



# Cohesive ED-155 recording system

Integrates with off-the-shelf flight display to exceed ICAO compliance recommendations



Acron Aviation now provides a fully compliant ED-155 recording solution by simply connecting the Acron Aviation Lightweight Data Recorder (LDR) or Extra Lightweight Data Recorder (xLDR) to the high-performing, compact EFD-750 display and the aircraft's global positioning source. This off-the-shelf system quickly answers ED-155 requests for light aircraft and helicopter operators by using existing avionics, eliminating redesign, rewiring, installation time and costs.

Easy installation and significant savings aside, this solution exceeds the ICAO ED-155 data compliance recommendations and EASA's ED-155 mandate that took effect in August 2022. It also supports Transport Canada's proposed requirements and other regions evaluating similar mandates.

The Acron Aviation ED-155 certified LDR and xLDR provide crash-protected recording of audio and flight data, video and GPS parameters. Enhanced features include increased data rate collection, auto-recording and pilot-control capabilities. The LDRs also

allow any subset of the total memory capability not intended for regulatory-mandated applications for audio or image recordings. Data retrieval and downloads can be done on the aircraft using the built-in web browser connected to a standard PC-based laptop, eliminating the need for removal.

The other key component of the ED-155 integrated solution is the advanced EFD-750 flight display. This compact, high-resolution system is a DO-178C and DO 254 Level A certified backup display for aircraft and the primary flight display in helicopters, and is fully compatible with existing digital NAV and GPS receivers. This configurable solution enhances pilot situational awareness by providing vital airspeed, altitude, attitude and slip data, with options for navigation and heading. This low-cost display is also fully compatible with night-vision goggles.

This simple, off-the-shelf solution offers the most cost-effective answer for ED-155 recommendations and compliance on the market today and routine data downloads. Data analysis can provide actionable information for flight data management, preventive maintenance, operations, quality assurance and safety risks using Acron Aviation or third-party flight data analytics programs.

## KEY FEATURES

### Cohesive ED-155 System

- > Offers global compliance to ED-155 mandates and recommendations
- > Integrates two TSO products
- > Simplifies wiring and reduces size, weight and power requirements
- > Uses existing real-estate in the cockpit and GPS/GNSS Sources
- > Reduces time, installation and certification costs

### EFD-750

- > Mirrors PFD presenting airspeed, altitude, attitude and slip data
- > Options for heading and navigation
- > Compact 3" display is certified to DO-178C and DO-254 Level A for Part 23, Part 25 and Part 27/29
- > Compatible with existing digital NAV and GPS receivers

### LDR and xLDR

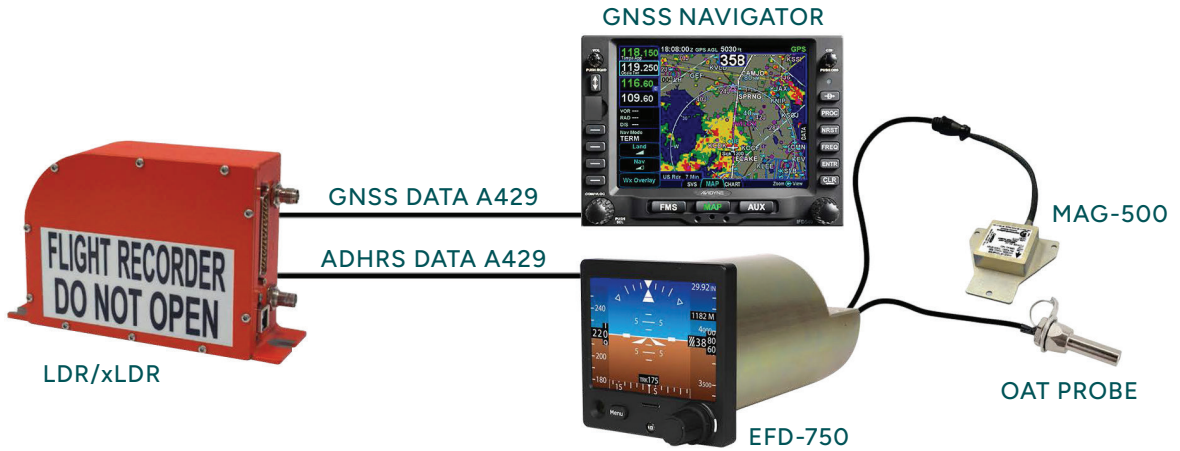
- > Crash-protected recording of audio, image and flight data
- > Small, lightweight and customizable recording parameters
- > Retrieve recorded data via built-in web browser on-aircraft
- > Certified – ED-155 and FAA TSO-C197; EASA ETSO-2C197

## DISCOVER MORE:

[acronaviation.com/avionics](https://acronaviation.com/avionics)

# Cohesive ED-155 recording system

Fast and easy installation choices



DISCOVER MORE:  
[acronaviation.com/avionics](http://acronaviation.com/avionics)

