SAFE-1050 Single or Dual Band BDA + Integrated Battery Backup

UL 2524 Certified Public Safety Distributed Antenna System

RATH™ by AVIRE

Class A Channelized and/or Class B BDA

Supports 700/800 bands with built-in battery backup

The SAFE-1050 Single or Dual Band BDA with Integrated Battery Backup is the first of its kind, combining two critical system components into one compact, NEMA 4 enclosure. This innovative approach blends the unique, plug-in card architecture and dedicated parallel channel processing signature to Safe-Com Public Safety DAS solutions with a state-of-the-art Lithium Iron Phosphate (LiFePO4) light-weight battery pack.

- Low spurious emissions and high signal performance in 700, 800 or dual-band 700/800 configurations.
- Uplink and downlink squelch mutes amplifier stages, including the output power amplifier to assure zero noise output under idle conditions.
- Proprietary advanced super-heterodyne front end, along with the digital Class A filtering with independent gain, AGC and squelch setting by filter, significantly enhances the system's ability to handle strong and weak signals simultaneously (near-far performance).
- The system monitors and prevents both overcharge and over-discharge of the battery, with overcurrent protection and cell balancing incorporated to extend the life of the battery pack.

700/800 dual band BDA

Power / Mechanical

System Configuration	Single band: 700 MHz Single band: 800 MHz Dual band: 700/800 MHz
Power supply	120 VAC
Power consumption*	50 watts average
Output power per band*	700 MHz: 29 dBm 800 MHz: 29 dBm 700 & 800 MHz: 32 dBm
Backup duration	12 or 24 hours
Channel card input frequency range	700 Uplink: 799 to 805 MHz 700 Downlink: 769 to 775 MHz 800 Uplink: 806 to 816 MHz 800 Downlink: 851 to 861 MHz
Certifications	UL 2524 FCC ID: Pending
Associated products	Remote Alarm Annunciator: SAFE-AN-1002
Alarms	6 NFPA alarms plus an oscillation alarm, an alarm to indicate a lost data connection to the remote annunciator, and a door alarm

Additional Operating Features

Class A and Class B filter latency	12.5 kHz: 60 µs 25 kHz: 35 µs 50 kHz: 25 µs 75 kHz: 15 µs 200 kHz: 10 µs 500 kHz: 8 µs
RF input **RF output***	0 dBm (max, no damage) 1 watt (2 watts with dual band)
Noise figure*	6 dB (typical)
Gain control **Gain range**	30 dB (+/- 1 dB steps) 80 dB standard (90 dB optional)
Squelch range	-85 to -50 dBm
AGC range	60 dB
Operating temperature	14 to 122°F (-10 to 50°C)
Size	19 x 18 x 6.7 inches
Weight	50 lbs
Enclosure	NEMA 4

* RF output power, output power per band, noise figure and power consumption depends on configuration. Other sub-bands are available. FirstNet available as required. RF Power +/- 2dB, Consult Customer Service for applications and quotations support.

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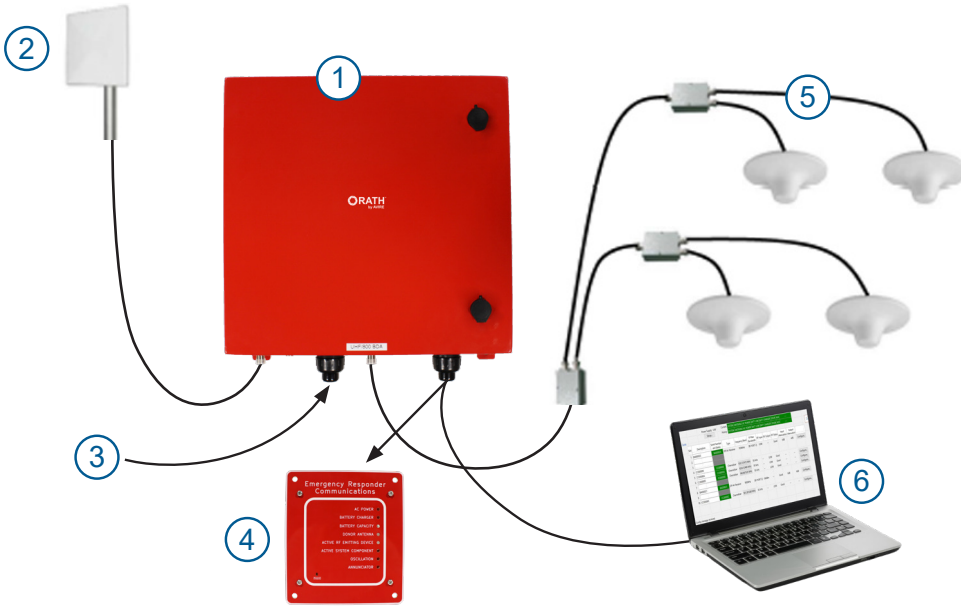
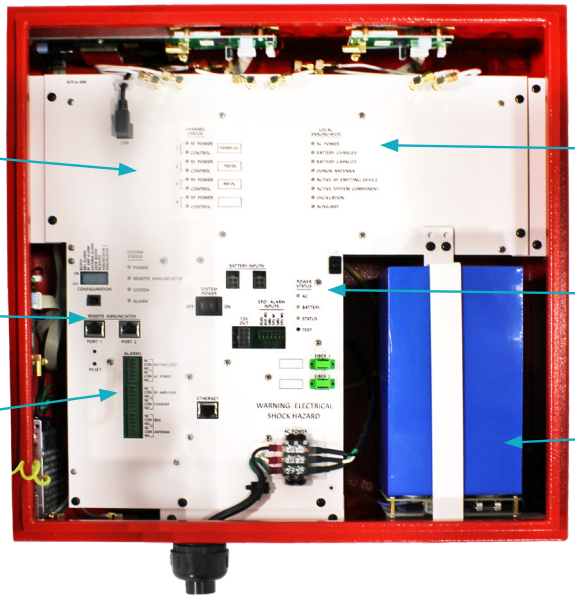
System Diagram

1. SAFE-1050 BDA + internal battery backup
2. Donor antenna
3. 120VAC power input
4. Remote annunciator
5. Service (in-building) antenna
6. Network management system (NMS)



Ports and Indicators

1. Channel status indicator
2. Two remote annunciator ports
3. Form C relays for fire panel
4. Local annunciator indicator
5. Battery and power status
6. Battery backup



WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. You MUST register Class B signal boosters (as defined in 47 CFR 90.219) online at www.fcc.gov/signal-boosters/registration. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of $100,000 for each continuing violation.

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