

SAFE-1030

Public Safety DAS Bi-Directional Amplifier (BDA)



A compact solution for multi-band applications.

- Supports multiple frequency bands & combinations in a single cabinet (UHF, VHF, FirstNet, 700, 800 and/or 900).
- Simplex radio coverage available.
- Signature plug-in channel card design & advanced filtering technology deliver strong, clear signal performance.
- Dedicated parallel channel processing reduces spurious emissions for clear mission-critical coverage enhancement.



Power / Mechanical

Power Supply	9 to 12 VDC, DC provided by battery backup unit (120 VAC optional)
Power Consumption*	100 watts maximum peak 40 watts average
Output Power Per Band*	700/800 MHz: 30 dBm +/- 2 dB UHF: 28 dBm +/- 2 dB VHF: 27 dBm +/- 2 dB
Channel Card Input Frequency Range	VHF card: 150 - 174 MHz UHF card: 380 - 512 MHz 700/800/900 card: 763 - 941 MHz
Card Capacity (each card covers a band or sub-band)	Small enclosure: 10 cards (max) Large enclosure: 20 cards (max)
Certifications	UL 2524 FCC ID: 2AKSM-SAFE2
Associated Products	Battery backup unit: SAFE-BBU-1000 Battery backup unit: SAFE-BBU-2000 Remote alarm annunciator: SAFE-AN-1002

Additional Operating Features

Class A and Class B Filter Latency	12.5 kHz: 60 μ s 25 kHz: 35 μ s 50 kHz: 25 μ s 75 kHz: 15 μ s 200 kHz: 10 μ s 500 kHz: 8 μ s
Digital Filters**	17 filter pairs to 34 filter pairs
RF Input RF Output*	-10 dBm (max, no damage) 1 watt (2 watts with dual band)
Noise Figure*	5 to 8 dB (typical)
Gain Control Gain Range	60 dB (+1 dB steps) 50 to 90 dB (typical)
Operating Temp.	14°F to 122°F (-10°C to 50°C)
Size & Weight (based on system design)	Small: 15 x 12 x 6.7 inches - 25 lbs (typical)
	Large: 19 x 18 x 6.7 inches - 40 lbs (typical)
Enclosure	NEMA 4
Alarms	6 NFPA alarms plus an oscillation alarm, an alarm to indicate a lost data connection to the remote annunciator, and a door alarm

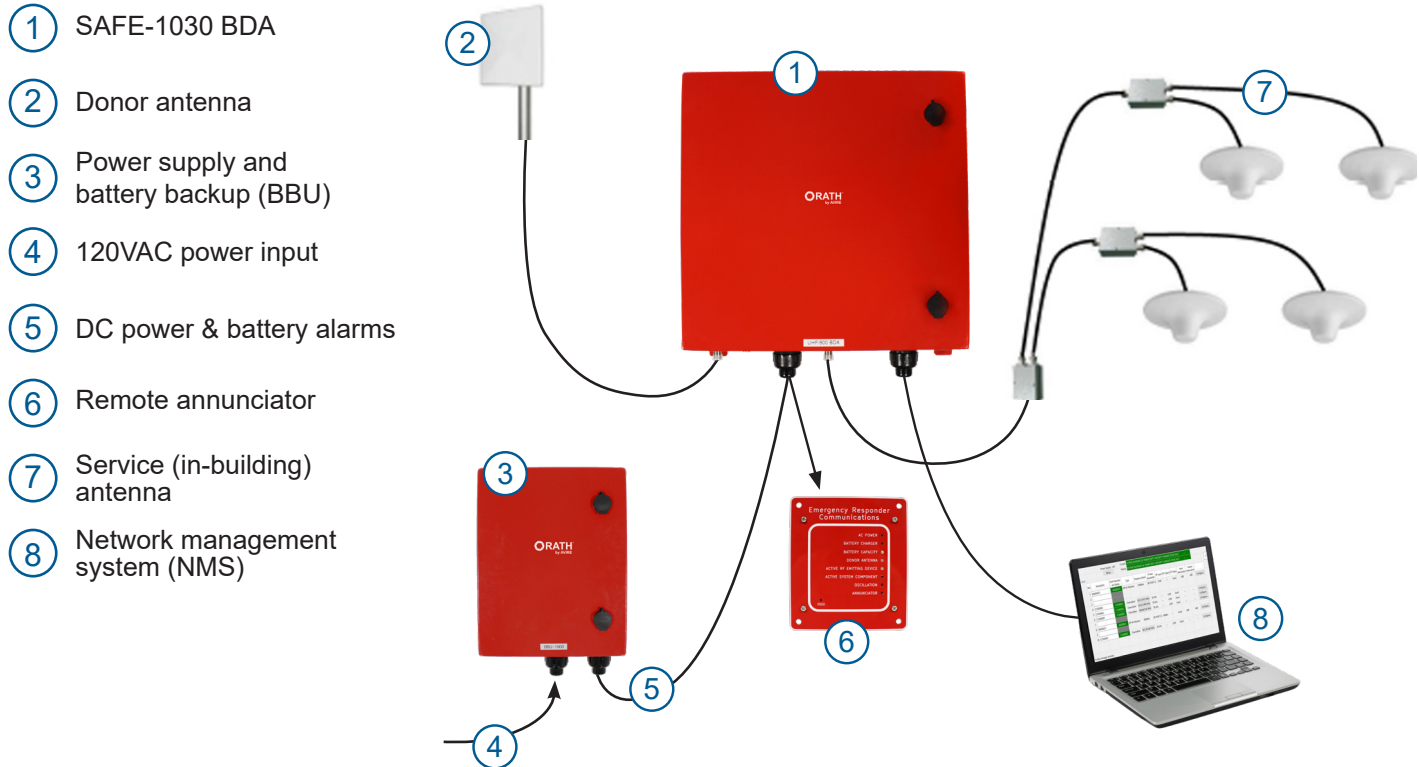
* RF output power, output power per band, noise figure and power consumption depends on configuration. Consult Customer Service for applications and quotations support.

** Digital filters expandable in sets of 34 (17 pairs).

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System Diagram



BDA Configuration Example

The modular channel card architecture of the SAFE-1030 BDA offers full flexibility for frequency and band configuration. Three or more bands can be integrated into a single NEMA enclosure.

- Regardless of the number of RF bands or sub-bands, a single service port is provided for simple installation and commissioning. Multiple donor ports are provided as required. (RF donor and service port are N female connectors.)
- DC power input comes from BBU via 8-pin cable (provided).
- USB-B and/or Ethernet RJ45 for NMS port.
- 6 form C relays for NFPA alarms to fire panel + oscillation alarm.



Small size class A VHF interlaced configuration shown above.

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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