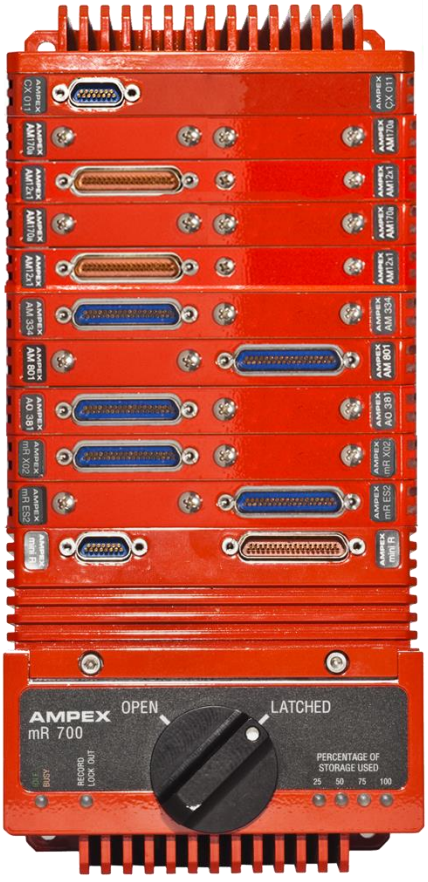
miniR® 700 Solid-State Recorder

The miniR 700 Recorder: Small in Size, but Big in Performance and Functionality.

The Ampex miniR™ 700 mini-recorder is a compact, high performance recorder that is both physically and electrically compatible with I/O Modules from the Ampex AMux™ 600 & AMux 700™ Multiplexers. In addition to traditional instrumentation sources such as serial, video, MIL-STD-1553B and PCM data, the miniR system can be configured to receive data from cutting-edge sources such as Ethernet, IntelliBus™, SMPTE 292M, FireWire, etc. The solid-state storage provided by miniR 700 recorder is housed in the mini-Removable Memory Module (mRMM) with available capacities from 112GB to 1568GB (1.5TB)[1]. The mRMM cartridge is hot swappable and provides indicators for Read/Busy, Record Lockout and Remaining Capacity. Recorded data may be downloaded either directly from the miniR 700 recorder's chassis, using FireWire or Ethernet, by means of the FireWire port on the optional mRMM-1394 removable memory module, or by using a docking station designed for the mRMM.



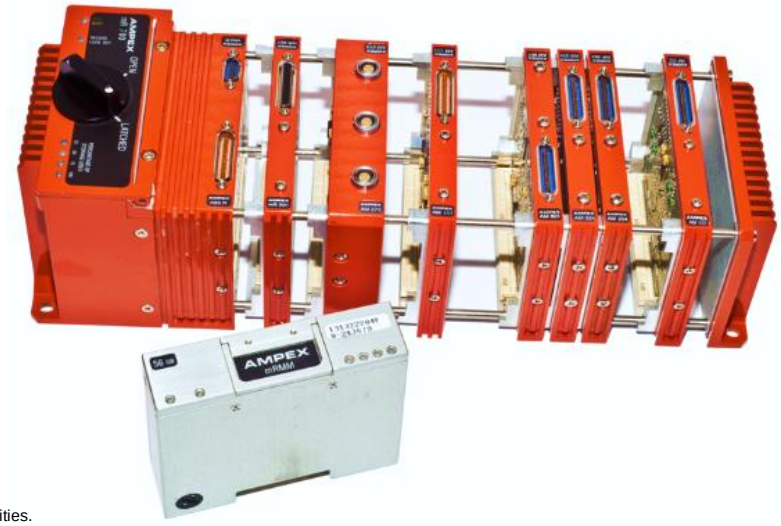
- ***From 112 up to 1,568 GBytes of Removable Storage[1]***
- ***Totally Flexible and Modular I/O***
- ***Extremely Compact in Size***
- ***Rugged / Airborne Capable***
- ***IRIG 106 Chapter 10 Recording Format***
- ***Ethernet Streaming and Publishing***
- ***Real Time Data Reduction Capabilities***
- ***Loop Recording Feature***
- ***Sustained Data Rates to 700Mb/sec***
- ***Hot Swappable mRMMs***
- ***RMM with IEEE1394 (FireWire) Download Port, to 784GB[1]***
- ***Full IRIG106-2011 Compliance***

Data Interfaces/Format

- IRIG-106 Chapter 10 recording format
- Network acquisition & output interfaces
- HD & SD Video, MPEG2, H.264/AVC, M-JPEG2000
- IntelliBus and IEEE 1394 interfaces
- GPS and HAVE QUICK time signals
- Variety of Amux 600 I/O Modules

Typical Applications

- High Resolution Video Recording
- Cockpit Video
- Flight Test, Sensor Development
- ELINT/COMINT/ACINT Data Acquisition
- Fixed/Rotary Wing, Manned/UAV Platforms
- Ground Mobile Field Data Collection



[1] As of Q3 2016; as memory density increases regularly, contact Ampex for latest capacities.

