STELLA DORADUS

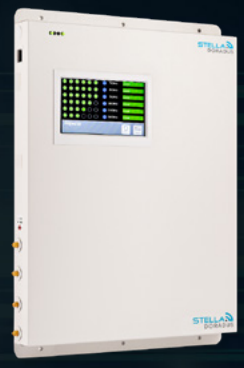
iLineAMP

The iLineAmp is used in conjuction with the iRepeater. It boosts cellular signal by an additional 20dB, allowing the repeater system to be extended 100m into the building/ship. It is a modular system, so can be further extended for large buildings / ships.

The iLineAmp boosts cellular signal through a coaxial cable, adding 20dB gain to the signal. This extra gain enables the mobile signal to be extended 100m further into the building/ship. The iLineAmp must be installed between the iRepeater and the internal antennas.

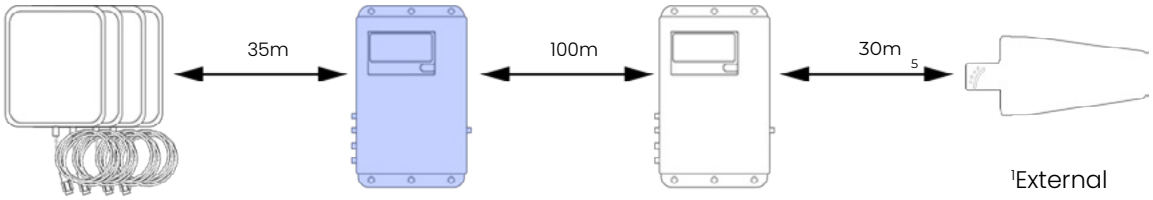
The iLineAmp can be connected to the Stella cloud dashboard, allowing it to be remotely managed, monitored, and adjusted, as well as receive real-time measurements of signal power, signal gain, plus other metrics for each band.

The 4 ports/ 4 indoor antennas per iLineAmp enables coverage into 4 separate areas inside the building/ship.



Features

- Extends mobile signal a further 100m in to the building/ship.
- LCD Touch Display - enhanced user experience.
- 4 indoor antennas - 4 individual coverage areas.
- Cloud - Monitoring/Alerts/Graphs/Management/Tracking.
- 20dB Gain uplink and downlink.
- Boosts all operators - Works with all phones and devices.
- Boosts All networks 5G/4G/3G/2G.
- Conforms to E.T.S.I specification.

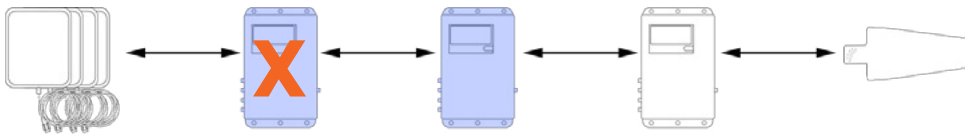


[2]Internal antennas (X4) | iLineAmp | iRepeater | [1]External antenna

Model	Bands	Ports	PSU	Weight	Dims(cm)	Antennas
iL5-EU	B20, B8, B3, B1, B7	4	12V,5A	2.8kg	43 X 30 X 4.8	4
iL6-EU	B28, B20, B8, B3, B1, B7	4	12V,7A	2.8kg	43 X 30 X 4.8	4
iL5-US*	B28, B4, B5, B25, B7	4	12V,5A	2.8kg	43 X 30 X 4.8	4

*Americas

iLineAmps must not be daisy chained one after the other. Doing so can damage the operators network.



[2]Custom antennas and custom cable lengths supplied.

[3]Dependent on operator/ location.

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

USA Bands (Americas)	B28	B4	B5	B25	B7
Downlink	758-788	869-894	2110-2155	7930-1990	2620-2690
Uplink	703-733	824-849	1700-1755	1850-1915	2500-2570

