

A NEW WAY TO LOOK AT AVIONICS



EVOLUTION

FLIGHT DISPLAY SYSTEM

ASPEN  AVIONICS™

FINALLY, AN AFFORDABLE ELECTRONIC FLIGHT INSTRUMENT SYSTEM FOR CERTIFIED GA AIRCRAFT

Aspen Avionics introduces the Evolution Flight Display system, the most innovative — and affordable — glass cockpit system ever for certified general aviation aircraft.

Glass cockpits, long proven on commercial and business aircraft, bring added functionality and reduced pilot workload by consolidating primary flight data on easy-to-view electronic displays — reducing scan across multiple instruments. Yet they have remained beyond the reach of many general aviation pilots, available only in the newest aircraft or at enormous expense.

Now, Aspen Avionics' Evolution Flight Display system, based on the latest digital electronics and LCD technologies, allows you to quickly and easily upgrade the vertical pairs of instruments in your six-pack; *from one to three pairs, all at once or one at a time, as your needs and budget require.*

Not only is the system designed to work with whatever is currently in your panel — extending the life of your existing avionics — the Evolution system evolves with you via future software upgrades, maximizing your investment.

Modular Technology Makes It Easy

Aspen Avionics uses a stunningly innovative, patent pending approach to make this flexibility possible. The EFD1000 is a common hardware platform — a completely self-contained module including gyro, pitot and static sensors — that slides into the existing 3-inch instrument holes in your panel. Different versions of software turn an EFD1000 into a Primary Flight Display (PFD) or a Multi-Function Display (MFD).

Aspen offers a range of PFDs and MFDs to allow you to configure your system for your requirements. Remarkably, upgrading from one model of display to another is as easy as loading new software — so you can build on your original investment, and upgrade as your needs grow. No more tearing out the old to start anew.

Redundancy and Safety are Built Right In

The Evolution system delivers a level of redundancy and safety previously unavailable in piston aircraft — at any price. In the unlikely event that your aircraft should ever lose electrical power, each display includes a built-in backup battery designed to keep your Evolution system running for at least 30 minutes, with an emergency GPS for continued situational awareness.

Plus, should you choose to expand your Evolution system with an MFD display, you'll be adding fully redundant ADAHRS sensors along with your second display. With the push of a button, your MFD can assume the duties of your PFD: no more struggling with partial-panel when your vacuum or electrical systems fail. And your backup instruments will be identical to — and right next to — your primaries, eliminating stressful searching for rarely-used analog gauges.

Easy to Afford, Easy to Install

Advances in electronics and display technologies enable Aspen Avionics to consolidate the functionality found in bulky remote boxes of older glass cockpit systems into a small, uniquely designed form factor. This highly integrated design brings you the same great features of existing glass cockpit systems at a fraction of the price. And, since the EFD1000 can be installed individually or as a multi-tube system, your transition from steam gauges to glass can happen in stages or all at once — it's up to you.

But hardware cost is just the beginning. What really counts is the installed cost. Currently available glass cockpit solutions require the installation of several large, remote boxes, heavy wiring from nose to tail, and often the rebuild of the entire instrument panel. Evolution's innovative and patent pending design allows display units to slide right into your panel's existing instrument cutouts and contain all its major sensors — *so installation time and cost are cut at least in half.*



THE EVOLUTION FLIGHT DISPLAY SYSTEM BRINGS TECHNOLOGY AND CAPABILITY — FORMERLY AVAILABLE ONLY IN THE LATEST AIRCRAFT OR AT ENORMOUS EXPENSE — TO YOUR AIRCRAFT, WITH LITTLE MORE DOWN-TIME AND COST THAN OVERHAULING YOUR ANTIQUATED MECHANICAL GYROS

AN ELEGANT ONE, TWO, OR THREE TUBE SOLUTION

The Evolution Flight Display system allows you to upgrade your cockpit all at once, or at your own pace.



