PRO LHG use **universal antenna mount**. For more details see [Accessories](#).(see page 11)

Anchor Vista Omni Compact is typically deployed at the height of 3 - 6 meters above the floor.

Recommended **mounting with WallMount Bracket**. Antenna should be in straight position in order to get maximum possible performance.



Optionally, you can

More details about Anchor Vista Omni Rules you can find in section [Anchor Deployment](#).⁵

⁵ <https://docs.sewio.net/display/PUB/Anchor+Deployment>

2.6.1 Holders PN

name	PN
quickMOUNT PRO LHG	SWC11-00-00

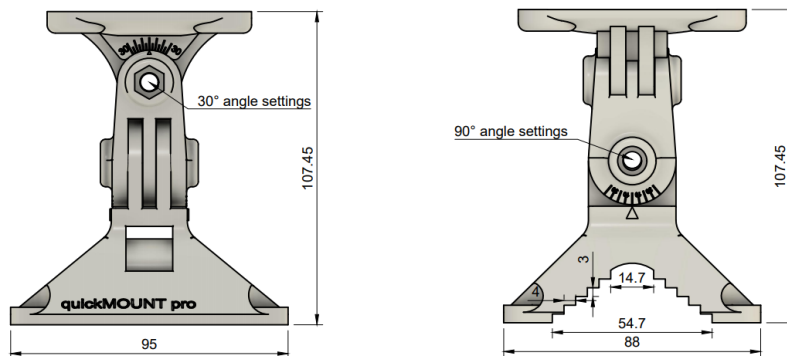
2.6.2 Holders PN

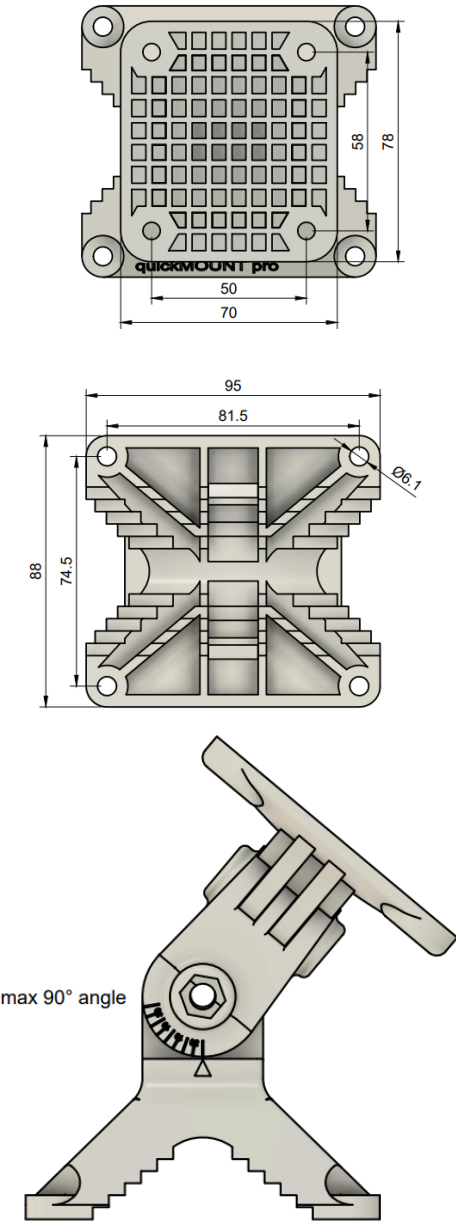
name	PN
Wall Mount Bracket	SWC02-00-00

quickMOUNT PRO LHG

Sewio provides quickMOUNT PRO LHG holder with Anchor Vista Omni.

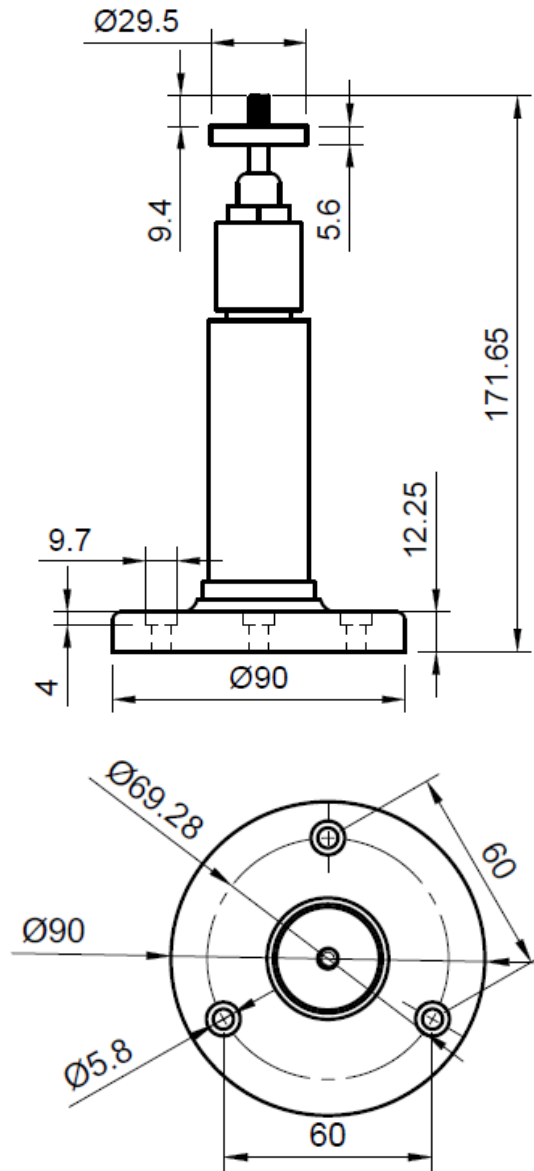
Its dimensions as below:



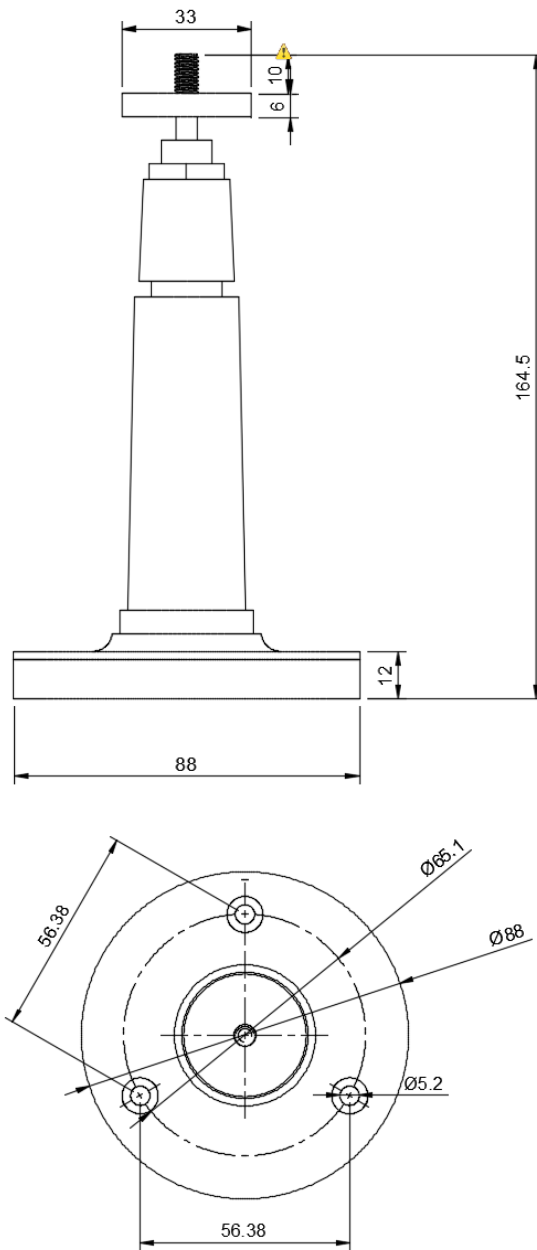


WallMount Bracket

Sewio provides mounting bracket with Anchor Vista Omni Compact
Its dimensions as below:



⚠ In past, we changed a vendor and may occur that your mounting bracket is slightly different.



2.7 Package Contains and Accessories - Vista Omni

2.7.1 Anchor Vista Omni (Industrial usage)

Package Contains

- Anchor Vista Omni
- quickMOUNT PRO LHG
- Omni seal 22x2


- Vista Omni Cable Gland
- Screws for quickMOUNT PRO LHG

Sewio Name	Sewio PN	Product Name	Description
Anchor Vista Omni	SWA09-00-02	RTLS Hardware - Anchors	Anchor Vista Omni without accessories
quickMOUNT PRO LHG	SWC11-00-00	quickMOUNT PRO LHG⁶ quickMount holder package contains screws that do not fit into the Anchor Vista enclosure, therefore Anchor Vista is delivered with the correct one. following screws are recommended: PN: BOSSARD 2000598 or WN 1412 for plastic; 5x12; Head: button; Phillips; steel; zinc.	Recommended holder for Anchor Vista Omni Industrial
Vista Omni Cable Gland	SWC13-00-00	RJ45 Feed-thru lock connector	Cable gland; M25; 1.5; Required to provide IP65 rating.

Accessories

Accessories recommended to Vista Omni (not part of the package):

⁶ <https://mikrotik.com/product/QMP-LHG#fndtn-specifications>

Sewio Name	Sewio PN	Product Name	Description
Ubiquiti universal antenna mount	N/A	Manufacturer: UbiquitiMount PN: UB-AM Available on: store.ui.com ⁷ or amazon.com ⁸	Universal antenna mount 

On this page:

- [Anchor Vista Omni \(Industrial usage\)](#)(see page 17)
 - [Package Contains](#)(see page 17)
 - [Accessories](#)(see page 18)
- [Anchor Vista Omni Compact \(Office Usage\)](#)(see page 19)
 - [Package Contains](#)(see page 19)
- [Other Accessories](#)(see page 20)
- [Packaging](#)(see page 20)

2.7.2 Anchor Vista Omni Compact (Office Usage)

Package Contains

- Anchor Vista Omni Compact
- Wall Mount Bracket

Sewio Name	Sewio PN	Product Name	Description
Anchor Vista Omni Compact	SWA09-00-01	RTLS Hardware - Anchors	Anchor Vista Omni without accessories
Wall Mount Bracket	SWC02-00-00	-	Wall Mount Bracket Recommended for Anchors Vista Omni, OmniLight, 1.4.