LineAmp Specification

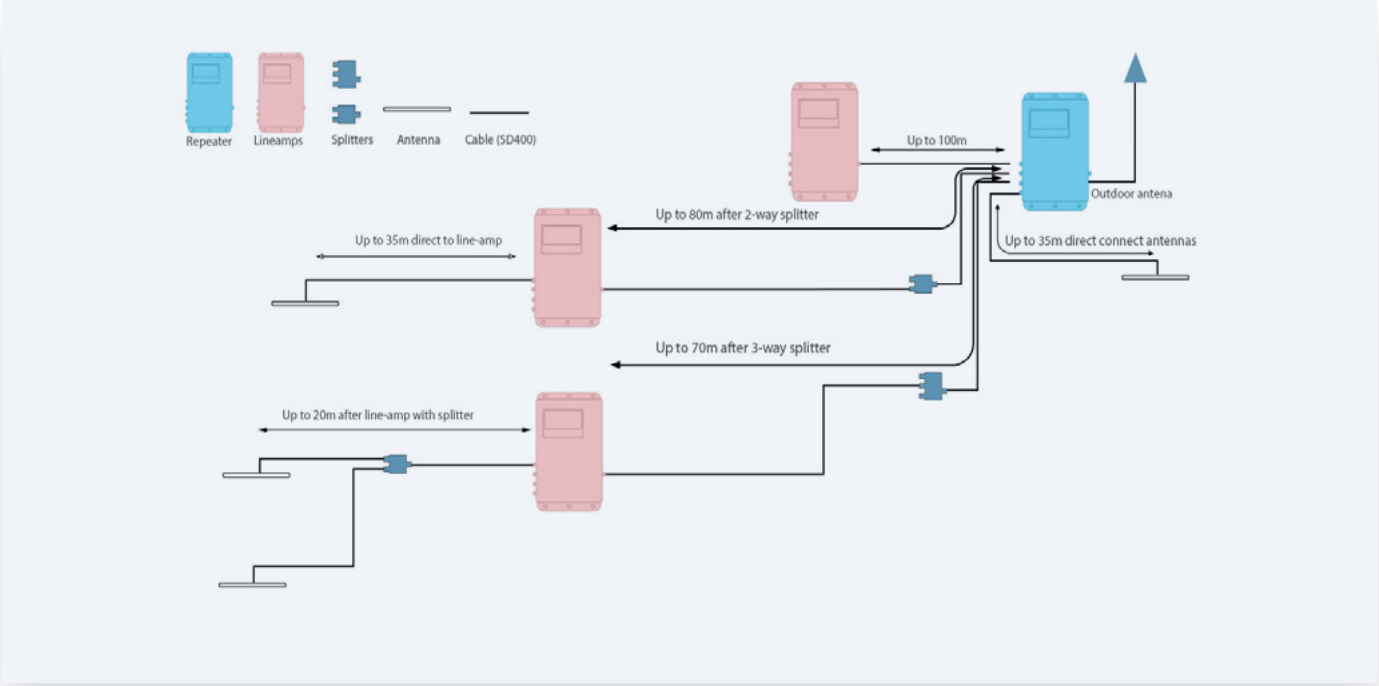
Coverage	(1000m2 per antenna X 4) = ~10 rooms
Gain (uplink and downlink)	20dB
Pass band ripple	<4dB
I/O impedance	50 ohm/SMA female connector
Max up/down signal strength	0dBm / 10dBm
Ambient Temperature	-30°C to +70°C
Power supply input	110 - 240V AC
Oscillation Control	Automatic
AGC Level Control:	Automatic[1]
Uplink Switch On	Yes[2]
AGC Range	30dB
Surge protection	SMA connectors DC grounded, 12V DC port MOV protected

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

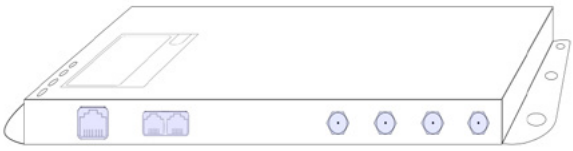
[2]The uplink amplifiers switch off when the repeater is not in use. This reduces the uplink noise to almost zero. When the repeater is in use (phone call or data session), the uplink amplifiers switch on for the duration of the call/ data session only.

Note: Specifications subject to change without notice.

Cable lengths



Side profile left



Ethernet Debug 4X internal antennas.

