STELLA DORADUS

iREPEATER

The iRepeater is a commercial grade cellular amplifier that works with all mobile operators.

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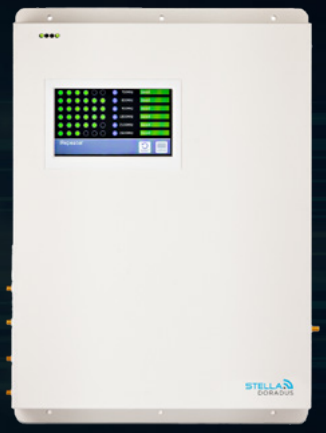
The iRepeater is a commercial grade cellular amplifier that works with all mobile operators. When connected to the Stella cloud platform, the iRepeater can be remotely managed, monitored, and adjusted, as well as receive real-time measurements of signal power, signal gain, and other control metrics for each band.

The 4 antenna ports allow the cellular signal to be amplified in 4 separate areas within the building/ship. This increases the coverage area to between 5 and 15 rooms, depending on the size and shape of the room.

The iRepeater is part of a modular system which, by adding iLineAmplifiers, can provide coverage in large, multi-storey, multi-zoned buildings.

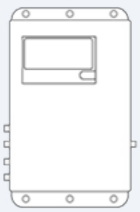


Features

- LCD Touch Display - Enhanced user experience.
- 4 indoor antennas - 5 to 15 room coverage.
- Cloud monitoring.
- Boosts all operators - works with all phones and devices.
- Boosts all networks 5G/4G/3G/2G.
- Conforms to E.T.S.I specifcations.

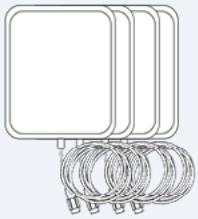
Model	Bands	Ports	PSU	Weight	Dims cm	Antennas
iR4-LGDW	B20,B8,B3,B1	2	12V,5A	1.6kg	27X29X3.8	2
iR5-EU	B20, B8, B3, B1, B7	4	12V,5A	2.8kg	43X30X3.8	4
iR6-EU	B28, B20, B8, B3, B1, B7	4	12V,7A	2.8kg	43X30X4.8	4
iR5-US	B28, B4, B5, B25, B7	4	12V,5A	2.8kg	43X30X4.8	4

Standard kit includes:

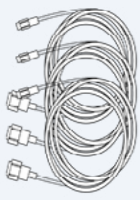


iRepeater

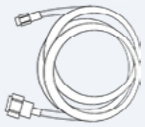
[1]External antenna



[2]Internal antennas



[2]Internal cables SD400



External 15m cable SD400

[1]Omni for ships, Yagi for buildings.

[2]Custom antennas and custom cable lengths supplied.

Check models above for your frequencies

EU Bands	B28	B20	B8	B3	B1	B7
Downlink	758-788	791-821	925-960	1805-1880	2110-2170	2620-2690
Uplink	703-733	832-862	880-915	1710-1785	1920-1980	2500-2570

US Bands (Americas)	B28	B4	B5	B25	B7
Downlink	758-788	869-894	2110-2155	1930-1990	2620-2690
Uplink	703-733	824-849	1700-1755	1850-1915	2500-2570

Amplifier Specification

Coverage	5-15 rooms
Gain	Uplink Gp: 60dB Downlink Gp> 60dB
Pass band ripple	<4dB
I/O impedance	50 ohm/SMA female connector
Max up/down signal strength	20dBm / 10dBm
Ambient Temperature	-30°C to +70°C
Power supply input	110 - 240V AC
Power supply output	12v DC
Oscillation Control	Automatic
AGC Level Control:	Automatic[1]
Uplink Switch On	Yes[2]
AGC Range	30dB
Surge protection	SMA connectors DC grounded, 12V DC port MOV protected