1 TUBE
Three levels of Primary Flight Displays (PFD) to choose from...

2 TUBE
Add a Multi-Function Display (MFD) for enhanced capability...

3 TUBE
The Ultimate GA cockpit solution — a PFD enhanced by two MFDs...

PILOT PFD



Modern EFIS at a breakthrough price

- Basic attitude
- Slaved DG
- Airspeed, altitude tapes
- Altitude alerter
- GPS flight plan map
- Internal backup battery
- Emergency GPS

PRO PFD



Professional-grade navigation & integration

- All Pilot features, plus...
- Full ADI
- EHSI with dual bearing pointers
- Flight director and autopilot integration
- Base map with curved flight paths
- GPS Steering
- Optional traffic, weather, terrain

ATP PFD



Ultimate PFD with many MFD capabilities

- All Pro features, plus...
- Sectional-type moving maps
- Standard traffic, weather, terrain

PFD OF YOUR CHOICE



EFD 1000 MFD



MFD plus sensor redundancy for PFD backup/reversion

- Sectional-style moving maps
- Traffic, weather and terrain hazard awareness
- 3D terrain visualization
- Customizable screen layouts
- Duplicate ADAHRS, and integrity cross-checking with PFD
- Emergency reversion to PFD functions if PFD fails

EFD 500 MFD



Lower-cost MFD without redundant sensors

- Same MFD features as the EFD1000 MFD
- But no duplicate sensors, no reversionary capability
- Most affordable price

AND

EFD 500 MFD



Double your MFD screen real estate, affordably

- Fills out your six-pack replacement with glass
- Same MFD features as EFD1000 MFD
- Can slave off EFD1000 MFD for quick and simple installation

EFD 1000 MFD



The ultimate in backup

- Triple sensor redundancy
- Fills out your six-pack replacement with glass

AND

PFD AND FIRST MFD OF YOUR CHOICE



EVOLUTION PRIMARY FLIGHT DISPLAY SYSTEMS

Aspen Avionics offers three levels of PFD, to allow you to customize your glass cockpit to meet your requirements. The PFD can be easily upgraded with minimal downtime through simple software updates. The Evolution PFD delivers an integrated solid-state air data, attitude, heading reference system (ADAHRS), combined with advanced navigation, moving map and hazard awareness capabilities.

Crisp 400x760 LCD display (145 pixels per inch) with ultra bright LED backlight for great visibility even in direct sunlight

Approach mode:
all key information on your
ADI for tighter scan

- Airspeed, altitude, attitude
- Lateral & vertical deviation
- Approach minimums

Full support for most
GA autopilots and flight
directors

Air data computer for
real-time winds and
temperatures aloft with
true airspeed

Active waypoint information
from your GPS flight plan

Slaved horizontal situation
indicator (HSI) with dual RMI
bearing pointers

Supports modern and
legacy GPS navigators and
VHF navigation radios

Automatic or
manual dimming



SD card slot for easy software and database updates

Built-in altitude alerter

Simple menu system

Flexible "hot keys"

Toggle airspeed and altitude tapes
on/off to suit your preference
(single tube installations only)

Base map underlays of GPS
flight plan and nearby nav aids

Built-in GPS Steering flies
curved flight paths (with
compatible GPS navigators)

EVOLUTION MULTI-FUNCTION DISPLAY SYSTEMS

Aspen Avionics offers two MFD models, which can be used as part of a 2-tube or 3-tube system with your Evolution PFD. The EFD1000 MFD takes your cockpit to the next level, combining moving maps, hazard awareness and more with a duplicate set of air data, attitude and heading sensors. So, in the unlikely event your PFD should fail, the MFD can seamlessly revert to deliver all the basic capabilities of your PFD so you can safely conclude your flight.

Aspen Avionics also offers the EFD500 MFD, a lower-cost version that provides moving maps, hazard awareness displays, and flight plan information—without the added expense of an additional ADAHRS set.

Choose the solution that best suits your needs and your budget, with the confidence of knowing that it's an easy, affordable upgrade to move up to the next level any time you want.

EFD1000 MFD

Add moving maps, datalink weather and traffic interfaces, a built-in terrain awareness database, flight information pages and more. Built using the same hardware as your PFD, this EFD1000 MFD gives you a full duplicate set of ADAHRS sensors, works with your PFD to continually monitor its health, and can automatically become a backup PFD if your primary should deteriorate or fail.



