

# EVOLUTION FLIGHT DISPLAY SYSTEM

## EVOLUTION 1500



- Lowest price full-featured glass panel for GA retrofit
- Advanced EFIS six-pack replacement
- Photo-quality moving maps and crisp, clear text
- Geo-referenced charts and airport diagrams
- Terrain, traffic, maps and weather
- Optional Evolution Synthetic Vision
- Works with your panel's existing avionics — nearly every GPS or nav radio
- Broadest autopilot/flight director support
- Easiest installation
- Expandable and upgradable
- Lightest weight
- Award-winning customer service
- No-nonsense warranty

## Evolution 1500 — The Most Flexible and Affordable Glass Cockpit System

The Evolution™ 1500 delivers powerful, full-featured Primary Flight Display (PFD) and Multi-function Flight Display (MFD) capabilities at the lowest price on the market. Versatile and exceptionally easy-to-use, this pair of Evolution Flight Displays gives you the advanced glass panel technology to make every flight safer and more enjoyable.

And your fly-away cost is made even lower because Aspen's patented retrofit technology delivers substantially lower installation cost. There's no need for costly new panel modifications; Evolution Flight Displays (EFDs) uniquely retrofit directly into your aircraft's six-pack panel holes. The self-contained EFDs also don't require the installation of heavy remote mount boxes. And since Evolution displays work with the avionics already in your panel — no matter what make — you don't have to upgrade your GPS or radios.

The Pro PFD provides professional-grade EFIS primary flight instruments, with a full-featured electronic HSI with moving map. The 500 MFD adds photo-quality moving maps, terrain awareness, geo-referenced charts and

airport diagrams, and (with optional or existing sensors) traffic displays, WX500 Stormscope® display, and the full suite of XM WX® aviation weather products.

The modular Evolution Flight Displays are fully upgradable, so you can add comprehensive hazard awareness capabilities, Evolution Synthetic Vision, and even a second MFD to complete a three-display glass cockpit system. Evolution delivers greater flexibility since Aspen flight displays work with your existing GPS, radios, and traffic sensors — so you don't have to upgrade them until you're ready.

Evolution 1500 — most flexible, most compatible, lowest cost.

# EVOLUTION FLIGHT DISPLAY SYSTEM

## EVOLUTION 1500

### 1000 Pro PFD



### 500 MFD



PFD and MFD displays showing optional Evolution Synthetic Vision.

### EFD1000 PRO PFD FEATURES:

- Airspeed and altitude tapes
- Altitude alerter (and separate approach minimums alerting)
- Full electronic HSI with dual bearing pointers
- Base map with flight plan legs and waypoints, curved flight paths<sup>1</sup>, and nearby nav aids
- Integrates with most GA autopilot and flight director systems
- ARC and 360° views with dual GPS and dual VHF nav support
- Built-in GPS Steering<sup>1</sup>
- Display of real-time winds aloft, OAT, TAS, and ground speed<sup>1</sup>
- Integral Air Data Computer and Attitude Heading Reference System (AHRS)
- Built-in backup battery and emergency GPS
- Optional Evolution Synthetic Vision<sup>4</sup>
- Optional Evolution Hazard Awareness (EHA) upgrade provides traffic and weather displays<sup>2,3</sup>
- Brilliant, direct sunlight-readable, 6-inch 760x400 TFT active matrix LCD display (140 pixels/inch)

### EFD500 MFD FEATURES:

- High resolution aviation style moving maps with hazard awareness overlays
- Customizable screen layouts
- Geo-referenced charts and airport diagrams
- Evolution Hazard Awareness (EHA) Built-in Terrain Awareness system Traffic<sup>2</sup>
- WX500 Stormscope® compatibility XM WX® Satellite Weather, with all XM WX aviation weather products<sup>3</sup>
- Built-in backup battery
- Brilliant, direct sunlight-readable, 6-inch 760x400 TFT active matrix LCD display (140 pixels/inch)

<sup>1</sup> With compatible GPS navigators

<sup>2</sup> Requires ARINC 735A compatible traffic system.

<sup>3</sup> Requires Aspen EWR50 Weather Receiver or equivalent.

<sup>4</sup> See [www.aspenavionics.com/availability](http://www.aspenavionics.com/availability) for product availability dates.

See [www.aspenavionics.com/approvals](http://www.aspenavionics.com/approvals) for the latest list of approved aircraft makes and models and autopilot/flight director systems.

Features and specifications are subject to change without notice.

### The 500 MFD — Multi-Function Versatility



Easily zoom, pan, and see your present position overlaid on geo-referenced charts and airport diagrams. In flight, cross-check positioning between chart and moving map.

Enhance situational awareness with a large traffic display for busy terminal environments, and hi-res sectional-style map with your flight plan overlaid.



Three dedicated displays in one; with your choice of content in each. Shown here: monitor potential traffic and weather hazards, while tracking progress along your IFR flight plan.



