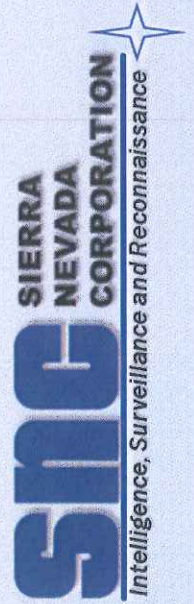


Attach B



Multi-Mission Aircraft Introduction

September 10, 2014





Agenda

- What is the MMA?
- What is CO-WIMS?
- What can the MMA and CO-WIMS do for me?
- Are these tools only for wildfire management?
- Who can get access to the MMA?
- Who can get access to CO-WIMS?
- How do I request the MMA or CO-WIMS access?
- How much does CO-WIMS cost?
- How much does the MMA cost?
- Where will the MMA be?
- Where does the MMA fly?
- How long can the MMA stay overhead?
- Can the MMA fly at night?
- How do I contact the MMA?
- Can CO-WIMS feed my GIS system?
- What are the limitations of these systems?
- I have more questions, who do I ask?



What is the MMA?



- Pilatus PC-12 aircraft
- Interoperable voice radios
- Color and thermal cameras
- Crew:
 - Pilot – Fire aviation experience
 - Mission System Operator – Wildland firefighter
- Broadband internet
- Data and image processing





MX-15HDi Sensor Package

The screenshot displays a software interface for a sensor package. At the top left, there is a map showing a coastal area with various landmarks and a red line indicating a route. Below the map are three video feeds showing different views of the same area. On the right side, there is a data table with columns for Source, Friendly Name, Location, Elevation, CE, LE, Type, Affiliation, Battle Dimension, Imagery, Broadcast, Course, Speed, Range, and Bearing. The table contains 10 rows of data, all with 'Invalid' values for Location, Elevation, CE, and LE, and 'User' as the source for all entries.

Source	Friendly Name	Location	Elevation	CE	LE	Type	Affiliation	Battle Dimension	Imagery	Broadcast	Course	Speed	Range	Bearing
organic	SPAL SP11	Invalid	Invalid	Invalid	0.005 nm	b-mppsp1	Unknown	Other	No	Yes	Invalid	Invalid	Invalid	0.000000° T
user	Point1	39°37'...	5.9691...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point2	39°42'...	5.8111...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point3	39°42'...	5.2531...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point4	39°42'...	5.5791...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point5	39°42'...	6.3131...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point6	39°42'...	5.3831...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point7	39°42'...	5.7431...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point8	39°38'...	5.8381...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point9	39°28'...	6.3281...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T
user	Point10	39°33'...	5.9211...	0.005 nm	0.005 nm	b-mpp	Unknown	Other	No	No	Invalid	Invalid	Invalid	0.000000° T

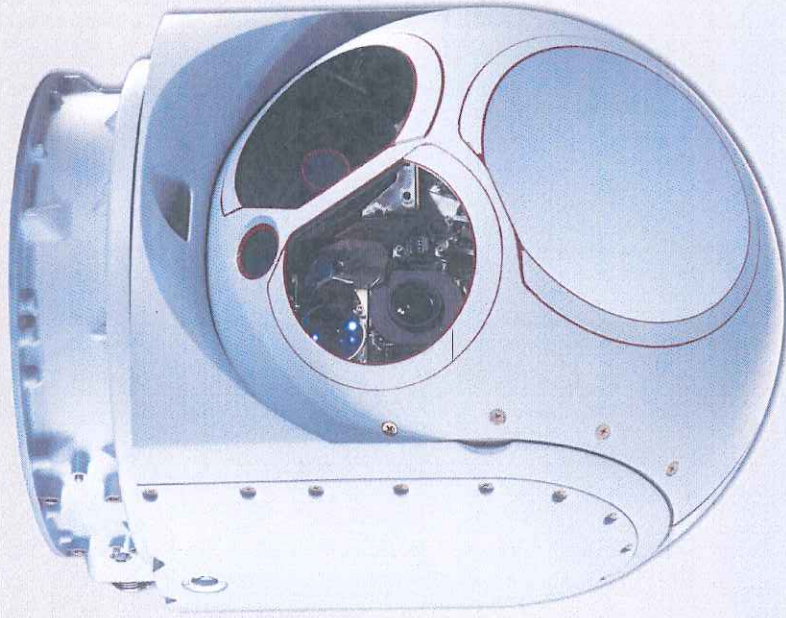


9:11 AM
5/19/2014

MX-15HDi Sensor Package



- MX-15HDi
 - EO, IR, and low-light (spotter only)
 - Integrated into Burma for sensor control
 - Internal GPS/INS



What is CO-WIMS?



