

RADIO DIRECTION FINDING

# COMPACT DF HEAD SYSTEMS

FOR VHF, UHF & SHF DISTRIBUTED OPERATIONS



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EXTRAORDINARY  
RF TECHNOLOGY

# HEAD SYSTEMS OVERVIEW

CRFS' compact Direction Finding (DF) Heads are a sub-system for Communications Intelligence (COMINT) and Electronic Warfare (EW) applications. They can be seamlessly integrated with dismounted solutions, and support signal search, capture, localization, DF and geolocation intelligence.

Swappable DF Heads scan, detect, DF and record DF results in tasked frequency channels tuneable across 30 MHz to 40 GHz\* frequency ranges.

Integrated hardware (RFeye Node 40-8, 100-8, 100-18, 100-40 and RFeye Node Plus 100-18), software and APIs provide accurate DF performance in complex signal environments. Multiple heads can be networked together for geolocation, tactical (dismounted) manned and unmanned solutions and distributed 2D TDoA, 3D TDoA and AoA deployments.

*\* Requires appropriate frequency Node*

## AT A GLANCE

- Supports ISR, locating and DF of radio signals, interference sources and radio monitoring
- Tactical DF antenna solutions for frequency ranges from 30 MHz to 40 GHz
- Modular systems with CRFS direction finding sensitivity and accuracy
- TDoA, 3D TDoA, AoA
- Small form factor COTS technology
- Easily integrated with a RFeye Node
- Rapid deployment & highly configurable
- Designed for distributed operations
- Integrated with tactical and dismounted solutions

DFH300 system  
with new Rapid  
Deployment  
Kit options

DF Head (Low Band)  
to 300 MHz

Carbon fibre DFH mount

Lightweight roll-up  
tubular 2m tripod system

2 x monitoring antennas

Multi-way bracket, central  
post and tensioners

CRPA Anti-jam GNSS antenna

Power and data distribution unit

Ruggedized RFeye Node

1.8KWh field deployable  
battery pack

120W solar panel



# NOW AVAILABLE

## RFEYE DFH300 UP TO 300 MHz

Compact Low Band Direction Finding (DF) head system covering a frequency range of 30 MHz to 300 MHz. The controller is incorporated in the Head measuring just 60 x 60 (cm) and weighing less than 5 kg. This swappable DF Head can be attached to different Nodes.



## RFEYE DFH300 BUNDLE LIST

### DF HEAD:

- DF Head system with 8 antennas
- Carbon fibre mount
- RF and power cables

### RAPID DEPLOYMENT KIT:

- 1 x Lightweight roll-up tubular 2m tripod
- 1 x Multi-way bracket, central post and tensioners
- 1 x RFeye Node (Green / Sand / White) choose between 8, 18 or 40 GHz
- 2 x monitoring antennas
- 1 x Power and data distribution unit
- 1 x CRPA Anti-jam GNSS antenna
- Cable management
- 1 x Ruggedized protective transport case

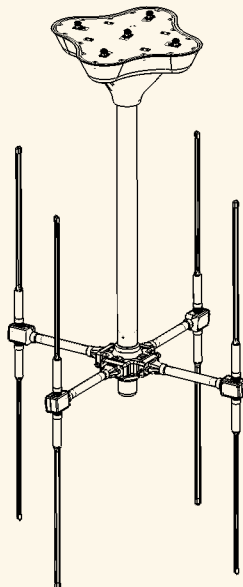
### OPTIONAL ACCESSORIES:

- Backhaul (options include Silvus MANET radio, Starlink)
- Ruggedized laptop
- 1.8KWh field deployable battery pack
- 120W solar panel

## COMING 2025

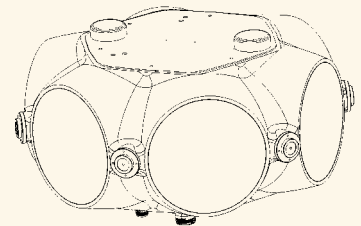
### UP TO 500 MHz

Compact Low Band Direction Finding (DF) head system covering a frequency range of 30 MHz to 500 MHz. Compared to the DFH300 with a single antenna ring, the DFH500 uses two rings for optimal performance over a wider frequency range 30-500MHz.



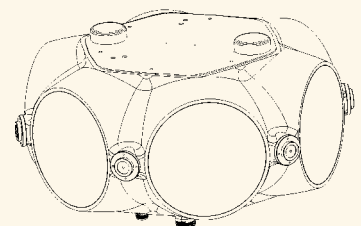
### UP TO 18 GHz

Ultra compact, lightweight, modular DF Head (up to 18 GHz). Spiral directional antennas receive all linear polarizations and commutation takes place at high speed for optimized DF performance. Planned weight <15 kg.



### UP TO 40 GHz

Ultra compact, lightweight, modular DF Head (up to 40 GHz). Requires RFeye Node 100-40.



# RAPIDLY DEPLOYED MAST SYSTEMS

	LIGHTWEIGHT ROLL-UP TUBULAR SYSTEM	INTERMEDIATE BLUESKY SYSTEM	HEAVYWEIGHT BLUESKY SYSTEM
Tripod height	2m	3m – 6m	6m – 10m
Construction material	Aluminium, ABS, rollable composite, UV resistant nylon fabric	Aluminium	Aluminium
Maximum height (inc DFH mount)	3m	7m	11m
Tripod load capacity	40 kg (88 lbs)	27 kg (59 lbs)	22 kg (48 lbs)
Wind rating	100km/h (62 MPH)	100km/h (62 MPH)	100km/h (62 MPH)
Deployment time	< 10 mins	< 10 mins	< 20 mins
Number of people to deploy	1-2	1-2	2
Testing to	MIL-STD810H	MIL-STD810G	MIL-STD810G
Fast elevator system	Yes	Yes	Yes
Colours	Black or Multicam	Black	Black
Compass and bubble system	–	Yes	Yes
Environmental	Water & dust proof	Water & dust proof	Water & dust proof



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CRFS creates deployable technology to detect, identify and geolocate signals in complex RF environments. With a leading position in the US, Europe and a global reach, our systems are used worldwide by regulatory, military, system integrators, government security agencies and corporates. They require actionable spectrum intelligence across the widest possible frequency range, in both congested and contested environments. They rely on our highly sensitive RF sensors, accurate transmitter geolocation, signal captures, classification and real-time RF intelligence to fulfil EMSO and electronic warfare support missions.