PROTECT YOUR ENVIRONMENT

| Oil spill | Illegal fishing | Forest fire | Flooding | Search & Rescue |

ST AIRBORNE SYSTEMS
Experts in maritime surveillance

MSS 8000 – NEXT GENERATION LAND AND MARITIME AIRBORNE SURVEILLANCE

Embracing the future, ST Airborne Systems is investing heavily in R&D and integrating advanced technologies that will transform the way surveillance is conducted.

At the forefront of innovation, we are adopting technological advancements in surveillance systems. Innovations, such as high-definition imaging, multispectral sensors and advanced radar systems, that enhance the capabilities of our systems enable better detection, tracking and identification of objects, which are crucial for your success.

Comprehensive Situational Awareness – the key to successful missions
All sensors are controlled from, and data is correlated in one tactical map. Our solution will seamlessly fuse data from both on-board and off-board sources—including UAVs—to deliver enhanced situational awareness and actionable intelligence.

Automate to reduce operator workload
Our new generation mission management system features powerful AI and machine learning capabilities that automate sensor control, target detection and classification and accelerate data processing, supporting the operator's real-time analysis, bringing higher accuracy, and faster, more well-informed decision-making. These intelligent systems reduce operator workload while increasing effectiveness, ensuring mission success.

Extensive use of augmented reality techniques
Overlaying both ground map and target data in RTV display windows to quickly geolocate and enable the operator

to provide important support to first responders and own ground resources.

Automated Sensor Operation – sensor control at your fingertips
Enhancing the sensor suite capability, reducing the workload of the operator, the MSS 8000 incorporates state-of-the-art solutions for full sensor control and automated operation of for example search radar and EO/IR. ASO is an AI-powered functionality that enhances airborne sensor platforms with real-time automation for faster, more efficient intelligence gathering and analysis.
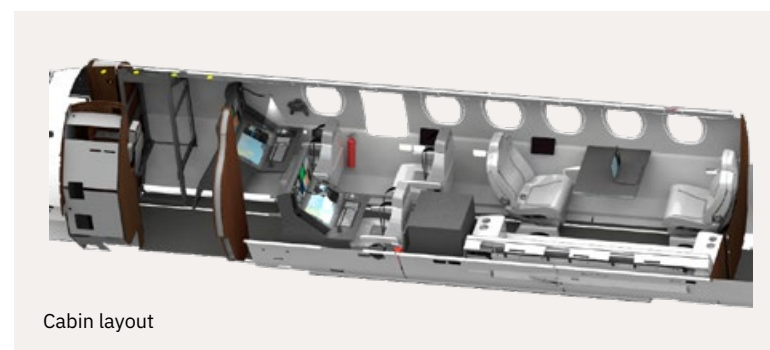
Finding the needle in the haystack
In today's data-rich surveillance environment, identifying what matters most can be a challenge. The MSS 8000 simplifies this task by intelligently fusing data from multiple sensors. These fused targets are then analyzed using advanced anomaly detection — whether rule-based, geofenced,

or AI-assisted — to quickly pinpoint and alert operators to items of interest.

Miniaturized electronics and agile designs allow our systems to be installed on a number of different platforms and to operate across a variety of mission profiles and environments. Combined with high-definition imaging, advanced AESA radar, Side Looking Airborne Radar, Airborne Multispectral Sensor, AIS, direction finder and COMINT (mobile and satellite phone detection and localization), our airborne systems offer unmatched performance in detection, tracking, and identification.

With growing global presence and strategic partnerships, we are meeting the rising demand for border and maritime security—empowering nations to combat threats like smuggling, human trafficking, and unauthorized entry with greater speed and confidence.

Cabin layout

System Operator Console

Pilot Displays

MSS 8000 – FOR FULL CONTROL OF YOUR ENVIRONMENT

. System Operator Console

10. High-speed SATCOM

15. Cabin layout

2. Pilot Displays

14. Airborne Multi-spectral Scanner

3. Rotating 360° Search Radar

13. High-speed datalink

4. COMINT Mobile phone detection

5. AIS transponder

6. COMINT Satellite phone detection

7. Direction Finder

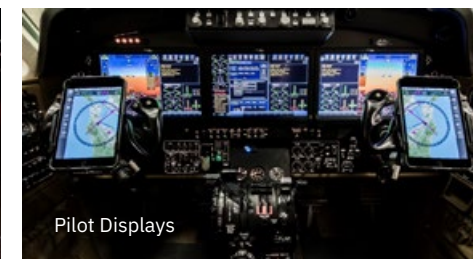9. Tactical Multi-band Radio

12. SLAR

8. EO/IR with HD Daylight, HD MWIR

SPECIAL MISSION

MSS 8000 MISSION MANAGEMENT SYSTEM

Upgraded system HW and SW architecture ensuring long-term availability. Scalable solutions ranging from UAVs, rotary-wing to fixed-wing with multiple operator consoles. Built for real time-sharing of the operational picture with command centers and first responders.

