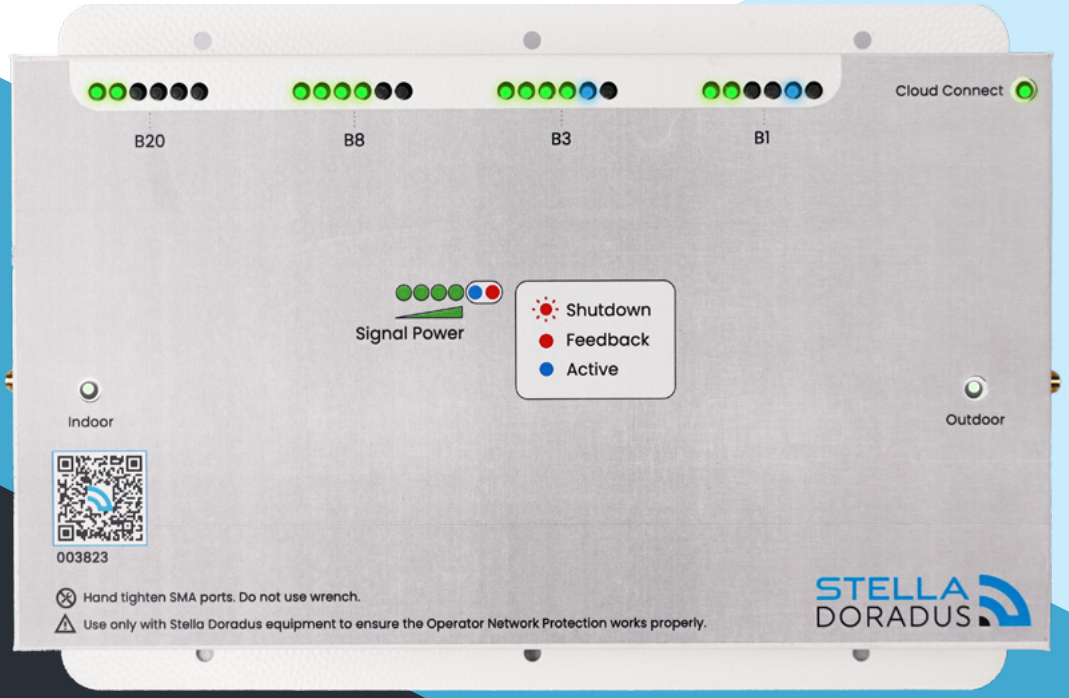


Stella Doradus

SOHO iRepeater

Brochure and User Guide for
iR4-S Repeater

Stay
Connected.

Amplify
Your Signal.

