

# Brochure and user guide



TITAN iR6



TITAN iR4



STELLA DORADUS

## Titan iRepeater

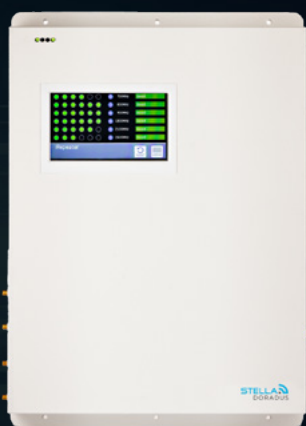


## Titan iREPEATER

**The Titan iRepeater is a commercial grade cellular amplifier that amplifies the signal for all mobile operators. When connected to the StellaControl platform, the Titan 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. This increases the coverage area to between 5 and 15 rooms, depending on the size and shape of the room.

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

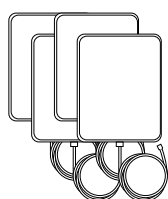


- Boosts all operators - works with all phones and devices.
- Boosts 5G/4G/3G/2G.
- Coverage for any sized building (LineAmps may be required)
- LCD Touch Display ( T-iR6 only )
- Remote monitoring. Managed by Stella (optional)
- Smart attenuation
- Smart Feedback detection
- Network scanning.
- Port Sense (automatic testing of all cables and connectors)

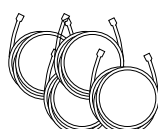
## Models

Model	Bands	Ports	PSU	Weight	Dims cm	Region
Titan iR4	B28, B20, B8, B3	4	12V, 5A	2.8kg	30X30X3.6	EMEA
Titan iR6	B28, B20, B8, B3, B1, B7	4	12V, 5A	4kg	43X30X4.8	EMEA

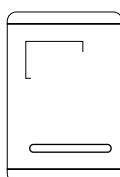
## Standard kit includes:



4x Internal antennas<sup>1</sup>



<sup>2</sup>Internal cables  
4x 15m SD240



Titan  
iRepeater



External 15m  
cable SD400



<sup>3</sup>External  
antenna

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

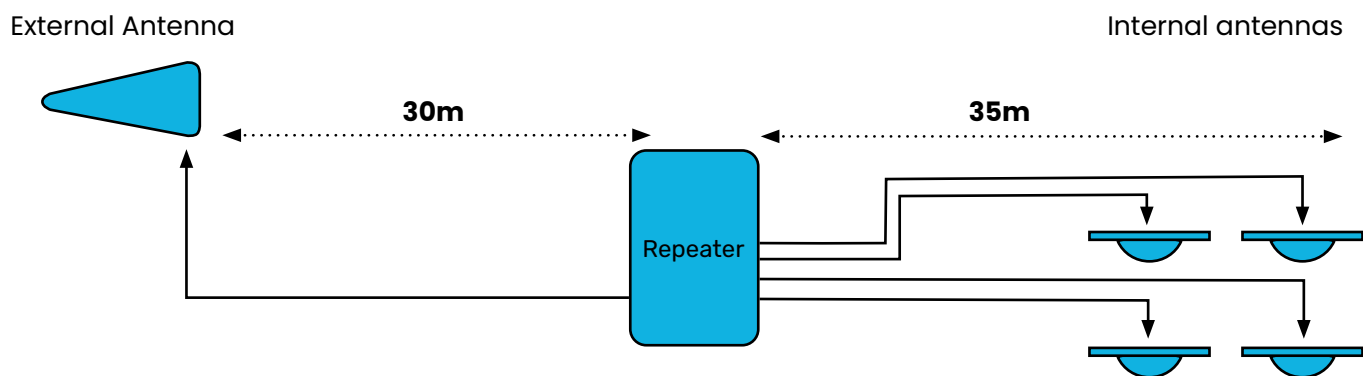
<sup>2</sup>Custom antennas and cable lengths supplied.

