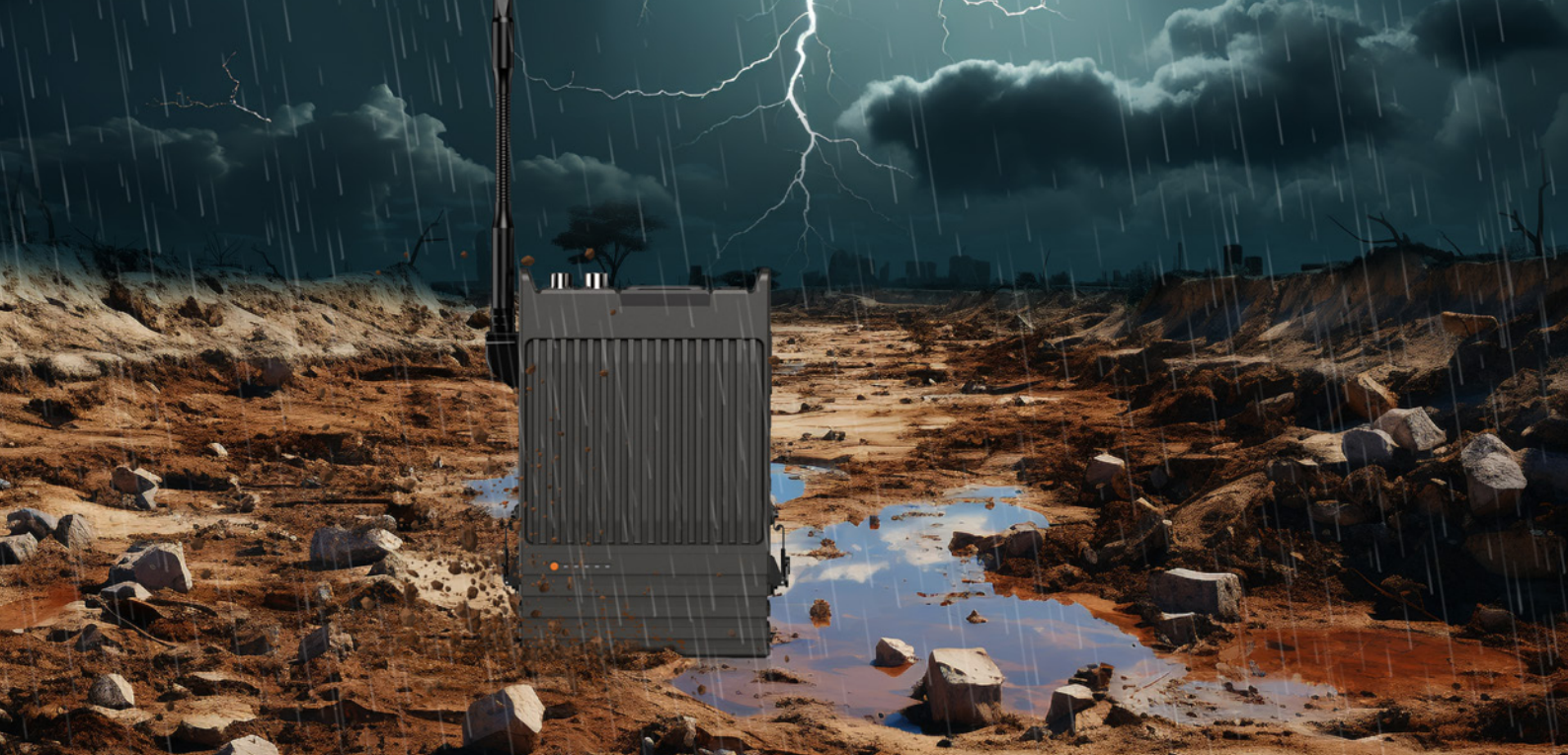# BF-TR925R

## Digital Narrowband Ad-hoc Repeater Radio

BF-TR925R Ad-hoc base station featured enhanced stability, wide coverage, and quick networking. It is equipped with the capacity to establish a wireless communication network independently and rapidly without relying on external networks (IP network/satellite network/mobile network), and seamlessly integrate with the existing private wireless network, providing reliable communication guarantees for emergencies or major events.

- 📞 4G PSTN
- 📶 Dual Channel*
- **IP** IP68 Protection
- 🖥 Rapid Deployment
- 📋 Intelligent Dispatch*
- ⚛ Flexible Networking
- 📍 Dual Mode Positioning
- 🔋 Multiple Power Supply Modes

**BelFone**
Communications for Efficiency and Safety

Note：*Represents optional functions

# FEATURES

## 🖥 Rapid Deployment

BF-TR925R flexible supports manpack, vehicle-mounted, and fixed installation, making it the ideal choice for quick set-up in various scenarios. It enables power-on automatic networking, swiftly providing extensive wireless network coverage and delivering enhanced emergency response capabilities.

## 📋 Intelligent Dispatching

Any nodes within the BF-TR925R allows to access the three-screen dispatch console and enables visualized dispatch and management of network terminals, including voice dispatch, GIS-based geographic dispatch, and data service management. Note: Dispatch console is sold separately.