Side profile right

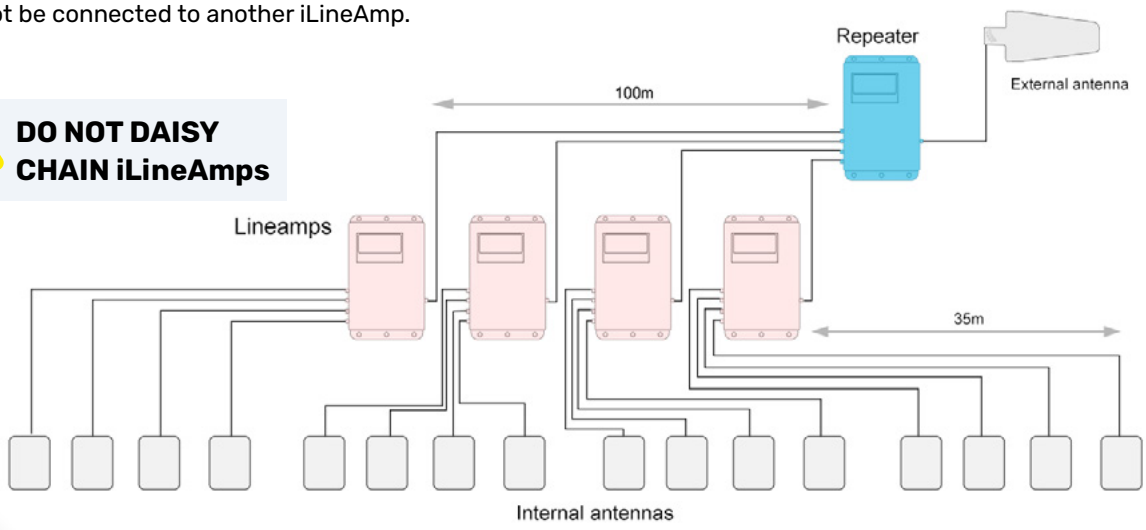
12V in Outside antenna port

Modular system

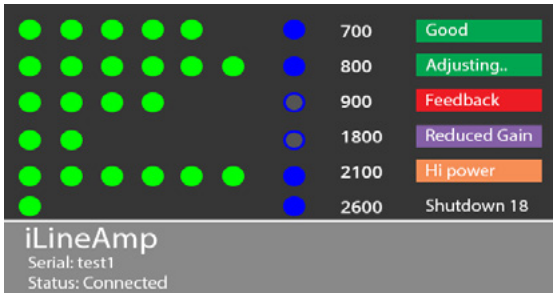
iLineAmps allow the system to be extended for large buildings and ships.

In the example below, 4 iLineAmps are installed after the iRepeater to enable the signal deep into the building, giving a total of 16 internal antennas. This modular system can be extended by adding up to 16 iLineAmps using 4 way splitters, allowing 64x antennas to be installed in large multi-story buildings or ships. The iLineAmps must all connect to the iRepeater. They must not be connected to another iLineAmp.

DO NOT DAISY CHAIN iLineAmps



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 strong signal from the repeater due to a short cable length. Action: add manual attenuation to the lineamp.
Reduced Gain	When the signal from the repeater is too high(due to short cable), the gain on the lineamp 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	Signal from repeater is too strong and band has shut down. Add manual attenuation to lineamp.

Decibel (dB) page:

The dB page shows the raw data coming from the amplifier. These dB values are very accurate.

It shows how the AGC (Automatic Gain Control) works on both uplink and downlink, and also how the amplifier manages oscillations.

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)						
Clamp (dB)	0	0	0	0	0	0
DL Total Loss (dB)						

UL Power	Uplink power. (Power emitted by the phones)
DL Power	Downlink power received by the lineamp from the repeater.
UL Fast AGC	Uplink AGC(UL gain is adjusted to control high power when phones are near antennas)
AGC	Uplink and downlink AGC. Gain is adjusted to keep the signal stable.
Clamp	Extra attenuation added when high DL power is sustained.
Manual Atten	Installer / Stella can add attenuation to any band.
UL/DL Reduced Gain	When the signal from the repeater is too high(due to short cable), the gain on the lineamp is reduced for an extended time.

Other LCD features

PIN Access	A secret PIN can lock out access to the LCD display. The PIN is set on clients account on platform.
Band On/Off	Installer / Stella can turn any band on or off.
Internal location	Type a note about the amplifier. This note is sent and displayed on the StellaControl inventory page. eg. the internal location of the amplifier.

*Every 24 hours these Reduced Gain reductions are cleared.

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