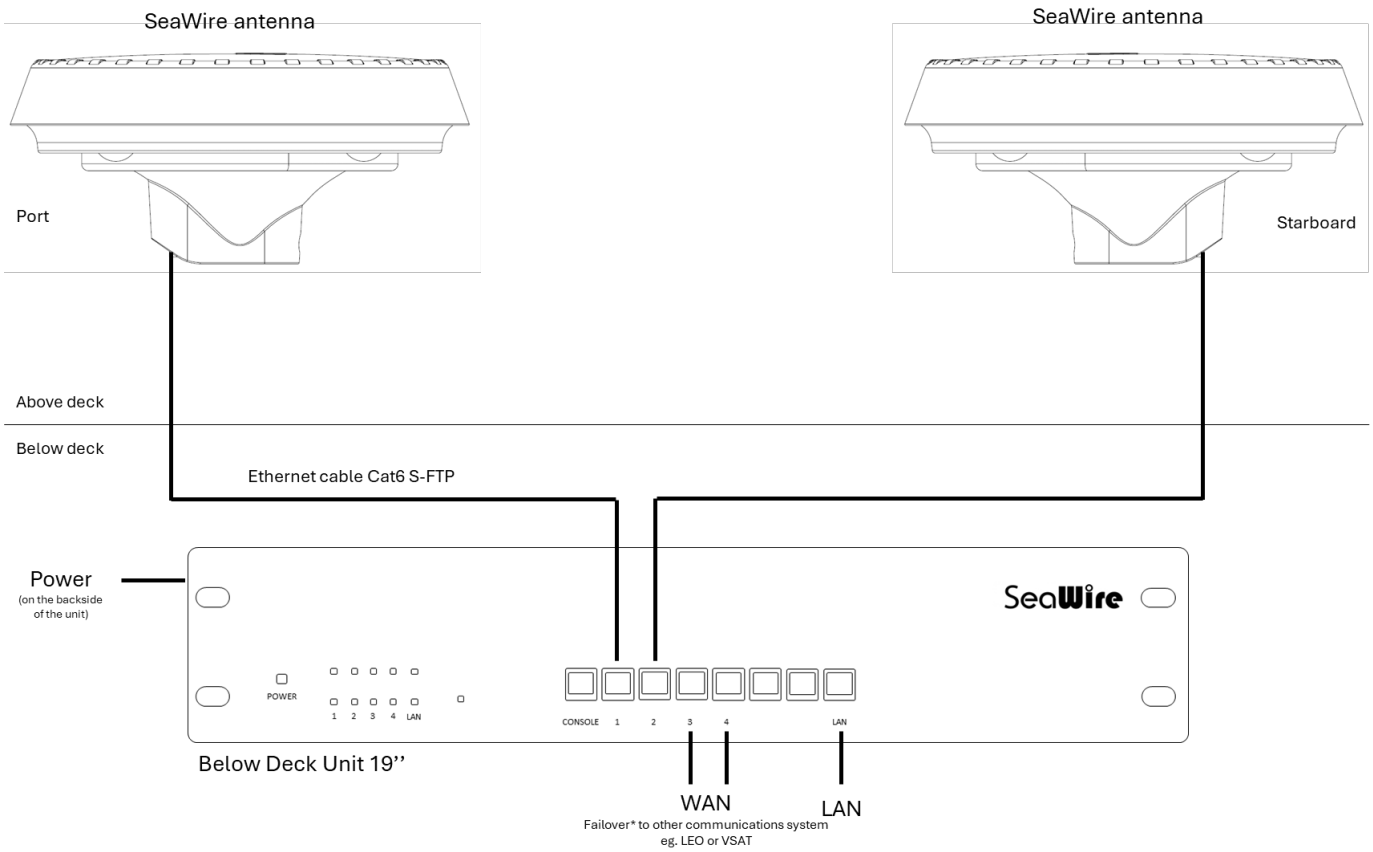
Data sheet SeaWire Pro 5G

System configuration



*The system can perform failover to other systems or combining all four inputs/internet sources, depending on the customer's needs. Failover can be triggered by various methods, such as a ping test, speed test, or other customizable criteria to ensure seamless connectivity and performance.

