

## SOHO iRepeater

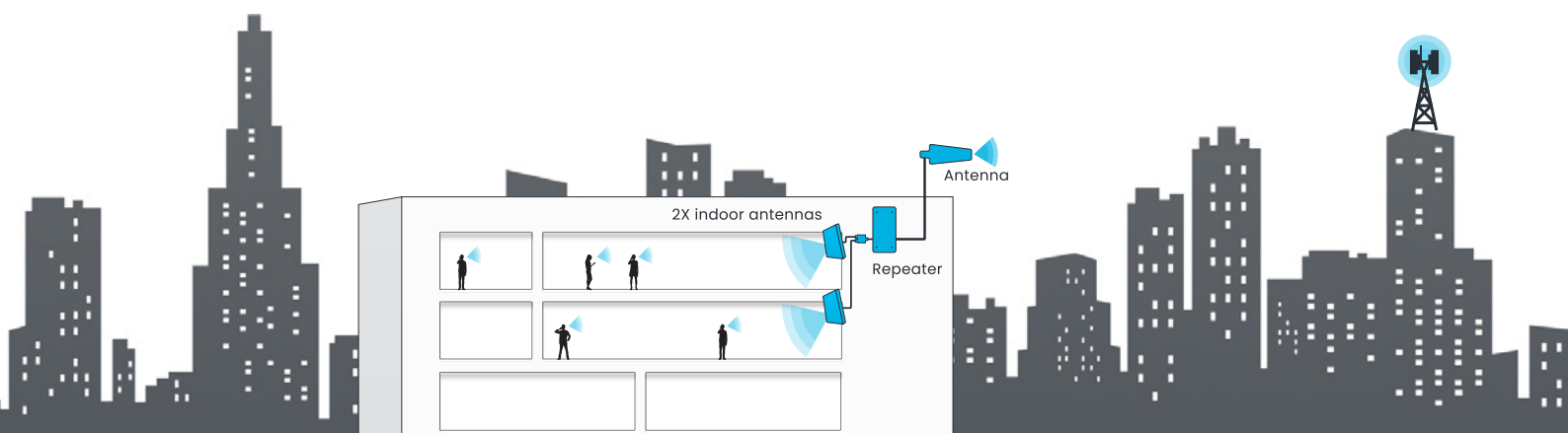
**The SOHO iR5 is a commercial grade cellular amplifier that amplifies the signal for all mobile operators. When connected to the StellaControl platform, the SOHO iR5 can be remotely managed, monitored, and adjusted, as well as receive real-time measurements of signal power, signal gain, and other control metrics for each band.**



- Boosts all operators - works with all phones and devices.
- Boosts 5G/4G/3G/2G.
- Coverage: 5 rooms.
- LCD Touch Display
- Remote monitoring System
- Network scanning.
- Port Sense

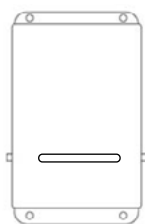
## SOHO iREPEATER

The external antenna is installed on the roof of the building where it receives the best signal from all the mobile operators. The signal is amplified by the repeater and passed around the inside of the building, covering up to 5 rooms. This coverage area can be expanded by adding a splitter for extra internal antennas.



SKU	Bands	Ports	PSU	Weight	Dims cm
iR4-S	B20, B8, B3, B1	1	12V, 5A	3.5kg	33X30X4.8
iR5-S	B28, B20, B8, B3, B1	1	12V, 5A	4kg	43X30X4.8

### Standard kit includes:



SOHO  
repeater



External  
Antenna



Internal  
Antenna



Power  
Supply



12m External  
cable SD240

<sup>1</sup>Wall mount panel or ceiling mount omni options

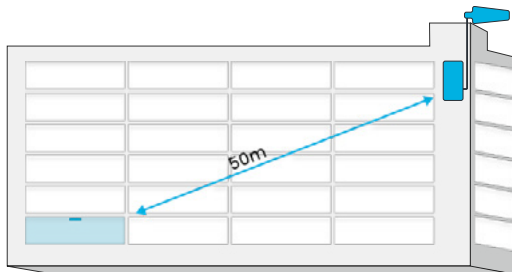
<sup>2</sup>Custom antennas and cable lengths supplied.

<sup>3</sup>Yagi or Laser antenna

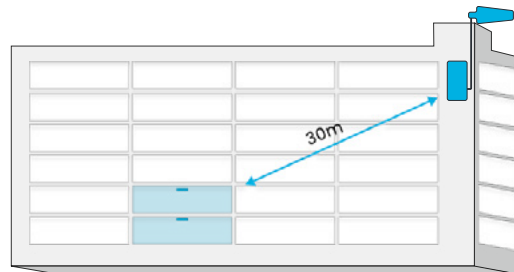
Do not use non Stella equipment with Stella repeaters. Stella repeaters operate silently on the operators network. Using Stella equipment with other manufacturers equipment will break this control system and could potentially harm the operators network. Doing so will void warranty.