# Specifications: LDR and xLDR

LDR (LIGHTWEIGHT DATA RECORDER)		XLDR (EXTRA LIGHTWEIGHT DATA RECORDER)	
<b>Physical Description</b>			
Height:	4.9 in. (12.45 cm)	4.9 in. (12.45 cm)	
Width:	3.9 in. (9.9 cm)	3.9 in. (9.9 cm)	
Depth:	8.0 in. (20.3 cm)	8.0 in. (20.3 cm)	
Weight:	< 5 lbs. (2.27 kg)	< 2.43 lbs. (1.1 kg)	
Reliability:	10,000 hrs.	10,000 hrs.	
<b>Power</b>			
Requirements:	28 VDC	28 VDC	
Consumption:	< 5 W (without external microphone and camera)	< 5 W (without external microphone and camera)	
<b>Connectors</b>			
Coaxial:	BNC: NTSC analog video (on certain LDR models) TNC: GPS RF antenna (on certain LDR models)		
D-Sub 50-Pin:	Analog audio, control inputs, status outputs, ARINC 717 serial data, ARINC 429 serial data on certain LDR models, external GPS serial cable	Analog audio, control inputs, status outputs, ARINC 717 serial data, ARINC 429 serial data on certain xLDR models, external GPS serial cable	
RJ-45:		Coaxial: 100Base-T Ethernet Maintenance port	
<b>Environmental</b>			
Temperature:	Operating: -55° C to +70° C	Operating: -55° to +70°C (-67° to +158°F)	
Non-operating: -55° C to +85° C	Operating: -55° C to +70° C	55,000 Ft.	
Non-operating: -55° C to +85° C	No cooling required per ARINC 600	Per ARINC 600	
Altitude:	Operating: 0 to 55,000 ft	Operating: 0 to 55,000 ft	
Vibration:	DO-160F Cat. S, curve M	DO-160F Cat. S, curve M	
Penetration:	250 lbs@10 feet, 1/4 inch diameter pin		
Static Crush:	5,000 lbs.	1,000 lbs.	
Fire Protection:	1100° C for 15 min. and 260° C for 5 hrs.	1100° C for 15 min. and 260° C for 5 hrs.	
Impact:	1,000 G over 6-axis	1,000 G over 6-axis	
<b>Options</b>			
Data Options/Recording:	GPS Recording 25-hours ARINC 717 25-hours with up to 512 wps ARINC 429 25-hours with up to 6100 msg/sec	ARINC 717 25-hours with up to 2048 wps ARINC 429 25-hours	
Microphone:	Panel and surface-mount microphones available	Optional Cockpit Area Microphone (CAM)	
Video:	NTSC Input for optional camera (PAL available)		
Audio:	2 hours x 2 or 4 channels	2-hours x 4 channels	
GPS:	External GPS antenna (L1 Active) with TNC connector P/N 009-E5557-00		
GSE:	-	Webserver or Recorder Data Interface Option	
Compliance:	ED-155, DO-160G, FAA TSO-C197 and EASA ETSO-2C197	ED-155, DO-160G, FAA TSO-C197 and EASA ETSO-2C197	
<b>Company Certification</b>			
	ISO 9001:2008 and AS9100:2009 Rev. C Certified	ISO 9001:2008 and AS9100:2009 Rev. C Certified	

DISCOVER MORE:  
[acronaviation.com/avionics](http://acronaviation.com/avionics)

EFD-750 ELECTRONIC FLIGHT DISPLAY	
<b>Physical Description</b>	
Dimensions:	3.125" round case, 5.62" deep case behind panel (+0.66 connector)
Weight:	Maximum 2.75 lb./1.25 kg
Power:	14 or 28 VDC electrical systems (10-32 VDC)
Interfaces (#):	ARINC 429 Inputs (5), ARINC 429 Output (1), RS-485 Serial Input (interfaces with MAG-500)(1), Analog Input (OAT) (1), Dimming Bus (1), I2C interface to the DCM-750
Navigation:	VOR/ILS or GPS Navigation or both
TSO:	C106, C113a, C201, C209
Design:	DO-178C and DO-254 - Design Assurance Level A
<b>TECHNICAL STANDARD ORDERS (TSO)</b>	
TSO-C106 – Air Data Computer	
TSO-C113a – Airborne Multi-Function Displays	
TSO-C201 – Attitude and Heading Reference System (AHRS)	
TSO-C209 – Electronic Flight Instrument System (EFIS) Display	
EFD-750 – Software: DO-178C Level A, Hardware: DO-254 Level A	
MAG-500 – Hardware: DO-254 Level C	

## HARDWARE

- > Active Matrix Liquid Crystal Display with 3.5" diagonal viewable area
- > Rotary knob to adjust altimeter and to scroll and select menu options
- > Ambient light sensor to automatically adjust brightness
- > Solid state internal sensors for attitude, rates and accelerations
- > Pitot/Static inputs, or digital Air Data Computer inputs (airspeed, altitude, Mach)
- > Optional interface to MAG-500 for heading information
- > MicroSD card slot on front bezel for field-loadable software and configuration updates
- > 9200-15754-0301 (with pitot/static ports, 1/8" ANPT, Green Lit Bezel, NVIS)

## PILOT MENU OPTIONS

- > Accessed by pressing the 'Menu' button
- > The pilot menu list includes:
  - > NAV Mode (VOR/ILS, GPS, Off) (When Nav enabled)
  - > Set Course (When VOR/ILS)
  - > Course Direct-To (When VOR)
  - > Data Field On/Off (When Data Fields enabled)
  - > Set Display Brightness
  - > BARO Type (In, hPa, Mb)
  - > BARO Sync (When configured for Baro Sync)
  - > Metric Altitude On/Off (When configured for metric)
  - > Attitude Alignment
  - > System Status

## FLIGHT CREW DISPLAY

- > Attitude and Slip/Skid
- > Altitude, Airspeed and Mach
- > Heading or Track – (Optional)
- > GPS and/or VOR/ILS Navigation (Optional)