AMPEX miniR® 700 Solid-State Recorder

Environmental Specifications[2†]

Temperature	Operating	-40 °C to +71 °C
	Non-operating	-56 °C to +80 °C
Altitude		70, 000 ft
Humidity		0 % to 100 % RH
Random vibration / shock		14 g_{rms}, / 20 g, 11ms

Conduction cooling solution required for full temperature range
(†Complete MIL-STD-810 test report results available on request)

Operational Specifications[2]

Sustained I/O data rate	700 Mb/sec
mRMM capacity[3]	112 GB to 1568 GB
mRMM capacity with 1394 I/F[3]	112 GB to 784 GB

Software Configuration

Web-browser service on control Ethernet port & TMATS

Dimensions	W x H x L	Weight	Power (MIL-STD-704)
Base unit	4.12" x 3.25" x 1.64"	43 oz. incl. mRMM cradle	15W @28VDC
mRMM cradle	4.12" x 4.25" x 1.81"		
mRMM	3.88" x 3.14" x 1.12"	8 oz. (112 GB module)	2W @28VDC
I/O and adaptor modules	4.12" x 3.12" x 0.454"‡	5.3 oz. (typical)	Module dependent, up to 10W

(‡Some I/O modules may be double or triple thick.)

Modules and Interfaces		Available Interfaces
miniR	(Base Unit)	10/100 Base-T, RS232/422
IRIG-106 I/O subsystem adaptor	mR-X02	IRIG-B, HAVE QUICK, discrete control/indicator, IEEE1394 (FireWire)
IRIG-106 I/O subsystem adaptor	mR-X03	All mR-X02 Features plus AMux600 Support
Ethernet switch	mR-ES2	Ethernet Switch: Four ports 1000Base-T, One port 100Base-T

Module	Input	Output	Description
AM-132	2 (+2)	–	Video: RS-170A (NTSC/PAL) with MPEG2/4 Encoder, 2 audio, Event Tone, Time Insertion
AM-11x4	4 (+2)	–	Video Input: RS-170A (NTSC/PAL) matted "4 up" on a single 1440x1152 HD frame, 2 audio, incl. Event Tone, Time Insertion
AM-12x1	1 (+2)	–	Video Input: HD SMPTE-292M (1080i & 720p), 2 audio, Event Tone, Time Insertion
AM-16x1	1 (+2)	–	Video Input: HD DVI-A, DVI-D, or RS-343 (1600x1200), 2 audio, Event Tone, Time Insertion
AM-160x	–	–	Motion JPEG-2000 Encoder with two channel audio; requires a video input module
AM-170x	–	–	MPEG-4/H.264 (AVC) Encoder with two channel audio; requires a video input module
AM-15F	1	–	Video: FC-AV (HSVN-9) Interface for F/A-18; Triple-width module
AM-156	6	–	Audio: CVSD at 32Kbps rate
AM-172	1 (+2)	–	Video: SDI/HD-SDI/3G-SDI to 1080p60 with H.264 Encoder, KLV metadata, 2 audio
AM-204	4	–	MIL-STD-1553B Bus Monitor (4 dual-redundant busses)
AM-228	8	–	ARINC 429 bus monitor
AM-261	1	–	IEEE1394B (FireWire) IIDC v1.31 DCAM Acquisition (400/800Mbps)
AM-264	1	–	IEEE1394B (FireWire) Bus Monitor (400/800Mbps)
AM-334	4	–	PCM: NRZ-L data with clock (RS-422 and TTL levels), data rate to 20Mb/s
AM-338	8	–	PCM: NRZ-L data with clock (RS-422 and TTL levels), data rate to 20Mb/s
AM-344	4	–	PCM: NRZ-L data with clock, Bi-phase, RS-422 and TTL levels, data rate to 20Mb/s
AM-413	3/2/1	–	Parallel input, programmable as 32bits x 1, or 16bits x 2, or 8bits x 3
AM-432	32	–	Discrete Inputs, TTL levels, debounced
AM-454	4	–	RS-232, RS-422/485 up to 1 million baud
AM-458	8	–	RS-232, RS-422/485 up to 1 million baud
AM-504	4	–	Analog: 16-bit resolution (Programmable Gain/Offset/Resolution)
AM-524	4	–	Analog with ICP interface: 16-bit resolution (Programmable Gain/Offset/Resolution)
AM-51b6	16	–	Analog with ICP interface: 16-bit resolution (Programmable Gain/Offset), requires AM-530a
AM-530a	–	–	Analog control module for AM-5xb6 with Digital Filter
AM-60x	1 / 2	–	Low overhead HOTLink II™ 400Mbps serial ports, one (AM-601) or two (AM-602) channels.
AM-801	1	1	IEEE802.3 Gigabit Ethernet for frames ("sniffing"), UDP, and TCP, input & output
AM-901	1	–	GPS: Time input and Time-Space-Position-Information channel
AO-381	–	1	PCM Output for on-board data reduction and telemetry downlink

[2] Specifications subject to change without notice
[3] As of Q3 2016; as memory density increases regularly, contact Ampex for latest capacities.

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Ampex Data Systems Corporation is AS 9100C / ISO 9001:2008 Certified
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