- Web based tool for visualization of wildfire information
- Based on the USFS Enterprise Geospatial Portal (EGP)
- Allows for collaborative sharing of map information
 - Fire perimeter, values at risk, land ownership, infra-red images, ICP locations, AFF and much more
- Accessible from computers, smartphones, and tablets





What can this system do for me?

- CO-WIMS and the MMA can provide you real-time information about your incident
 - Built with wildfire in mind, but useful on any incident
 - Information is immediately available to all responders and participants
- CO-WIMS is a Federal Geographic Data Committee (FGDC) compliant geospatial database
 - The GIS information in CO-WIMS can be accessed directly by external GIS systems with the appropriate credentials
- CO-WIMS and the MMA are not only for wildfire incidents
 - Information gathering and sharing can be applied to many types of situations

- Natural disasters, search and rescue, police activity, emergency transportation, and research missions



SIERRA
NEVADA
CORPORATION





Access

- **Who can get access to CO-WIMS?**
 - All wildfire related personnel in Colorado can get access to CO-WIMS
 - CO Department of Public Safety personnel
 - Local fire protection district personnel
 - CO Sheriff's department personnel
 - County and local emergency management personnel
 - CO National Guard personnel
 - Federal agencies: IC's, FMOs, Interagency Dispatch Centers

- **Who can request the MMA?**

- Local, County, State and Federal Incident Commanders
- County Sheriff's offices
- County Emergency Managers
- Federal FMOs and Interagency Dispatch Centers





Requesting the MMA

- How do I request the MMA?
 - Local, County and State Agencies
 - Contact the Colorado State Patrol (CSP) Denver Regional Communications Center, via the State Emergency Operations Line (303-279-8855).
 - Provide CSP with incident information. A latitude and longitude for each incident will be needed. CSP will contact the DFPC Duty Officer and MMA Flight Crew.
 - Interagency
 - Option #1 - Federal Agencies should request the MMA through their Interagency Dispatch Center, who will contact CSP Dispatch using the above process.
 - Option #2 - Federal agencies should request the MMA through their Interagency Dispatch Center, who will contact the Rocky Mountain Area Coordination Center (RMACC), who will contact the DFPC Duty Officer.
 - Other
 - Requests for missions outside the State of Colorado will be handled on a case by case basis. Requests should go to the Colorado State Patrol (CSP) Denver Regional Communications Center.





Cost

- CO-WIMS
- Mission Rates
 - Costs to Colorado local and county agencies for wildfire missions will be covered by DFPC.
 - Extended operations on a large fire will be billed to the fire.
 - Costs for non-wildfire missions will be at the rate of \$1,189.75 (during the period of time that the temporary aircraft is in service) for Colorado local government or Colorado state agency requester.
 - Additional fees will be assessed for federal missions and missions outside the State of Colorado.





