

MicroCMS

The **MicroCMS** is a light weight but feature rich digital cabin management system with a 4K surround sound audio and video distribution system. The system provides entertainment and controls via either built in interfaces or through applications run on passengers' devices. It provides all of the requested features from both the business aviation and VVIP market and is designed to be easily installed, light weight and lower cost than any system available today.

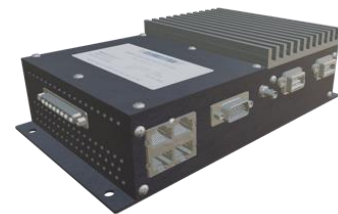
MicroCMS has a flight attendant portal for control of the system and advanced maintenance features for easy installation and maintenance. The system has remote access through its LTE modem for media uploading, software updating and troubleshooting.



STAND ALONE COMPONENTS

CABIN ENTERTAINMENT SERVER

Cabin Entertainment Server stores and streams entertainment media and moving map services on demand directly to passenger devices providing individualized entertainment for each passenger without the need for heavy and expensive installed avionics. The cabin entertainment server combines 5 products, a server, a wireless router/access point, a cellular modem, various entertainment applications and a moving map into a single small light weight unit.



ALL IN ONE IFE SYSTEM

The All in One Monitor is a single unit IFE system that stores and streams entertainment media and moving map services on demand directly to passenger devices providing individualized entertainment for each passenger and displays video on two displays mounted on the forward and aft bulkheads. The Single Unit IFE system combines 6 products, a 4K OLED display, a server, a wireless router/access point, a cellular modem, various entertainment applications and a moving map into a single thin, light weight unit.



MODIFICATION AND COMPLETION CENTER FRIENDLY

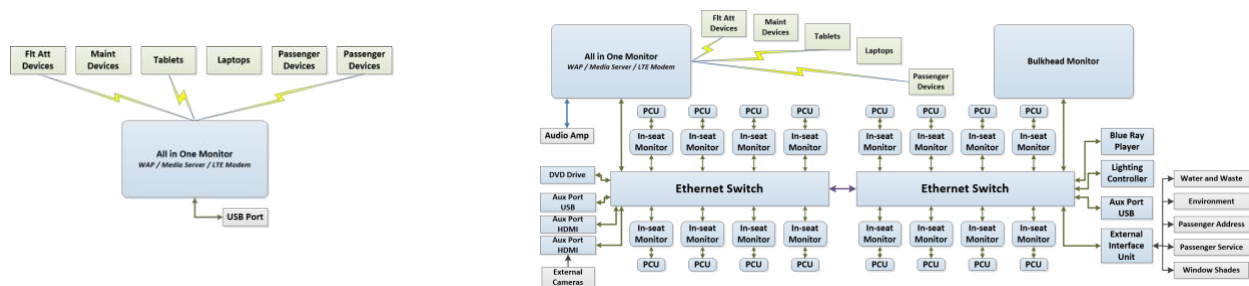
The system is design for fast and easy installations and to support very short lead times. Custom systems can be configured and installed by the installation center alone.

MicroCMS utilizes a hub-based design with a common harness type simplifying the required installation engineering.

The system's configuration and feature set are software driven, allowing hardware to be carried in inventory at mod centers to support immediate installations.

Two proprietary drag and drop tools generate customize the system configuration and graphic user interface the output the parts list, wiring drawings and system software.

The system is scalable from a complete IFE system in a single unit to a full featured system in the most luxurious VVIP aircraft.



INSTALLATION AND MAINTENANCE FEATURES

System components have self-addressing capabilities that automatically locates and addresses each unit within the system, eliminating the need for ID strapping or other mechanical identification devices, just plug the system components in and the software does the rest.

The system automatically checks and updates each component's software every time the system is powered on to ensure each component always uses the correct software.

The system's health monitoring capabilities provides continuous health monitoring to ensure system readiness and ease troubleshooting. Troubleshooting is accomplished via wireless devices, such as laptops, tablets or smart phones.

Remote health monitoring and troubleshooting is available via the built in LTE modem allowing operators to monitor entire fleets from a single ground station. The modem can be used for automatic software updates, remote troubleshooting and even media uploading.

