

- *Portable*
- *45-MHz bandwidth*
- *Flexible*
- *Modular*
- *Remote Operation*



Features

- Four-element adaptive array with dual channel receiver design
- Instantaneous 45-MHz bandwidth per receiver
- Generates 254 simultaneous beams with fully-independent adaptive beam processing
- 200-kHz channel spacing
- Modular processing system
- Portable design
- Remote operation capability

Description

This ABFS-09-4-01 adaptive array is a multiple-element adaptive beam-forming system that is designed to operate in the 900-MHz frequency band. It is intended to be used as a smart antenna to extract and clean up signals in congested signal environments. The design is flexible, modular, and can be customized to meet user requirements.

The system employs dual-band receivers to allow operation on two selected 45-MHz subbands. These subbands are internally digitized and processed by advanced FPGA-based processing technology to isolate and enhance up to 254 signals of interest.

The system is software controlled and is operated through a flexible graphical interface. Optionally, a socket-based interface is available for remote operation and control.



Specifications

Includes

Four element adaptive array head
Pan and tilt unit for head positioning
Tripod
Adaptive beam-forming electronics
Rack mount server
GPS Unit
Transit Case

Additional Options

Four Terabyte TVO recorder (11 hour recorder)
Rack mount keyboard and monitor
Additional server to run X-Midas applications
Electronic compass and camera

Engineering

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|------------------------------|-----|
| Interferer handling capacity | 3 |
| Gain (dBi) | 6 |
| Close Angle Suppression | 3° |
| Suppression (dB) | >30 |

Receiver

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|-------------------------|-------------|
| Band A (MHz) | 864–964 MHz |
| Band B (MHz) | 819–914 MHz |
| Instantaneous bandwidth | 45 MHz |
| Tuner step size | 50 KHz |

Beam forming

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|---------------------------------|--------------------|
| Channels processed | 254 (127 per band) |
| Channel size | 200 KHz |
| Independent Adaptive processing | |

Array Head Physical Properties

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|--------|--------------|
| Blades | 4 |
| Length | 27.85 inches |
| Depth | 23 inches |
| Height | 8.85 inches |
| Weight | 50 pounds |