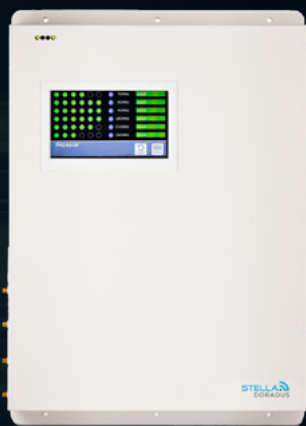# iREPEATER

The iRepeater is a commercial grade cellular repeater that amplifies the signal for all mobile operators in buildings and ships.

The iRepeater is a commercial grade cellular amplifier that amplifies the signal for all mobile operators. When connected to the StellaControl 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 line-amplifiers, can provide coverage in large, multi-storey, multi-zoned buildings.
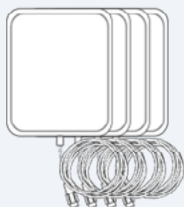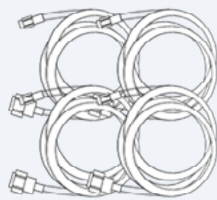
Features

- Boosts all operators - works with all phones and devices.
- Boosts 5G/4G/3G/2G.
- 4 separate indoor antennas - 5 to 15 room coverage.
- LCD Touch Display - Enhanced user experience.
- Remote monitoring via StellaControl cloud.
- HDR Software attenuation - no need for external attenuators.
- Feedback detection - accurate detection of oscillations

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

Standard kit includes:

Internal antennas	[2]Internal cables 4x SD400	iRepeater	External 15m cable SD400	[1]External antenna

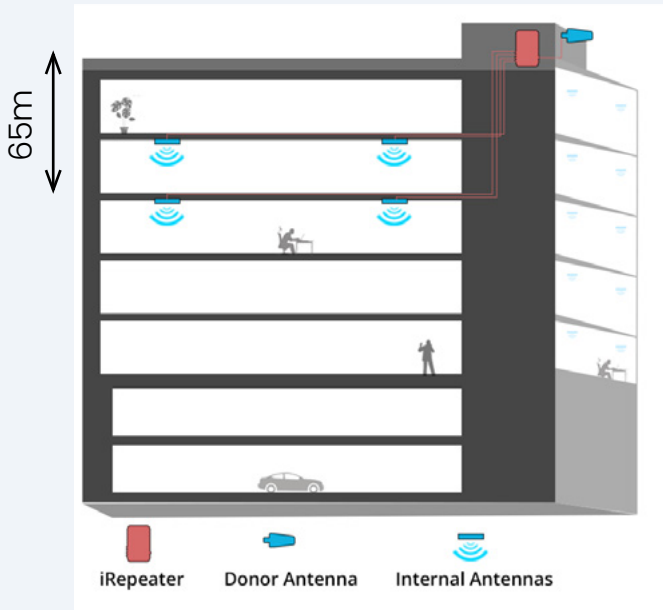[1]Omni for ships, Yagi for buildings.
[2]Custom antennas and cable lengths supplied.

Single iRepeater System

An iRepeater has 4 ports to which can be attached 4 separate antennas. The distance from the outdoor antenna to the repeater is max 30m and the distance from the repeater to the internal antennas is max 35m.
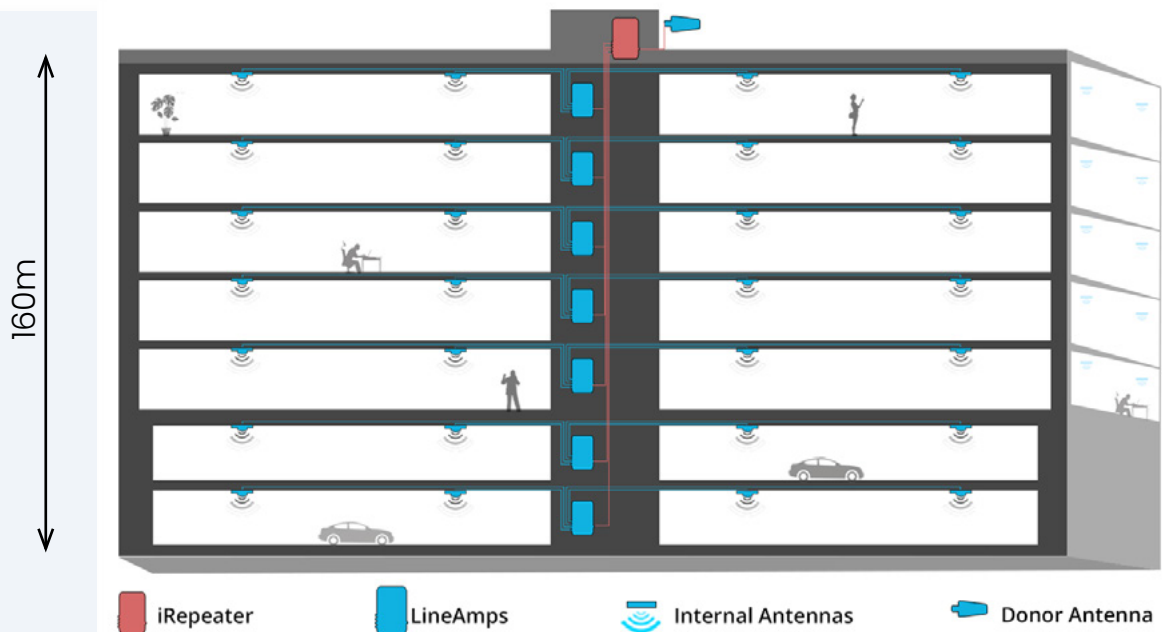
Splitters can be used to double the 4 ports to 8 ports. However, in this case the distance from the repeater to the internal antennas is reduced to 20m.