Package content

2x SeaWire RouDem 5G
2x Mounting bracket
1x 19'' BDU
1x Power cable
10x Scews M6x16mm
2x Keys (4mm Hex Key, 2.5mm Hex Key)
1x Privacy policy
1x User guide
1x Registration information

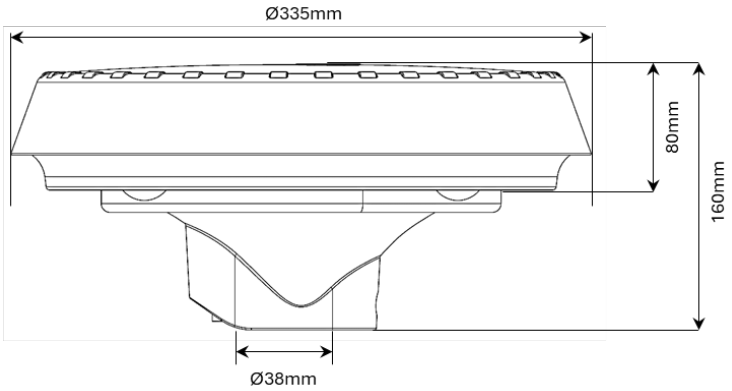
Specifications SeaWire 5G antenna

The SeaWire Pro system consists of two SeaWire 5G antennas.

Design

Cellular directional mechanical turning antenna integrated with modem, router, WiFi, GPS and compass.

Diameter: Ø335mm
Height w./wo. bracket: 160mm/80mm
Weight w./wo. bracket: 2.1kg/1.8kg
Mounting type: Ø38mm/1.5' pole
Color: Light grey



Environmental conditions

Temperature	Storage: -40°C - 85°C
Relative humidity	10% - 100% (non-condensing)
Robustness	0.5m/1.64ft drop on concrete
Water and dust	IP66

Mobile network

Data network	5G, 4G LTE, 3G
Region	Global

Frequency bands & MIMO	
5G NR	NSA: n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 29/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 75/ 76/ 77/ 78/ 79 DL 4 × 4 MIMO: n1/n2/n3/n7/n25/n30/n66/n38/ n40/n41/n48/n70 SA: n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 29/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 75/ 76/ 77/ 78/ 79 DL 4 × 4 MIMO: 1/n2/n3/n7/n25/n30/n38/n40/ n41/n48/n66/n70 UL 2 × 2 MIMO: n38/n41/n48
4G LTE	LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 29/ 30/ 32/ 66 LTE-TDD: B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48 DL 4 × 4 MIMO: B1/B2/B3/B4/B7/B25/B30/B38 /B40/B41/B42/B43/B48/B66
UMTS	WCDMA: B1/ 2/ 4/ 5/ 8/ 19

Antenna

Automatic mechanical pointing	Yes, rotary motor with infinite rotation
Antenna type	
Directional antenna	1x 0.7 ~ 8GHz, gain 3.0-11.0 dBi
Omnidirectional antenna	1x 1.5 ~ 6GHz, peak gain ≤ 5.5 dBi 2x 0.7GHz ~ 3.8GHz, peak gain ≤ 4.0 dBi

GNSS

GNSS technology	Fully integrated global navigation satellite system solution (GPS, GLONASS, BDS, Galileo and QZSS)
Bands	L1/L5

Interfaces

LAN interface	
Connector type	1x R J45 port
Data rate	10/100/1000 Mbps
Max. Cable length	100m/328ft (min. Cat6 S-FTP, grounded)
SIM	
SIM card type	eSIM LPAd* (read more about LPAd on p. 4) 1x Micro-SIM 3FF slot*
WLAN access point	
WiFi standard	802.11a/b/g/n/ac Wave2 (Wi-Fi 5)
Frequency and max. data rate	2.4 GHz, 400 Mbps 5 GHz, 866.7 Mbps

*It is not possible to use both the eSIM LPAd and micro-SIM simultaneously in the device.

