



STELLA DORADUS

# DAS MARINE

An industrial grade cellular amplifier system for ships.  
Distributes mobile signal throughout the ship.  
Works with all mobile operators in the EMEA and/or America regions.

**The DASMarine is an industrial grade cellular amplifier system for ships. It works with all mobile operators in the EMEA and/or America regions. It ensures that the ship is connected to the mobile signal up to 30km from the coastline.**

This solution is scalable and modular and is suitable for any sized ship, including large, super yachts.

It efficiently distributes mobile signal, voice and data, throughout the ship, ensuring the crew can communicate at all times.

When connected to the Stella cloud platform, it can be remotely managed, monitored and adjusted, as well as receive real-time measurements of signal power, gain, and other metrics for each band.

- Boosts all operators.
- 5G/4G/3G/2G ready.
- Maintains signal 30km off coastline.
- Distributes voice/data signal around ship.
- Remote monitoring.
- Conforms to E.T.S.I specifications.
- Wall-mount/Rack-mount.
- Scalable modular solution.
- Large LCD Touch Display.
- Region: EMEA and/or Americas.



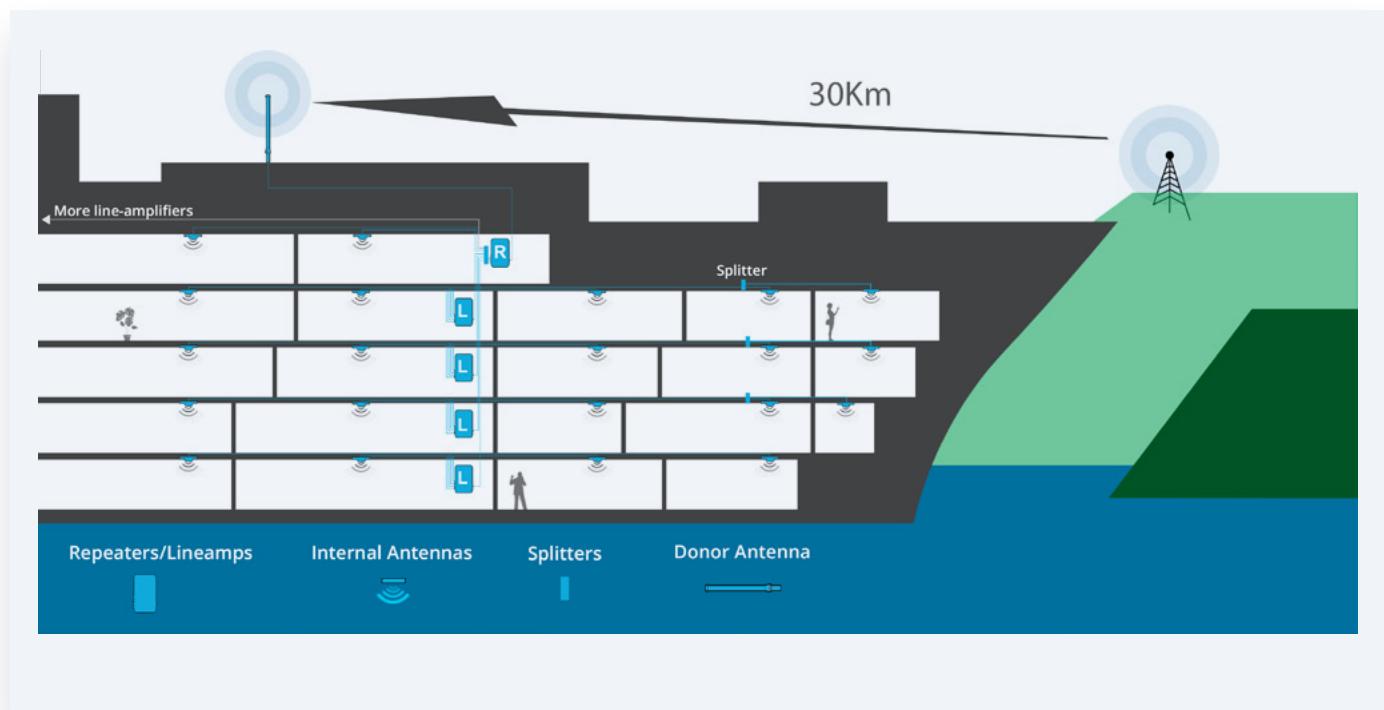
The DASMarine is a modular and configurable repeater solution. Depending on which regions the ship travels in, and the size of the ship, amplifiers can be configured and added as required.