This solution is suitable for mid sized buildings.

iRepeater and LineAmp system (EnterPrise)

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

In the example below, LineAmps are installed after the iRepeater. Each LineAmp can be installed up to 100m after the iRepeater. This allows the signal to reach deep within the building. Each LineAmp also has four ports providing coverage in four separate areas.

LCD - Full Colour - Touch

Overview

The large LCD panel allows the user to easily see what is happening inside the repeater. Controlling bands and configuring the repeater is easy and intuitive.

Main Page

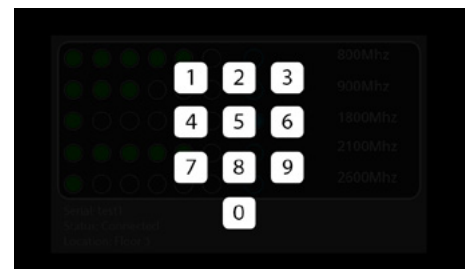Simple overview of power levels and current state of each band.

Control band page

Manually turn OFF/ON or attenuate any band. Full HDR manual attenuators.

Decibel (dB) page
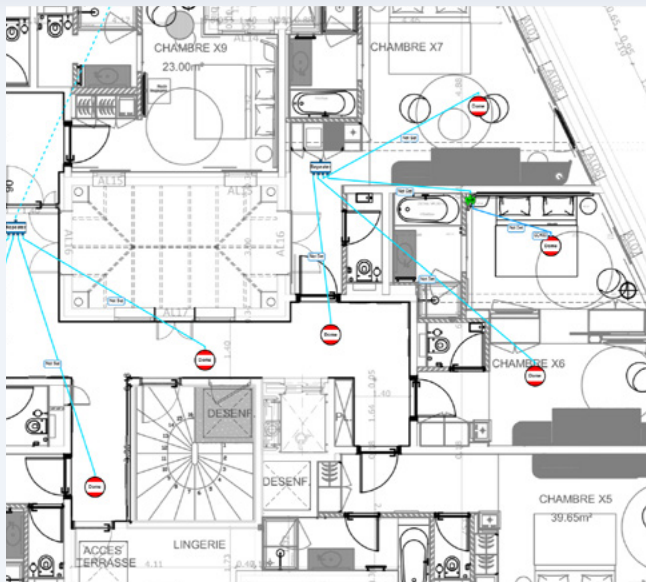
Accurate signal measurements in dBs

Security

Secure 6 digit pin to block unauthorized access.

StellaControl Cloud Platform

Inventory page

Manage all iRepeaters easily from the inventory. Sell devices to a growing list of customers. Monitor performance of all iRepeaters via the cloud.

StellaPlanner

Design repeaters systems with the StellaPlanner. Upload building plans, place antennnas in chosen locations. Let the tool calculate signal power and RF losses in the design. All projects can be stored in a personalized account on StellaControl. Let Stella help you design the optimal repeater system.

Places page

Create a new building or ship. Add iRepeaters and LineAmps to this new place. Monitor all amplifiers in context inside the building or ship. Analyze the system perform as a whole.

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.

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