EFD500 MFD

The EFD500 provides the same great MFD features as the EFD1000 MFD at a lower price, by eliminating the ADAHRS sensor set (and the ability to serve as a PFD backup). It is ideal as a third tube to round out your glass cockpit six-pack replacement, and can be installed as a slave display to your EFD1000 MFD to make installation a snap.

COMING SPRING 2008

MODULAR, EXPANDABLE, AND UPGRADABLE FOR MAXIMUM FLEXIBILITY

PFD/MFD Features					
	EFD1000 Pilot	EFD1000 Pro	EFD1000 ATP	EFD1000 MFD	EFD500 MFD
Integral ADAHRS, backup battery and emergency GPS	◆	◆	◆	◆	
Integral altitude alerter/pre-select	◆	◆	◆		
GPS flight plan map views: 360° & Arc	◆	◆	◆	◆	◆
Slaved directional gyro with heading bug	◆				
Full EHSI with dual bearing pointers		◆	◆		
Dual GPS, dual VHF nav support		◆	◆		
Autopilot & flight director integration		◆	◆		
Integral GPS Steering		◆	◆		
Base map with curved flight paths		◆	◆	◆	◆
Sectional-style map			◆	◆	◆
Terrain, traffic, weather overlays		OPTIONAL	◆	◆	◆
Full-screen, 2-up, 3-up layouts				◆	◆
Reversionary PFD (emergency use only)				◆	

Pilot and Pro products available Fall 2007. MFD products available Spring 2008. ATP available Fall 2008.

SPECIFICATIONS

GENERAL SPECIFICATIONS:

Width	3.50 in. (measured at bezel)
Height	7.00 in. (measured at bezel)
Can Depth	4.11 in. (rear of bezel to rear of can)
Overall Depth	6.21 in. (knob to rear pressure pitting)
Weight	2.2 lbs
Display Type	6.0" Diagonal TFT Active Matrix LCD (400x760)
Display Colors	262,144
Face	Anti-Reflective Coated Glass
Backlight	High Intensity White LED
Rotary Knobs	Optical Encoder with Momentary Push
Dimming	Manual & Automatic (front bezel mounted sensor)

OPERATIONAL SPECIFICATIONS:

Operating Temp:	-20°C to +55°C
Storage Temp:	-55°C to +85°C
Max Operating Altitude (Ambient)	35,000
Cooling	Integral Fan
Max Humidity	95% at 50°C
Input Voltage	+8 to +32 Volts DC
Max Current	3.5 Amps

INTEGRATION SPECIFICATIONS:

Navigation Sources:

- Dual ARINC 429 GPS
- Dual RS-232 GPS
- Dual VHF navigation radios
- Radar altimeter Decision Height (DH) annunciation

Autopilot/Flight Director Support

- Bendix/King: KAP 140/150; KFC 150/200/225/250/300/325; KCP 320
- Century: II/III/IV/41/2000
- Cessna ARC 400/800/1000 series
- S-TEC: 20/30/40/50/55/55X/60/60-2/65

CERTIFICATION CANDIDATES:

Technical Standard Orders

- TSO-C2d Airspeed Instruments
- TSO-C3d Turn and Slip Instrument
- TSO-C4c Bank and Pitch Instruments
- TSO-C6d Direction Instrument Magnetic (Gyroscopically Stabilized)
- TSO-C8d Vertical Velocity Instrument (Rate-of-Climb)
- TSO-C10c Altitude Pressure Activated Sensitive Type
- TSO-C106 Air Data Computer
- TSO-C113 Airborne Multipurpose

Software

- RTCA DO-178B Level C

Environmental

- RTCA DO-160E

Supplemental Type Certificate (STC)

- Approved Model List (AML) for Over 800 Aircraft Models

Specifications subject to change without notice.

CONTACT

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ABOUT ASPEN AVIONICS

Aspen Avionics specializes in bringing the most advanced technology and capability from the commercial and business aviation markets into general aviation cockpits — and budgets. Our products increase situational awareness and reduce pilot workload, making it even easier and safer to fly in both VFR and IFR conditions. The way we look at it, getting the latest avionics technology shouldn't always mean spending a lot of money — on equipment or installation. At Aspen Avionics, we design products to be affordable, easy to install, and easy to own.