



LIFESEEKER PRODUCT PORTFOLIO

OCTOBER 2015

AERONAUTICAL MISSION SYSTEMS



CENTUM RAT

Fly with a **purpose**

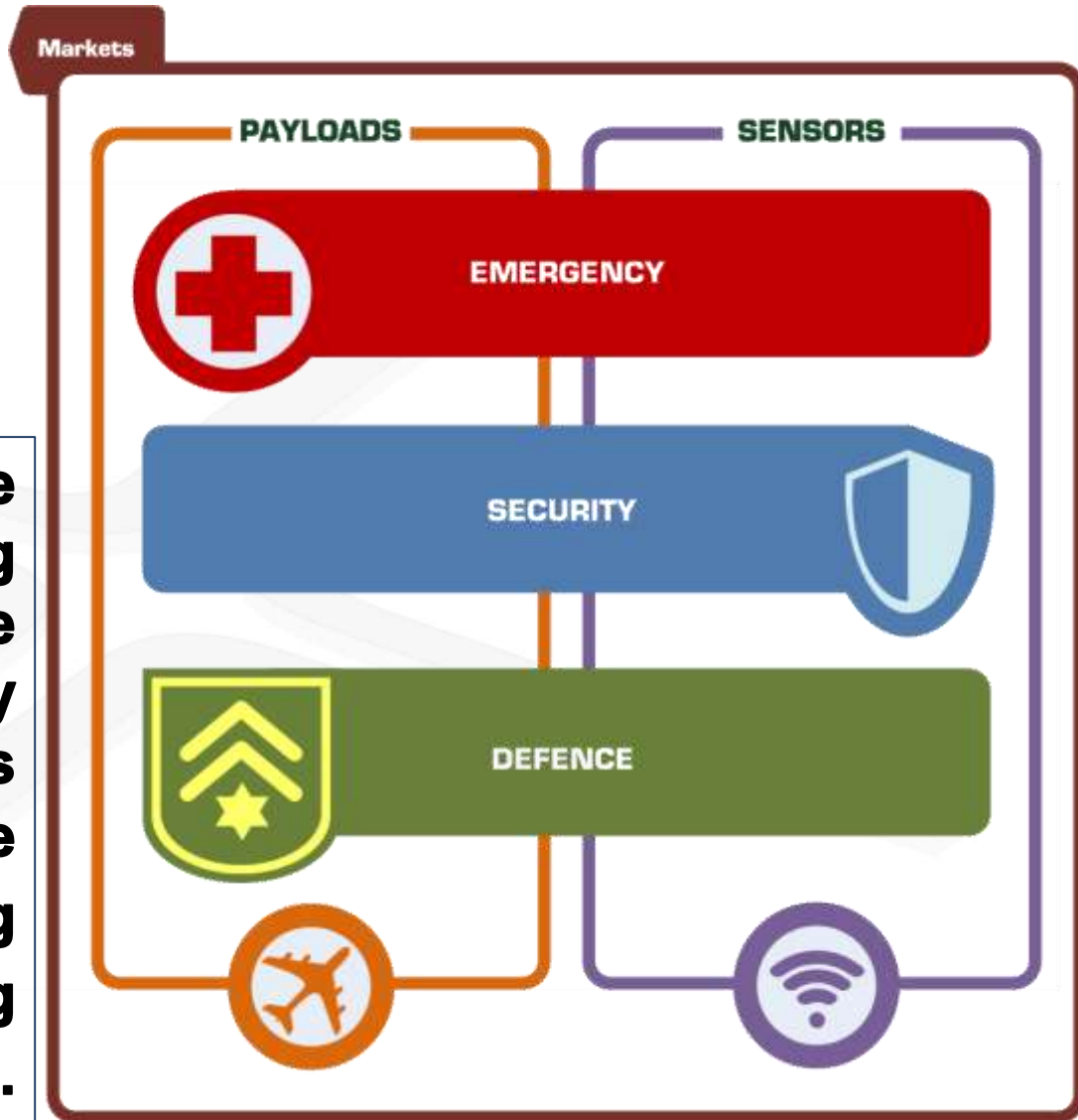
MARKETS & MISSIONS

Critical Missions



Search & Rescue
Fire fighting
Sea Surveillance
Emergency
Communications
Early Response
Drug trafficking
Kidnapping

...



sBTS TECHNOLOGY

AIRBORNE SENSING BASE TRANSCEIVING STATION



Software defined radio (SDR)

Aerospace standards (DO - 160)

Reduced SWaP

sBTS – SENSING BASE TRANSCEIVING STATION

Capabilities

SIGINT/COMINT sensor...

