

CMOSS FIREFLY RADIOHEAD

ADD CAPABILITY. SHED WEIGHT. DOMINATE THE BATTLEFIELD.



KEY FEATURES

Mounts Externally

Removes heat from inside the vehicle and creates more space for operators.

Co-located with Antenna

Improves performance by minimizing signal loss over RF cables.

Advanced Filtering

Improves performance by minimizing cosite interference.

Modular Design

Provides maximum configuration flexibility based on operator needs, supports new and legacy waveforms, modules can be swapped in the field for easy reconfiguration or maintenance, additional modules can support electronic warfare power amplifier needs, and new modules can be developed and fielded quickly and efficiently (saving money) as needs change.

Mature Design

FireFly 125SR fully qualified in 2017; FireFly 2100AG already flight tested on UH-60 and on contract for full qualification Q1 2022 for Army aviation platforms; successfully conducted dual transmit and receive of SINCGARS and TSM waveforms in Army's Open Innovation Lab, supported successful NETMODX demo with Elbit America radiohead integrated with CMOSS software defined radio (SDR) in a Stryker vehicle.

Top Hat with Digital Front End

Provides high speed digital communications over CMOSS MORA and VICTORY data busses between radiohead and CMOSS software defined radios (SDRs).

Collaborative Approach with US Army

Elbit America working closely with Army C5ISR engineers via CRADA to rapidly tailor our solution to meet user needs.

FIREFLY

COMMUNICATION BRILLIANCE

A FAMILY OF SINGLE-CHANNEL AND DUAL CHANNEL MODULAR POWER AMPLIFIERS






The Elbit Systems of America FIREFLY amplifier product line is a first-ever modular, lightweight, high power amplifier product with swappable, stackable amplifier modules. Users may now mix and match modules in a single-channel or dual-channel configuration to meet their unique mission requirements, while saving space and weight on their operating platform. FIREFLY amplifier modules support both new and legacy waveforms and includes integrated TX/RX cosite filtering, which improves radio system performance. The modular design also simplifies maintenance, provides customer flexibility, and accelerates fielding of new capabilities.

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TECHNICAL SPECIFICATIONS

RF Output Power - Up to 100W (Module Dependent)
Isolation Between Channels >40 dB
Transmit Noise Floor -180 dBc/Hz
Out of Band Spurious -80 dBc
Input Impedance VSWR < 2.0:1
Output Load Impedance 50 Ω
Output into VSWR Max, No Degradation Up to 3.0:1
Bypass Insertion Loss <1 dB Typical
Isolated Power Supply
Primary Power Input Voltage Range 22 to 32 VDC
Power Consumption
TX: 170W Typical
RX: 30W Typical
Tunable Bandpass Filters for Both TX and RX > 30 dB Rejection at 10% Aside
Self-keying
Optional frequency up/down conversion available

AVAILABLE MODULES					
	COMMON CONTROLLER	GREEN	RED	YELLOW	BLUE
MODULE NAME	COMMON/PS CONTROLLER	NARROWBAND	WIDEBAND	VHF/UHF	MUOS
TRANSMIT FREQUENCY	N/A	30-88 MHZ 116-174 MHZ	225-450MHZ 1250-1390MHZ 1755-1850MHZ	30-512 MHZ	290-320MHZ
RECEIVE FREQUENCY	N/A	30-88MHZ 116-174MHZ	225-450MHZ 1250-1390MHZ 1755-1850MHZ	30-512MHZ	240-380MHZ
COMMS/WAVEFORMS	N/A	SINGGARS VHF-AM/FM WREN-NB P25	TSM SRW WNW ANW2 UHF-AM/FM	SINGGARS HAVEQUICK VHF/UHF-AM/FM SRW SATURN	MUOS DAMA
OUTPUT POWER	N/A	50W	25W/50W	50W	100W
ADJUSTABLE POWER LEVELS	N/A	3	3	3	15
INPUT POWER	N/A	<6W	<5W	<5W	<1W
HEIGHT (IN)	3.75	3.75	3.75	3.75	3.75
WIDTH (IN)	2	2	2	2	2
DEPTH (IN)	15	15	15	15	15
WEIGHT (LBS)	3.25	3.68	4.45	5	5

"This product contains non-U.S. origin technical data."

INTERFACES

The FIREFLY amplifier Common Controller provides 1 MIL circular connector for 28VDC power and 1 MIL circular connector for control signals to the radio. FIREFLY amplifier modules each provide a half-duplex RF port to the radio and another to the antenna. The control interfaces supported are:
LVDS | RS-485 | RS-422 | 10/100 BASE-T Ethernet

SPECIFICATIONS

- Environmental: MIL-STD-810G
- EMI: MIL-STD-461F
- Power: MIL-STD-704A-F
- CE101 Compliant

