

ABELL[®]

Fast Deploy Mission Critical Portable Communication System



Portable Digital Repeater | LTE PoC & DMR Intercom | MESH Multi-Jump Network



R50(10)

Portable Digital Repeater

The ABELL R50(10) portable digital repeater supports single-person carrying and vehicle deployment, which can quickly establish a wireless communication network in emergencies and major events, and provide safe and reliable communication protection for the scene of the incident the first time.

In special scenarios, the use of the ABELL R50(10) portable digital repeater public-private integration version not only quickly achieve the command and dispatch of the local network, but also can directly connect to the rear command center through the 2G/3G/4G network (coming).





Product features

Compatible with standard DMR terminals

Support ABELL SFR enhanced mode, longer communication distance, stronger anti-interference ability, fast networking on the same frequency, no need for duplexer

Built-in 5.6V high-capacity lithium battery, standby for over 40 hours, 5-5-90 hours up to 30 hours Power supply: DC and AC two charging modes

Provide external power input 12V standard interface, convenient for car charging/power supply

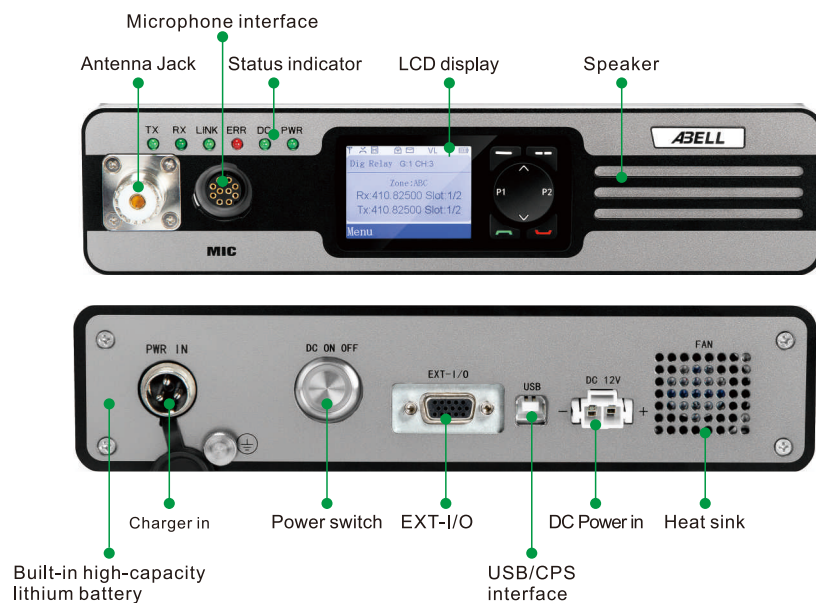
ABELL R50 backpack base station is compact and built-in high-capacity lithium battery

Equipped with a power switch as standard, after the power outage is turned on, up to 80% of the power can be left for half a year, which is an essential device for emergency communication

Customized 1:1 ultra-portable backpack

DMR and 4G public private network integrated communication version (customized version, coming soon)

Highly integrated design



Multiple modes and combinations of more devices

R50(10) Portable Digital Repeater Standard Edition

Basic mode:

It supports all handhelds and vehicle radios of ABELL brand and mainstream brands in the market that conform to the European ETSI standard Tier1 and Tier2; at the same time.

Support ABELL All Series



ABELL SFR Enhanced Mode:

Product families supporting ABELL SFR Enhanced Mode:

A7 series conventional and vehicle radios

A7 series explosion-proof explosion-proof radios



R50(10) Portable Digital Repeater 4G Public Private Internet Version (DMR+4G) (Coming)

Public network system:

Android operating system, support a variety of intercom platforms, 2G/3G/4G



Private network system:

R50(10) portable digital repeater standard version



Solutions



system working mode



MESH system (coming...)

Industry applications



Oil industry



Coal transportation



Facility Emergency Repairing



Disaster Rescue



Sports Event



Building Coverage

R50(10) Technical parameters

General Specification	
Frequency Range	UHF: 350-400 MHz, 400-470MHz, 450-520 MHz
Number of zones	100
Channel Capacity	1600
Channel Spacing	12.5KHz/25KHz
Working method	Semi-duplex or simplex relay
Operation Voltage	DC 13.8V(±20%); AC 100-240V
Frequency stability	±0.5ppm
Antenna Impedance	50Ω
LCD display	2.0 inches
Dimension	316(L)*240(W)*65(H) mm
Weight	3.2Kg(Without battery) 5.65Kg(with backpack/antenna/charger)

Built-in battery	
Built-in battery	10.8V 15.6AH

Environmental indicators	
Range of working temperature	-30°C~ +60°C
Storage temperature range	-40°C~ +85°C
Moisture proof	According to MIL-STD-810C/D/E/F standard
Shock and vibration	According to MIL-STD-810C/D/E/F standard

Accessories	
Backpack	Turntable Backpack Size: 470*275*90mm
Antenna	gooseneck antenna Bandwidth: 20MHz VSWR: ≤2.0dB Gain: 3dBi
Charger	AC100~230V 50/60Hz12.6V/5A Charging terminal three-core 16mm aviation head
Speaking microphone	Aviation head microphone model: AS-AA01-T

Transmitter	
Output Power	H:10W L:5W
4FSK Digital modulation	Only data:7K60FXD, data and voice 7K60FXE
FM modulation	12.5 kHz:8K50F3E; 25 kHz:16KΦF3E;
Modulation limitation	±2.5kHz@12.5kHz; ±5.0kHz@25kHz
FM modulation	-40dB@12.5kHz, -45dB@25kHz
Emission spurious	-36 dBm≤1GHz/-30 dBm≥1GHz
Adjacent channel power	≤-60dB/12.5KHz, ≤-70dB/25KHz
Frequency response	+1/-3 dB
Rated Audio Distortion	≤3%
Digital speech coder	AMBE+2™

Receiver	
Digital sensitivity	5% BER:0.225 uV
Analog sensitivity	0.225 uV (12 dB SINAD)
Intermodulation	≥65 dB
Adjacent Channel Selectivity	≥60 dB/12.5KHz, ≥70dB/25KHz
Spurious suppression	≥70 dB
FM noise	-40dB@12.5kHz, -45dB@25kHz
Frequency response	+1/-3 dB
Rated audio output power	3W(speaker)
Audio Distortion	3%(typical)
Conducted spurs	-57dBm
GPS positioning accuracy	Horizontal position accuracy ≤ 10m (under good signal conditions)
TTF (time to first fix) cold start	<1 minute (under good signal conditions)
TTF (time to first fix) hot start	< 10 seconds (under good signal conditions)

● All specifications are subject to change without notice due to continuous development.

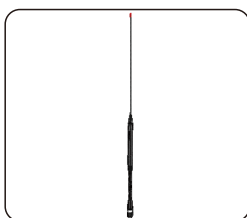
Parts List



Power Adapter



1:1 Customized Ultra
Portable Backpack



antenna



Hand microphone



power cable



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Dealer Area