1. System Operator Console
MSS 8000 display computer Dual 24" multi-touch screenstrackball, joystick, keyboard.Highly ergonomic console design and operator chair. DZUS slots for intercom, radios etc.

2. Pilot Displays
Yoke mounted pilot displays for enhanced operational awareness

3. Rotating 360° Search Radar
Advanced True AESA radar, Instrumented range 200NM, Excellent small target detection in heavy sea clutter, Ground, Air and Maritime MTIStrip, Spot & ISAR imagery. AI-assisted target classification. High resolution ground mapping and change detection.

4. COMINT Mobile phone detection
Capable of locating and communicating

with mobile phones, finding people in distress or searching for specific mobile phones

5. AIS transponder
provides a comprehensive ship traffic overview

6. COMINT Satellite phone detection
Capable of locating and communicating with satellite phones, finding people in distress or searching for specific sattelite phones.

7. Direction Finder
Detection and localization of emergency beacons.

8. EO/IR with HD Daylight, HD MWIR
Combined HD Daylight spotter and HD SWIR Laser range finderOptional MTI SW and video map overlays.
Automated Sensor Operator, including AI-assisted target detection & recognition.

9. Tactical Multi-band Radio
Multiband capabilities with frequency ranges from 30 – 960 MHz.
Extensive encryption capabilities
Cross channel repeat.

10. High-speed SATCOM
LEO or geo-stationary high-speed SATCOM solutions. HW- and SW-based firewalls ensuring high internet cybersecurity.

12. SLAR
Side Looking Airborne Radar. New, advanced solid state transciever with enhanced range and detection capability. Primarily used for Oil spill detection. Small target detection at sea. AI-assisted target detection.