⁷ <https://store.ui.com/collections/operator-accessories/products/universal-antenna-mount>

⁸ https://www.amazon.com/Ubiquiti-UB-AM-Universal-Antenna-Mount/dp/B07S1PQT2H/ref=sr_1_7?crid=1ZY51JW0L6B08&dchild=1&keywords=ubiquiti+universal+antenna+mount&qid=1621854376&srefix=Ubiquiti%C2%A0universal+antenna+mount%2Caps%2C249&sr=8-7

2.7.3 Other Accessories

Other accessories suitable to both anchor types Vista Omni and Vista Omni (w/o Accessories) → not part of the package:

Sewio Name	Sewio PN	Product Name	Description
PoE PowerBank	N/A	SMART POWERBANK 802.3AF POE 48VDC/300MA⁹	Power bank for demos with Anchor Vista
USB to PoE Converter	N/A	TP-DCDC-2USB-48¹⁰	DC-DC Converter to PoE from an arbitrary power bank
Tripod	N/A	Tripod 3.45m¹¹	-
Tripod Whitworth adaptor	N/A	Verified PN¹² Other adaptors¹³ (nonverified)	Tripod adaptor to Anchor Vista
SMALLRIG	N/A	SMALLRIG¹⁴	Flexible multipurpose holder.
RAM portfolio	N/A	variety of mounting products¹⁵	Many types of industrial mounting

2.7.4 Packaging

Packaging is similar to both anchors Vista Omni and Vista Omni (w/o Accessories)

⁹ <https://shop.meconet.de/Power-Supply/PoE-Power-over-Ethernet/Smart-PowerBank-802-3af-PoE-48VDC-300mA::116925.html>

¹⁰ <https://www.balticnetworks.com/tycon-power-usb-powered-48v-passive-poe-inserter-48vdc-12w-poe-two-usb-power-inputs.html>

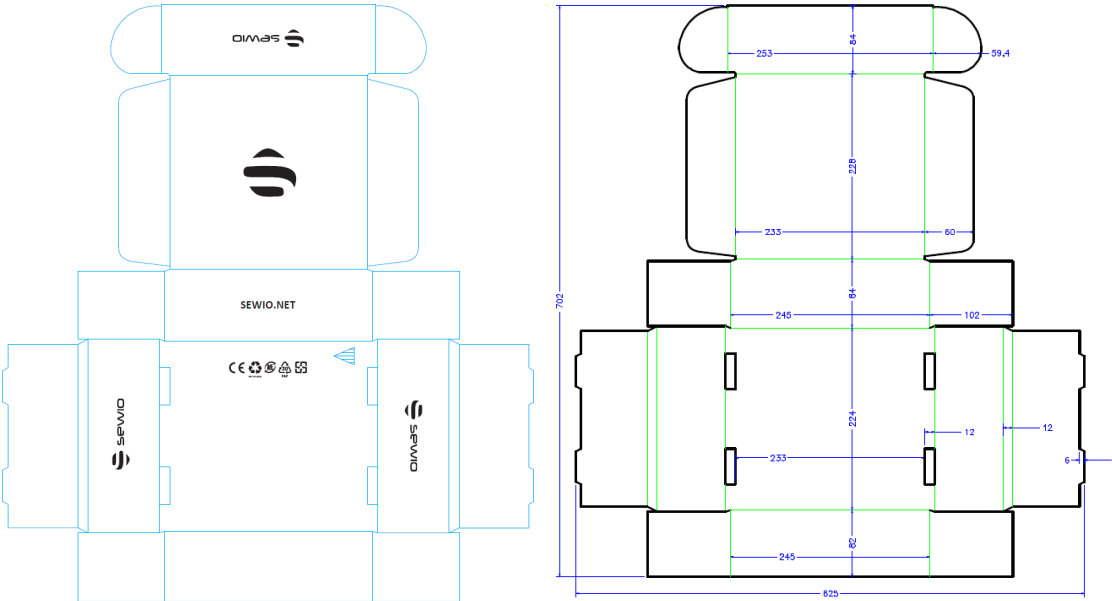
¹¹ <https://www.elementrix.cz/www-foto-eshop-cz/eshop/13-1-Studiove-stativy/0/5/628-Stativ-pro-stud-svetlo-blesk-250cm>

¹² <https://www.foto-eshop.cz/www-foto-eshop-cz/eshop/65-1-Stativ-stativove-hlavy/166-2-Stativove-hlavy/5/3246-3D-Stativova-kulova-hlava-HL11X>

¹³ https://www.amazon.com/s?k=ball+head+screw+mount&crd=FD99BEZ27OGL&qid=1553699397&sprefix=ball+head+scr%2Caps%2C218&ref=sr_pg_1

¹⁴ <https://www.cddiscount.com/photo-numerique/accessoires-photo/smallrig-accessoire-camera-pince-appareil-photo-a/f-1121133-sma0744790441345.html>

¹⁵ <https://www.rammount.com/>



2.8 Safety and Regulatory Information - Vista Omni

2.8.1 Safety Information

- Never open the enclosure of the Vista Omni.
- Do not use the Vista Omni if it has been damaged

2.8.2 Regulatory Information

FCC Notice (For US Customers): FCC ID: 2ATZ8-SWA07-00

For FCC compliance, the following conditions must be met:

- All units must be exclusively used indoors.
- No devices may be installed at any outdoor location.

This device is designed to be operated with the supplied antenna. The use of any other antenna with this device is strictly prohibited and may result in the voiding of the FCC authorization for this equipment's operation. It is strictly forbidden to use any other antenna than the one Sewio Networks s.r.o has supplied.

This device is compliant with FCC Rules, part 15. Its usage is subject to the two following conditions:

(1) this device may not be the cause of any harmful interference, and (2) this device shall accept any interference received, including interference that may interfere with its desired operation.

This device is also in compliance with part 15.517 of the FCC Rules. This equipment may only be used indoors. Usage outdoors violates 47 U.S.C. 301 and the operator could be subject to serious legal penalties.

This equipment is only to be installed and used at a 20 cm minimum distance between the radiator and a person.

Any changes or modifications that have not been expressly agreed to by the Sewio Networks s.r.o could invalidate the user's authority to use the equipment.

 **Always use RTLS Studio 2.4.x or higher.**

2.8.3 DISCLAIMER

The information contained within this document is subject to change without prior notice. Sewio Networks s.r.o accepts no responsibility for any inaccuracies or omissions and specifically rejects any losses, liabilities, or risks, personal or otherwise, sustained as a consequence, directly or otherwise, of the use or application of anything contained within this document. In order to obtain the latest documentation, contact Sewio Networks s.r.o.

The user assumes all responsibility and liability for the proper and safe handling of the goods. Further, the user indemnifies Sewio from all claims arising from the handling or use of the goods.

3 Anchor Vista DirectFive

Feature Set

- Decawave UWB Radio
- Manageable via web browser and RTLS Studio
- Ethernet and Wi-Fi backhaul (optional)
- Firmware upgrade via Ethernet

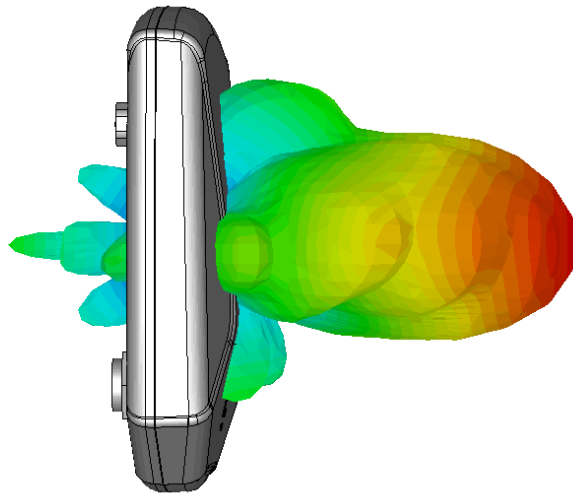
NEW**Cutting Edge Antenna Design****NEW****IEEE 802.3af compliant (Active PoE)****NEW****Atmospheric pressure sensor****NEW****Industrial Enclosure****NEW****Zero Warm-up Time****NEW****Robust Synchronization**

 **Please use with RTLS Studio 2.3 or higher.**

Anchor is a reference device with a known position. Set of Anchors creates location infrastructure where Tags are being located with sub-meter accuracy. The primary goal of the device is to gather radio signals from mobile locators called Tags and forward them to RTLS Studio where the position is being estimated.

Moreover, Anchors can also receive data from sensors equipped within the Tag such as acceleration, orientation, button event or custom data payload. Data are further exposed to the user via open API.

Anchor is an IP network device equipped with an Ethernet/Wi-Fi interface for both data backhaul and/or power supply. Anchors are configured and managed via RTLS Studio software. They support variety of holders to simplify the installation in any premises. They are mounted above Tags which ensures maximum coverage and minimizes obstacles blocking its communication line.



Key Features of Anchor Vista line

Feature	Benefit	Description
UWB Antenna CUTTING EDGE FEATURE	Better Range and Uniform Coverage, no blind spots	Directional antenna was specifically designed for world-wide available UWB channel 5 and scalable TDoA approach. Its design leverage on wireless synchronization where key is to have enough gain to reach neighbor anchors within square, while still have the maximum gain for location area where Tags are moved and signal from them can be easily attenuated. This high performance directional antenna also provide homogeneous/ uniform radiation pattern, while this is almost impossible with omni UWB antennas. Therefore, it minimizes possibility of "blind" spots in radiation pattern as well as the within location area as well.
PoE 802.3af	Remote Power Management	PoE Enables continuous power integrity health-check. In case of outage or system shutdown it enables to make power restart procedure remotely which might be crucial since anchors are not usually easily reachable.
	Reducing Cabling	Anchor consumes just 2W thus, empowering PoE In/PoE Out network extender device is feasible. It enables significantly reduce long cables coming inherent for Ethernet star topology. PoE In / PoE Out can be reduce multiple long cables to single cable with star cabling only within given location cell.
Industrial Enclosure	Industry ready solution	Sewio provides Anchor Vista DirectFive with industrial housing which was specifically designed for harsh environments and outdoors. It also perfectly suits industrial environments where lot of dust or dirty impurities are present. Thanks to unique design, it provides barometric measurement for Z-axis even through robust housing.

Other improvements of Anchor Vista line

Feature	Benefit	Description
Zero Warmup Time	Fast commissioning	Precise location requires sub-nano second synchronization. It takes around 20 minutes for synchronization stabilization for previous Anchor 1.4. Now, Anchor is ready immediately after the power-up.
Robust Sync	Stable Positioning robust against environmental conditions.	TDoA requires sub-nano second synchronization. Current Anchor version is sensitive to rapid airflow or sudden changes in temperature which causes troubles with anchor's synchronization. It might lead to incorrect positioning at the end. After a long research we have designed a new approach where Anchor Vista is able to be very resilient against various environmental condition.

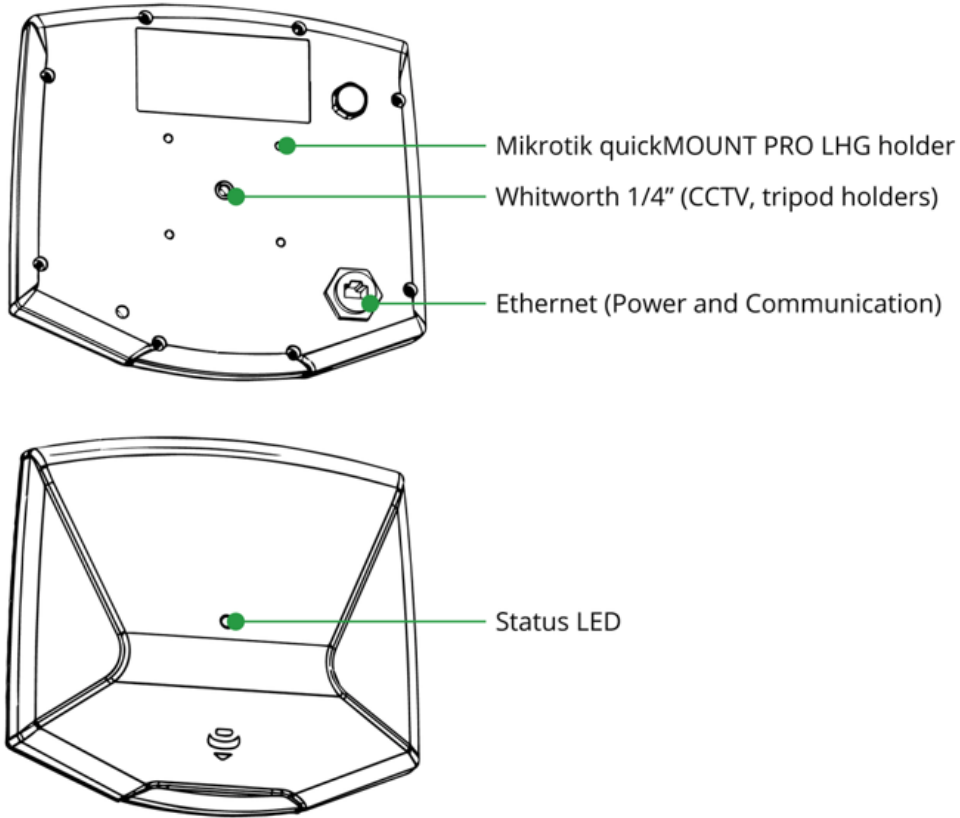
Feature	Benefit	Description
Barometer Sensor on board	Possibility to measure Z-axis via barometer ¹⁶	Measuring Z-axis via UWB requires diagonal 3D anchors placement at different heights, which is quite impractical for most of applications outside the lab environment. Latest advances in MEMS sensors allows to incorporate very precise barometer sensor. Sewio on the top of it has developed Z-axis estimation based on relative barometric measurements between tag and anchors. It can be precise at dm-level of accuracy without any requirements on anchor infrastructure.