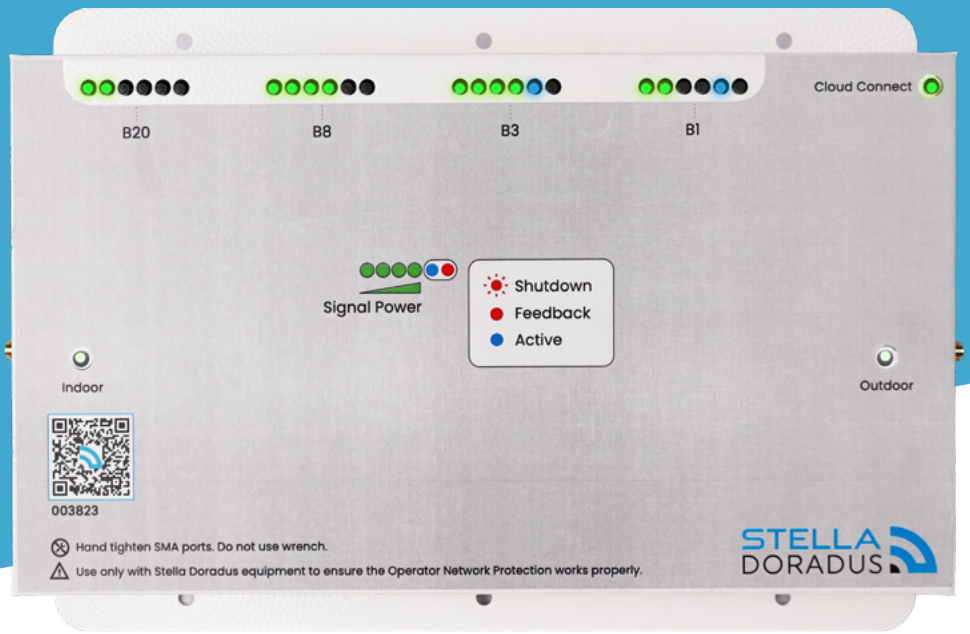
Product Overview

Features & Specs 04
SOHO Kit 06
Modular System 07
PortSense 08
Cell Scanning 09

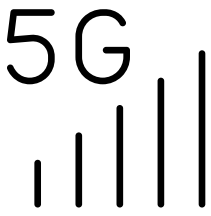
Other

Stella Control 10
FAQs 11

The SOHO iRepeater

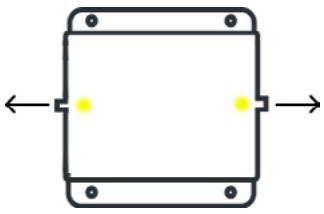


MODEL	WEIGHT	DIMS MM	SKU	BANDS
SOHO iR4-S	2KG	185x260x48	iR4-S	20/8/3/1



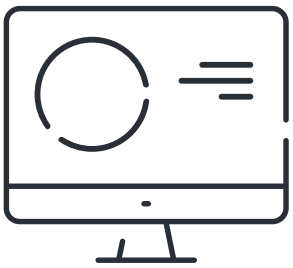
AMPLIFY ALL OPERATORS

Amplify the signal from all operators for 5G, 4G, 3G and 2G.



PORTSENSE

PortSense technology confirms visually that cables and antennas are correctly connected.



REMOTE MONITORING

Monitor signal and repeater performance on StellaControl platform. Troubleshoot issues and adjust settings to ensure optimal coverage and reliability.

Specifications

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

Amplifier Specification

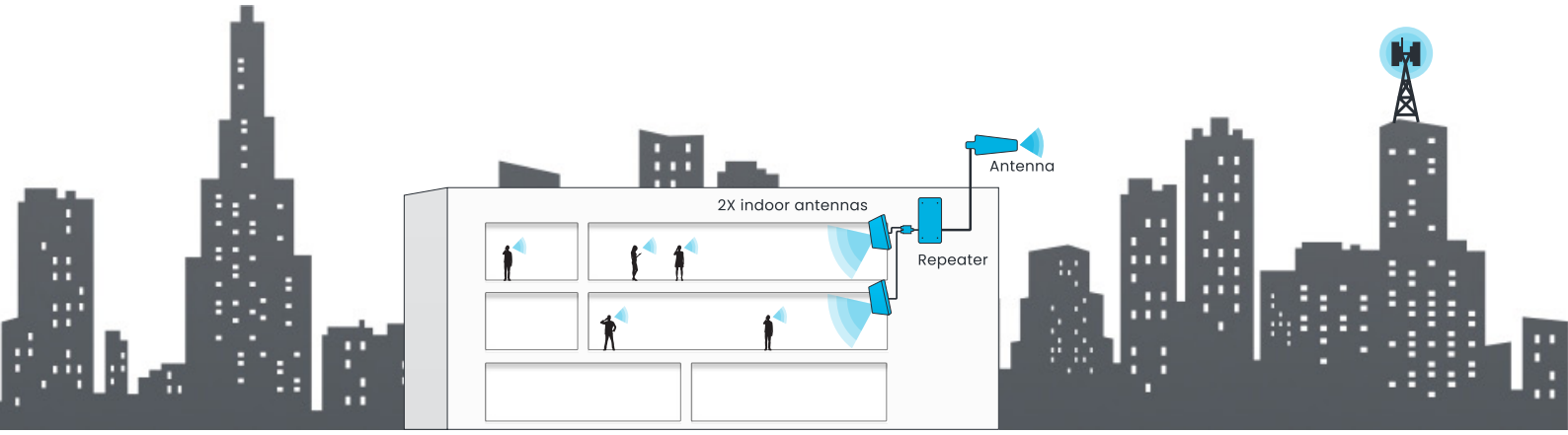
Coverage	up to 5 rooms
Gain	Uplink Gp: 60dB Downlink Gp> 60dB
Pass band ripple	<4dB
I/O impedance	50 ohm/SMA female connector
Max up/down signal strength	20dBm / 10dBm
Ambient Temperature	-30°C to +70°C
Power supply input	110 - 240V AC
Power supply output	12v DC
Oscillation Control	Automatic
AGC Level Control:	Automatic[1]
Uplink Switch On	Yes[2]
AGC Range	0 to 30dB
Surge protection	SMA connectors DC grounded, 12V DC port MOV protected
Port Sense	Yes
Embedded modem	Yes

