

QUICK ACCESS RECORDER (QAR)

The quick access recorder (QAR) is an extremely small LRU able to be acquire, process and store data from multiple sources in a readily accessible location.

The QAR automatically records to two independent storage mediums, a removable SD/SDHC memory card (up to 256 gigabytes), as well as an internal 4 gigabyte NAND SLC grade memory chip.

Data retrieval is through either removal of the SD card or an internal 4G LTE Cellular modem which can automatically upload recorded data to the cloud on aircraft touch down. The cellular module supports global frequency bands and incorporates an internal MIMO antenna array with no need for external antennas.

An optional weight-on-wheels signal prevents any RF transmission via hardware interlocks to prevent transmission in flight where applicable due to regional NAA requirement. To address cyber security considerations the QAR incorporates both high strength RSA 2048 bit and AES 256 bit encryption, supported with a TPM 2.0 security device. The QAR can also function as a ethernet to secure cellular communication bridge.



Data Sources:

- ARINC-573/717
- ARINC-429
- ARINC-825
- RS-422 or 485

PHYSICAL AND ELECTRICAL SPECIFICATIONS

Dimensions	55mm (2.2") width, 48mm (1.9") height, 40mm (1.6") depth, excluding connector
Weight	Less than 250 grams (< 9 oz)
Mounting Type	Rigidly fixed to mating 38999 connector
Construction	QQ-A-200/8 Aluminium with Ultem Antenna Cover (Cellular models)
Finish	MIL-PRF-22750 black epoxy paint
Power supply input	28 VDC nominal, 10 to 80 VDC, DO-160 CAT Z
Power supply consumption	Maximum 6 watt
Input Connector	D38999/20FD35SN – or equivalent
Operating Temperature (operating)	-40 to +70 degrees Celcius
Operating Temperature (non-operating)	-40 to +85 degrees Celcius
Operating Altitude	Up to 55,000 ft
Environmental Qualification	RTCA DO-160G
Design Assurance	RTCA DO-254 and DO-178C (as applicable)
Production Approvals in Process	FAA TSOA, FAA 8130-3 Release

Diagnostic Solutions International, LLC

ISO9001 & AS9100D Certified

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