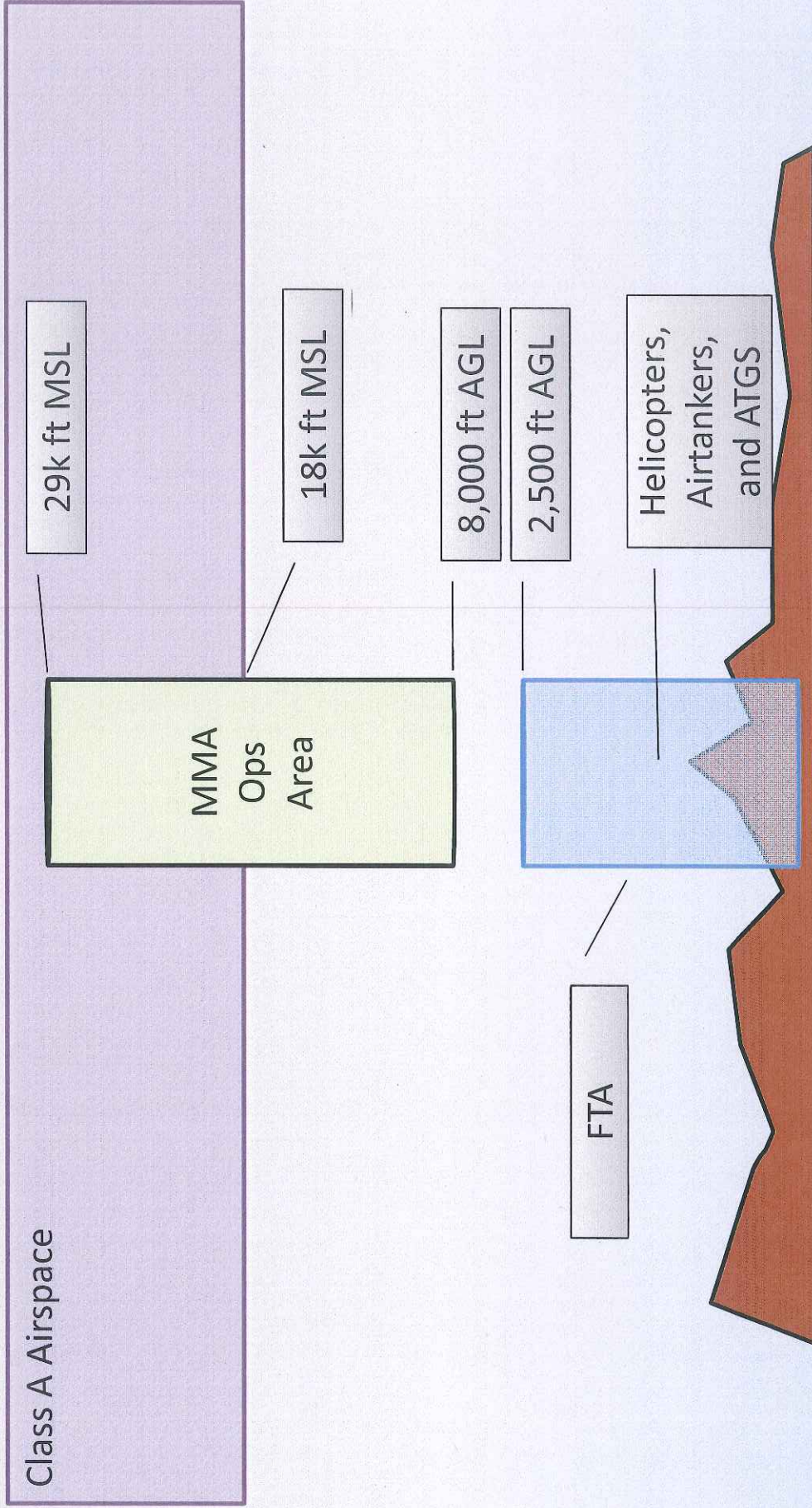
MMA Flight Envelope

- Typically, the MMA will be based out of Centennial, CO
 - The aircraft can be operated out of most airports in Colorado
 - For operations outside Colorado, the MMA can be repositioned as necessary
- For most wildfire surveillance missions, the MMA will operate well outside the Fire Traffic Area (FTA)
- Depending on the distance between the incident and the MMA starting location, mission duration can be as long as 6 hours
- The MMA can be operated at night, if desired





Airspace



The MMA Does Not Need to Enter the FTA!





Contacting the MMA

- Internet chat is the preferred method for direct communications during a flight
 - Chat provides direct, real-time communications without congesting the already crowded radio channels
 - This should be coordinated upon ordering the MMA
- Email is also available
- 800 MHz voice communications are available:
 - 8CALL90, 8TAC91, 8TAC92, 8TAC93, AND 8TAC94
- VHF FM communications are also available:
 - Standard interagency frequencies





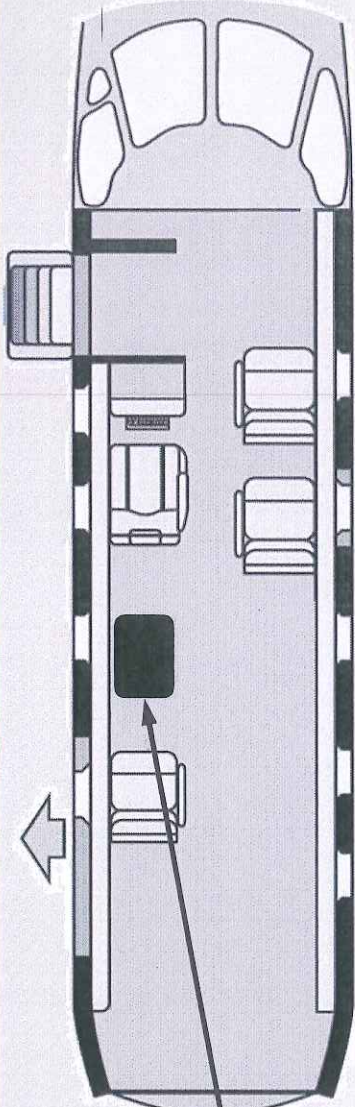
System Limitations

- Access to CO-WIMS requires internet access
 - Data can be pre-loaded and carried into the field
- The MMA will not produce “survey quality” data
 - The system can produce tactically relevant and timely data to help inform incident managers
- Aircraft operations
 - Severe winds or other weather situations may ground the aircraft
 - Planned maintenance activities may make the aircraft unavailable – these will be pre-coordinated
 - Unplanned maintenance issues may make the aircraft temporarily unavailable