13. High-speed datalink
Long range, high speed tactical data link. Up to 16.5 Mbit/s. Range up to 200 km @ 6000 ft.

14. Airborne Multi-spectral Sensor, AMS VIS (RGB), SWIR, MWIR, LWIR & UV imaging sensor
Hi-resolution georeferenced ground mapping. AI-assisted target detection. For Search And Rescue, oil spills, wildfire detection, plastic pollution detection at sea, general thermography, ground water mapping, and wildlife census.
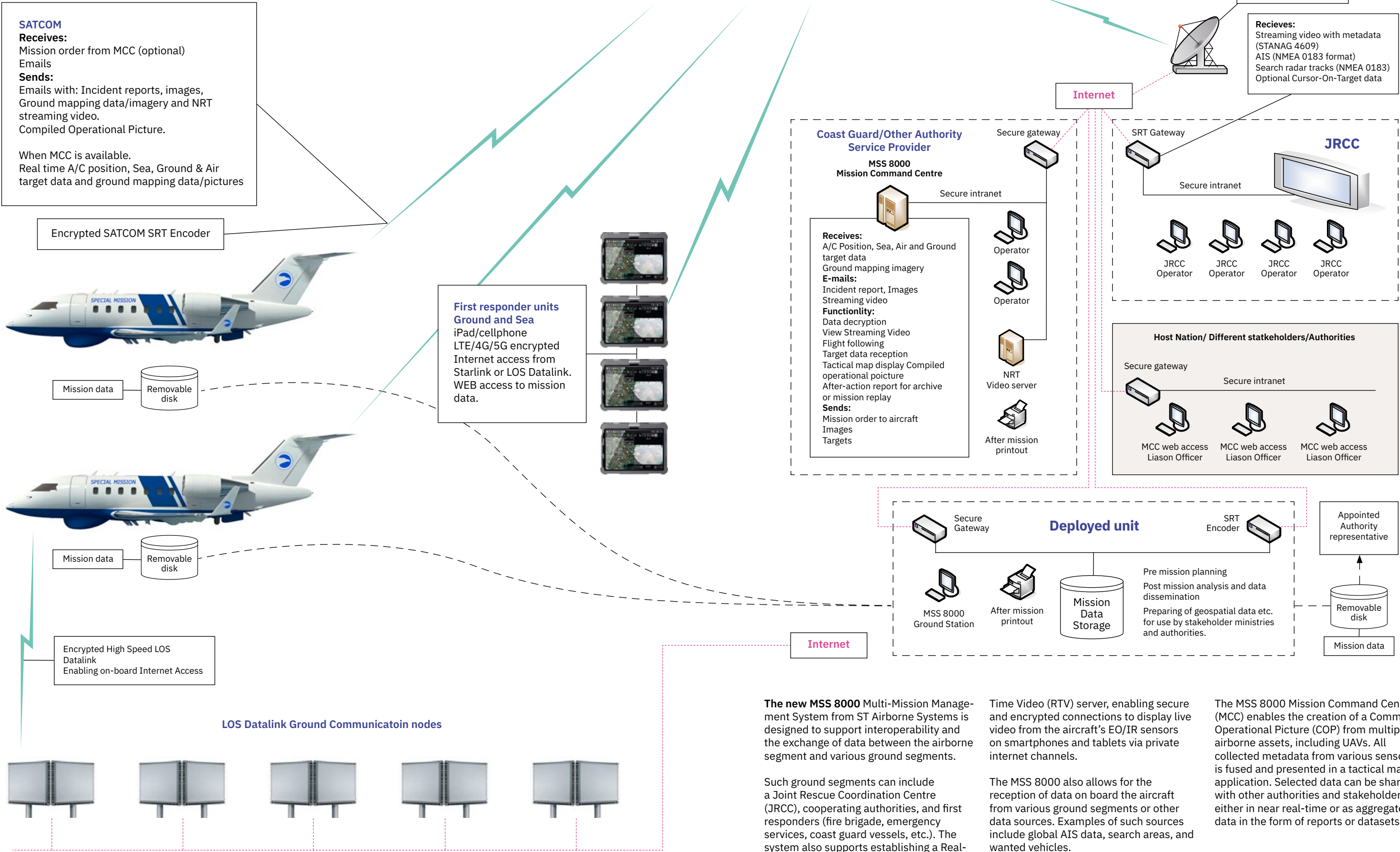
15. Cabin layout
1 – 3 main operator consoles. Additional liaison officer laptop-based workstations. Configuration for rotary-wing aircraft is available.
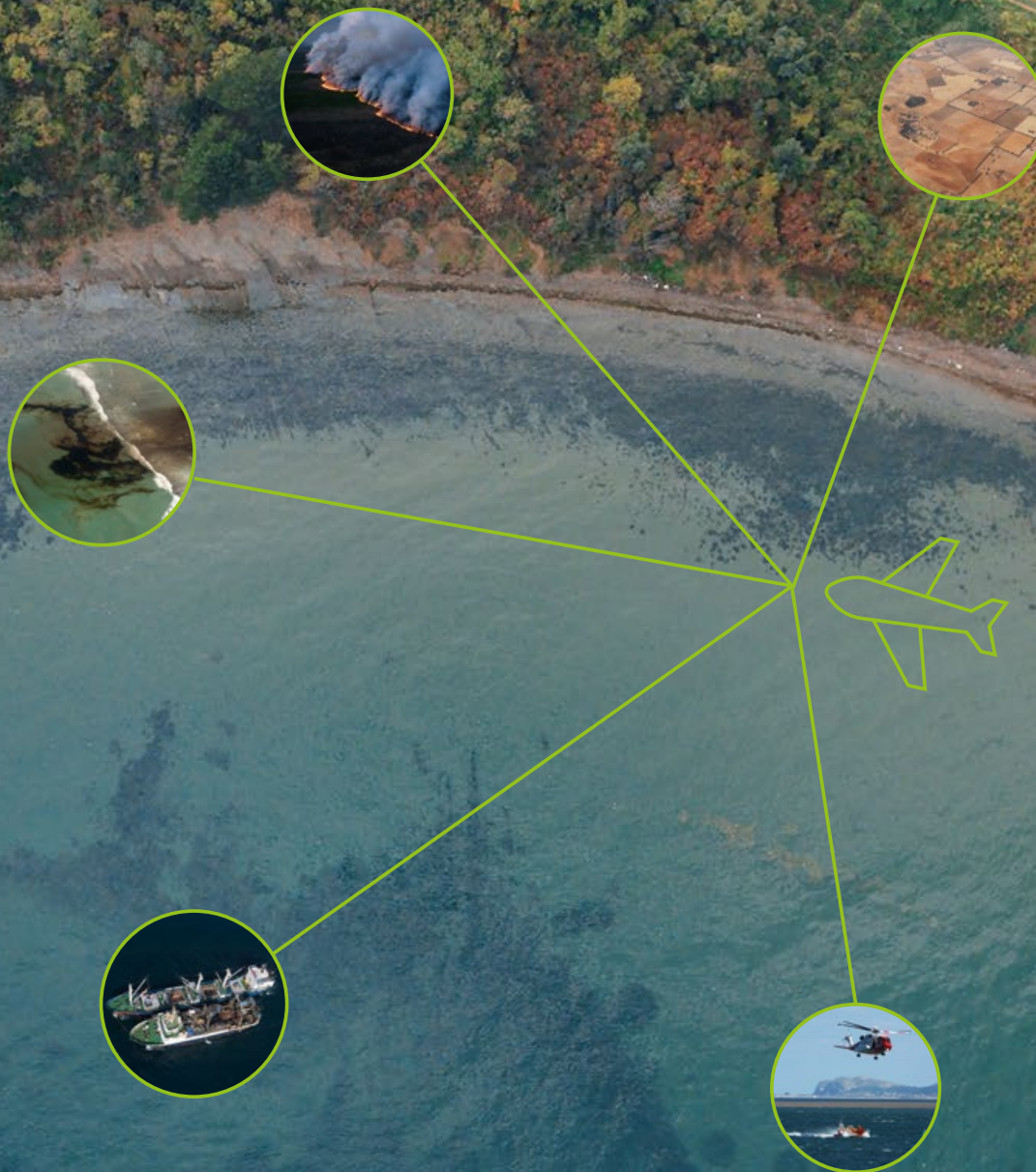
COMMUNICATION
AND INTEROPERABILITY