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

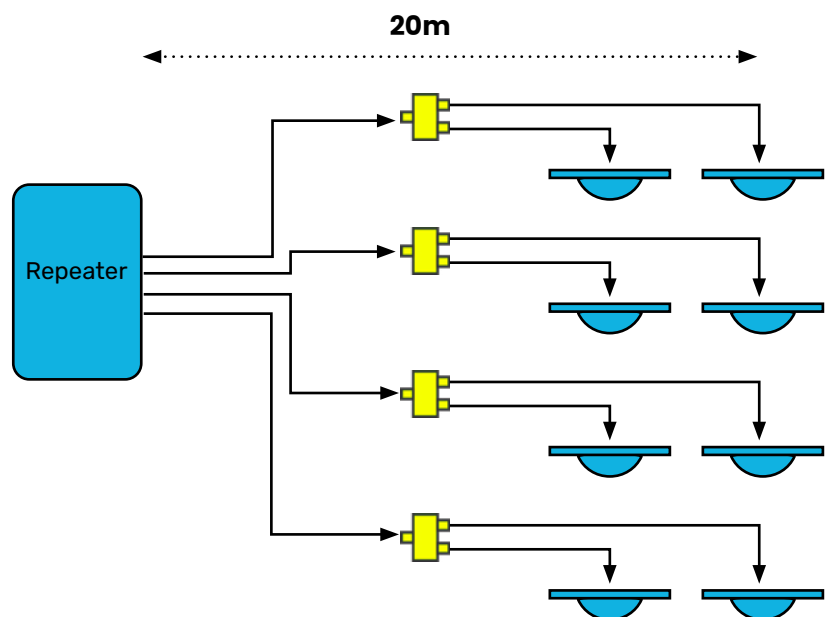
## A Single Titan

A Titan repeater has 4 ports for 4 internal antennas. Each antenna provides coverage in 1000m<sup>2</sup> (open space). Typically this is about 3 to 5 rooms. However, using 2 way splitters, up to 8 antennas can be connected to the Titan. These antennas can be installed up to 20m away from the Titan. This will provide coverage in up to 30 rooms.