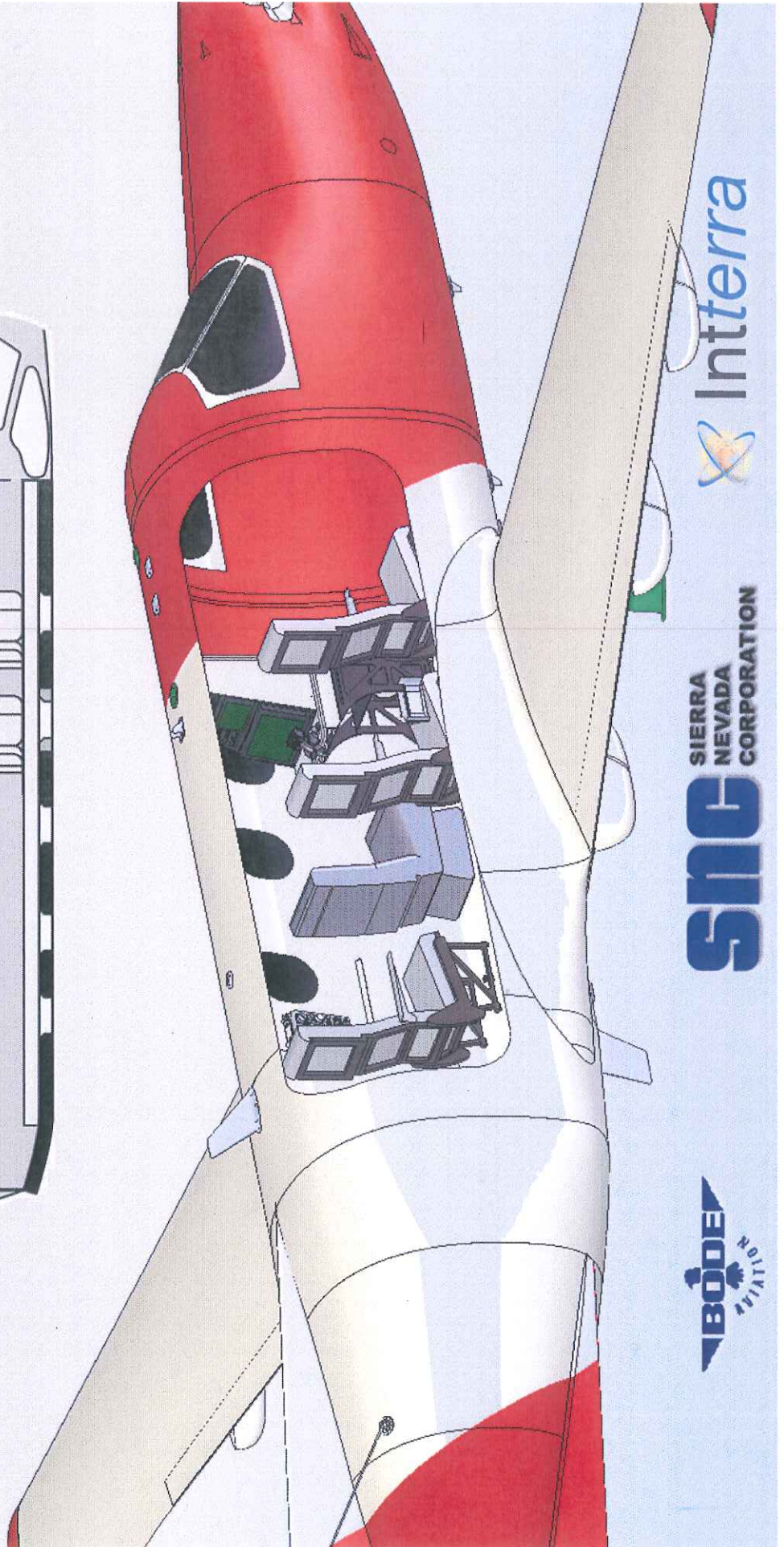




Aircraft General Arrangement



Carry on mission computer



Questions



- For further questions or discussion contact your DFPC Regional FMO or:
Jane Lopez, Fire Aviation Branch Chief
Phone: 970-491-8624
Jane.Lopez@state.co.us