Detection



Identification



Communication



Geo-location



Mobile phones are the most extended beacons in the world

sBTS – CURRENT FEATURES

Key functionalities



GSM **Voice** and **SMS** services

GSM **Detection** and **Geo-location**

System features

Flexible and **scalable** onboard system

Operation range **300MHz – 2.5GHz**

Reduced SWaP (Size, Weight & Power)

Aerospace standards (**DO-160, DO-178B**)



HELICOPTER



TACTICAL UAS

INTEGRATED PLATFORM
VIDEO - COMINT/SIGINT



LIFESEEKER

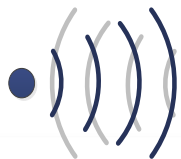


Maximum Success in Search & Rescue Missions

Functionality

- **Locate a lost person** through his/her mobile phone
- Acts as a **communication relay**

Detection



Geo-location



Communication



LifeSeeker includes **two subsystems**:

Onboard sensor:

- Detects and locates **GSM transmissions**
- Sends **geographic coordinates** of the transmission to the control station



Control station:

- Provides **system intelligence** and operational control
- **Easily adapted** to mission needs



LIFESEEKER – CONTROL STATION

Provides HMI (Human Machine interface)

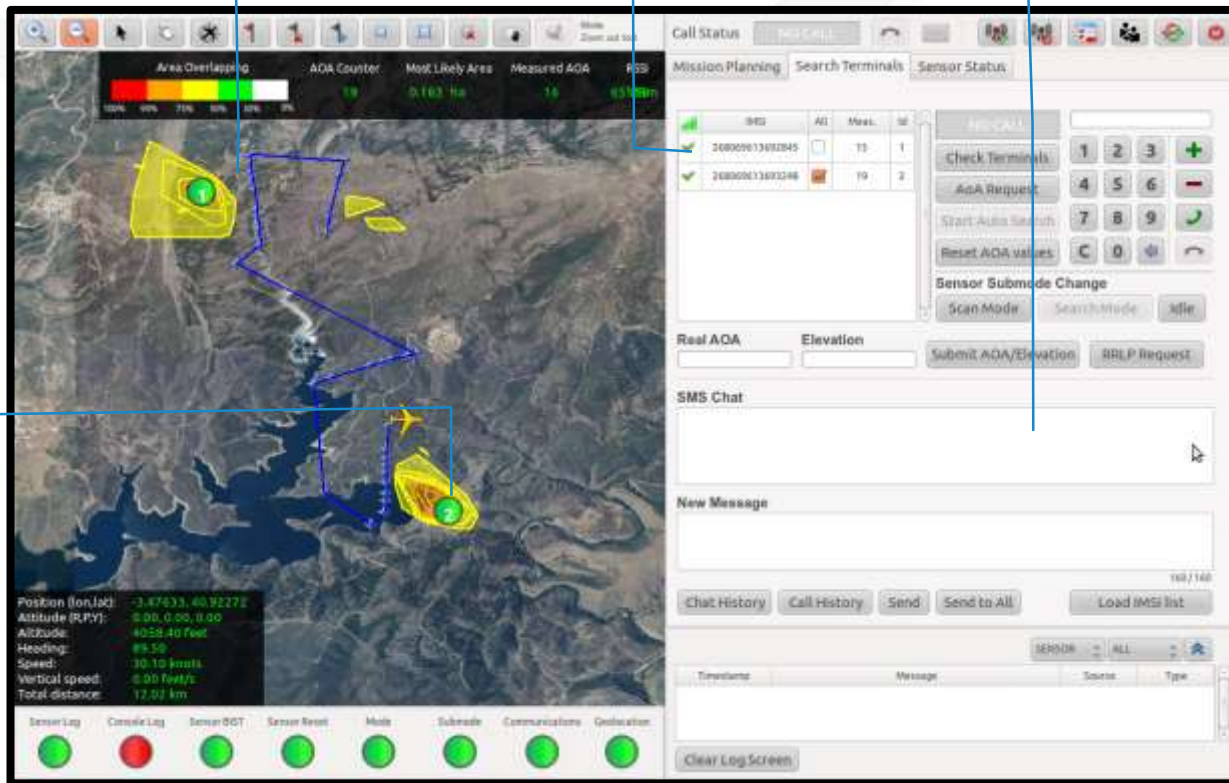
Control of the on-board sensor

GIS Integration

IMSI selection
(detection)

Mobile device
communication
control (SMS)

Geo-location
algorithm and
data
presentation



Other features:

- User management
- Mission planning

LIFESEEKER – INTEGRATION & FLIGHT TESTS



Penguin B



Cruiser II



EC-135

LIFESEEKER – FUNCTIONAL SPECIFICATIONS

Features	SR-100	SR-200	SR-300*
Mission	Search & Rescue	Search & Rescue	Search & Rescue
GSM detection	Yes	Yes	Yes
GSM identification	IMSI	IMSI and IMEI	IMSI and IMEI
GSM geo-location	AoA	AoA and RRLP	AoA and RRLP
Targets	Single	Multiple	Multiple
GSM communications	SMS	SMS and voice	SMS and voice
2G network operation	No	Yes	Yes
3G network operation	No	No	Yes
Black- & whitelists	No	No	Yes
Intra-cell communications	No	No	No
Backhauling	No	No	No

* Available in Q1 2016



LIFESEEKER – FURTHER INFORMATION

Link to Products

 <http://centum-rt.com>

Product Brochures

 LifeSeeker ([EN](#))

Product Videos

 [SBTS](#)



The image shows a product brochure for the LifeSeeker system. It features the Centum Research & Technology logo at the top left. The main header reads "LIFESEEKER Airborne Base Transceiver & Geo-localization System". Below this, there is a "KEY FEATURES" section with a list of bullet points, a "TECHNICAL SPECS" section with a list of technical details, and a "PRODUCT OVERVIEW" section with descriptive text. The brochure also includes two photographs: one of a person on a mountain peak and another of a helicopter in a snowy mountain landscape.