3.1 Part Number

PN	Name	Description
SWA08-00-01	Anchor Vista DirectFive	DirectFive + QuickMount + Cable Gland
SWA08-01-01	Anchor Vista DirectFive WiFi	DirectFive + QuickMount + Cable Gland

¹⁶ <https://docs.sewio.net/display/PUB/Z-Axis+with+Barometer%2C+Configuration>

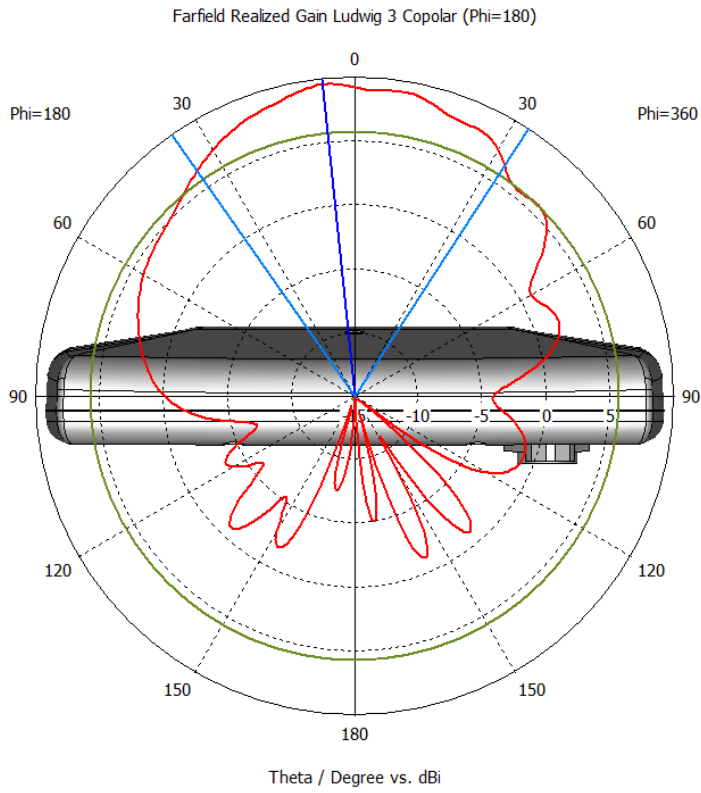
3.2 Technical Parameters - Vista DirectFive

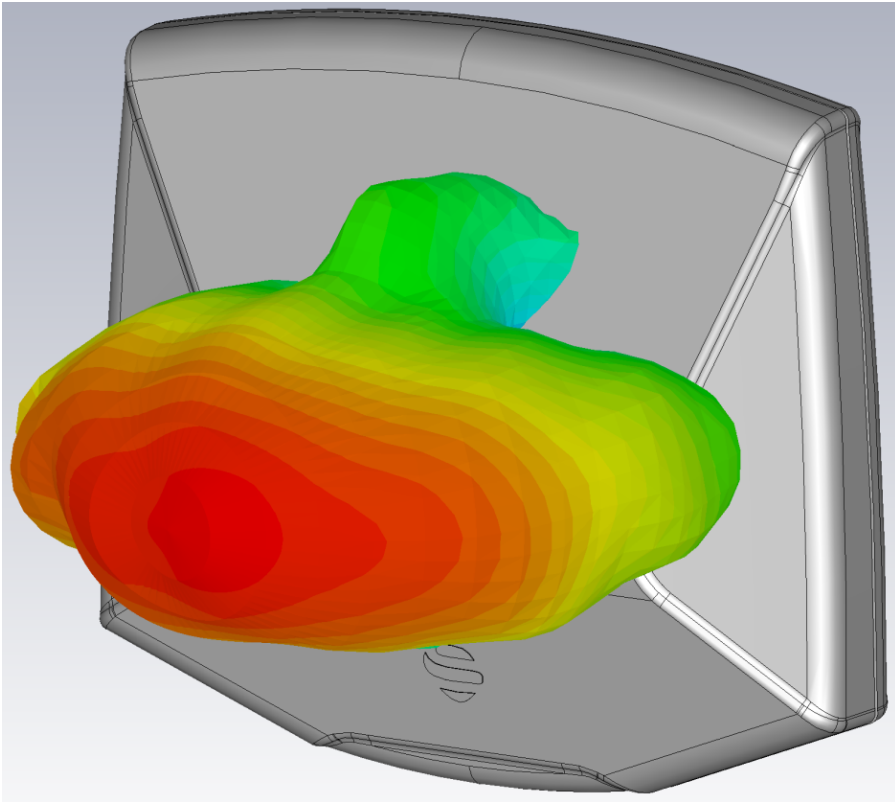


Size	212 x 190 x 36
Weight	390 g
Power Supply	PoE 802.3af or DC 48V (Passive PoE)
Power Requirements	2.5W
Operating Conditions	-20 - 60 °C 20 – 85% humidity
Enclosure	IP65 RJ45 Feed-thru lock connector shall be properly mounted to provide IP65 rating.

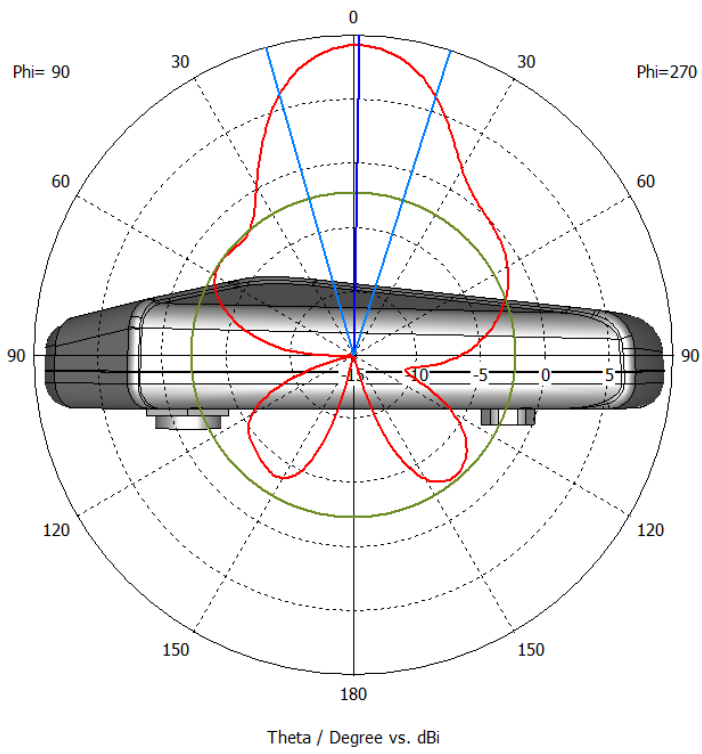
Warm-up Time	Immediate
Environment	Industrial Warehouse Manufacturing Retail Sports Tracking Livestock
Placement	Indoor
UWB Antenna	Directional CH5
WiFi 2.4 GHz (optional)	Omnidirectional Antenna
UWB Radiated Power CH5 6.5 GHz	-41.3 dBm/Hz
Approvals	RED/CE FCC

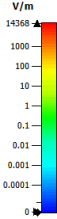
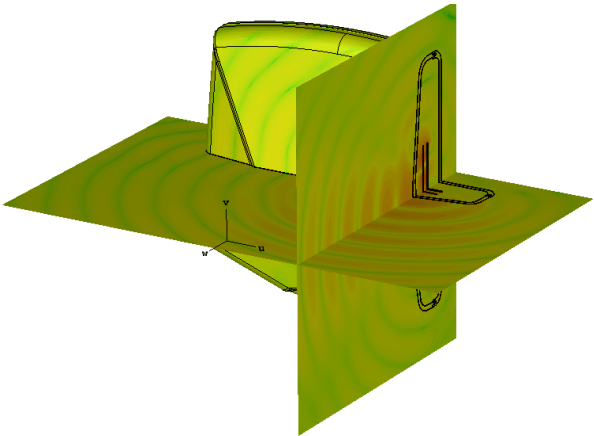
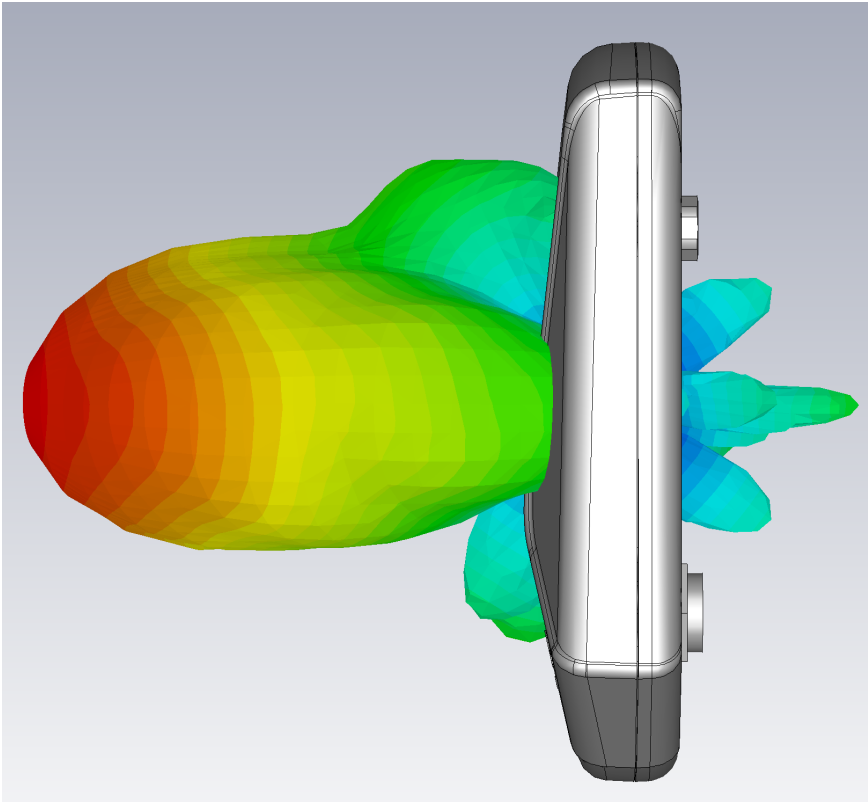
3.2.1 Radiation Pattern - Vista DirectFive





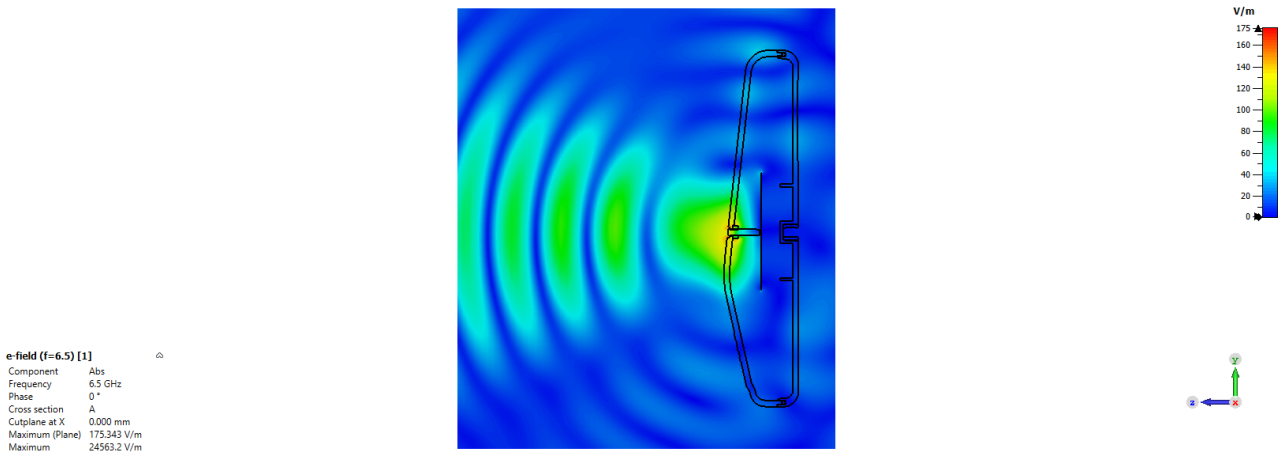
Farfield Realized Gain Ludwig 3 Copolar (Phi=90)





e-field (f=6.5) [1]
Component Abs
Frequency 6.5 GHz
Phase 0°
Cross section A
Cutplane at X 60.200 mm
Maximum (Plane) 7713.17 V/m
Maximum 24563.2 V/m





3.3 Power Supply Options - Vista DirectFive

3.3.1 Power Over Ethernet (Active PoE)



Connect the anchor to a network switch supporting PoE IEEE 802.3af standard via Ethernet cable.