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

How it Works

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.

When connected to the StellaControl platform, the SOHO 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. Typical coverage is between 2 and 5 rooms within the building.



Standard kit includes:

2X antennas (one internal, one external)

SOHO iRepeater

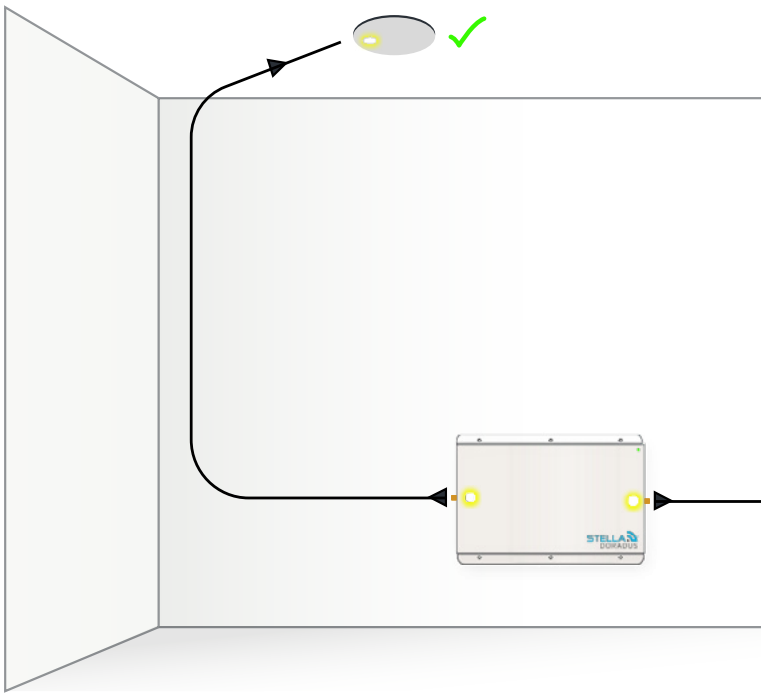
External 12m cable SD240

PortSense

OUR PORT SENSE TECHNOLOGY
(PATENT PENDING)

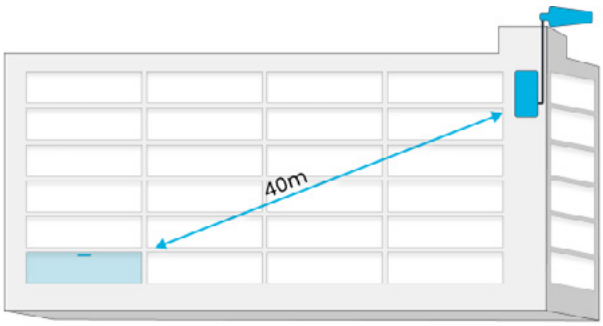
In order to test the cable connections between the repeater and the antennas, there are 2 white LEDs, when the cables are connected correctly to the respective antennas the LEDs will turn on.

This assures the installer that the antennas are outputting signal and there are no faults in the cables.