KEY FEATURES

- 220W-300 Watt communications
- Remotely Controlled (RC) air vehicle and UAS integration
- Cognitive Radio technology for dynamic spectrum allocation
- Software Defined Radio (SDR) core technology for easy scalability and reprogramming
- Advanced GPS positioning for extended mission planning
- Collaboration linking
- Built-in Self-Test capabilities
- Mission Planning Software
- Call management functionality
- 3DRF authentication functionality

TECHNICAL SPECS

- 4 No-IP channels (for ground usage)
- 1 to 100 channels
- 3 x 100,000 pairs for search and IDRF identification
- Integrated SDR/FPGA architecture
- Standard interface
- Reduced OPEX
 - Size: 150 x 100 x 200 mm
 - Weight: ~1kg
 - Power: 30 W
- Transmission power: 30W
- Frequency range: 300-400 MHz

LIFESEEKER
Airborne Base Transceiver & Geo-localization System

LIFESEEKER is an innovative software system capable of handling multiple phones, geotagging and virtual network coverage, global precision Time Synchronization (RTS), automatic ID search and fast, secure under adverse weather conditions.

PRODUCT OVERVIEW

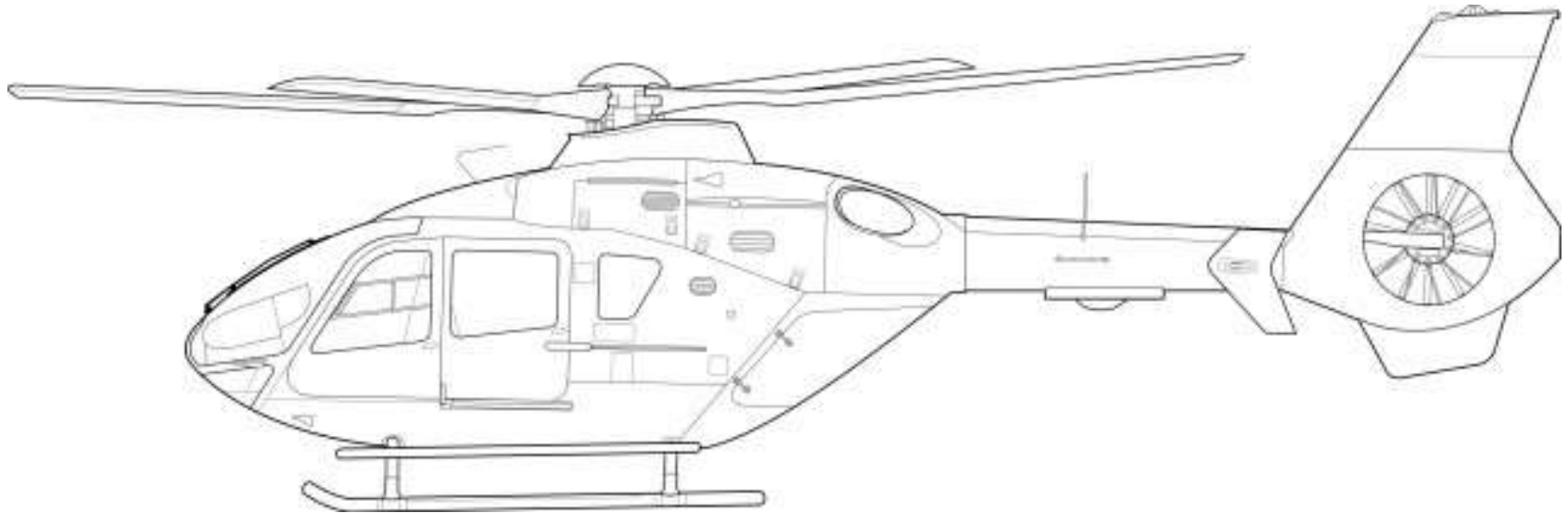
LIFESEEKER is a state-of-the-art radio system designed to locate missing people under extremely adverse conditions, leading rescue teams to the persons in danger.

LIFESEEKER also acts as a communications relay for mobile voice and messaging between the missing party and the rescue team.

LIFESEEKER comprises an onboard antenna and an integrated control console. The onboard software controls SDR transmitters and uses a phased array antenna to locate the source of the transmission. The geographic coordinates of the signal source are communicated to the ground search teams.

The onboard software serves as the operational and control station, from where the rescue operator can coordinate LIFESEEKER operations.

LIFESEEKER supports both single phone and multi phone detection modes.



CENTUM research & technology

Where Technology addresses Market

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