Add an Evolution 1000 MFD for a total glass cockpit system, including PFD redundancy and more display area than competing flight displays.

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# EVOLUTION SYNTHETIC VISION



Evolution 2500 showing Evolution Synthetic Vision on center PFD

## 3-D Situational Awareness Made Flexible and Affordable

Evolution Synthetic Vision (ESV) is an optional expansion to the Evolution Flight Display System. ESV presents a real-time, computer-generated 3D view of terrain, obstacles, and traffic. The synthetic rendering simulates the view from the cockpit on a bright day, so it's especially helpful to provide enhanced situational awareness when flying during conditions of reduced visibility or darkness.

### Precision and Clarity

Evolution Synthetic Vision sets a new industry benchmark for precision by using 3-arc second terrain data. Aspen's 140-pixels/inch display delivers crisp, clear, high-resolution detail—the perfect platform for synthetic vision technology.

### Unique Flexible Display Layouts

User-configurable screen layouts allow you to specify which PFD and/or MFD screen areas you wish to display synthetic vision. Choose between wide and normal field of view settings to control the level of detail you prefer.

### Simple, Easy Upgrade

Your Authorized Aspen Avionics Dealer can easily upgrade your Evolution installation via the display's front-loading micro SD slot.

### Breakthrough Pricing

Evolution Synthetic Vision is the lowest cost, certified synthetic vision technology available, with options starting at \$2995.

# Versatile, User-Configurable Layouts

## Evolution Synthetic Vision on the Evolution 1000 Pro PFD



Pro PFD full screen, wide field of view



Pro PFD full screen, narrow field of view



Pro PFD — Evolution Synthetic Vision top, terrain view with hazard overlay bottom

## Evolution Synthetic Vision on the Evolution 1000/500 MFD



MFD Thumbnail Layout — secondary AI and top-down terrain hazards at top; Evolution Synthetic Vision bottom



MFD Split Screen Layout — Evolution Synthetic Vision top, navigation and top-down terrain hazards bottom



MFD Full Screen Layout — Evolution Synthetic Vision, narrow field of view, 3D traffic

## Evolution Synthetic Vision Unique Features & Benefits

- Three arc-second terrain data accuracy
- 3-D traffic
- Predictive collision warning for terrain & obstacle hazards
- User-configurable screen layouts
- Wide or narrower field-of-view options
- PFD and MFDs may display synthetic vision simultaneously
- Low-cost upgrade

In addition to unique-to-Aspen features, ESV also includes all of the familiar Synthetic Vision capabilities pilots have come to expect, including flight path marker symbology and perspective views of traffic, obstacles, airports and runways.