Once the Anchor is connected to a stable power supply, a blue LED blinks¹⁷ several times that indicates the anchor was turned ON. Then the LED is turned OFF.

3.3.2 DC 48V, Passive PoE

The anchor can be powered from a single or multiple port PoE injector with DC 48V output. Power is supplied via Ethernet cable (pairs 4,5 positive terminal, 7,8 negative terminal).

Single-port Injector


<p>Injector with an integrated power source for AC.</p>	<p>Injector which requires an external DC 48V power source.</p>
 <p>(Ubiquiti POE-48)</p>	

¹⁷ <https://docs.sewio.net/display/PUB/Anchor+LED+Indication>

Multi-port Injector for 19" rack

"Data LAN" ports are connected to the network switch, "Power+Data" ports are connected to the anchors.



Always use a galvanic isolated  48V power adaptor with short circuit protection for passive PoE injection. Never connect "Power+Data" injector ports to the computer or other network devices.

Recommended PoE Injector power adaptor PN: [GS36E48-P1J](#)¹⁸ or [GST36E48-P1J](#)¹⁹ Meanwell. Available through whole-sellers Mouser, Digikey, or Farnell worldwide.

Power Bank

⚠ The USB connector is not available in Anchor Vista. Thus either a PoE power bank should be used or a USB to PoE converter and standard USB power bank. Please see the [accessories](#)(see page 32).

On this page:

- [Power Over Ethernet \(Active PoE\)](#)(see page 32)
- [DC 48V, Passive PoE](#)(see page 32)
 - [Single-port Injector](#)(see page 32)
 - [Multi-port Injector for 19" rack](#)(see page 33)
 - [Power Bank](#)(see page 33)

3.4 Device Mounting - Vista DirectFive

Please follow the assembly guide for Anchor Vista DirectFive:

¹⁸ <https://www.meanwell-web.com/en-gb/ac-dc-wall-mount-adaptor-output-48vdc-at-0-75a-gs36e48--p1j>

¹⁹ <https://www.meanwell-web.com/en-gb/ac-dc-industrial-desktop-adaptor-output-48vdc-at-0-gst36e48--p1j?returnurl=%2fen-gb%2fsearch%3fq%3dgst36e48-p1j%23gst36e48-p1j>



quickMOUNT PRO LHG holder provides tilt capability up 30° while metal console maintain minimum separation from the wall. Adjustable holder Mikrotik quickMOUNT PRO LHG + metal console is recommended for permanent anchor placement.

Anchors are typically deployed at the height 4 - 6 meters above the floor. Please read more information about typical anchor deployment within Starting guide and Advanced guide.

Permanent deployment: Mikrotik quickMOUNT PRO LHG + metal console




Mobile deployment: can utilize the whitworth 1/4" as it is compatible with the most off-the-shelf tripods and CCTV holders.

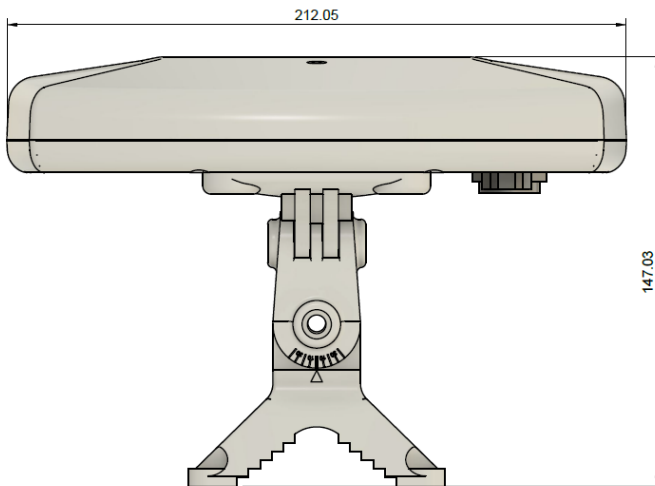


3.4.1 Dimensions - Vista DirectFive + quickMOUNT

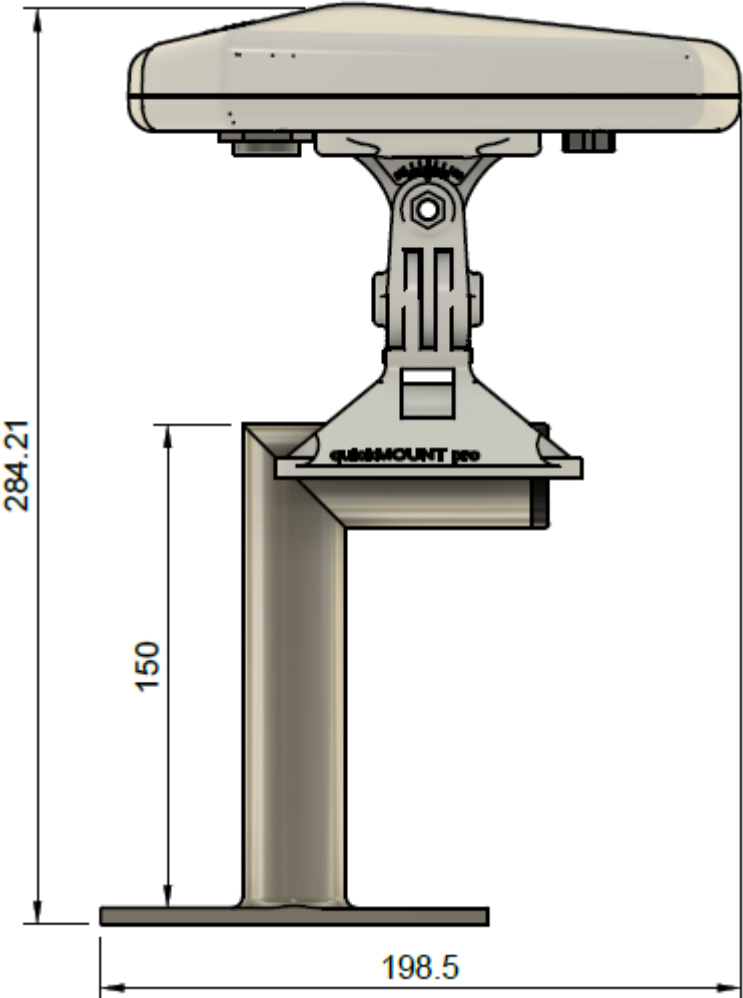
Recommended Vista DirectFive + mounting accessories. Product numbers are available in [Package Contains and Accessories - Vista DirectFive](#)(see page 38).

-  Wall mount metal brackets are strongly recommended to keep anchor separated from the wall.

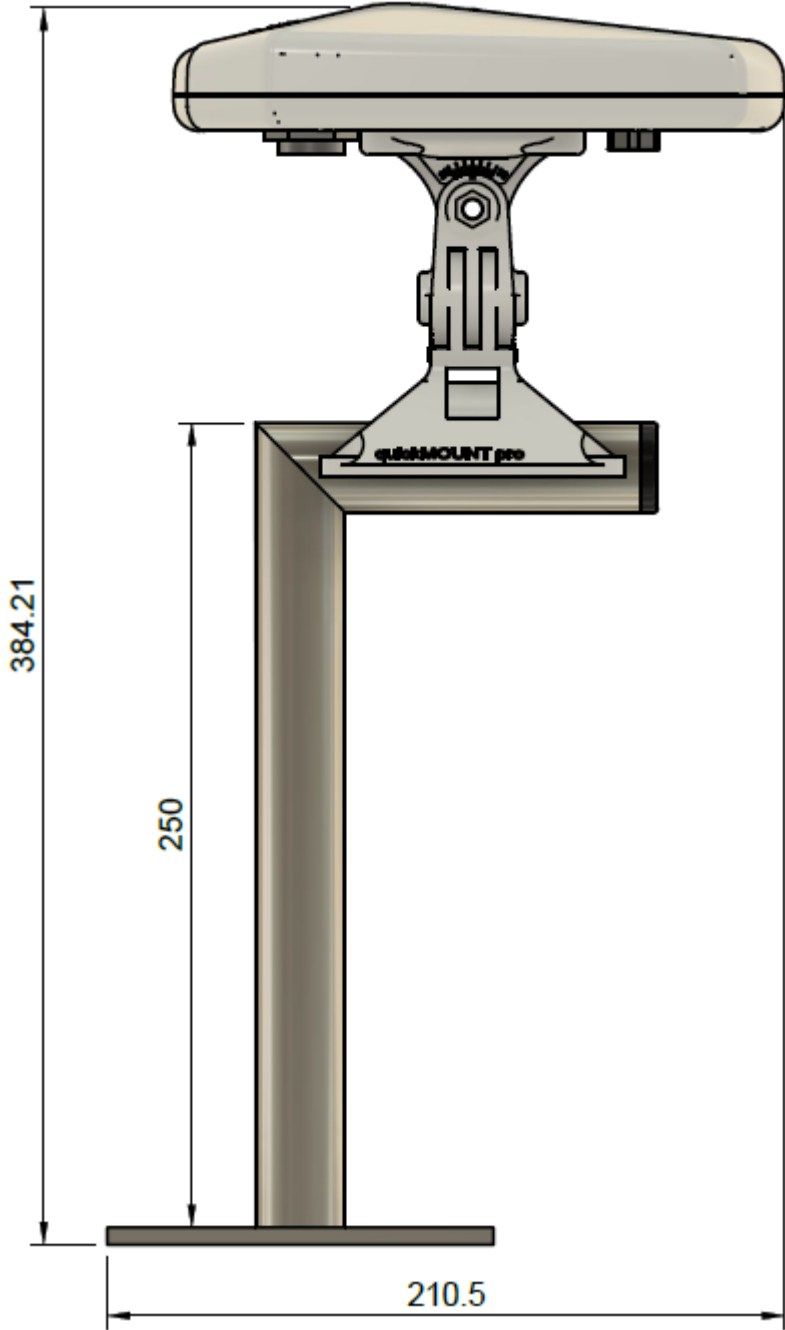
Vista DirectFive + quickMOUNT PRO LHG



Vista DirectFive + quickMOUNT PRO LHG + Wall Mount Metal Bracket 15 cm



Vista DirectFive + quickMOUNT PRO LHG + Wall Mount Metal Bracket 25 cm



3.5 Package Contains and Accessories - Vista DirectFive

3.5.1 Package Contains

- Anchor Vista DirectFive
- RJ45 Feed-thru lock connector
- Bracket quickMOUNT PRO LHG
- Screws for quickMOUNT PRO LHG

Sewio Name	Drawings	Sewio PN	Product Name	Description
Anchor Vista DirectFive	See page Dimensions - Vista DirectFive (see page 35).	SWA08-00-00	RTLS Hardware - Anchors	Anchor Vista DirectFive without accessories.
Vista DirectFive Cable Gland	-		RJ45 Feed-thru lock connector	Required to provide IP65 rating.
quickMOUNT PRO LHG	<ul style="list-style-type: none"> • quick mount 1.pdf²⁰ • quick mount 2.pdf²¹ • quick mount 3.pdf²² 	SWC11-00-00	quickMOUNT PRO LHG ²³ quickMount holder package contains screws that do not fit into the Anchor Vista enclosure, therefore Anchor Vista is delivered with the correct one. following screws are recommended: PN: BOSSARD 2000598 or WN 1412 for plastic; 5x12; Head: button; Phillips; steel; zinc.	Recommended holder for Anchor Vista.