## Antenna layout options

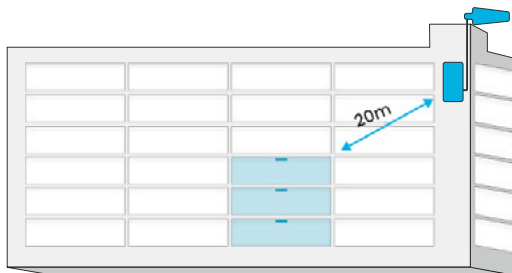
Splitters can be added after the repeater to increase the number of indoor antennas.



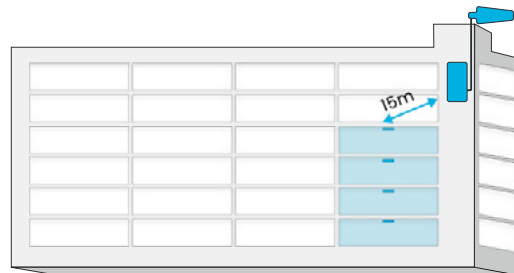
No Splitter - 50m  
1 Antenna



1 Splitter - 50m  
2 Antenna



1 - 20m  
3 Antenna

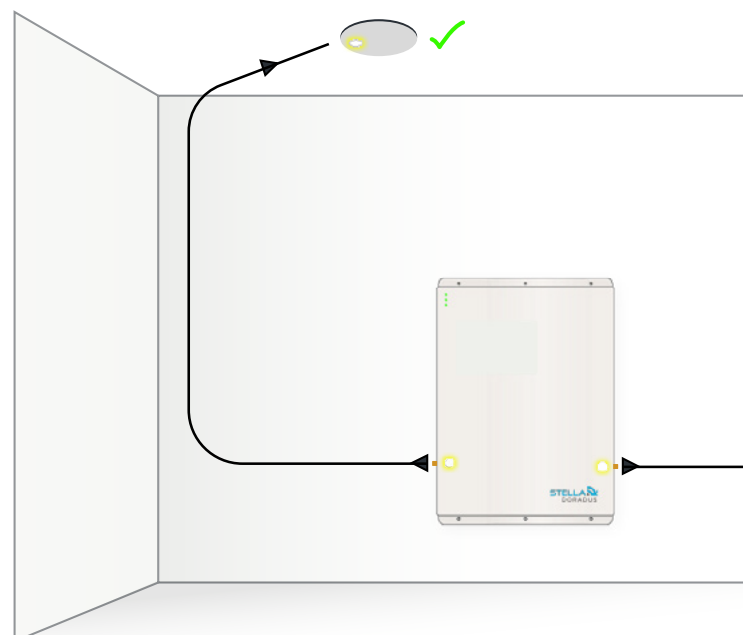


1 Splitter - 15m  
4 Antenna

## PortSense

In order to test the cable connections between the repeater and the antennas, there are 5 LEDs on the repeater and corresponding LEDs on the indoor antennas.

These LEDs light up when the antennas are correctly connected to the repeater. This assures the installer that the antennas are outputting signal and there are no faults in the cables. They can also be used to show which antenna is connected to which port on the repeater.



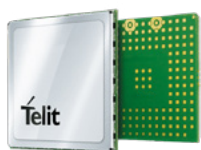
# Network Scanning



## Network Scanning

The mobile signal of all operators can be scanned outside the building. A time chart of cellular coverage can be built up for the building. This is very useful for troubleshooting and monitoring the ever-changing RF environment