## 💎 Military Grade

The BF-TR925 is built with a fully cast aluminum body, features excellent heat dissipation, and enhanced crash resistance. Remains stable and long-time communication when operating in extreme disaster environments such as earthquakes, floods, and typhoons. When used outdoors, it can be carried for manpack, with enhanced flexibility to adapt to different scenarios.

## 🔋 Multiple Power Supply

The BF-TR925R supports battery power, external AC power, and external DC power. When deployed as a manpack, the optional high-capacity battery can be used for easy and firm installation. For use as a fixed or mobile station, it can be connected to a power supply through specialized vehicle accessories, meeting diverse power needs in various emergency scenarios.

## 📶 Dual-Channel Communication

The BF-TR925R features dual-channel communication, allowing a single device to provide two channels of ad-hoc networking. This ensures separate frontline and rear command communication and enables two-channel network data to be transmitted in parallel.

## 📍 Dual Mode Positioning

The BF-TR925R incorporates GPS+BDS positioning module. This helps the dispatch center to get up to its subordinate terminals' real-time movement and trajectory, enabling real-time data transmission and storage.

## 📞 PSTN

The BF-TR925R features an inbuilt 4G public-network module that allows it to work as a mobile terminal and make phone calls, effectively solving the issue that the remote site is unable to communicate with the command center through the private network, providing a reliable communication guarantee for temporary command stations.
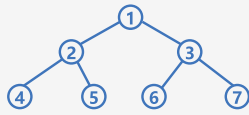
## ⚛ Flexible Networking

The BF-TR925R supports dynamic topology networking with up to 32 nodes, allowing chain, star, mesh, tree, and hybrid topology, allowing it to automatically establish the optimal communication network and flexibly adapt to different environments. Additionally, the BF-TR925R also supports long-distance back-to-back networking of base stations, serving as a backup solution for wireless air interfaces, effectively ensuring communication reliability.
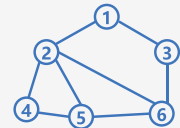
## Networking mode


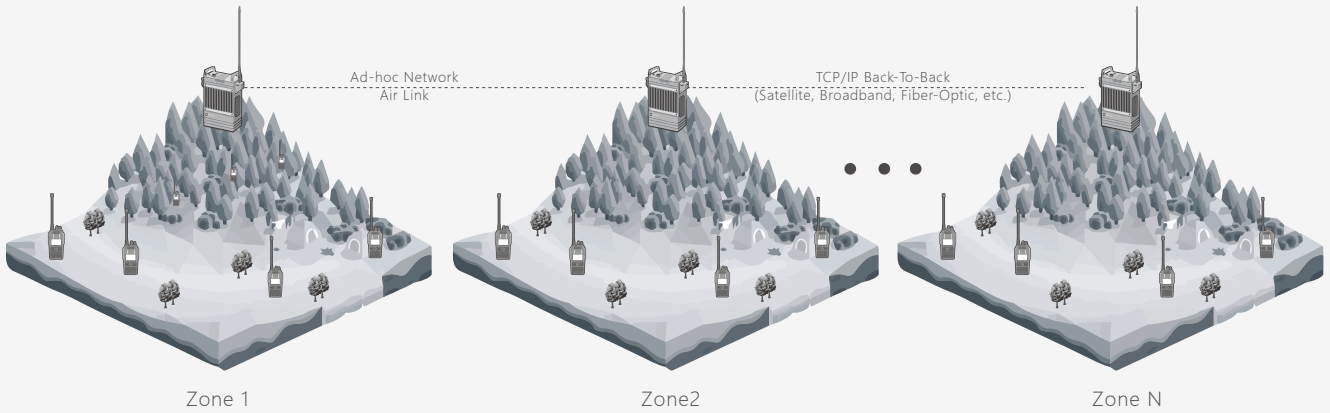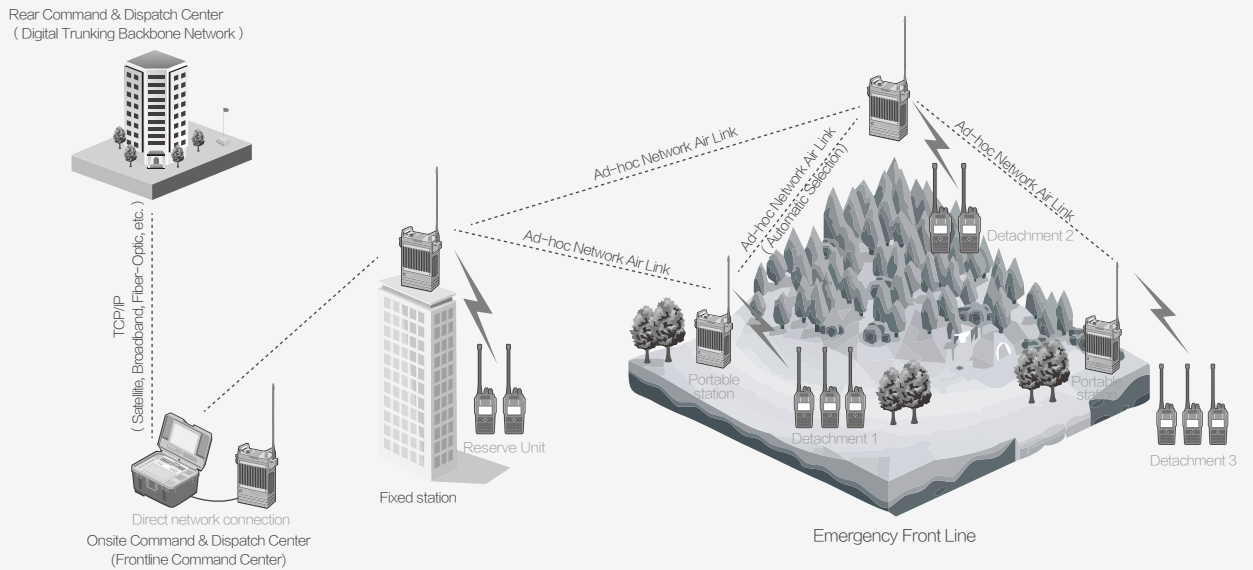
Chain Networking