3.5.2 Accessories


They are not part of the package.

²⁰ <https://docs.sewio.net/download/attachments/3244595/quick%20mount%201.pdf?api=v2&modificationDate=1597932403869&version=1>

²¹ <https://docs.sewio.net/download/attachments/3244595/quick%20mount%202.pdf?api=v2&modificationDate=1597932424586&version=1>

²² <https://docs.sewio.net/download/attachments/3244595/quick%20mount%203.pdf?api=v2&modificationDate=1597932437827&version=1>

²³ <https://mikrotik.com/product/QMP-LHG#fndtn-specifications>

Sewio Name	Drawings	Sewio PN	Product Name	Description
Ubiquiti universal antenna mount	N/A	N/A	Manufacturer: UbiquitiMount PN: UB-AM Available on: store.ui.com ²⁴ or amazon.com ²⁵	Universal antenna mount. 
Wall Mount Metal Bracket 15 cm	<ul style="list-style-type: none"> Wall Mount Metal Bracket 15cm.pdf²⁶ 	SWC10-0 2-00	WaveRF PK15I32 ²⁷	15cm Metal console for Anchor Vista placement with quickMount PRO LHG holder.
Wall Mount Metal Bracket 25 cm	<ul style="list-style-type: none"> Wall Mount Metal Bracket 25cm.pdf²⁸ 	SWC10-0 1-00	WaveRF PK25I28 ²⁹	25cm Metal console for Anchor Vista placement with quickMount PRO LHG holder.
PoE PowerBank	-	N/A	SMART POWERBANK 802.3AF POE 48VDC/300MA ³⁰	Power bank for demos with Anchor Vista.
USB to PoE Converter	-	N/A	TP-DCDC-2USB-48 ³¹	DC-DC Converter to PoE from an arbitrary power bank

²⁴ <https://store.ui.com/collections/operator-accessories/products/universal-antenna-mount>

²⁵ https://www.amazon.com/Ubiquiti-UB-AM-Universal-Antenna-Mount/dp/B07S1PQT2H/ref=sr_1_7?

[crd=1ZY51JW0L6B08&dchild=1&keywords=ubiquiti+universal+antenna+mount&qid=1621854376&srprefix=Ubiquiti%20universal+antenna+mount%20Caps%20C249&sr=8-7](https://www.amazon.com/Ubiquiti-UB-AM-Universal-Antenna-Mount/dp/B07S1PQT2H/ref=sr_1_7?crd=1ZY51JW0L6B08&dchild=1&keywords=ubiquiti+universal+antenna+mount&qid=1621854376&srprefix=Ubiquiti%20universal+antenna+mount%20Caps%20C249&sr=8-7)

²⁶ <https://docs.sewio.net/download/attachments/3244595/Wall%20Mount%20Metal%20Bracket%20-%20Short%2015cm.pdf?api=v2&modificationDate=1597932507370&version=1>

²⁷ <https://www.i4wifi.cz/cs/210412-konzole-a-drzaky-konzole-na-fasadu-15-cm-hmzodiny-a-vruty-html>

²⁸ <https://docs.sewio.net/download/attachments/3244595/Wall%20Mount%20Metal%20Bracket%2025cm.pdf?api=v2&modificationDate=1597932576259&version=1>

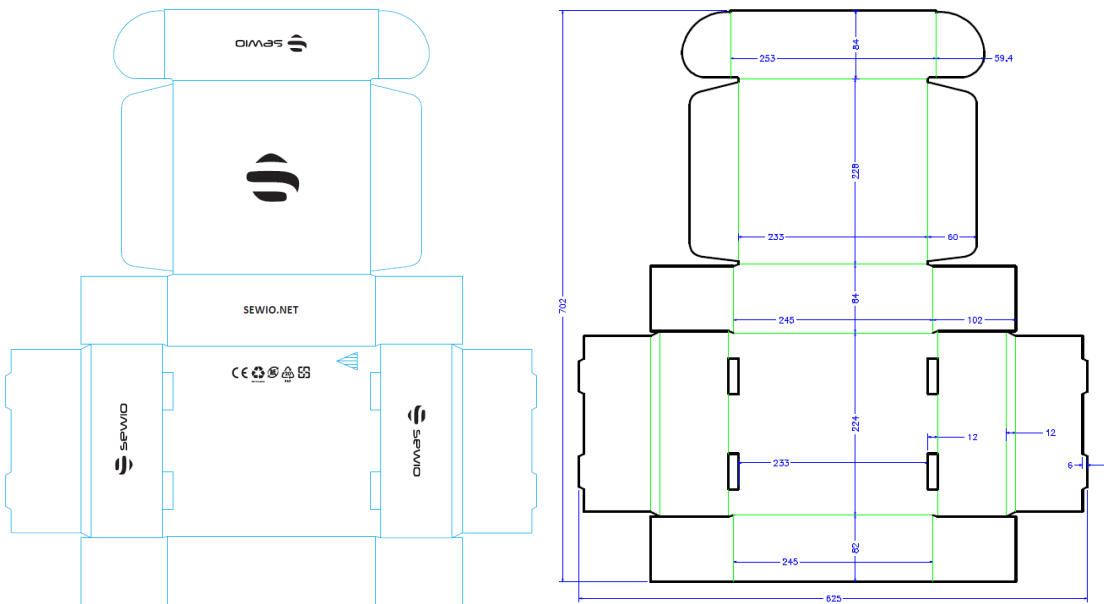
²⁹ <https://www.i4wifi.cz/cs/210414-drzak-waverf-pk25i28-25cm-hmzodiny-a-vruty>

³⁰ <https://shop.meconet.de/Power-Supply/PoE-Power-over-Ethernet/Smart-PowerBank-802-3af-PoE-48VDC-300mA::116925.html>

³¹ <https://www.balticnetworks.com/tycon-power-usb-powered-48v-passive-poe-inserter-48vdc-12w-poe-two-usb-power-inputs.html>

Sewio Name	Drawings	Sewio PN	Product Name	Description
Tripod Whitworth adaptor	-	N/A	Verified PN ³² Other adaptors ³³ (nonverified)	Tripod adaptor to Anchor Vista.
Tripod	-	N/A	Tripod 3.45m ³⁴	-
RAM portfolio	-	N/A	variety of mounting products ³⁵	Many types of industrial mounting.

3.5.3 Packaging



32 <https://www.foto-eshop.cz/www-foto-eshop-cz/eshop/65-1-Stativy-stativove-hlavy/166-2-Stativove-hlavy/5/3246-3D-Stativova-kulova-hlava-HL11X>

33 https://www.amazon.com/s?k=ball+head+screw+mount&crid=FD99BEZ27OGL&qid=1553699397&sprefix=ball+head+scr%2Caps%2C218&ref=sr_pg_1

34 <https://www.elementrix.cz/www-foto-eshop-cz/eshop/13-1-Studiove-stativy/0/5/628-Stativ-pro-stud-svetlo-blesk-250cm>

35 <https://www.rammount.com/>



3.6 Safety and Regulatory Information - Vista DirectFive

3.6.1 Safety Information

- Never open the enclosure of the product.
- Do not use the product if it has been damaged.

3.6.2 Regulatory Information

Any changes or modifications that have not been expressly agreed to by the Sewio Networks s.r.o could invalidate the user's authority to use the equipment.

🔗 Always use with RTLS Studio 2.1 or higher.

3.6.3 DISCLAIMER

The information contained within this document is subject to change without prior notice. Sewio Networks s.r.o accepts no responsibility for any inaccuracies or omissions and specifically rejects any losses, liabilities, or risks, personal or otherwise, sustained as a consequence, directly or otherwise, of the use or application of anything contained within this document. In order to obtain the latest documentation, contact Sewio Networks s.r.o.

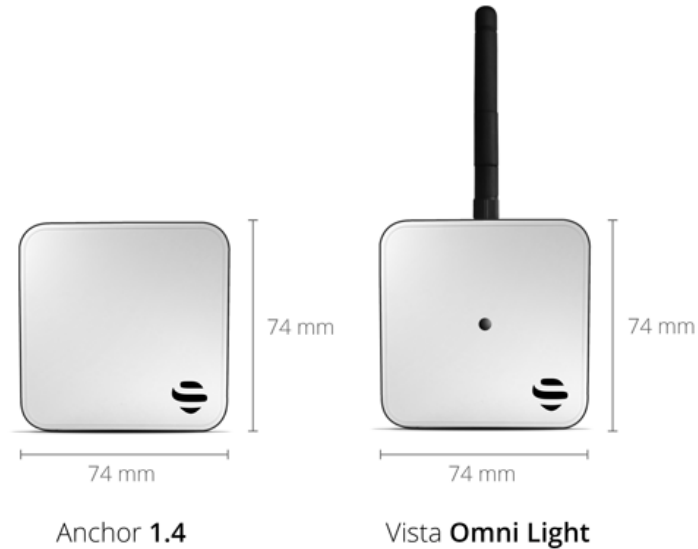
The user assumes all responsibility and liability for proper and safe handling of the goods. Further, the user indemnifies Sewio from all claims arising from the handling or use of the goods.

4 Other Anchors

Sewio has got two older anchors:

- **Anchor Vista OmniLight**
- **Anchor 1.4**

i Anchor Vista OmniLight is still supported → new FW releases



Anchor Type	Anchor 1.4 (see page 54)	Vista Omni Light (see page 43)
Product Status	END OF LIFE	SUPPORTED
Released	2017	2019
Size	74 x 74 x 25	74 x 74 x 25
Weight	72 g	72 g
Operating Conditions	0 - 50 °C	0 - 60 °C
Warmup period	20 minutes*	zero
UWB Antenna	omni	true omni
Passive PoE 48V	✓	✓

Active PoE IEEE 802.3af, Cisco Compatible	✘	✔
Battery Power Supply	USB Power Bank	PoE Power Bank**
Ethernet Backhaul	✔	✔
WiFi Backhaul	optional	optional
Remote LED Identification	✔	✔
Barometer	✘	✔
Clock Type	XTAL	TCXO

*Anchor is able to provide True Location after a warmup period

**available through PoE Power bank or USB to PoE converter, see [accessories](#)³⁶.

4.1 Anchor Vista OmniLight

Feature Set

- Decawave UWB Radio
- Manageable via web browser and RTLS Studio
- Ethernet (recommended) and Wi-Fi backhaul
- Firmware upgrade via Ethernet

NEW True 360° omni range

NEW IEEE 802.3af compliant (Active PoE)

NEW Atmospheric pressure sensor

NEW Zero Warm-up Time

NEW Robust Synchronization

 Please use with **RTLS Studio 2.3 or higher**.