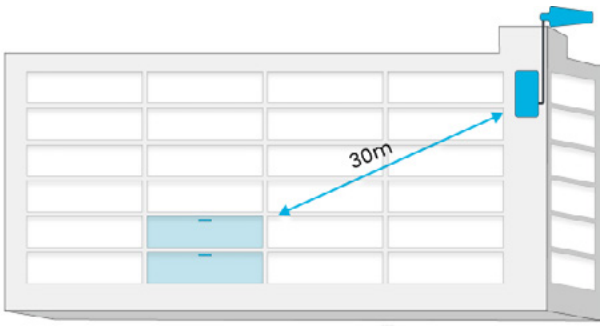


Antenna layout options

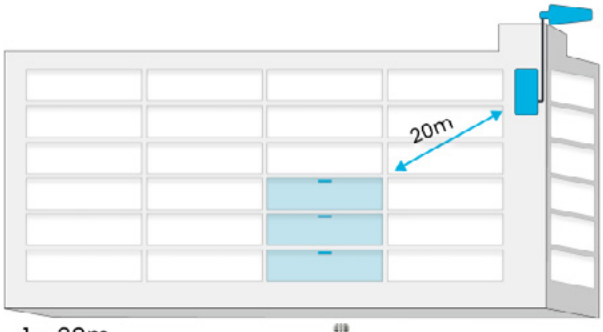
Splitters can be added after the repeater to increase the number of indoor antennas.



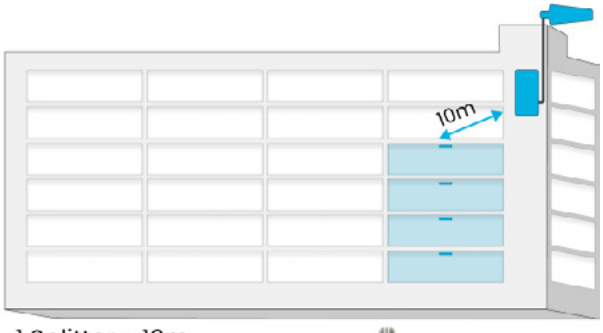
No Splitter - 40m
1 Antenna



1 Splitter - 30m
2 Antenna

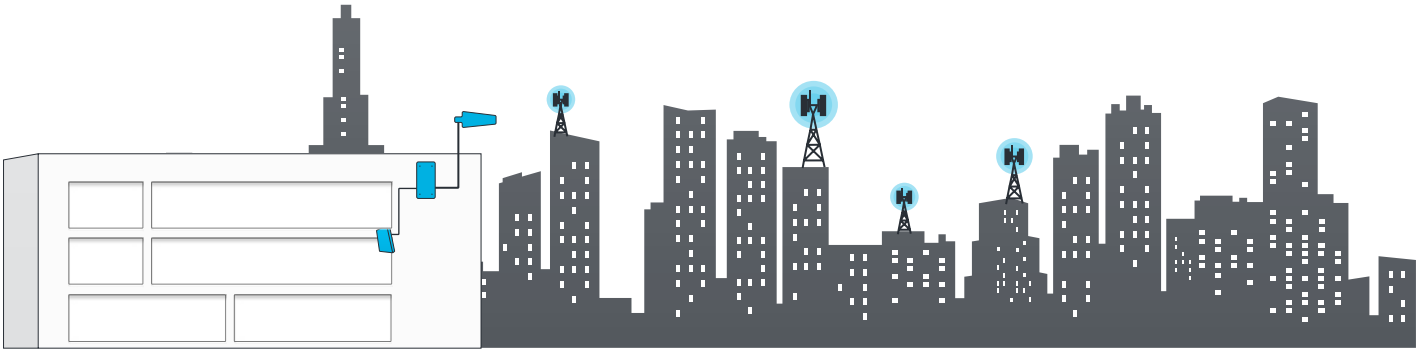


1 - 20m
3 Antenna



1 Splitter - 10m
4 Antenna

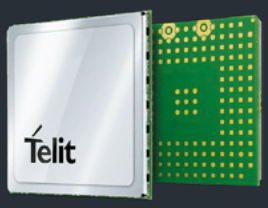
Cell Scanning



Cell 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.

