



**WIDEBAND  
DUAL MILITARY AMPLIFIER**

**HF 125W / VHF 75W / UHF 50W**



# Afractal 2

**HU - 1.6 MHz to 512 MHz / HV - 1.6 MHz to 170 MHz**

VERSATILE MILITARY COMMUNICATIONS

The **Afracal 2** is a DUAL Power Amplifier providing seamless communication during tactical missions on HF, VHF and UHF. Amplifier 1 covers 1.6-30 MHz HF at 125W and Amplifier 2 covers 30-170MHz VHF at 75W, 170 - 512MHz UHF at 50W.

The two RF inputs are automatically routed to the most suitable internal amplifier. The RF output is also automatically switched to the appropriate antenna connection depending on the transmission frequency.

Low-pass-filter switching is controlled by both the Radio and Afracal logic to ensure seamless performance.



## MAIN FEATURES

### DUAL RF POWER AMPLIFIER 125W/75W/50W

- LINEAR HF / VHF / UHF
- Rugged, Compact and Reliable
- Radio user interface RS232 / RS485 control
- Automatic RF source and antenna port selection
- Automatic output filter select
- Forward power indication
- VSWR bar graph
- 1 m water immersion
- 3 year warranty
- MIL-STD-810 G

## FEATURES FOR ANY MISSION

### COMPACT DESIGN

Designed to fit into tight spaces within military vehicles, the **Afracal2** amplifier is one of the most compact available.

### MIL-STD-810G

The powder-coated T6-Aluminium casing ensures compliance to MIL-STD- 810G specifications.

### SET-UP

Set-up is automatically controlled by the connected radio.

### DISPLAY

The user-friendly display indicates the selected transmission frequency, RF output-power and VSWR is indicated on a bar graph.

### DATA

High data rates can be maintained due to the exceptional linearity.

### POWER SUPPLY

The **Afracal 2** amplifier can operate from 10 - 35VDC. The connected radio is supplied with a stable 12VDC simplifying power supply configurations and reducing cabling.

### ATU

A rear connector facilitates communication to external high power antenna tuners converting radio RS232 to robust RS485 control signals for extended installation distances between the amplifier and the tuner.

### INSTALLATION

Purpose built base station and vehicular mount racks are available to facilitate quick extraction, cooling and vibration damping.

Contact our sales team for options or custom solutions.

## ENVIRONMENTAL

Shock, Vibration & Immersion  
EMI/RFI  
Operating Temperature  
Storage Temperature

MIL-STD-810G  
MIL-STD-461E  
-30 to +65°C  
-40 to +85°C



## DUAL RADIO BASE STATION



## AFRACAL 2 SPECIFICATIONS

### RF Output Power

#### HU Model (1.6 - 512MHz)

AMP1: 125W (1.6-30MHz) PEP  
AMP2: 75W (30-170MHz) CW  
50W (170-512MHz) CW

#### HV Model (1.6 - 170MHz)

AMP1: 125W (1.6-30MHz) PEP  
AMP2: 75W (30-170MHz) CW

### Operation Cycle

Continuous with optional cooling fan.

### Gain Amp1

13dB ±1dB

### Gain Amp2

13dB ±1dB

### Harmonic Suppression

>55dB (typical)

### Max Load Mismatch

VSWR 1: 5

### Protection

Temperature, VSWR.

### Power Source

12Vdc nom. (10-36 VDC)

### Power Connector

62IN-12E-18-2S

### RF Input connector

BNC - Female

### RF Input/Output

50 Ohm unbalanced

### RF Output connectors

N-Type Female

### Intercom Interface

Via radio handset connector

### External Audio

10W into 4Ω Optional Speaker (Aux Connector)

### Aux Connector

62IN-5024-12-14S

### Data Connector

62IN-5005-10-8S

### Cooling Fan Connector

62IN-5005-10-6S

### Tuner Interface

RS232 / RS 485

### Tuner Connector

62IN-5005-10-7S

### Dimensions

194x150mm x354 (w x h x d)

### Weight

11 kg (typical)

### Power Consumption

18A/12A at 24V (typical)

### AMP 1 @125W

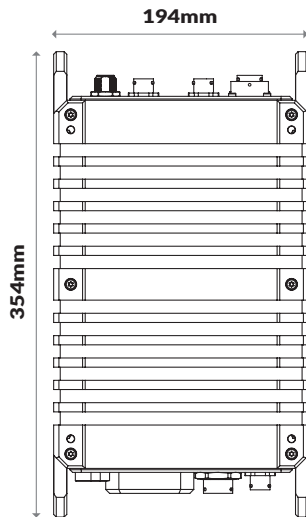
7.5A at 24V (typical)

### AMP 2 @ 100W

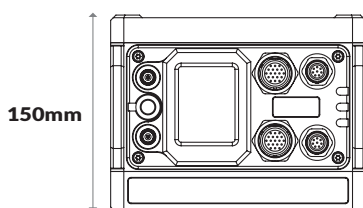
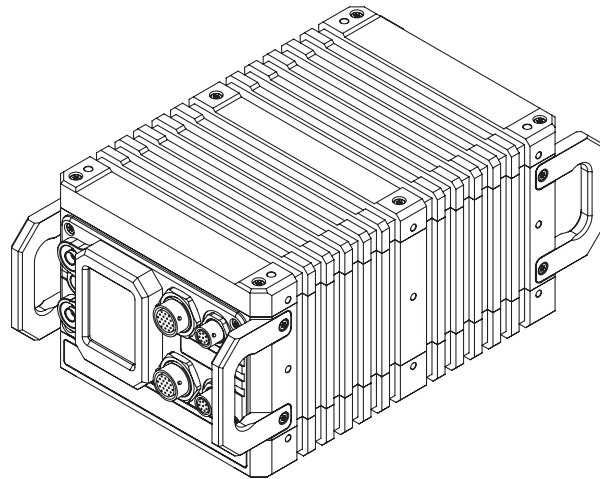
7.5A at 24V (typical)

Please verify specifications with our sales department.

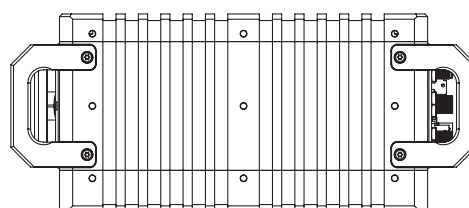
## AFRACAL 2 DIMENSIONS



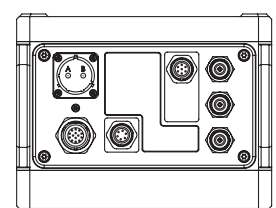
TOP VIEW



FRONT VIEW



SIDE VIEW



REAR VIEW



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