Anchor is a reference device with a known position. Set of Anchors creates location infrastructure where Tags are being located with sub-meter accuracy. The primary goal of the device is to gather radio signals from mobile locators called Tags and forward them to RTLS Studio where the position is being estimated.

Moreover, Anchors can also receive data from sensors equipped within the Tag such as acceleration, orientation, button event or custom data payload. Data are further exposed to the user via open API.

³⁶ <https://docs.sewio.net/display/PUB/Package+Contains+and+Accessories>

Anchor is an IP network device equipped with an Ethernet/Wi-Fi interface for both data backhaul and/or power supply. Anchors are configured and managed via RTLS Studio software. They support variety of holders to simplify the installation in any premises. They are mounted above Tags which ensures maximum coverage and minimizes obstacles blocking its communication line.



Key Features of Anchor Vista Omni Light

Feature	Benefit	Description
PoE 802.3af	Remote Power Management	PoE Enables continuous power integrity health-check. In case of outage or system shutdown it enables to make power restart procedure remotely which might be crucial since anchors are not usually easily reachable.

Feature	Benefit	Description
	Reducing Cabling	Anchor consumes just 2W thus, empowering PoE In/PoE Out network extender device is feasible. It enables significantly reduce long cables coming inherent for Ethernet star topology. PoE In / PoE Out can be reduce multiple long cables to single cable with star cabling only within given location cell.

Other improvements of Anchor Vista line

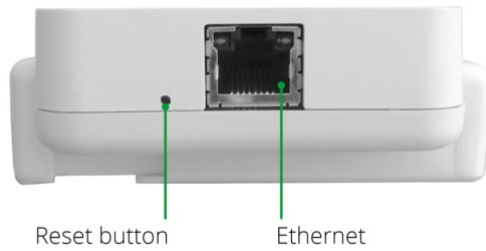
Feature	Benefit	Description
True 360° omni range	No need for device orientation adjustments.	This design provides uniform omni-directional pattern, thus there is equal range in 360°. Therefore no need for an additional and painful device orientation adjustments especially once the anchor is deployed and becomes physically unreachable.
Zero Warmup Time	Fast commissioning	Precise location requires sub-nano second synchronization. It takes around 20 minutes for synchronization stabilization for previous Anchor 1.4. Now, Anchor is ready immediately after the power-up.
Robust Sync	Stable Positioning robust against environmental conditions.	TDoA requires sub-nano second synchronization. Current Anchor version is sensitive to rapid airflow or sudden changes in temperature which causes troubles with anchor's synchronization. It might lead to incorrect positioning at the end. After a long research we have designed a new approach where Anchor Vista is able to be very resilient against various environmental condition.
Barometer Sensor on board	Possibility to measure Z-axis via barometer ³⁷ .	Measuring Z-axis via UWB requires diagonal 3D anchors placement at different heights, which is quite impractical for most of applications outside the lab environment. Latest advances in MEMS sensors allows to incorporate very precise barometer sensor. Sewio on the top of it has developed Z-axis estimation based on relative barometric measurements between tag and anchors. It can be precise at dm-level of accuracy without any requirements on anchor infrastructure.

4.1.1 Partnumber

PN	name
SWA07-00-00	Anchor Vista OmniLight
SWA07-01-00	Anchor Vista OmniLight WiFi

³⁷ <https://docs.sewio.net/display/PUB/Z-Axis+with+Barometer%2C+Configuration>

4.1.2 Technical Parameters - Vista OmniLight



Size	74 x 74 x 25
Weight	72 g
Power Supply	PoE 802.3af or DC 48V (Passive PoE)
Power Requirements	2.5W
Operating Conditions	0 - 60 °C 20 – 85% humidity without condensation
Warm-up Time	Immediate
Environment	Industrial Warehouse Manufacturing Retail Sports Tracking
Placement	Indoor
UWB Antenna	Omnidirectional CH2, CH5
WiFi 2.4 GHz (optional)	Omnidirectional Antenna

UWB Radiated Power CH2 4 GHz CH5 6.5 GHz	-41.3 dBm/Hz
Approvals	RED/CE, CH5 and CH2. FCC, CH5 only

4.1.3 Power Supply Options - Vista OmniLight

Power Over Ethernet (Active PoE)



Connect the anchor to a network switch supporting PoE IEEE 802.3af standard via Ethernet cable.

Once the Anchor is connected to a stable power supply, a blue LED blinks³⁸ several times that indicates the anchor was turned ON. Then the LED is turned OFF.

DC 48V, Passive PoE

The anchor can be powered from a single or multiple port PoE injector with DC 48V output. Power is supplied via Ethernet cable (pairs 4,5 positive terminal, 7,8 negative terminal).

Single-port Injector

Injector with an integrated power source for AC.	Injector which requires an external DC 48V power source.
 <p>(Ubiquiti POE-48)</p>	

Multi-port Injector for 19" rack

"Data LAN" ports are connected to the network switch, "Power+Data" ports are connected to the anchors.



³⁸ <https://docs.sewio.net/display/PUB/Anchor+LED+Indication>



Always use a galvanic isolated 48V power adaptor with short circuit protection for passive PoE injection. Never connect “Power+Data” injector ports to the computer or other network devices.

Recommended PoE Injector power adaptor PN: [GS36E48-P1J](#)³⁹ or [GST36E48-P1J](#)⁴⁰ Meanwell. Available through whole-sellers Mouser, Digikey, or Farnell worldwide.

Power Bank

! The USB connector is not available in Anchor Vista. Thus either a PoE power bank should be used or a USB to PoE converter and standard USB power bank. Please see the [accessories](#)(see page 47).

On this page:

- [Power Over Ethernet \(Active PoE\)](#)(see page 47)
- [DC 48V, Passive PoE](#)(see page 47)
 - [Single-port Injector](#)(see page 47)
 - [Multi-port Injector for 19" rack](#)(see page 47)
 - [Power Bank](#)(see page 48)

4.1.4 Device Mounting, Vista OmniLight

Please follow the assembly guide:



Anchor Vista OmniLight is typically deployed at the height 3 - 6 meters above the floor.

Permanent deployment : Recommended mounting with Wall Mount Bracket + Holder. Antenna should be in straight position in order to get maximum possible performance.

³⁹ <https://www.meanwell-web.com/en-gb/ac-dc-wall-mount-adaptor-output-48vdc-at-0-75a-gs36e48--p1j>

⁴⁰ <https://www.meanwell-web.com/en-gb/ac-dc-industrial-desktop-adaptor-output-48vdc-at-0-gst36e48--p1j?returnurl=%2fen-gb%2fsearch%3fq%3dgst36e48-p1j%23gst36e48-p1j>



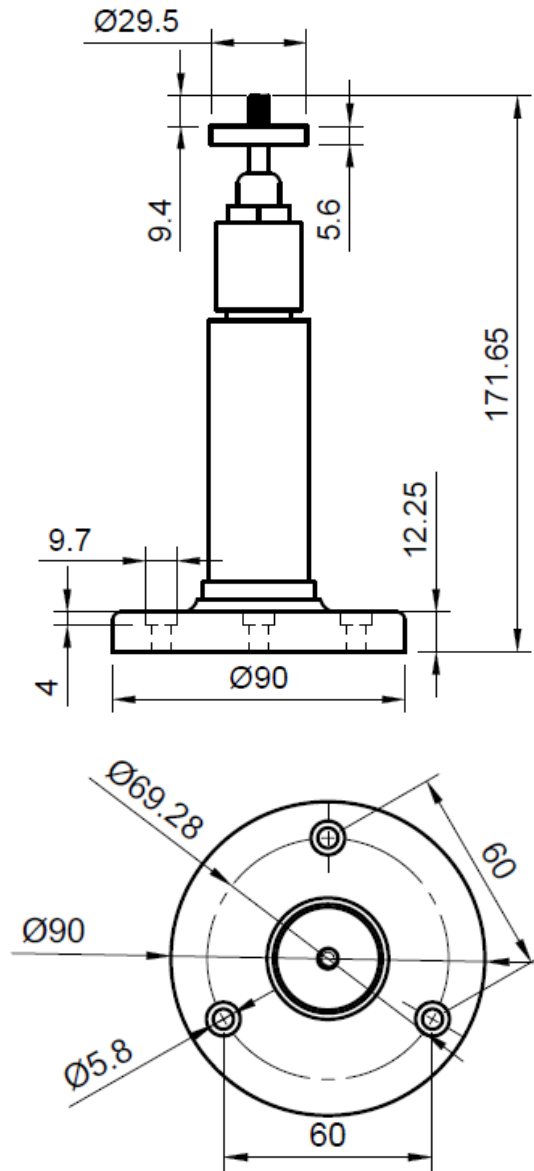
Mobile deployment: can utilize the whitworth ¼” as it is compatible with the most off-the-shelf tripods and CCTV holders.

Holders PN

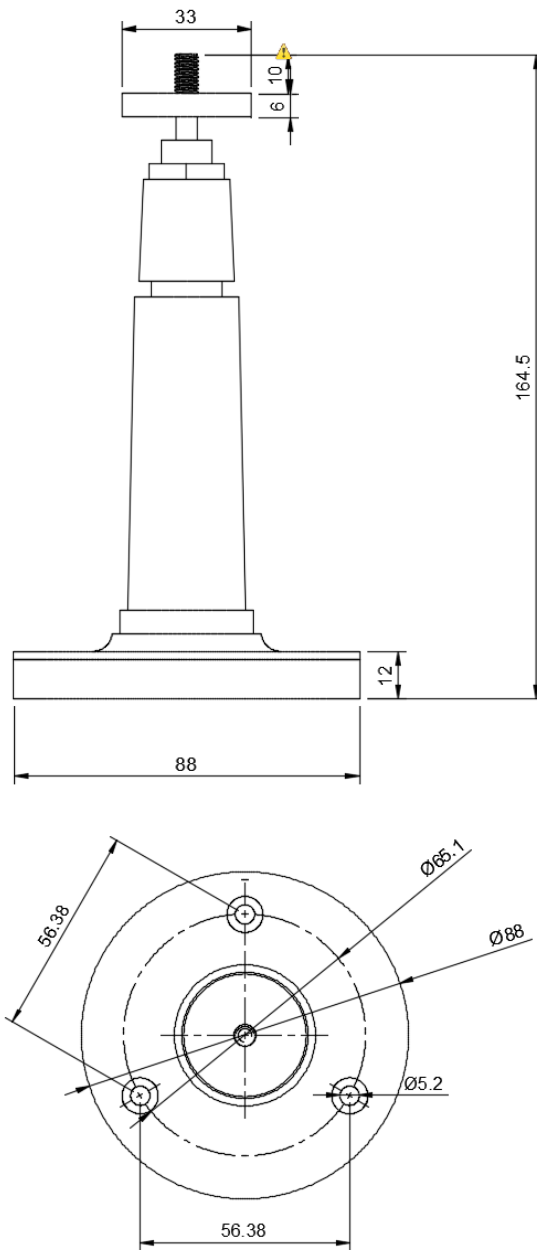
name	PN
Wall Mount Bracket	SWC02-00-00
Vista OmniLight Holder	SWC01-00-00

Wall Mount Bracket Dimensions

Sewio provides mounting bracket for Anchor Vista OmniLight with dimensions as below:



⚠ In past, we changed a vendor and may occur that your mounting bracket is slightly different.



4.1.5 Package Contains and Accessories, Vista OmniLight

Package Contains

- Anchor Vista OmniLight
- Anchor Holder
- Wall Mount Bracket

Accessories

They are not part of the package.