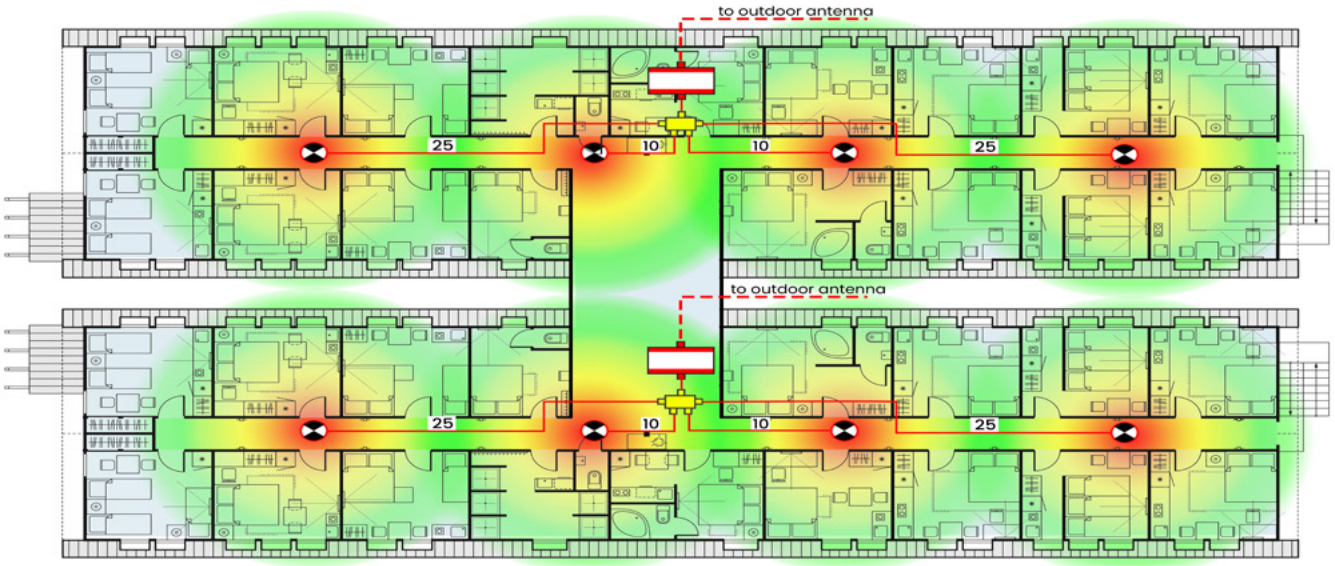
Operator	Service	Band	Cell ID	Power	Quality	RSSI	PCI
02 DE	LTE	B7	5461519	-106	-6	-84	151
	LTE	B3	5732137	-89	-14	-55	437
	LTE	B8	5732127	-78	-8	-55	58
	LTE	B20	5732117	-65	-20	-29	163
Telekom	LTE	B7	33016582	-87	-6	-62	408
	LTE	B1	26902798	-90	-20	-52	446
	LTE	B3	33016576	-78	-7	-38	279
	LTE	B3	26902789	-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

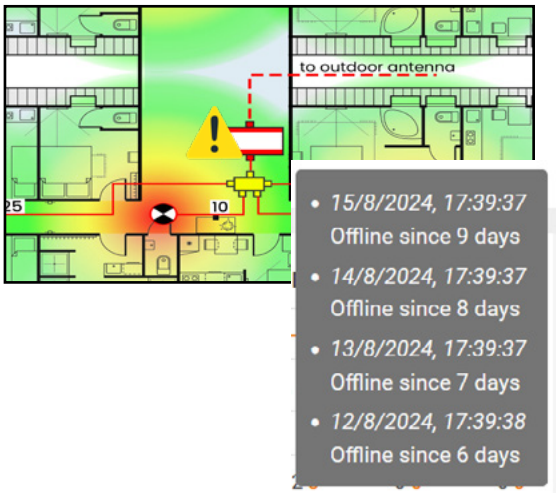
The SOHO iRepeater has an internal embedded cellular modem that automatically connects to StellaControl (our online monitoring platform), without the need to connect an ethernet cable. This means the repeater is allways accessible remotely for monitoring.

Stella Planner



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.



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 vacinity. This forewarns the installer/ Stella of potential issues and to take corrective action.

Stella Doradus

Coolfinn, Portlaw, Waterford, Ireland

P. +353 51 387145 info@stelladoradus.com
www.stelladoradus.com