SYSTEM COMPONENTS

MONITORS

All in One Monitor (RS-30XX-01)

A smart 4K resolution OLED monitor with an integrated Cabin Entertainment Server (RS-1000-01), touch screen interface and a 2TB integrated media server. Each monitor also includes an 802.11 AX wireless access point / router and 5G LTE modem. Bluetooth enabled

22.0" x 15.2" x .25"/1" – less than 3.8 lbs. (24" monitor)



Bulkhead Monitor (RS-31XX-01)

A smart 4K OLED monitors with an internal computer system, touch screen interface and internal storage for distributed media. Wi-Fi and Bluetooth enabled.

22.0" x 13.2" x .25"/1" – less than 3.1 lbs. (24" monitor)



In-Seat Monitor (RS-32XX-01)

A 4K OLED smart monitors with internal processor and storage for distributed media. Can be used for galley panel. Wi-Fi and Bluetooth enabled.

12.5" x 7.5" x .75" – less than 2.4 lbs. (13" monitor)

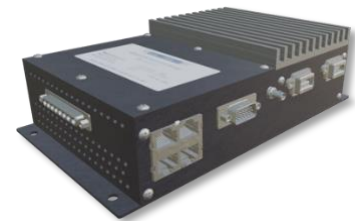


SOURCES

The Cabin Entertainment Server (RS-1000-01)

The server design is a high-performance media server and control platform with a built-in 802.11ax cabin wireless system that can provide a complete IFE system in one tiny unit. The server's 2TB of NVME storage has more than ample storage for hundreds of movies, music, maps and other applications. With an integral 5G cellular modem the server also has cost effective ultra-high speed internet access enabling automatic media and software updating in addition to remote troubleshooting. The server reads and decodes aircraft flight data directly from the aircraft's avionics systems for use by custom applications and has four customizable discrete inputs.

8.5" x 5" x 2" – less than 2 lbs.



DVD Drive (RS-1100-01)

The system has a unique DVD drive that allows presentation devices to access the digital media directly from the DVD disk without first being converted to a video stream. Presentation devices can access the DVD drive as if it were attached directly to the presentation devices internal processor.

6.2" x 6.2" x 1.1" - less than ½ lbs.



Auxiliary Port – HDMI (RS-1300-01)

The HDMI Aux port enables third party devices to input a video stream and display it on the various presentation devices throughout the system. The port can be powered over Ethernet.

3" x 4" x 1" - less than ½ lbs.



Auxiliary Port – USB (RS-1200-01)

The USB Aux port enables USB storage devices to be connected to the system as a Network Attached Storage device and can be powered over Ethernet.

3" x 4" x 1" - less than ½ lbs.



Auxiliary Port – Ethernet (RS-1400-01)

The Auxiliary Port – Ethernet enables third party devices to connect directly into the system. This is design primarily as a maintenance port.



BACKBONE

Ethernet Switches (RS-4XXX-XX)

The MicroCMS Ethernet Switches are Layer 3 devices that connect the various components together and manage the data traffic between them. Each Ethernet Switch contains an internal server capability and is available in 8, 16 and 24 port configurations with and without PoE.

12.7" x 7.5" x .75" – less than 2.4 lbs. (16 port Switch)



PASSENGER CONTROL UNITS

Touchscreen Control Unit (RS-20XX-01)

Touch Screen Passenger Control Units feature high resolution, full color and high brightness screens with a capacitive multi-touch interface. Each screen has a fully customizable graphic interface and is Wi-Fi and Bluetooth enabled.

2.75" x 4.8" x .75" – less than ½ lbs.



INTERFACE UNITS

External Interface Unit (RS-5000-01)

The External Interface Unit is a protocol translation device designed to communicate with and control aircraft and third-party systems. The unit supports discrete inputs, discrete outputs, RS 232, RS 429, RS 485, Can Bus, high current relays and digital potentiometers.

4.3" x 3.5" x 1.9" - less than 3 lbs.



Lighting Controller (RS-6000-01)

The Lighting System Controller interfaces to third party lighting systems and has 4 RGBW PWM outputs for the control of strip or spotlights and 8 relays to control reading lights. The controller also translates commands to provide control and feedback from third-party lighting systems.

5.2" x 3.5" x 1.8" - less than 3 lbs.