Sewio Name	Sewio PN	Product Name	Description
PoE PowerBank	N/A	SMART POWERBANK 802.3AF POE 48VDC/300MA ⁴¹	Power bank for demos with Anchor Vista
USB to PoE Converter	N/A	TP-DCDC-2USB-48 ⁴²	DC-DC Converter to PoE from arbitrary power bank
Tripod	N/A	Tripod 3.45m ⁴³	-
Tripod Whitworth adaptor	N/A	Verified PN ⁴⁴ Other adaptors ⁴⁵ (non verified)	Tripod adaptor to Anchor Vista
SMALLRIG	N/A	SMALLRIG ⁴⁶	Flexible multipurpose holder.
RAM portfolio	N/A	variety of mouting products ⁴⁷	Many types of industrial mounting

41 <https://shop.meconet.de/Power-Supply/PoE-Power-over-Ethernet/Smart-PowerBank-802-3af-PoE-48VDC-300mA::116925.html>

42 <https://www.balticnetworks.com/tycon-power-usb-powered-48v-passive-poe-inserter-48vdc-12w-poe-two-usb-power-inputs.html>

43 <https://www.elementrix.cz/www-foto-eshop-cz/eshop/13-1-Studiove-stativy/0/5/628-Stativ-pro-stud-svetlo-blesk-250cm>

44 <https://www.foto-eshop.cz/www-foto-eshop-cz/eshop/65-1-Stativy-stativove-hlavy/166-2-Stativove-hlavy/5/3246-3D-Stativova-kulova-hlava-HL11X>

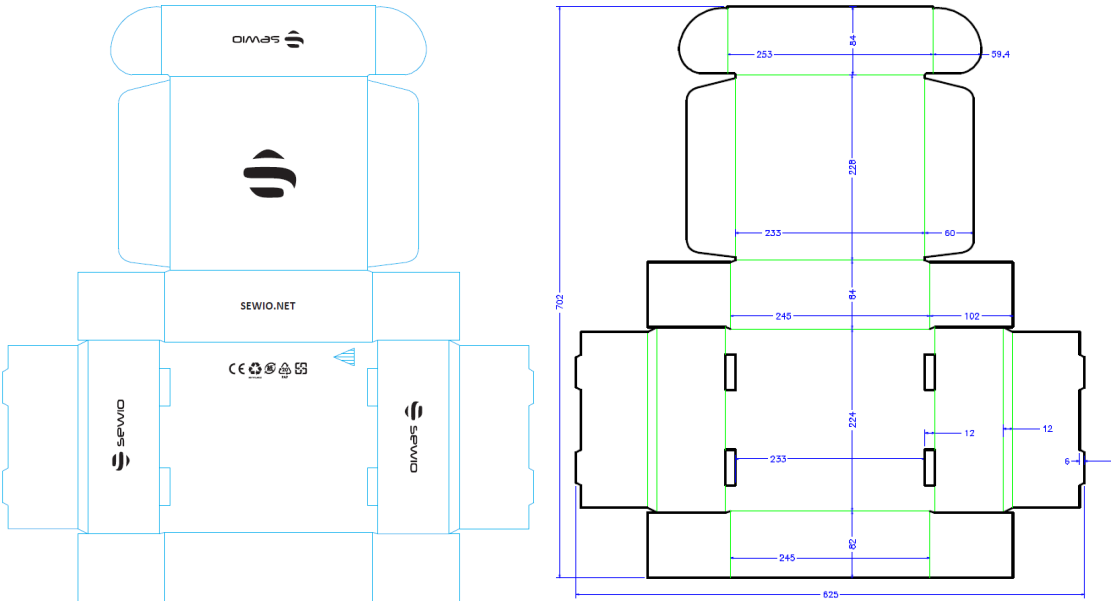
45 [https://www.amazon.com/s?](https://www.amazon.com/s?k=ball+head+screw+mount&crid=FD99BEZ27OGL&qid=1553699397&srefix=ball+head+scr%2Caps%2C218&ref=sr_pg_1)

[k=ball+head+screw+mount&crid=FD99BEZ27OGL&qid=1553699397&srefix=ball+head+scr%2Caps%2C218&ref=sr_pg_1](https://www.cdiscout.com/photo-numerique/accessoires-photo/smallrig-accessoire-camera-pince-appareil-photo-a/f-1121133-sma0744790441345.html)

46 <https://www.cdiscout.com/photo-numerique/accessoires-photo/smallrig-accessoire-camera-pince-appareil-photo-a/f-1121133-sma0744790441345.html>

47 <https://www.rammount.com/>

Packaging



4.1.6 Safety and Regulatory Information, Vista OmniLight

Safety Information

- Never open the enclosure of the Vista OmniLight.
- Do not use the Vista OmniLight if it has been damaged

Regulatory Information

FCC Notice (For US Customers): FCC ID: 2ATZ8-SWA07-00

For FCC compliance, the following conditions must be met:

- All units must be exclusively used indoors.
- No devices may be installed at any outdoor locations.

This device is designed to be operated with the supplied antenna. The use of any other antenna with this device is strictly prohibited and may result in the voiding of the FCC authorization for this equipment's operation. It is strictly forbidden to use of any other antenna than the one Sewio Networks s.r.o has supplied.

This device is compliant with FCC Rules, part 15. Its usage is subject to the two following conditions:

(1) this device may not be the cause of any harmful interference, and (2) this device shall accept any interference received, including interference that may interfere with its desired operation.

This device is also in compliance with part 15.517 of the FCC Rules. This equipment may only be used indoors. Usage outdoors violates 47 U.S.C. 301 and the operator could be subject to serious legal penalties.

This equipment is only to be installed and used at a 20 cm minimum distance between the radiator and a person.

Any changes or modifications that have not been expressly agreed to by the Sewio Networks s.r.o could invalidate the user's authority to use the equipment.

 **Always use with RTLS Studio 2.1 or higher.**

DISCLAIMER

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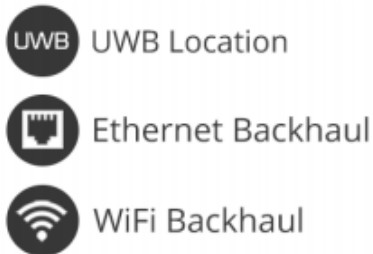
The user assumes all responsibility and liability for proper and safe handling of the goods. Further, the user indemnifies Sewio from all claims arising from the handling or use of the goods.

4.2 Anchor 1.4

Feature Set

- Decawave UWB Radio
- Manageable via web browser and RTLS Studio

- Ethernet (recommended) and Wi-Fi backhaul
- Firmware upgrade via Ethernet



Anchor is a reference device with a known position. Set of Anchors creates location infrastructure where Tags are being located with sub-meter accuracy. The primary goal of the device is to gather radio signals from mobile locators called Tags and forward them to RTLS Studio where the position is being estimated.

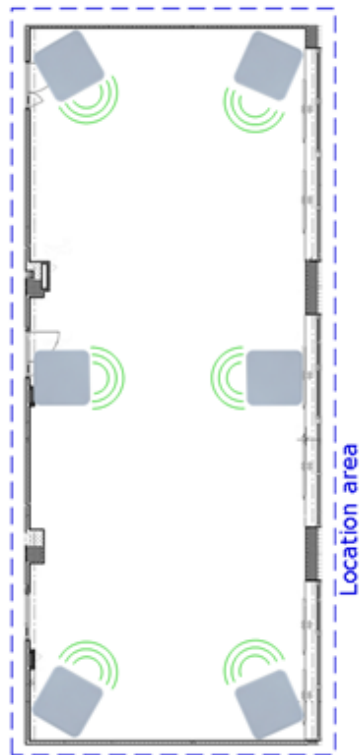
Moreover, Anchors can also receive data from sensors equipped within the Tag such as acceleration, orientation, button event or custom data payload. Data are further exposed to the user via open API.

Anchor is an IP network device equipped with an Ethernet/Wi-Fi interface for both data backhaul and/or power supply. Anchors are configured and managed via RTLS Studio software. They support variety of holders to simplify the installation in any premises. They are mounted above Tags which ensures maximum coverage and minimizes obstacles blocking its communication line.

Always orient the anchors best radiation to the center of the room or the location area.

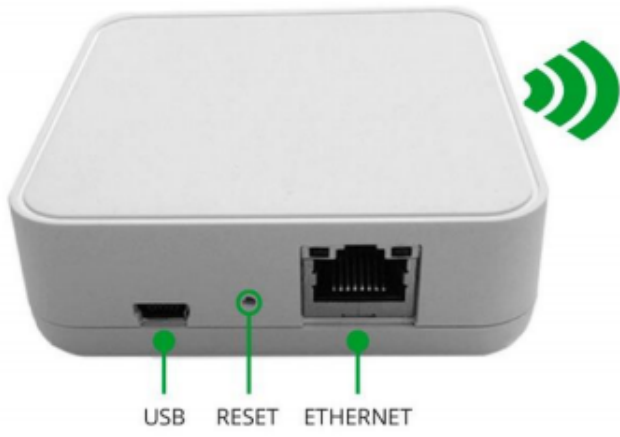
The anchor's radiation should be oriented to the spots where tags will be located to ensure maximum signal coverage. The antenna has a different ideal radiation depending on the anchor type, see the figures below.

The rule of thumb is that the Anchor 1.4 has the best antenna radiation on the side where the LED is located.



4.2.1 Product Number

PN	name
SWA01-00-00	Anchor 1.4
SWA02-00-00	Anchor 1.4 WiFi



4.2.2 Technical Parameters, Anchor 1.4



Size	70 x 74 x 25 mm
Weight	72 g
Power Supply	Passive PoE or USB
Power Requirements	1.5W USB DC 5V, ≈ 300mA Passive PoE 48V, ≈ 30mA
Operating Conditions	0 - 50 °C
Warm-up Time	20 minutes
Environment	Office Warehouse Retail Light Industry

Placement	Indoor Only
UWB Antenna	Omnidirectional
WiFi 2.4 GHz (optional)	Omnidirectional Antenna
UWB Radiated Power CH5 6240 – 6739.2 MHz	-41.3 dBm/Hz


4.2.3 Power Supply Options, Anchor 1.4

- **Power Supply from USB – DC 5V, 500mA, battery power bank or USB Adaptor with maximum cable length 1.8m.**

Do not use longer USB cables, since cable voltage drop can cause instability of the device.

- **DC 48 V, Passive PoE**

Alternatively, Anchor can be powered from DC 48V supply via PoE Injector. Power is injected and delivered into unused Ethernet pairs (Pairs 4,5 positive terminal, 7,8 negative terminal).

Always use galvanic isolated  48V power adaptor with short circuit protection for passive PoE injection. Never connect “Power+Data” injector ports to the computer or other network devices.

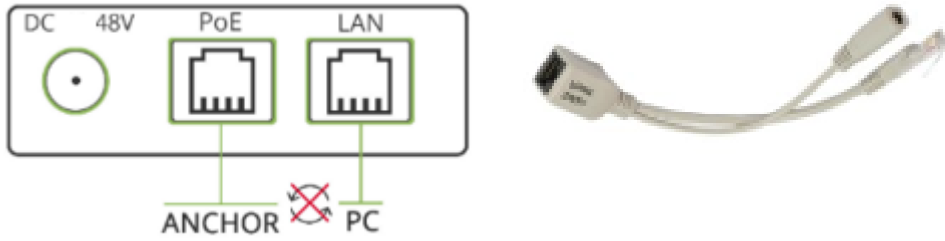
Recommended power adaptor PN: [GS36E48-P1J](https://www.meanwell-web.com/en-gb/ac-dc-wall-mount-adaptor-output-48vdc-at-0-75a-gs36e48--p1j)⁴⁸ or [GST36E48-P1J](https://www.meanwell-web.com/en-gb/ac-dc-industrial-desktop-adaptor-output-48vdc-at-0-gst36e48--p1j?returnurl=%2fen-gb%2fsearch%3fq%3dgst36e48-p1j%23gst36e48-p1j)⁴⁹ Meanwell. Available through whole-sellers Mouser, Digikey or Farnell world-wide.