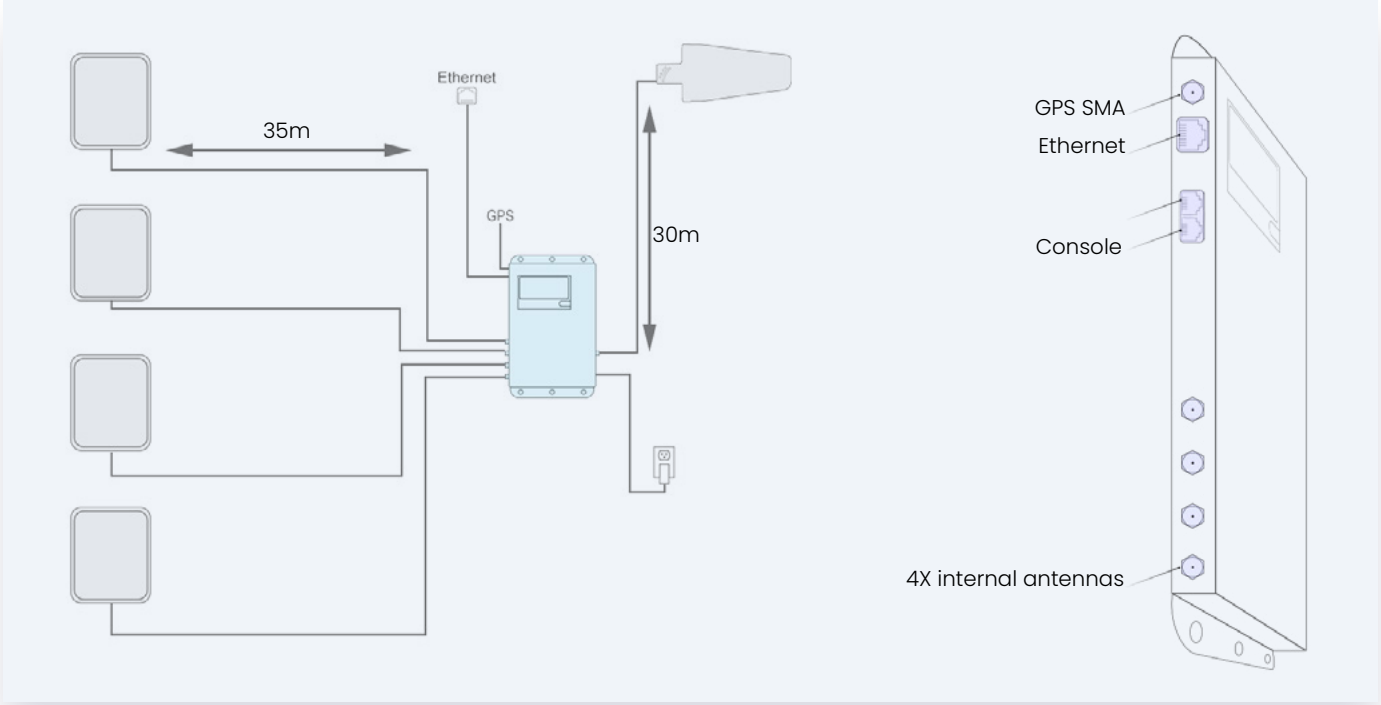
Antennas	Indoor Panel	Outdoor Yagi
Nominal Gain	6.4dBi / 9.4dBi	10dBi
3dB beam Pattern	60° x 60°	60° x 50°
Bandwidth	700MHz - 2700MHz	700MHz - 2700MHz
VSWR	<1.4	<1.5
Front to Back Ratio	> 20dB	> 20dB
Polarization	Vertical	Vertical
Power Rating	50W	50W
Impedance	50-OHM	50-OHM
Termination	N-Female	N-Female
Cross Pol. Discrimination	-20dB	-20dB
Dimensions	210 x 180 x 43mm	442 x 205 x 62mm
Weight	0.68kg	1.2kg
Wind velocity	126km/hr	140km/hr
Working temperature	-40°C to +65°C	-40°C to +65°C

[1]Automatically adjusts during installation. Thereafter, automatically adjusts for seasonal variation in path loss between the base station and the outdoor antenna.

[2]The up-link 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 up-link amplifiers switch on for the duration of the call/ data session only.

Note: Specifications subject to change without notice.

