

# ROADRUNNER<sup>®</sup>

ELECTRONIC FLIGHT INSTRUMENT



CAPABILITY YOU NEED. PRICE YOU CAN AFFORD.

# Astronautics

DISPLAYS & COCKPIT INTEGRATION



# THE FASTEST WAY TO UPGRADE

**The AFI4700 RoadRunner Electronic Flight Instrument (EFI)** is a form-fit-function EFI replacement for Attitude Director Indicator (ADI) and Horizontal Situation Indicator (HSI) primary flight instruments.

The RoadRunner EFI offers enhanced safety, reduced operating costs, and minimized installation downtime, and is capable of displaying terrain awareness, traffic, weather, and synthetic vision.

# ROADRUNNER



## 2-IN-1 REPLACEMENT FOR EXISTING ADI & HSI

**The RoadRunner EFI** provides pilots and operators with several benefits versus currently-installed electromechanical or CRT displays:

**Repair Cost Mitigation.** Eliminate expensive and unscheduled removals of legacy instruments that can ground aircraft for weeks and cost \$20,000 or more.

**Long-term Value.** 8,500-hour MTBF, two-year warranty, and ongoing support.

**Minimal Downtime.** Three-day or less installation with minimal or no change to aircraft wiring and no change to instrument panel with an adapter plate.

**Intuitive Control.** Familiar, easy-to-use controls with menus never more than two pages deep.

**Decreased Workload.** Approved for single-pilot IFR with dual EFI installation.

**Increased Operational Capability.** Enable RNAV capability with WAAS-enabled GPS for LPV, LPV+, and LNAV+V approaches.

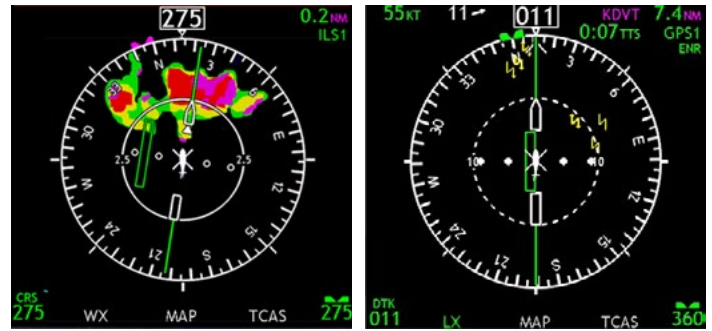
**Certified.** TSO approved and flying on A109, Bell 412, UH-60, and Casa 212 aircraft.

**Growth Path.** Field-loadable USB supports future software upgrades such as Synthetic Vision and HTAWS.

# Improve Situational Awareness

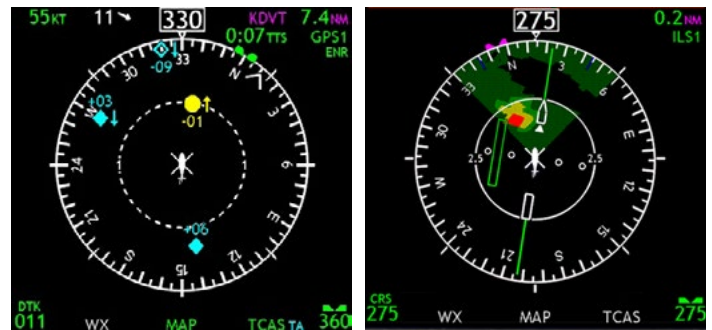
## INTEGRATE ONBOARD SENSORS

**Bring safety system information** directly into your field of view and in a new modernized package, allowing you to integrate on-board systems, including Radar, Stormscope, Traffic, RadAlt, and TAWS overlays.



Weather Radar

Stormscope



Traffic

TAWS

## ADD FUNCTIONALITY WITHOUT COMPLEXITY

**Increase situational awareness** by overlaying electronic map data (EMD) on the HSI, including active flight plan info such as flight legs, ground speed, wind speed/direction, decision height, track,

and waypoint information (when coupled to an FMS or GPS), without increasing pilot workload through the RoadRunner EFI's intuitive and easy-to-use pilot interface.



VOR Map



GPS Map



Course Deviation

# without Increasing Pilot Workload.



LPV

Rising Runway

## EXPAND LANDING CAPABILITY

With a WAAS-enabled GPS source, the RoadRunner EFI allows pilots to make localizer performance with vertical guidance (LPV) approaches, as well as approaches with advisory vertical guidance, known as LP+V and LNAV+V.