- **Single-port Injector**

Contains DC Jack, PoE Port and Lan port.

⁴⁸ <https://www.meanwell-web.com/en-gb/ac-dc-wall-mount-adaptor-output-48vdc-at-0-75a-gs36e48--p1j>

⁴⁹ <https://www.meanwell-web.com/en-gb/ac-dc-industrial-desktop-adaptor-output-48vdc-at-0-gst36e48--p1j?returnurl=%2fen-gb%2fsearch%3fq%3dgst36e48-p1j%23gst36e48-p1j>



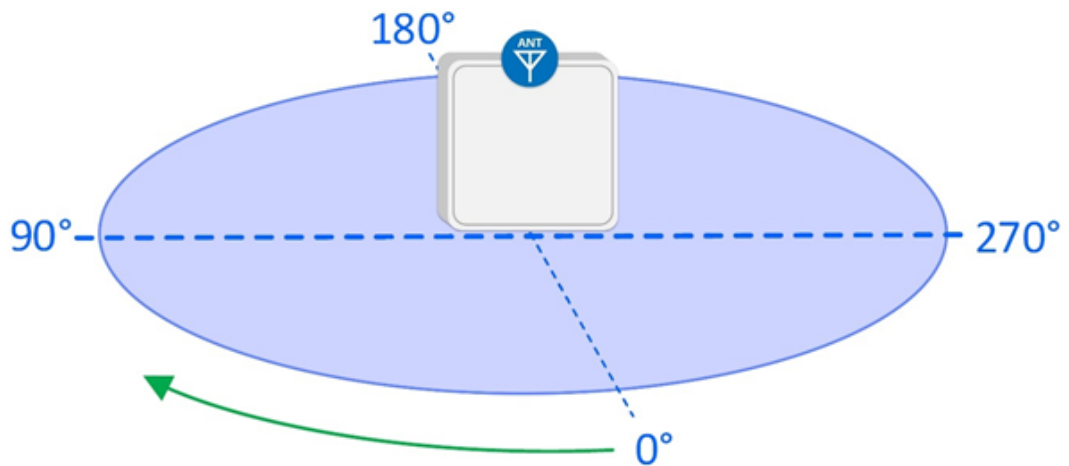
- **Multi-port Injector for 19” rack**

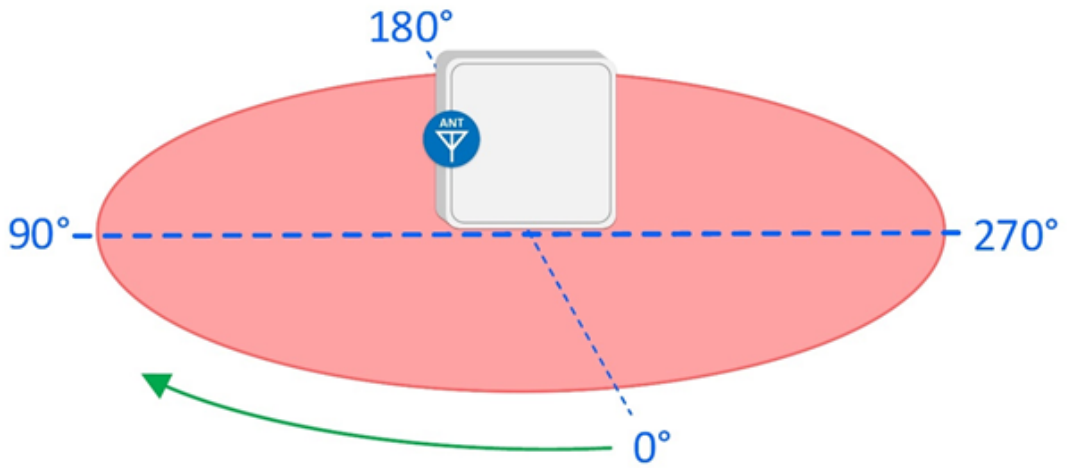
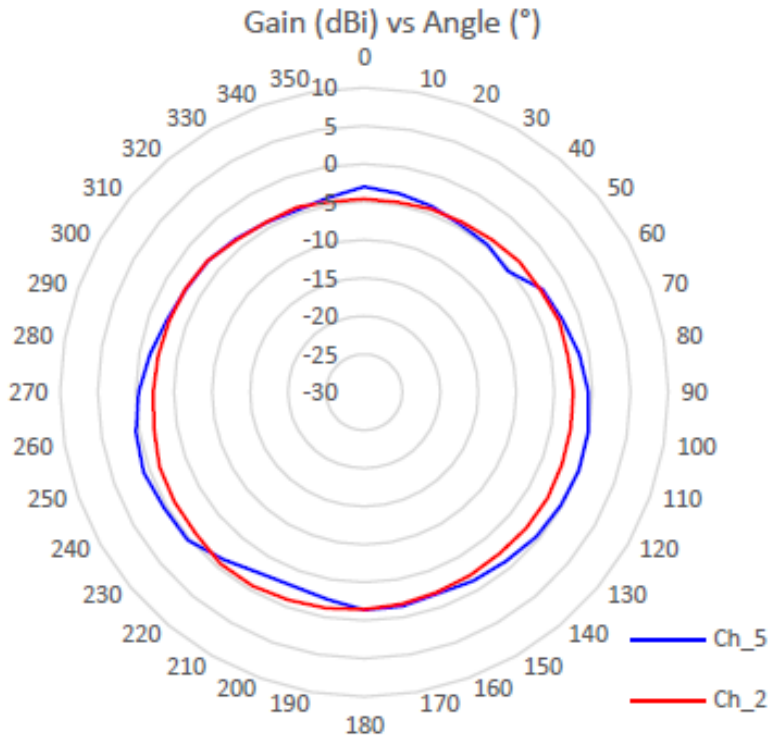
“Data LAN” ports are connected to the network Switch, “Power+Data” ports are connected to the Anchors.

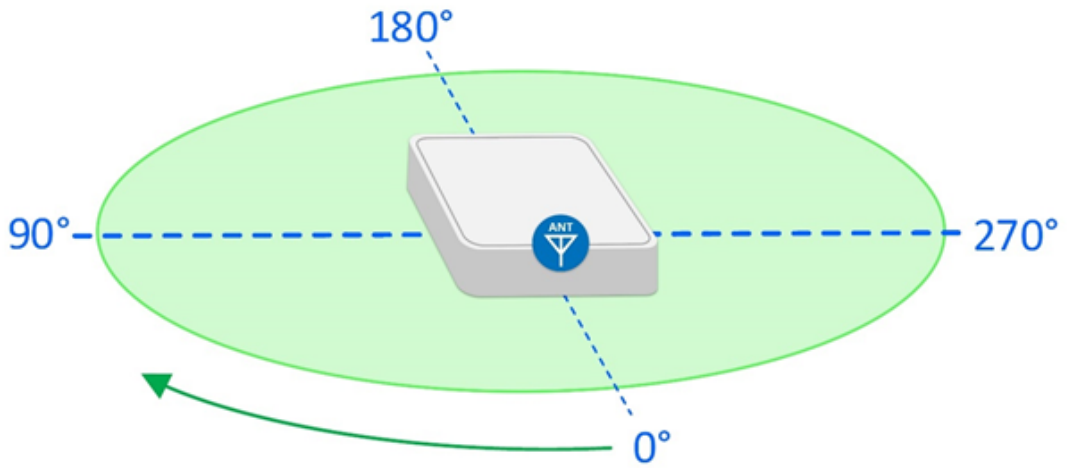
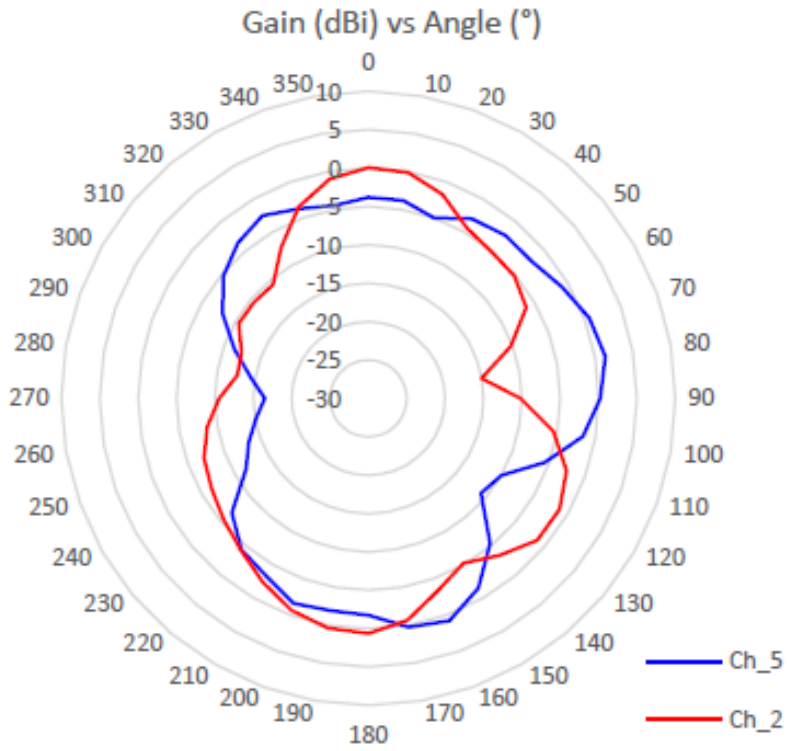


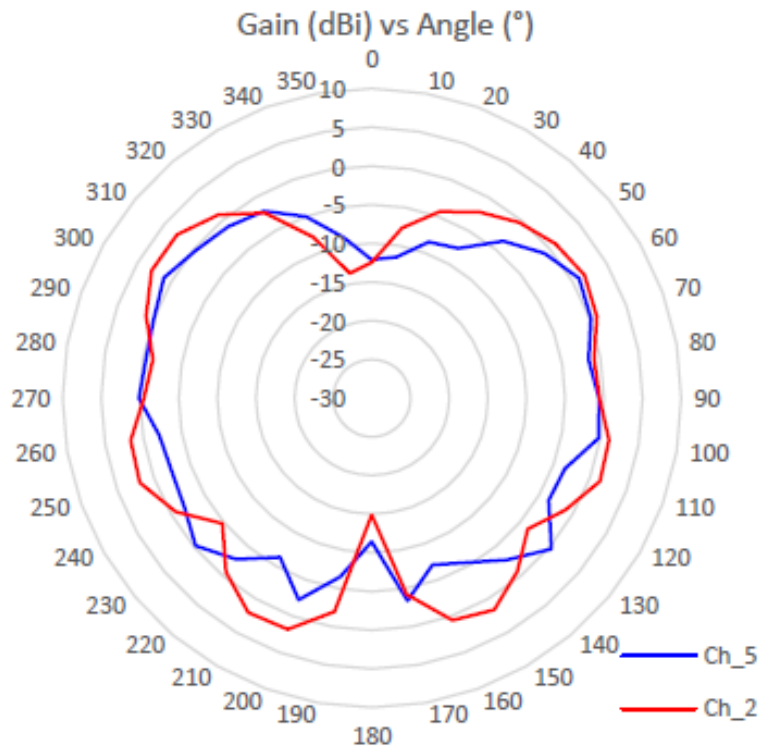
4.2.4 Radiation Pattern, Anchor 1.4

The anchors’ antenna radiation patterns in all three axes are described in this section.









i The recommended anchor orientation is horizontal with the ideal antenna radiation facing the center of the location area.