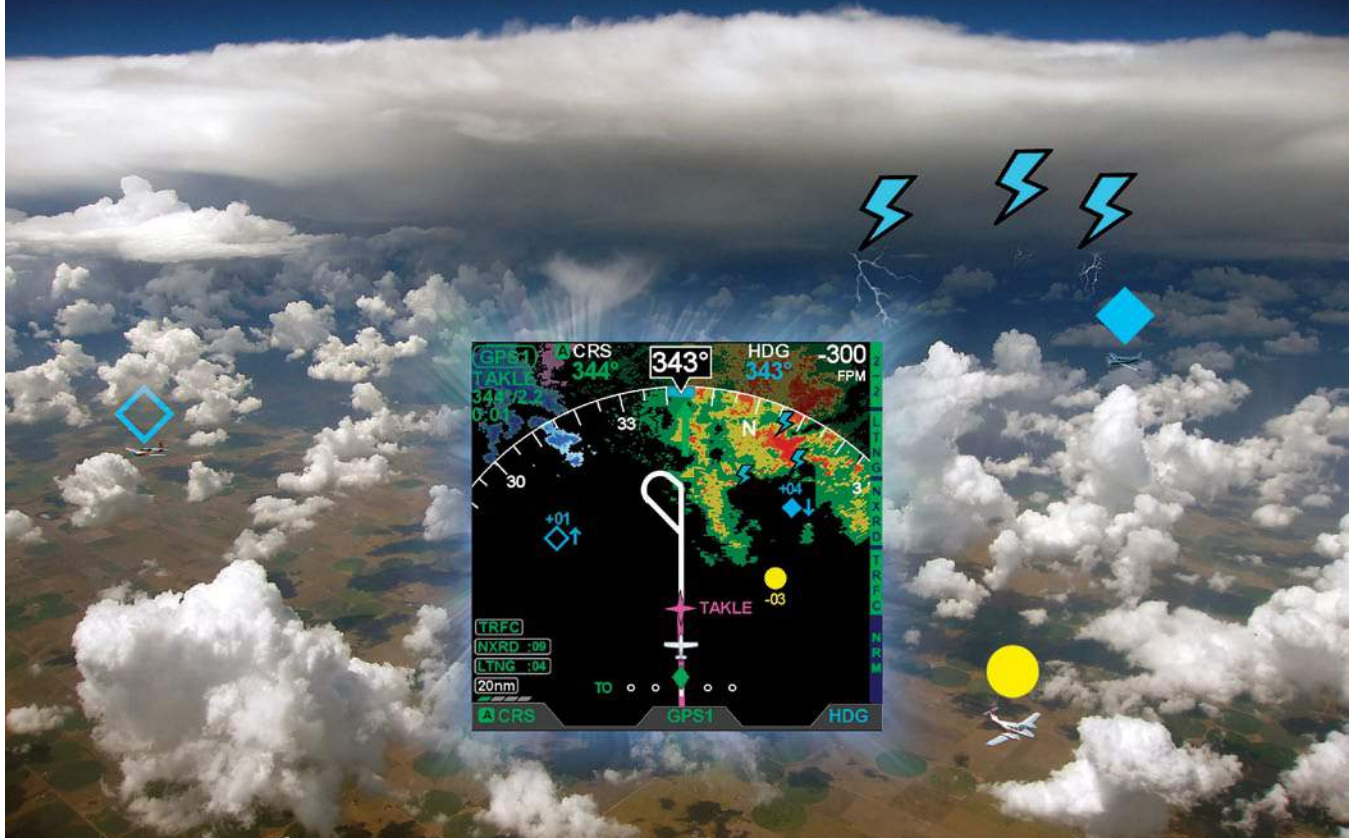


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# Terrain, Traffic, and Weather at a glance.



## EVOLUTION HAZARD AWARENESS

### Integrated Hazard Awareness

Evolution Hazard Awareness (EHA) presents an integrated display of potential flight hazards directly in front of the pilot. EHA is a standard, built-in feature of the Evolution MFDs and is an optional software upgrade on the Pro PFD. EHA enables the display of traffic, datalink weather, and WX500 Stormscope(R) data from compatible sensor systems.

Combining XM WX® Satellite Weather, Stormscope lightning, traffic, and terrain on your primary navigation display and moving maps makes it easy to see and avoid hazards, even in IMC. EHA provides a better, more integrated display for compatible hazard sensors, while the Evolution EWR50 Weather Receiver delivers breakthrough pricing for datalink weather solutions.



#### Terrain

An internal terrain and obstacle awareness system is built into Aspen's Evolution MFDs.

#### Traffic

EHA integrates and displays nearby traffic information from compatible traffic sensor systems.

#### Weather

EHA puts lightning and datalink weather information into your primary field of view.

#### Breakthrough Pricing

The Evolution EWR50 is the lowest cost certified weather receiver available.

# Evolution Hazard Awareness Feature Comparison

	1000 Pro PFD EHA Software Upgrade	MFD Built-in Features
Terrain		◆
Traffic <i>(Requires ARINC 735A compatible traffic system.)</i>	◆	◆
Weather	◆	◆
<b>WX500 Stormscope interface</b>	◆	◆
<b>Datalink Weather</b> <i>(Requires Aspen EWR50 Weather Receiver or equivalent.)</i>	◆	◆
Hi-res NEXRAD radar	◆	◆
Radar coverage map	◆	◆
Precipitation type (at surface)	◆	◆
TFRs		◆
METARs		◆
TAFs		◆
AIRMETs		◆
SIGMETs		◆
Cloud tops		◆
Echo tops		◆
Lightning	◆	◆
Winds aloft (by altitude)		◆

## EVOLUTION HAZARD AWARENESS FEATURES:

### Weather

WX500 Stormscope®

- Control and display lightning data
- Cell and strike modes
- RS-232 interface

XM WX® Satellite Weather

*(Requires Aspen EWR50 Weather Receiver or equivalent.)*

- Compatible with Evolution Weather Receiver, and Heads Up Technologies XMD-076/A receivers
- Supports full suite of XM WX Satellite Weather aviation products (display capabilities vary by model)
- Data from single weather receiver can be displayed on up to three Aspen EFD displays

### Traffic<sup>1</sup>

- Supports traffic systems with standard ARINC 735A outputs, including TIS-capable Mode S transponders
- Enhanced traffic system features and control available on MFD systems (features vary by manufacturer)
- Data from single traffic receiver can be displayed on up to three Aspen EFD displays

### Terrain

- Terrain and obstacle awareness display and database built into MFDs

<sup>1</sup>See [www.aspenavionics.com/availability](http://www.aspenavionics.com/availability) for product availability dates.

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Evolution Hazard Awareness is available on one, two, and three display Evolution PFD and MFD Installations

## Lowest Cost Certified Weather Receiver

### Aspen EWR50

Display datalink weather on three displays with one receiver



### EVOLUTION EWR50 WEATHER RECEIVER:

RS-232 interface to the 1000 Pro PFD and 500 MFD	Nominal Current:	0.12/ 0.22 amps (28v/14v)
Works with all standard XM WX antennas, including combos	Software:	DO178B Level E
Input voltage: 11-32 vdc	Environmental:	DO160E
Dimensions: 7.8" x 6.5" x 1.35"		
Weight: 1.4 lbs.		



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