

# TETRA / UHF FIBER OPTIC BDA

## CSG 9450-BDA65-36 OX

CSG TETRA / UHF Fiber Optic BDA (Bi-directional Amplifier) is designed to solve problems of weak mobile signal in the place that is far away from the Base Station (BS) and has fiber optic cable network underground.

The repeater works as a relay between the BTS, Donor ( Input ) and mobile Radios . It receives the DOWNLINK signal from BTS via the Donor Antenna, linearly amplifies the signal and then retransmits it via the Indoor Signal Distribution System to the weak / blind coverage area. In the reverse path the signal from the mobile radio is also amplified and retransmitted to the BTS via the opposite direction.

( known as UPLINK ) .The Remote unit will reconvert the optic signal into RF signal and provide the signal to the areas where network coverage is inadequate.

CSG BDAs / Repeaters are designed to operate within the customized band.as Band selective or in Channel Selective configuration



### Features

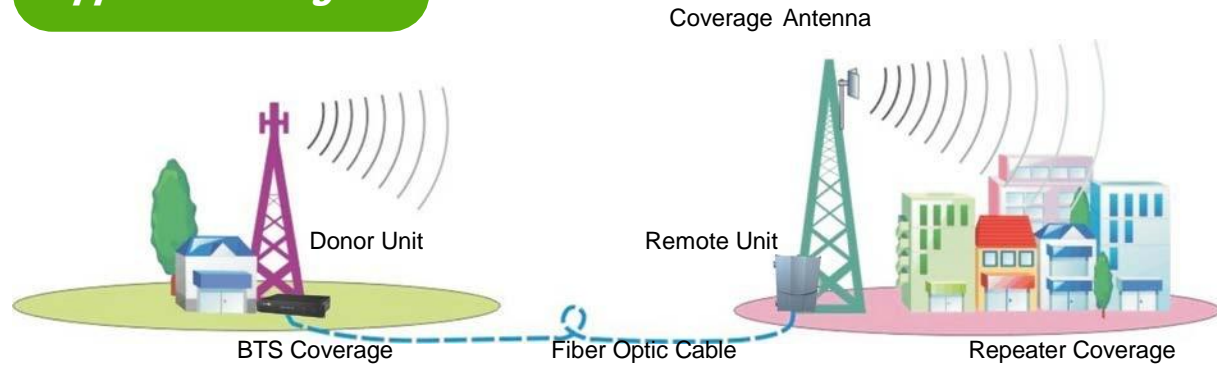
- Aluminum-alloy casing with IP65 protection has high resistance to dust, water and corroding
- Omni-directional antenna can be adopted to expand more coverage
- Tx/Rx control and alarm messages can be transmitted via one fiber optic cable
- Adopting WDM module to realize long-distance transmission
- Stable and improved signal transmission quality
- One Donor Unit can support up to 8 Remote Units to maximize utilization of fiber optic cable
- USB port provides a link to a notebook for local supervision or to the built-in wireless modem to communicate with the NMS (Network Management System) that can remotely supervise BDA's working status and download operational parameters to the BDA

### Applications

To expand signal coverage or enhance signal blind area where TETRA signal is weak or unavailable.

- Public Safety
- Transportation
- Utilities
- Government
- Military
- PAMR
- Commercial & Industry
- Oil & Gas

## Application Diagram



## Technical Specifications

PARAMETERS		SPECIFICATIONS
Frequency range	Uplink	452.500 ~ 457.500 MHz
	Downlink	462.500 ~ 467.500 MHz
Gain		65 dBm
Gain Adjustable range		1- 36 dB
Max. Input Power		+10 dBm
Output Power		36 dBm (4 watt)
Transmission Distance		≤ 20 Km
In-Band Ripple		≤ 3 dB
VSWR		≤ 1.5 : 1
Group delay time		≤ 5μs
I/O Impedance		50 Ω
Third-order Inter-Modulation		max.-40dBc @ 30kHz
Noise Figure		< 5 dB(Only for Uplink)
Spurious Emission		≤-36 dBm
In-Band Inter-Modulation Attenuation		≤ -40 dBc / 30 KHz,    ≤ -15dBm / 30 KHz
System Delay		≤ 5μsec
RF Connectors		N - Female
Power Supply		AC 100 ~ 240 VAC
Dimensions (Approx.)		418 x 90 x 290 mm (Donor Unit) 428 x 327 x 154 mm(Remote Unit)
Weight (Approx.)		Donor Unit : 6 kg , Remote Unit : 25 Kg
Alarm monitoring system		Optional
MTBF		>50,000 Hours
Indications		Power supply , Alarm, State
Operating temperature		-10 to 50 °C
Humidity		≤ 95 %
System Delay		≤5u Sec
I/O Impedance		50Ω
Fiber Optic Light Source		Laser unit (Wavelength:1310 nm/1550 nm)
Optical Output Power		≥0dBm (1310nm)/≥3dBm (1550nm)
Optical Receiver Sensitivity		≤ -25dBm
Temperature Range		Operation : -30°C ~+55°C/ Storage : -20°C~+60°C
Relative Humidity Range		≤95% (non condensing)
Power Supply (customized)		DC-48V For Donor Unit AC 240V ±15%,50Hz For Remote Unit
Backup Power Supply (Optional)		Not Required