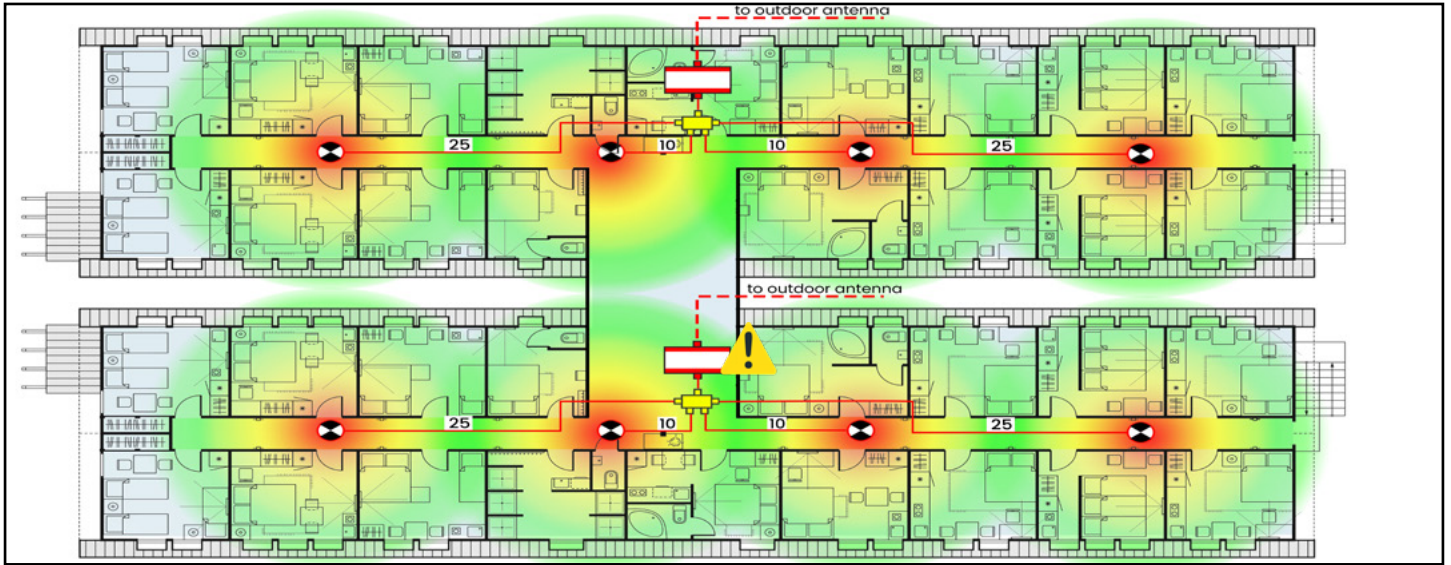
Operator	Service	Band	Cell ID	Power	Quality	RSSI	PCI
O2 DE	LTE	B7	5461519	-106	-6	-84	151
	LTE	B3	5732137	-89	-14	-55	437
	LTE	B8	5732127	-78	-8	-55	58
	LTE	B20	5732117	-65	-20	-29	163
Telekom	LTE	B7	33016582	-87	-6	-62	408
	LTE	B1	26902798	-90	-20	-52	446
	LTE	B3	33016576	-78	-7	-38	279
	LTE	B3	26902789	-86	-11	-58	445
	LTE	B8	33016585	-62	-7	-38	305
	LTE	B20	28483077	-75	-20	-38	208
Vodafone DE	LTE	B7	3504646	-107	-6	-81	147
	LTE	B1	3504660	-96	-18	-60	85
	LTE	B1	2580245	-102	-20	-62	436
	LTE	B3	2827016	-100	-20	-60	69
	LTE	B3	3504649	-95	-8	-61	144



## Embedded cellular modem

The Titan iRepeater has an internal embedded cellular modem that automatically connects to StellaControl (our online monitoring platform), without the need to connect an ethernet cable. This means the repeater is always accessible remotely for monitoring.

## StellaControl Cloud Platform



### StellaPlanner

Repeater systems can be designed with the StellaPlanner. Building plans can be uploaded and antennas placed in the desired locations. The tool calculates signal power and RF losses in the design. All projects can be stored in a personalized account on StellaControl. Stella helps you to design the optimal repeater system.

A smaller version of the floor plan diagram with a yellow warning triangle and a grey alert notification box. The box contains a list of offline events:

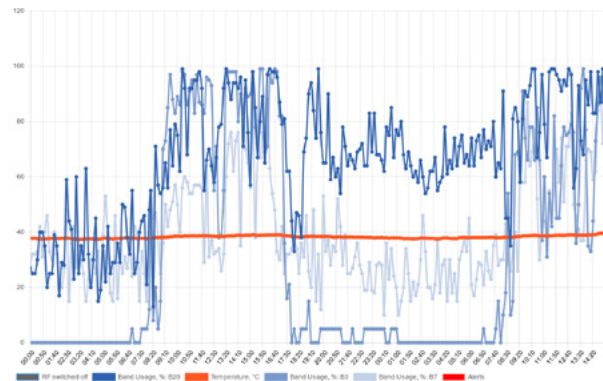
- 15/8/2024, 17:39:37  
Offline since 9 days
- 14/8/2024, 17:39:37  
Offline since 8 days
- 13/8/2024, 17:39:37  
Offline since 7 days
- 12/8/2024, 17:39:38  
Offline since 6 days

### Alerts

Email alerts are automatically sent to the installer if there are any changes to the system, eg. an amplifier is disconnected, or the operator installs a new base station antenna in the vicinity. This forewarns the installer/Stella of potential issues and to take corrective action.

### History Graphs

Many metrics can be viewed on the Titan and graphed over time. This allows the installer to quickly understand the behaviour of the repeater and track any potential issues.



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

## Amplifier Specification

Coverage	up to 5 rooms	
Gain	Uplink Gp: 65dB	Downlink Gp> 65dB
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 <sup>1</sup>	
Uplink Switch On	Yes <sup>2</sup>	
AGC Range	0 to 30dB	
Surge protection	SMA connectors DC grounded, 12V DC port MOV protected	
Port Sense	Yes	
Embedded modem	Yes	

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

<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 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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