This solution provides mobile signal in all desired areas inside the ship, and can operate in the EMEA + Americas.

## Amplifiers

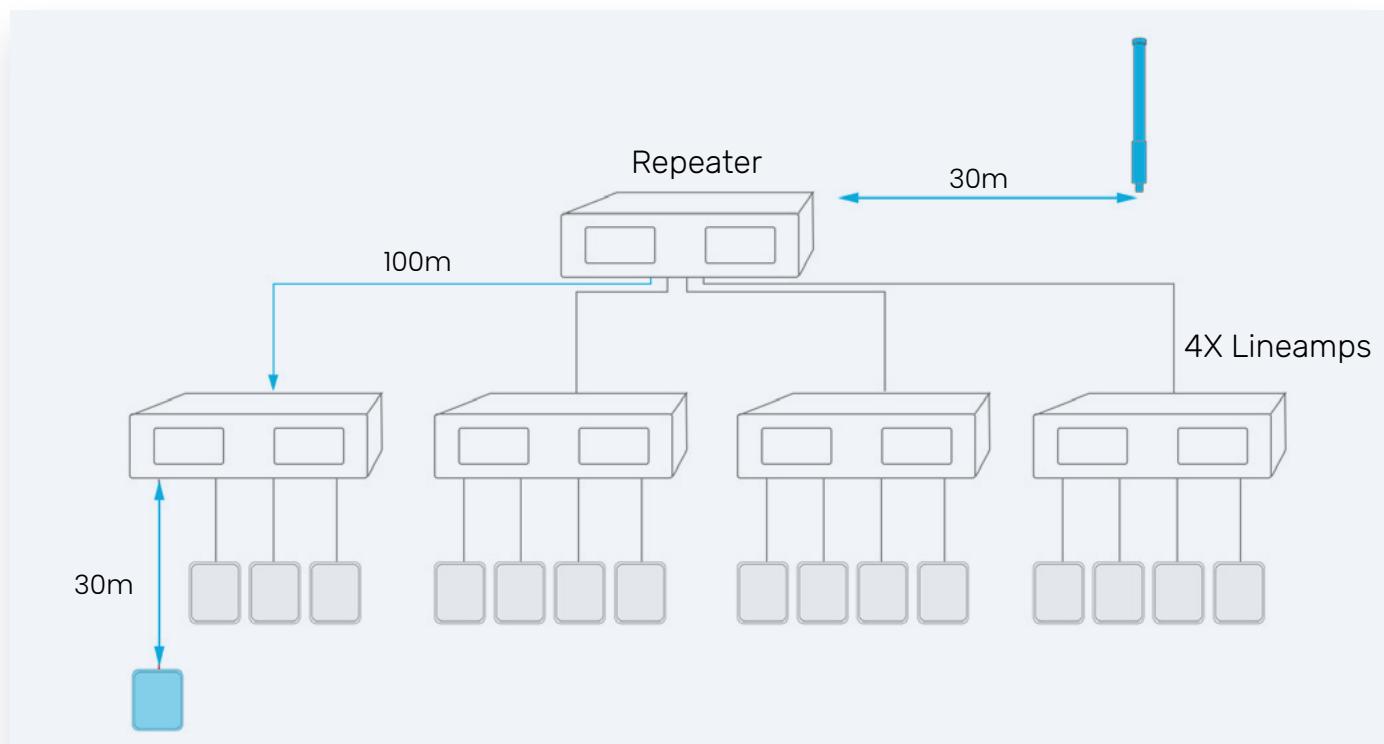
Amps	Device	Gain dB	Power up/down	Region	Mounting
iR6-EU	Repeater	60	20dBm/10dBm	EMEA	Wall/Rack
iR5-US	Repeater	60	20dBm/10dBm	Americas	Wall/Rack
iL6-EU	LineAmp	20	0dBm/10dBm	EMEA	Wall/Rack
iL5-US	LineAmp	20	0dBm/10dBm	Americas	Wall/Rack

## System Diagram



## Modular/scalable system

The example system above shows one iRepeater and four iLineamps. The number of iLineAmps can be increased by using splitters on each port of the repeater. The number of internal antennas can be increased by using splitters after the iLineamps.