### Option #1



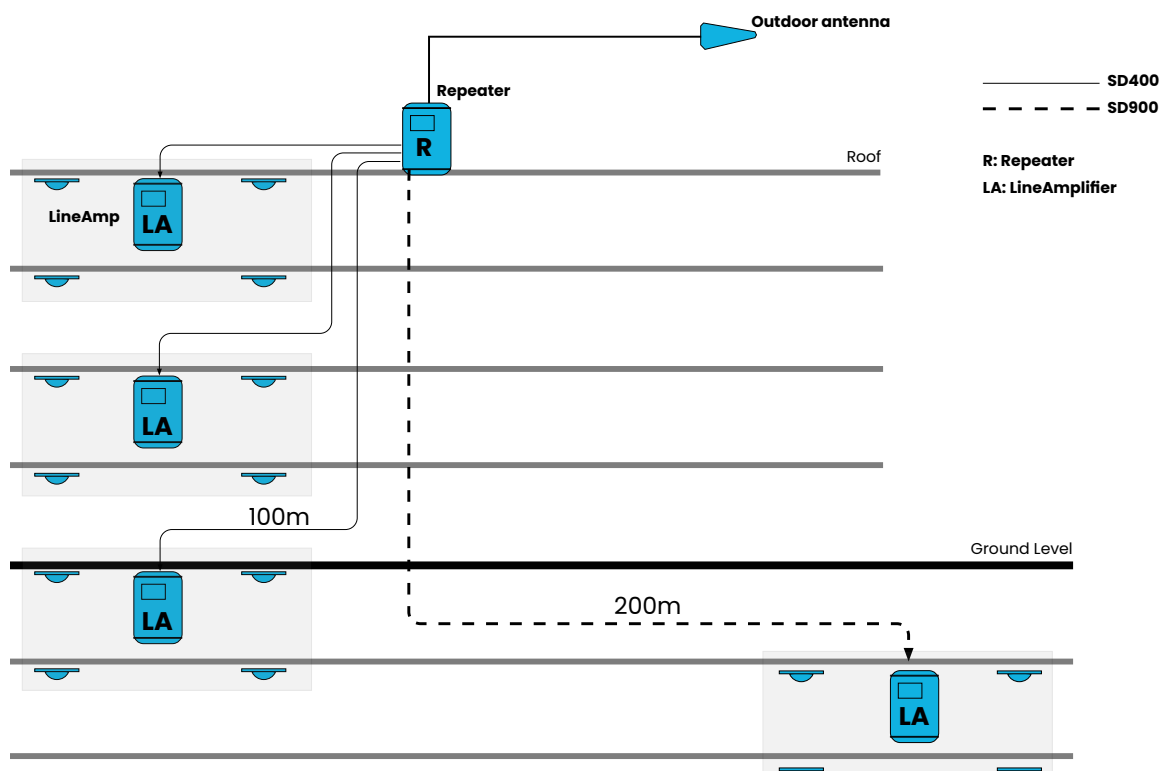
### Option #2



## Extending Titan coverage with LineAmps

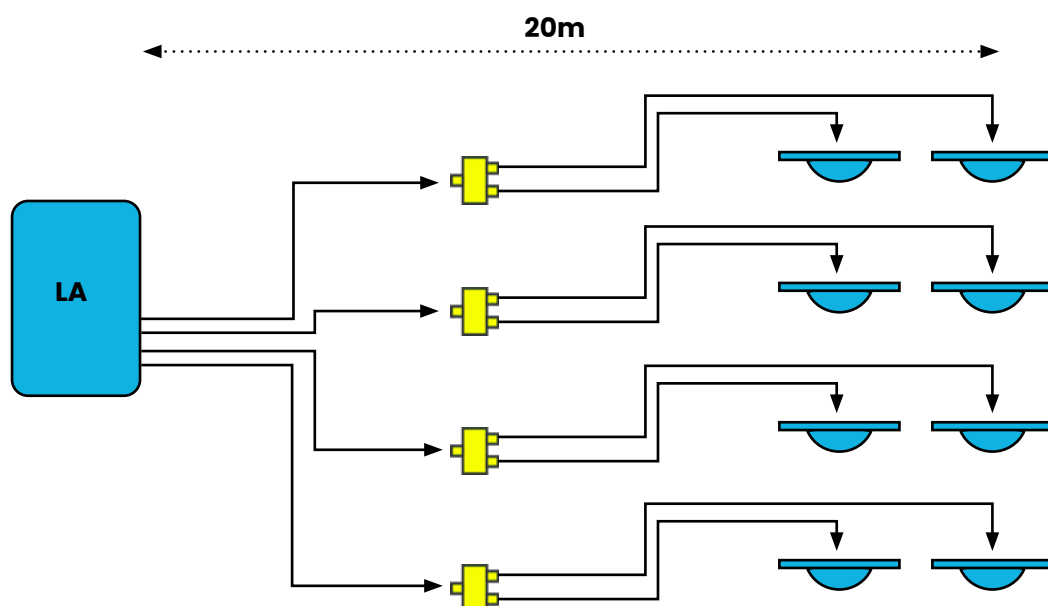
For larger buildings, the system can be extended by adding LineAmps (LA).

In the example below, LAs are installed after the Titan. Each LA can be installed up to 100m after the Titan (200m if SD900 cable is used). This allows the signal to reach deep within the building. Each LA also has four ports which provides coverage in four separate areas.

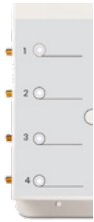


## Using splitters with LineAmps.

2-way splitters may be installed after each LineAmp. This reduces the allowable distance between the LineAmp and the internal antenna from 35m to 20m, but 8 antennas can now be installed instead of 4.



## Features



### Port Sense

In order to test the cable connections between the repeater and the internal antennas, there are 4 LEDs on the repeater and corresponding LEDs on the indoor antennas.

These LEDs light up when the antenna is correctly connected to the repeater. This assures the installer and the client 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. (This feature requires new special Stella antennas)



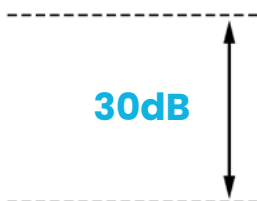
### Embedded cellular modem

The Titan iRepeater has an internal embedded Telit cellular modem that automatically connects to StellaControl, our online monitoring platform. No need to install an ethernet cable anymore for remote monitoring.



