

HONEYWELL CONNECTED RECORDER-25 (HCR-25)

Flight Recorder

Overview

Honeywell has been a leading manufacturer of recorders for 60 years. The latest Honeywell Connected Recorder-25 (HCR-25) meets the 2021 Federal Aviation Administration and European Aviation Safety Agency mandates for storing 25 hours minimum of voice recordings. In the event of an emergency, the data on board will be quickly and more easily accessible to investigators.

HCR-25 provides an aircraft recording solution supporting parametric flight data, 4 channels of cockpit voice recording and CPDLC recording for up to 25 hours each. Additionally, the HCR-25 is designed in accordance with RTCA/DO-178C and RTCA/DO-254. It meets all current and anticipated FAA and EUROCAE requirements and has a 90-day ultrasonic locator beacon (ULB), certified to TSO-C121b.

In addition to fulfilling mandates, HCR-25 operators can benefit from real-time data streaming and cloud-upload capabilities, enabled by Honeywell's Connected Aircraft software, which allows for the swift and remote retrieval of data from the aircraft for storage or analysis.

To ensure the HCR-25 meets the requirements of new and old aircraft, some modifications may be required, or additional data formatting hardware used.

HCR-25 is installed in standard 1/2 ATR chassis per ARINC 404 to eliminate the need for heavy mounts and easily integrates with other systems to provide additional functionality such as:

- High speed (<45 seconds) and license free flight data download at the gate via a Gigabit Ethernet link (FDR)

The HCR-25 can be supported by dedicated Recorder Independent Power Supply, Cockpit Area Microphone, and Cockpit Control Unit. Variants of the Cockpit Control Unit support dual recorder installations.

HCR-25 will be RTAR (Real Time Access Recorder) ready and enabling of this function can be done by simple software on the wing application.



HCR-25 Cockpit Voice Recorder (CVR)



HCR-25 Flight Data Recorder (FDR)

Key Features

- Voice, data, datalink recording
- HCR-25 D (FDR)
- HCR-25 V (CVR)
- ED-112A compliant
- Designed to meet current and anticipated future regulations
- Compact and lightweight – 8.1 lb (3.7 kg)
- Webserver for fast & free data download
- Approval to ETSO-C123c, C124c, C176a, C177a
- 90-day Ultrasonic Locator Beacon to TSO-C121b

Applications

- Crash protected recording
- Data storage for other applications including:
 - FOQA/FDM/FDAP

Specifications

Interfaces

- Flight Data Recorder (FDR)
 - 25 hours capacity from:
 - ARINC 717 format 64-4096 wps (external interface)
 - ARINC 717 format (internal interface)
 - Cockpit Voice Recorder (CVR)
 - 4 channels, 30 minutes to 25 hours duration
 - 3 crew channels
 - 1 cockpit area microphone channel
 - Datalink Recorder (CPDLC)
 - 2 to 25 hours, ARINC 429
 - Receives GMT/UTC via ARINC 429
 - Comprehensive BIT including individual discrete output for each recording function
 - Gigabit Ethernet maintenance portPower
- 115 VAC, 400 HZ (FDR)
 - 115 VAC, 400 HZ(CVR)

Find out more

To find out more about Honeywell's connected (HCR-25) flight recorder, please call:

North America: +1 (800) 601 3099

Outside North America: +1 (602) 365 3099

Electrical and Mechanical

- 28 VDC (CVR)
- 13W max (excluding application specific expansion card)
- Mass: 8.1 lb (3.7 kg) including underwater locator beacon, excluding expansion card
- Dimensions
 - FOQA/FDM/FDAP
 - 1/2 ATR long per ARINC 404A (FDR)
- Underwater Locator Beacon: Beacon to TSO-C121b
- Connector: DPXB-57-34P-0001

Environmental

- Adheres to ED-112A defined crash survivability tests
- Fire intensity
 - High: 1100°C for 60 minutes
 - Low: 260°C for 10 hours
- Impact shock: 3,400 G for 6.5 ms
- Penetration resistance: 500 lb from 10 ft 1/4 inch contact point
- Static crush: 5,000 lb for 5 mins per axis
- Shear/Tensile strength: 6,000 lb for 1 minute each axis
- Fluid immersion: Immersion in aircraft fluids for 24 hours
- Water immersion: 30-day sea water
- Hydrostatic pressure: Equivalent to depth of 20,000 ft

RTCA-DO160G

Environmental Qualification

- Temperature
 - Operating: -55°C to +70°C
 - Non-operating: -55°C to +85°C
- Altitude: -1,000 ft to +55,000 ft
- RTCA-DO160G

Optional Equipment

- Cockpit Control Unit (CCU)
- Recorder Independent Power Supply (RIPS)
- Cockpit Area Microphone (CAM)
- Ground support equipment

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