Bands	B28	B20	B8	B3	B1	B7	B5	B4	B25
Downlink (MHz)	758-788	791-821	925-960	1805-1880	2110-2170	2620-2690	869-894	2110-2155	1930-1990
Uplink (MHz)	703-733	832-862	880-915	1710-1785	1920-1980	2500-2570	824-849	1700-1755	1850-1915
REGION	EU/US	EU	EU	EU	EU	EU	US	US	US

## Regions:

**EU:** Europe, Middle East, Africa.

**US:** Caribbean, USA, Mexico, South America.

Device	Up/Down Power	GAIN
Repeater	20dBm / 10dBm	60dB
LineAmp	0dBm / 10dBm	20dB

## Repeater/LineAmp Specification

Coverage	(1000m <sup>2</sup> per antenna X 4) = ~15 rooms
Pass band ripple	<4dB
I/O impedance	50 ohm/SMA female connector
Ambient Temperature	-30°C to +70°C
Power supply input	110 - 240V AC
Oscillation Control	Automatic
AGC Level Control:	Automatic <sup>1</sup>
Uplink Switch On	Yes <sup>2</sup>
AGC Range	30dB
Surge protection	SMA connectors DC grounded, 12V DC port MOV protected

<sup>1</sup>Automatically adjusts during installation. Thereafter, automatically adjusts for seasonal variation in path-loss between the base station and the outdoor antenna.

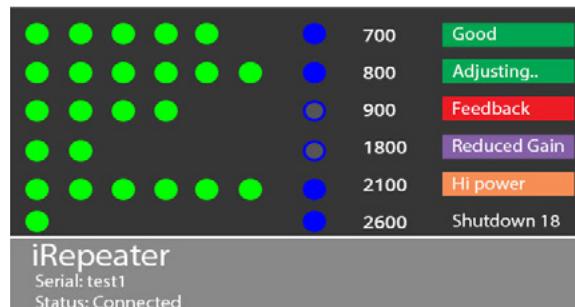
<sup>2</sup>The uplink amplifiers switch off when the repeater is not in use. This reduces the uplink noise to almost zero. When the repeater is in use (phone call or data session), the uplink amplifiers switch on for the duration of the call/ data session only.

Note: Specifications subject to change without notice.

## Main screen:

**Green:** Downlink signal power.

**Blue:** The band is switched on. This happens when a data session is initiated. Once the data session is over, the band switches off and the blue dot also switches off.



Good	Indicates no problems.
Adjusting	Band is self optimizing.
Hi power	There is a very strong outdoor signal. Action: No action required as the repeater will self optimize.
Reduced Gain	When close to an operator's mast, the gain is reduced for an extended time.
Feedback	Feedback occurs when the indoor and outdoor antennas are not isolated from each other. At a minimum, a concrete block wall must separate these antennas.
Shutdown	External signal is too strong and band has shut down. Add manual attenuation.

## Decibel (dB) page:

The dB page shows actual raw data (dB) from the amplifier.

Frequency (MHz)	700	800	900	1800	2100	2600
UL Power(dBm)	-15	-15	-15	-15	-15	-15
DL Power(dBm)	-30	-30	-30	12	-30	-30
UL Fast AGC(dB)	5	5	5	5	5	5
AGC (dB)	0	0	0	0	0	0
Clamp(dB)	0	0	0	0	0	0
mgain (dB)	0	0	0	0	0	0
UL Reduced Gain	0	0	0	0	0	0
DL Reduced Gain	0	0	0	3	0	0
DL Total Loss (dB)	0	0	0	3	0	0

UL Power	Uplink power received by the amplifier. (Power emitted by the phone)
DL Power	Downlink power from the operator, received by the amplifier.
UL Fast AGC	Uplink AGC
AGC	Uplink and downlink AGC. This controls the uplink and downlink gain at the same time, when the operator's downlink signal is too strong.
Clamp	Extra attenuation added when high DL power is sustained.
Manual Atten	Installer can add attenuation manually to any band.
UL/DL Reduced Gain	When close to a base station, the gain is reduced for an extended time. Add manual attenuation.

## Other LCD features

PIN Access	A secret PIN can lock out access to the LCD display. The PIN is set on the clients account on the platform.
Band On/Off	Turn any band on or off.
Internal location	Enter note about the amplifier. This note is sent and displayed on the stellacontrol inventory page. E.g. Internal location of the amplifier.



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