Power

Power method	AC/DC/POE 802.3af 100-240V max. 0.5A (powered via the BDU)
Connector type	RJ45 port
Battery	
Battery type	Lithium ion, rechargeable
Operational time	Min. 1 hours

Features

Compass	Built-in 0-360° compass for directional accuracy
Routing	Static/dynamic
Data Logging	Signal strength, bytes sent and received, error messages, hardware info messages, speedtests
DHCP	Yes
Firewall	UNIX based firewall with iptables and rule configuration
WiFi access control	Password authentication
Cellular Toolkit	Data usage, signal usage, SIM PIN, network scan, network discovery, status
Configuration & Management	Web, SSH, serial connection, SCP
System Operation	System information, WiFi, network settings, SIM information, compass, reboot
Diagnostic	Remote diagnostic tools for support
LED-indicators	Power, antenna pointing

Approvals/Certifications (In Progress)

We are actively working towards achieving the following approvals and certifications for our product: CE, FCC, RoHS

Our product will comply with the following standards upon certification:

EMC

- ETSI EN 301 489-17 V3.1.1 (2017-02)
- ETSI EN 301 489-1 V2.1.1 (2017-02)
- Draft ETSI EN 301 489-52 V1.1.0 (2016-11)

RF Exposure

- EN 62311:2008

Safety

- IEC/EN 62368-1:2014

Radio

- ETSI EN 300 328 V2.1.1 (2016-11)

Local Profil Assistant Device

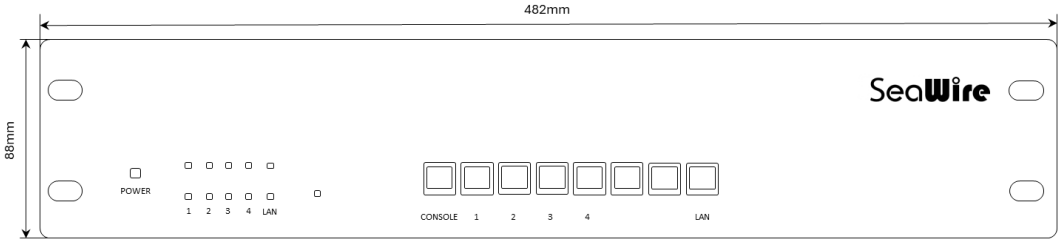
The Local Profile Assistant Device (LPAd) is a technology used in mobile networks to manage eSIM (embedded SIM) profiles. It allows for local provisioning and management of eSIM profiles providing flexibility and control over mobile connectivity in various environments. The concept involves a global roaming profile covering 200 countries, with the option to stack up to eight additional eSIM profiles. This enables cost reduction when sailing across borders due to the ability to stack local SIM cards for the region in which the ship is operating. Additionally, within the same country, it allows connection to multiple operators to achieve maximum performance.

Specifications BDU (Below Deck Unit)

Design

Hardware unit for managing data from external antennas and other communications sources via four WAN ports. The integrated control computer handles the synchronization and control of the two antennas. The BDU is also equipped with a LAN port, enabling it to connect to the onboard network.

Size: H 88mm (2U) x L 482mm x D 340mm
Weight: 4 kg
Enclosure material: Metal housing with black powder coat



Interfaces

Networking interface (standard configuration)	4x WAN 10/100/1000 RJ45 ports (port 1, 2, 3 + 4) Port 1 + 2: SeaWire antennas Port 3: First failover (failover method: ping check) Port 4: Second failover (failover method: ping check) 1x LAN 10/100/1000 RJ45 ports (port LAN)
Networking interface (manual enabling)	Port 3 +4 can be configured from WAN to LAN Seamless failover method can be applied
Management interface	1x RJ45 serial port (consol port)

Power

Power method	AC 100-240V
Connector type	IEC 60320 C14 Inlet

Features

Load balancing	Weight control, route test, failover

DHCP	Yes
Firewall	Port forwarding, Nat, firewall policies
Users	User role: admin/operator
Configuration & Management	Web, SSH, serial connection, SCP
VLAN	Yes
POE	2x 48V Active ~0.32A (port 1 + 2 standard) 2x 24V Passive 1A (port 3 + 4 manual enabling)
LED-indicators	Power, data ports

Note: subject to change without notice.