

### Home/Office Cell Phone Signal Booster

#### Overview

#### C20L Series with LCD Display

C20L series smart signal repeater is a latest high-end product, researched and developed by Amplitec. It is designed with technology and environment oriented conception, as a perfect combination of environmental protection and signal coverage. It carries with features like novel appearance, high intelligence, high circuit integration, low cost, low power consumption, etc.

Aluminum alloy specular shell makes it more technical sense. Large-size LCD screen with blue backlight help users easily get each operating parameter. Smart functions including isolation detection, self-excitation elimination, uplink auto standby and uplink&downlink gain linkage make easier and quicker installation. C20L series repeater provides a rapid and perfect solution to solve and optimize the weak signal of houses, offices, hotels, elevators, underground parking lots and other small weak signal area.



#### Product Feature

- Large-size screen to clearly shows operating parameters.
- Real-time isolation detection function, automatically detect and alarm when in insufficient isolation.
- Self-excitation elimination function, automatically decrease the gain when self-excite which causing by insufficient isolation.
- Auto-shutoff function, automatically cut down downlink output power when in severe self-excitation and over input power.
- Uplink auto-standby function, device enters standby mode when no user in the coverage area to save power consumption.
- Manual gain attenuation, with 1dB step to attenuate the gain among 1-31dB range
- Auto-level control function to ensure stable coverage.
- Uplink and downlink gain linkage function to keep the balance of uplink and downlink.



#### Installation Example

### Specification

| Items                                   |  | Uplink  | Downlink                          |
|---|--|---|-----------------------------------|
| Model/Frequency Range                   | C20L-B5  | 824 ~ 849 MHz   | 869 ~ 894 MHz                     |
|   | C20L-B8  | (880)890 ~ 915 MHz  | (925)935 ~ 960 MHz                |
|   | C20L-B3  | 1710 ~ 1785 MHz   | 1805 ~ 1880 MHz                   |
|   | C20L-B1  | 1920 ~ 1980 MHz   | 2110 ~ 2170 MHz                   |
|   | C20L-B7  | 2500 ~ 2570 MHz   | 2620 ~ 2690 MHz                   |
|   | C20L-B20   | 832 ~ 862MHz  | 791 ~ 821 MHz                     |
|   | C20L-B28   | 703 ~ 733 MHz or<br>718~748 MHz   | 758 ~ 788 MHz or<br>773 ~ 803 MHz |
| Output Power                            |  | 15±2 dBm  | 20±2 dBm                          |
| ALC Active 10dB, Output Power Variation |  | Δ   ≤2 dB   | Δ   ≤2 dB                         |
| Rated Gain(Center Frequency)            |  | 65±3 dB   | 70±3 dB                           |
| Ripple in Band                          | CDMA≤8 dB / EGSM≤15 dB / GSM≤8 dB / DCS≤10 dB / WCDMA≤6 dB / LTE7≤8 dB / LTE20≤15 dB / LTE28≤8 dB  |   |                                   |
| Intermodulation Products                | 9KHz~1GHz  | ≤-45 dBc  | ≤-45 dBc                          |
|   | 1GHz~12.75GHz  | ≤-30 dBm  | ≤-30 dBm                          |
| Spurious Emission                       | 9KHz~1GHz  | ≤-36 dBm  | ≤-36 dBm                          |
|   | 1GHz~12.75GHz  | ≤-30 dBm  | ≤-30 dBm                          |
| ATT Attenuation (Center Frequency)      | 1 ~ 10dB   | Δ   ≤1dB  | Δ   ≤1dB                          |
|   | 10 ~ 20dB  | Δ   ≤1.5dB  | Δ   ≤1.5dB                        |
|   | 20 ~ 30dB  | Δ   ≤2dB  | Δ   ≤2dB                          |
| LCD Indication                          | Band   | Frequency   |                                   |
|   | Gain   | Uplink&downlink gain  |                                   |
|   | Pout   | Downlink output power   |                                   |
|   | Work   | Normal operating: Display , Uplink idle shutoff: No display                     |                                   |
|   | ISO  | Normal operating: No display, Derating: Display, Self-excitation shutoff: Flash |                                   |
|   | ALC  | Not active: No display, Active 5-10dB: Display, Active 15-29dB: Flash           |                                   |
| Idle Shutoff                            | @Max. Gain, uplink 5±1 minutes continuous input signal < -85dBm(Idle threshold setting), uplink PA will be OFF, once input signal ≥ -80dBm, uplink PA will be ON at once.  |   |                                   |
| Real-time Self-excitation Elimination   | Test on downlink. Derate the gain value when the device is self-excited(Isolation is less than the gain). If in severe self-excitation(The isolation is 15dB less than the gain), it will auto shutoff.                                    |   |                                   |
| Auto-shutoff                            | Severe self-excitation shutoff, over input signal shutoff(If beyond ALC range, uplink&downlink PA will be OFF in 5s. Restart device after 30±5s. It will permanently shut off if it is beyond ALC range for 5 times, until power-on again. |   |                                   |
| Power Supply                            |  | DC: +5 V  |                                   |
| Power Consumption                       |  | <6 W  |                                   |
| RF Connector                            |  | N-Female  |                                   |
| Operating Temperature                   |  | -10℃ ~ +55℃   |                                   |