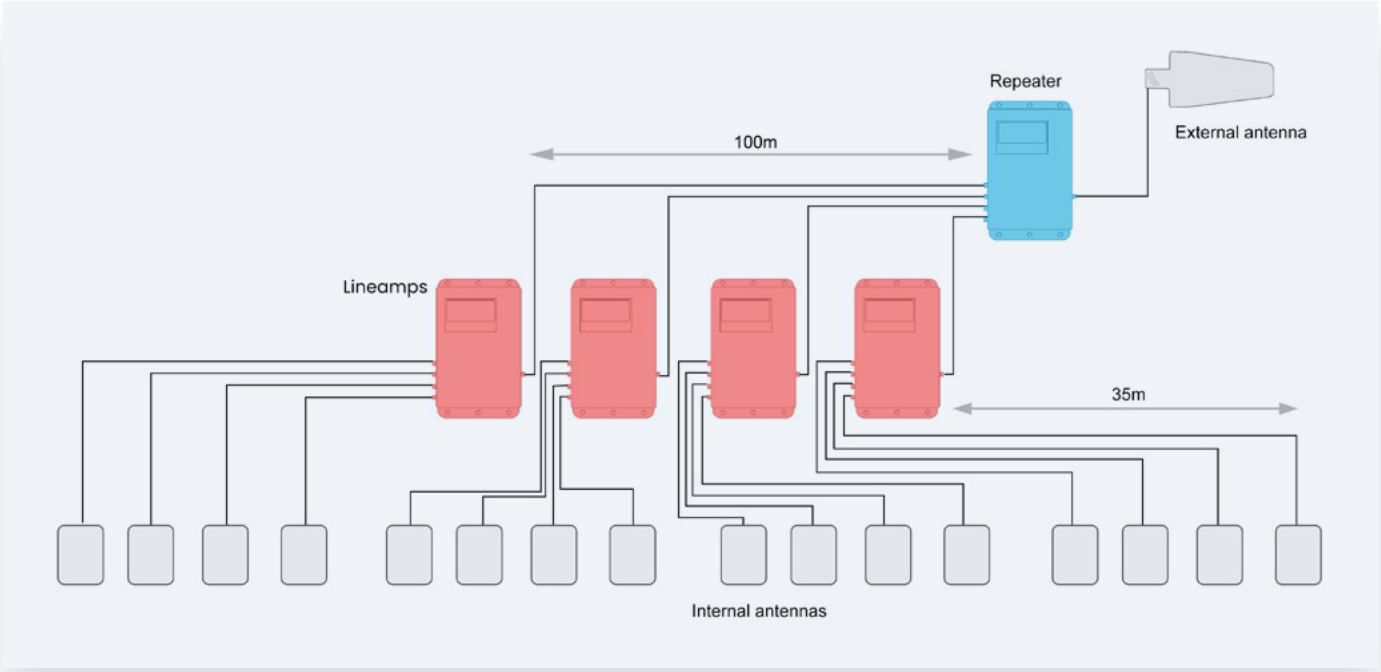
Installation diagram



Modular system

For larger buildings, the system can be extended by adding iLine Amplifiers.

In the example below, 4 iLineAmps are installed after the iRepeater, allowing a total of 16 internal antennas to extend the signal deep into the building, This modular system can be extended by adding up to 16 iLineAmps, allowing 64x antennas to be installed in large multi-storey buildings or ships.



Main screen:

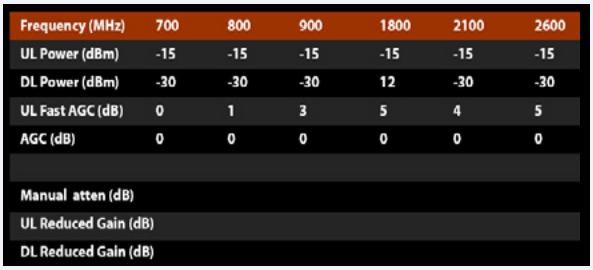
Green: Downlink signal power.

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 eachother. 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 the raw data in dBs.



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)	0	1	3	5	4	5
AGC (dB)	0	0	0	0	0	0
Manual atten (dB)						
UL Reduced Gain (dB)						
DL Reduced Gain (dB)						

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	Installer / Stella can turn any band on or off.
Internal location	Enter a 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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