### Network Scanning

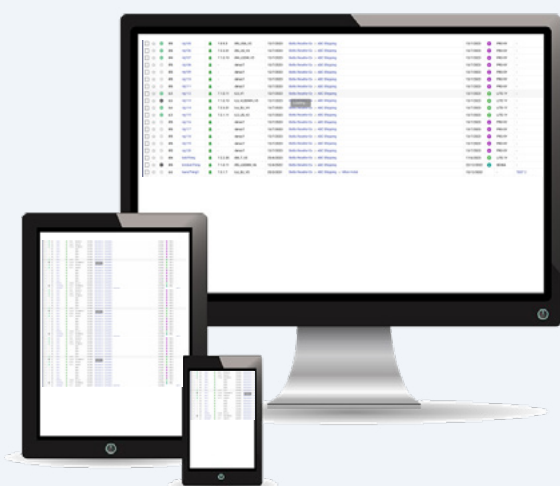
Using the internal modem, remote cellular scanning is now available. Scan the mobile signal of all operators outside the building. Build up a map of cellular coverage for the building. This is very useful for troubleshooting and monitoring the ever-changing RF environment (available soon).



### High Dynamic Range Attenuators

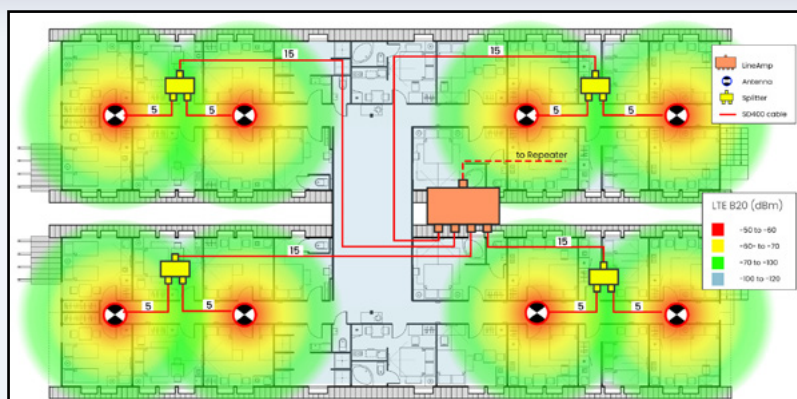
HDR attenuators allow us to do full AGC in software. No need for external physical attenuators anymore. No need to add software attenuation. Everything is now automatic.

## StellaControl Cloud Platform



### Inventory page

The StellaControl Portal is a web-based platform that provides installers and authorized users remote monitoring, managing and control of iRepeater installations. By logging into the platform from a computer or mobile device, users can organize all their deployments, commission new iRepeater systems, view real-time system performance, adjust alarm policies and notification settings, update software, and much more.

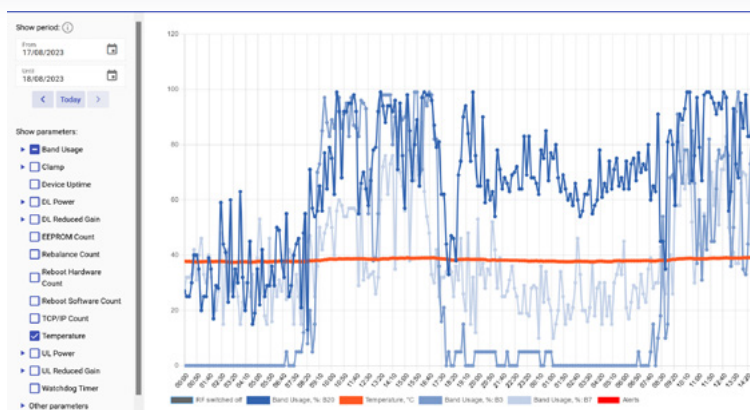


### StellaPlanner

Design repeater systems with the StellaPlanner. Upload building plans, place antennas 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.

### History Graphs

View metrics from the Titan graphed over time to quickly understand the behaviour of the repeater and track any potential issues.



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

## Amplifier Specification

Coverage	up to 15 rooms with one Titan. (200 + rooms when LineAmps are deployed)					
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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