## IMPROVE SITUATIONAL AWARENESS & PERFORMANCE OVER TIME

The RoadRunner EFI's pilot-accessible **USB port** gives operators a path to implement updates and new features as they become available.

New features can have many operational benefits, including the continued improvement of situational awareness through advanced features such as synthetic vision system (SVS) and internal TAWS. With the RoadRunner EFI, these field-loadable updates are implemented quickly, with little disruption to your ongoing operations.



Synthetic Vision



**B212 & B412**



**A109**



**Astronautics**

**HH-60**

# PRODUCT DESCRIPTION



**THE ROADRUNNER EFI** consists of a hardware part number and a software flight application.

The large amount of legacy and modern interfaces provide for easy integration with existing systems as well as enablement and display of modern navigation systems and other digital inputs.

## GENERAL SPECIFICATIONS

|                   |  |
|-------------------|--|
| <b>Dimensions</b> |  |
| Electronics Unit  | 5.0"H x 4.6"W x 6.9"D                      |
| Display Head      | 9.7"H x 5.2"W x 1.5"D                      |
| <b>Weight</b>     | 8.1lbs                                     |
| <b>Display</b>    | 4" x 7" AMLCD<br>4.1" x 6.8" viewable area |
| <b>Resolution</b> | 480 x 800                                  |
| <b>Luminance</b>  | >800 cd.m <sup>2</sup>                     |

## I/O SPECIFICATIONS

|  |   |
|--|---|
| <b>ARINC 429 Inputs</b>                                    | 8 |
| <b>ARINC 429 Outputs</b>                                   | 4 |
| <b>3-wire Synchro/Resolver Inputs (XYZ)</b>                | 6 |
| <b>Synchro/Resolver Reference (26VAC or 115VAC) Inputs</b> | 5 |
| <b>ARINC 568 DME Inputs</b>                                | 1 |
| <b>4-wire Resolver Outputs</b>                             | 1 |
| <b>Low-Range Analog Inputs</b>                             | 6 |
| <b>High-Range Analog Inputs</b>                            | 8 |
| <b>RS-422 (crosslink) Inputs</b>                           | 1 |
| <b>RS-422 (crosslink) Outputs</b>                          | 1 |
| <b>RS-232 Inputs</b>                                       | 2 |
| <b>RS-232 Outputs</b>                                      | 2 |

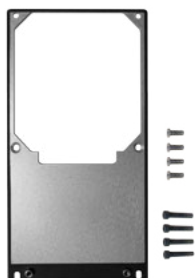
## CERTIFICATION SPECIFICATIONS

|                                |                               |
|--------------------------------|-------------------------------|
| <b>FAA TSO</b>                 | C209, C3e, C165a              |
| <b>Software</b>                | DO-178C Level A               |
| <b>Firmware</b>                | DO-254 Level A                |
| <b>Environmental</b>           | DO-160G                       |
| <b>FAA System Safety</b>       | Part 25 & 29                  |
| <b>A109 FAA STC Validation</b> | SR04390CH<br>EASA, ANAC, DGAC |
| <b>B212/412 FAA STC</b>        | SR01048DE                     |



**THE INSTALLATION KIT** contains parts needed for dealers to build an adapter harness. The Part Number Matrix will list various Installation Kit Part numbers with descriptions.

- ✓ Assuming a customer is updating an aircraft specified in the Part Number Matrix with Original Equipment Manufacturer installed displays, Kit descriptions with the Aircraft model will contain both the RoadRunner EFI connector and the aircraft side mating connectors.
- ✓ A Generic Installation Kit contains only the RoadRunner EFI connector. The dealer is responsible to source the aircraft side connectors.



**THE INSTALLATION RING** is an adapter plate designed to facilitate drop-in replacement of the existing aircraft instruments with the RoadRunner EFI.

The Installation Ring is aircraft model specific. The Installation ring hole pattern is meant to match the aircraft's existing instrument panel. The Installation ring is fastened to the panel with supplied fasteners. The RoadRunner EFI is then fastened to the Installation Ring with supplied fasteners.

The Installation Ring is not required if a new aircraft panel is being fabricated.



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