Tree Networking

Star Networking

Mesh Networking

# TYPICAL APPLICATION

## Ad-hoc Networking Diagram



Ad-hoc Network
Air Link

TCP/IP Back-To-Back
(Satellite, Broadband, Fiber-Optic, etc.)

Zone 1

Zone2

Zone N

## Frontline & Rear Command Linkage



Rear Command & Dispatch Center
( Digital Trunking Backbone Network )

TCP/IP
( Satellite, Broadband, Fiber-Optic, etc.)

Ad-hoc Network Air Link

Ad-hoc Network Air Link

Ad-hoc Network Air Link
( Automatic Selection )

Ad-hoc Network Air Link

Detachment 2

Portable station

Reserve Unit

Fixed station

Detachment 1

Portable station

Detachment 3

Direct network connection

Onsite Command & Dispatch Center
(Frontline Command Center)

Emergency Front Line

# APPLICATIONS



Emergency Rescue

Forest Fire Protection

Earthquake Relief

Flood Relief

# OTHER FEATURES

- ● 2.0-inch Display
- ● Separated Operation Panel
- ○ High Frequency Flashing Light
- ● Aviation Connector
- ○ Optical Network Interface
- ● Intelligent Power Display
- ● Air-Interface ID Authentication
- ● Advanced Voice Encryption
- ○ Dual Channel Back-to-Back
- ● Multiple System Available(Ad Hoc Networking, BelFone SDC System, SFR)

# SPECIFICATION

| General | |
|---|---|
| Frequency Range（Optional） | 136-174MHz<br>350-400MHz<br>400-480MHz |
| Channel | 3776 |
| Channel Spacing | 12.5KHz /25KHz |
| Antenna Impedance | 50Ω |
| Working Voltage | Car-mounted: DC13.8V(±15%) , Negative ground<br>Manpack: 10.8-12.6V |
| Current Consumption | < 6A |
| Operating Environment | -30℃～+70℃ |
| Storage Environment | -40℃～+85℃ |
| Dimensions | 302mm(L)*218mm(W)*76mm(H)<br>(antenna and antenna base not included) |
| Weight | ≤5kg (include battery) |

| General | |
|---|---|
| Power Output | Car-mounted: 5-25W (continuous emission )<br>Manpack: 3-15W (continuous emission) |
| Frequency Stability | ≤0.5ppm |
| 4FSKdigital modulation | 12.5KHz Only data: 7K60FXD<br>12.5KHz Data and voice: 7K60FXW |
| Adjacent Channel Power | ≤60dB |
| Spurious Radiation | -36dBm<1GHz   -30dBm>1GHz |
| Digital Vocoder | AMBE |

| Receiving | |
|---|---|
| Sensitivity | 3%BER≤0.35uV |
| Frequency Stability | ≤0.5ppm |
| Adjacent Channel Selection | ≥60dB |
| Intermodulation Immunity | ≥65dB |
| Spurious Response | ≥70dB |
| Blocking | ≥90dB |

| Environmental | |
|---|---|
| Working Temperature | -30℃～+70℃ |
| Storage Temperature | -40℃～+85℃ |
| Shock & Vibration | MIL-STD-810G |
| Moisture Proof | MIL-STD-810G |
| Waterproof & Dustproof | IP68 |

Note: The above specification is tested by the trial standard. Due to the continuous development of technology, the data provided are for reference only.

# ACCESSORIES

## STANDARD ACCESSORIES



BF-A61
Battery

BF-TC981
Handheld Mic

RA925
Antenna

## OPTIONAL ACCESSORIES



BF-TC987
Vehicle Mounted Dock

BF-TC986
Individual Load Carrier

BF-TC921
Optical Module

BF-TC922
Flashing Light

Dedicated to increasing the efficiency and reliability of missioncritical communications, BelFone is always on the way to offer responsive, flexible and reliable products. For more information about our products and solutions, contact us or visit us at www.belfone.com.

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SGS   ISO   CE   FC   CCC