AIRS-400

Aircraft Image Recording System

Appareo offers some of the industry's best lightweight digital flight data recording solutions for both new and legacy aircraft, either factory-installed or retrofit. These recording and storage solutions include cockpit image and audio recorders, inertial-based flight data recorders, and conventional flight data recording solutions utilizing existing aircraft communications buses.

Joining the Appareo connectivity ecosystem is the Aircraft Image Recording System model 400 (AIRS-400), a 4K ultra high definition flight data recorder that's equipped for wireless data offload.

INFORMATION CAPTURED

- Cockpit images
- ATC and cockpit audio
- WAAS GPS (altitude, latitude, longitude, ground speed, vertical speed, etc.)
- Altitude data (pitch, roll, yaw, etc.)
- Rates of rotation
- Acceleration data (G forces)

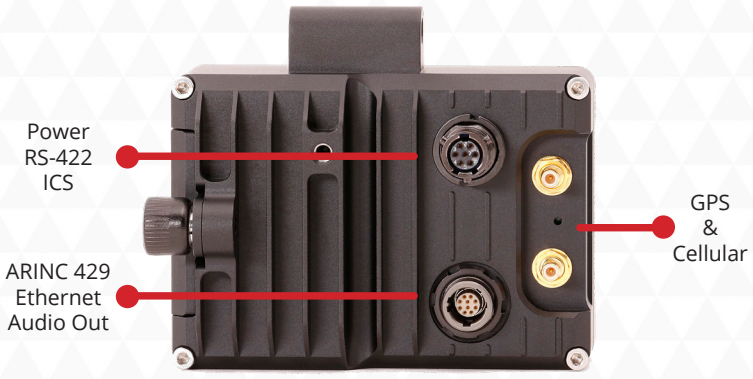
AIRS-400 FEATURES

- 8 MP images (4K)
- 30 images per second
- h.264 Encoded Images
- 90 degree Field-Of-View
- 128/512 GB SD Card Support
- 35 GB internal memory
- 100 Mbps Ethernet
- 25800 DMIPS Processor

Optional:

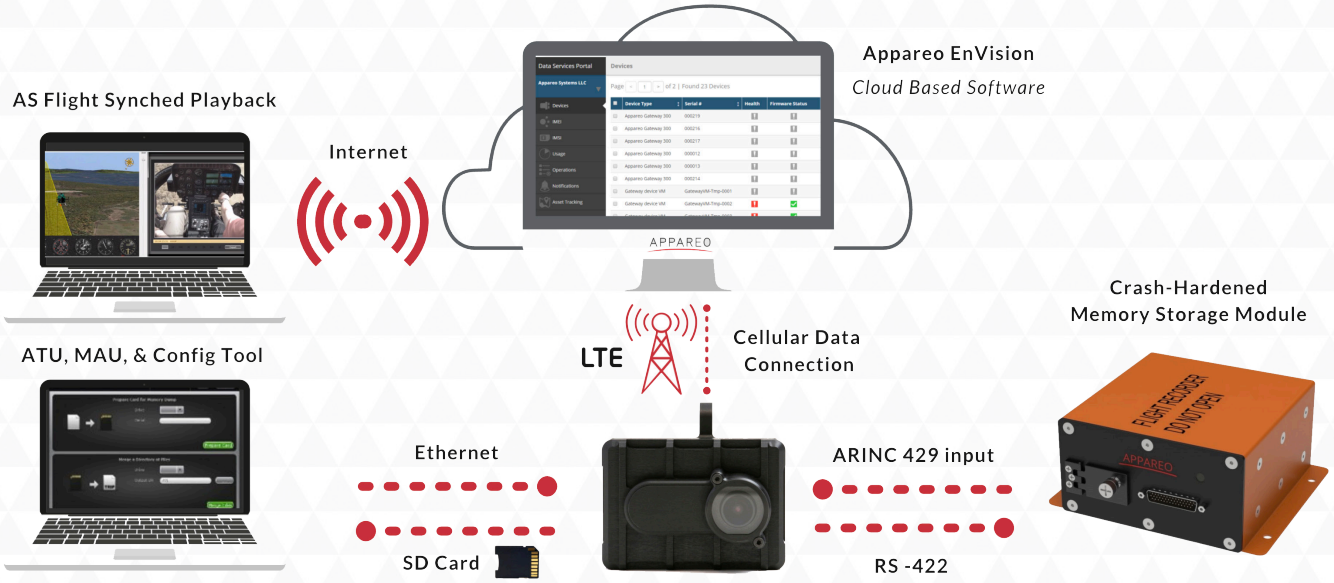
- ARINC 429 input
- Cellular Data Offload
- ED-155 Audio output
- RS-422 Output

INPUT/OUTPUT



APPAREO CONNECTIVITY ECOSYSTEM

Any Appareo AIRS product will work with the Vision 1000 toolset and external survivable memory modules.



TECHNICAL SPECIFICATIONS

Image Specifications	
Image Frame Rate	30 fps
Image Size	3840 x 2160
Compression Methodology	H.264
Horizontal Field of View	90°
Vertical Field of View	45°

Audio Record Specification	
ICS Input Range	up to 44.1 KHz
Audio Input per ED-112 Max Input Voltage	3.0 VRMS
Ambient Area Audio Recording	up to 32 KHz

Audio Output Specification	
Nominal Output Level	1 Vrms (600 ohm load)
Max Output Level	2 Vrms (600 ohm load)
Output Impedance	< 600 ohms
Frequency Range	100 Hz - 10 KHz
Flat Frequency Response	< 3 dB

Inertial Measurement Unit (IMU) Specification	
IMU Record Rate	4 Hz
Rotational Rate Range	250 dps
Acceleration Range	+/- 4g
Sense Axis	triaxial
Heading Accuracy	2°
Roll and Pitch Accuracy	1.5°

GPS Specification	
GPS Constellations Supported	GPS, GLONASS
GPS Receiver Type	WAAS
GPS Update Rate	4 Hz
GPS TTFF	< 5 minutes

On Board Flash Memory	
Storage Capacity	35 GB
Storage Time	200 hours IMU. 2 hours of image/audio

SD Card Storage Capacity	
128 GB SD card	200 hours of IMU 8 hours image / audio
512 GB SD card	200 hours of IMU 32 hours image / audio

ARINC 429 Support	
Baud Rates Supported	12.5 and 100 Kbps

Wired Communication Specification	
Ethernet per IEEE 802.3U (100BASE-TX)	at least 5 MB/s
RS-422 supporting ANSI / TIA / EIA-422-B Standards	230.4 kbps

Cellular Communication Specification	
LTE M1	B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66

General Specifications	
Input Supply Voltage	9 - 32 VDC
Input Supply Current, 28 VDC	1 A
Weight	310 grams
Dimensions	71.09 mm x 86.47 mm x 65.69 mm
Operating Temperature	-25° C to +65° C
Time to Record Power Application	<30 seconds