LOW EARTH ORBIT SATELLITES
Offering high data rates, low latency, low data traffic fees.

Satcom service provider
receiver station(-s)

Recieves:
Streaming video with metadata
(STANAG 4609)
AIS (NMEA 0183 format)
Search radar tracks (NMEA 0183)
Optional Cursor-On-Target data

SATCOM
Receives:
Mission order from MCC (optional)
Emails
Sends:
Emails with: Incident reports, images,
Ground mapping data/imagery and NRT
streaming video.
Compiled Operational Picture.

When MCC is available.
Real time A/C position, Sea, Ground & Air
target data and ground mapping data/pictures

Internet

Encrypted SATCOM SRT Encoder

SRT Gateway

JRCC

Secure gateway

**Coast Guard/Other Authority
Service Provider**

**MSS 8000
Mission Command Centre**

Secure intranet

Secure intranet

Operator

Operator

JRCC
Operator

JRCC
Operator

JRCC
Operator

JRCC
Operator

**First responder units
Ground and Sea**
iPad/cellphone
LTE/4G/5G encrypted
Internet access from
Starlink or LOS Datalink.
WEB access to mission
data.

Mission data

Removable
disk

Receives:
A/C Position, Sea, Air and Ground
target data
Ground mapping imagery
E-mails:
Incident report, Images
Streaming video
Functionlity:
Data decryption
View Streaming Video
Flight following
Target data reception
Tactical map display Compiled
operational poicture
After-action report for archive
or mission replay
Sends:
Mission order to aircraft
Images
Targets

NRT
Video server

After mission
printout

Host Nation/ Different statkeholders/Authorities

Secure gateway

Secure intranet

MCC web access
Liason Officer

MCC web access
Liason Officer

MCC web access
Liason Officer

Mission data

Removable
disk

Secure
Gateway

Deployed unit

SRT
Encoder

Appointed
Authority
representative

MSS 8000
Ground Station

After mission
printout

Mission
Data
Storage

Pre mission planning

Post mission analysis and data
dissemination

Preparing of geospatial data etc.
for use by stakeholder ministries
and authorities.

Removable
disk

Mission data

Internet

Internet

Encrypted High Speed LOS
Datalink
Enabling on-board Internet Access

LOS Datalink Ground Communicatoin nodes

The new MSS 8000 Multi-Mission Manage-
ment System from ST Airborne Systems is
designed to support interoperability and
the exchange of data between the airborne
segment and various ground segments.

Such ground segments can include
a Joint Rescue Coordination Centre
(JRCC), cooperating authorities, and first
responders (fire brigade, emergency
services, coast guard vessels, etc.). The
system also supports establishing a Real-

Time Video (RTV) server, enabling secure
and encrypted connections to display live
video from the aircraft's EO/IR sensors
on smartphones and tablets via private
internet channels.

The MSS 8000 also allows for the
reception of data on board the aircraft
from various ground segments or other
data sources. Examples of such sources
include global AIS data, search areas, and
wanted vehicles.

The MSS 8000 Mission Command Centre
(MCC) enables the creation of a Common
Operational Picture (COP) from multiple
airborne assets, including UAVs. All
collected metadata from various sensors
is fused and presented in a tactical map
application. Selected data can be shared
with other authorities and stakeholders,
either in near real-time or as aggregated
data in the form of reports or datasets.

PROTECT YOUR BORDERS AND NATURAL RESOURCES

CONTACT

PHONE
+46 8 122 129 00

FAX
+46 8 509 09 603

E-MAIL
INFO@AIRBORNESYSTEMS.SE

VISIT

ST AIRBORNE SYSTEMS AB
LÖFSTRÖMS ALLÉ 5
SE-172 66 SUNDBYBERG
SWEDEN