

# DCS1800 Bandwidth Adjustable Indoor Repeater

## SR-1820



### Features

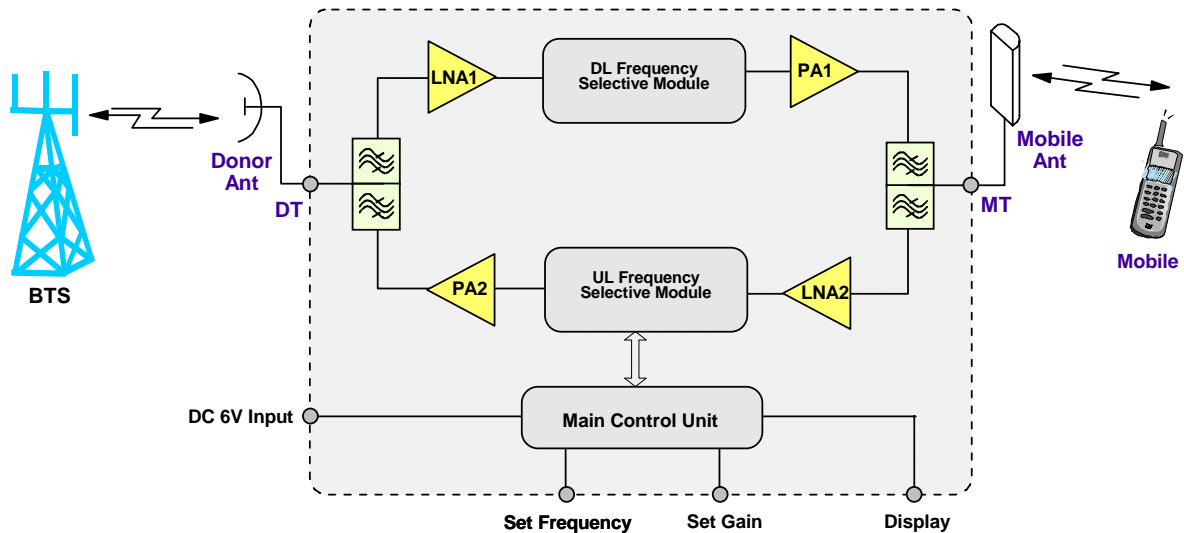
- 27dBm, 30dBm output power for different converge area.
- Broadband linear power amplifier ensures un-distorted amplification of DCS1800 signals.
- 2-25MHz adjustable bandwidth is suitable for different operating band.
- Low noise amplifier improves uplink system noise figure for better voice quality and reduced dropped call.
- System commissioning can be performed without using any additional tools or equipment.
- Highly integrated design with miniaturized enclosure, small size, light weight and easy to install.
- Local control and monitoring function: operating status and parameters can be set or monitored by OMT / OMC.
- OMC is available for remote operation and maintenance via integrated wireless modem. (Optional)



### Product Description

SR-1820 DCS1800 Bandwidth Adjustable Repeater is designed for indoor operations. It is a bi-directional amplifier that is used to enhance signal strength in small-and-medium-sized areas in a DCS1800 network. The system gain is compensated automatically according to the temperature variation within the enclosure, which ensures stable operation under ambient temperature functions. It is best suitable for provision of signal coverage within offices and residential apartments.

### Functional Block Diagram



## Technical Specifications

Model			0.5W		1W	
Electrical						
Frequency Range		Downlink	MHz	1805-1880		
		Uplink	MHz	1710-1785		
Maximum System Gain			dB	80		
Operating Bandwidth		Downlink	MHz	2 – 25*		
		Uplink	MHz	2 – 25*		
Gain Adjustment Range (1dB step)			dB	0 – 30		
Output Power, Downlink			dBm	27	30	
Output Power, Uplink			dBm	17	17	
Pass Band Ripple, p-p			dB	≤5		
System Group Delay			μsec	≤6		
System Noise Figure UL at Maximum Gain			dB	≤6		
Spurious		9KHz – 1GHz	dBm	-36		
		1GHz – 12.75 GHz	dBm	-30		
OIP3			dBm	46	45	
Out of band gain		Offset ≥ 400kHz	dB	≤ 50		
		Offset ≥ 600kHz	dB	≤ 40		
		Offset ≥ 1MHz	dB	≤ 35		
		Offset ≥ 5MHz	dB	≤ 25		
Input VSWR				≤1.6		
Absolute Maximum RF Input Power			dBm	+10		
Impedance			Ω	50		
Power, Mechanical & Environmental						
Dimensions, H x W x D			mm	484 x 324 x 180	484 x 324 x 180	
Weight (approx.)			kg	18	18	
Power Supply			VAC	80 – 265 / 47 – 63Hz		
Power Consumption (approx.)			W	80	90	
Enclosure Cooling				Convection		
RF Connectors				N-Female		
Operating Temperature			°C	-20 to +40		
Operating Humidity			%	≤ 95		
Environmental Class				IP55		
MTBF			hr	> 50,000		

Note: Typical specification at room temperature  
\*bandwidth adjustable from 2 to 25

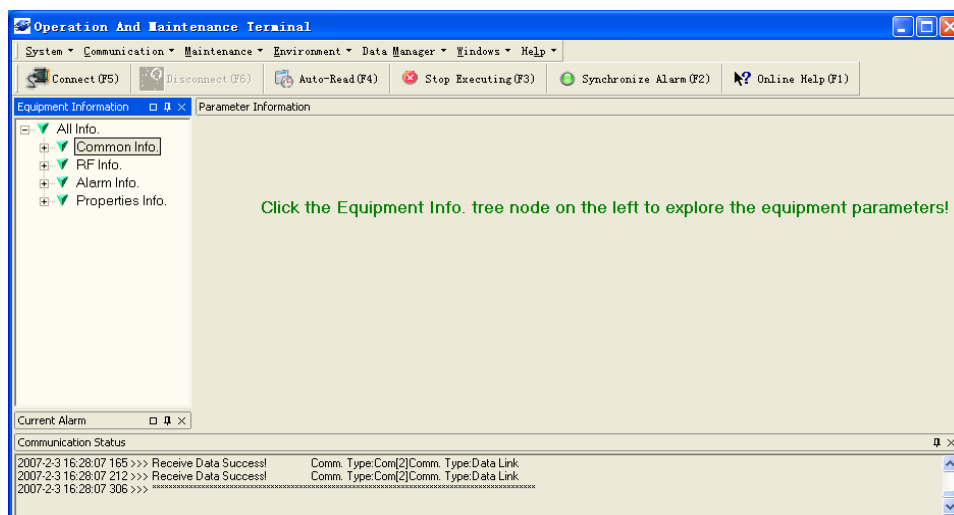
## Operation and Maintenance

By using a direct serial connection to a PC, the installation and commissioning of SR-1820 is accomplished by the OMT. With the integrated wireless modem (data or SMS mode), equipment parameters can be monitored remotely.

Controlled equipment parameters include: Operating Frequency, Center Frequency Adjustable, Gain, Soft ON/OFF, Over-temp Threshold, DL In/Output Power Threshold.

Monitored equipment parameters include: Alarms (LNA, PA, PLL, Power Down, PSU Fault, DL In/Output Power, Over-temp, VSWR).

The SR-1820 has been developed to take advantage of advanced network operation, where the (optional) OMC provides an effective solution for central monitoring a group of Comba products.



## Outline Drawing

