



*Envision brings the advantages of integrated flight deck technology to the retrofit market for business and general aviation aircraft.*



*Envision* is Avidyne's new retrofittable Integrated Flight Deck system that is designed with the flexibility to be installed in a number of different aircraft types and configurations.

With *Envision*, you can add all the enhanced situational awareness and reliability benefits of an all-glass flight deck to virtually any general aviation aircraft.

With several display options, including single and dual EXP5000 PFDs, and 10.4-inch EX5000 or 5.5-inch EX500 MFD configurations, *Envision* can be customized to fit in virtually any panel space. The *Envision* EXP5000 PFD conveys traditional primary flight instrumentation as well as a pilot-selectable moving map presentation of flight plan data and an RMI pointer, all within the primary field of view, reducing pilot workload. The versatile EX5000 or EX500 MFD shows navigation data, lightning, traffic, obstacles, and terrain with an intuitive user interface.

Many original equipment manufacturers (OEMs) have integrated Avidyne's *Entegra* system into their new production aircraft, setting off a wave of integrated flight deck technology adoption not seen since the migration of EFIS from air transport to business jets.

With *Envision*, Avidyne is making this technology available for retrofit installation into the existing fleet of general aviation aircraft.



# Envision

## Integrated Flight Deck System

### Bringing it All Together

Envision integrates all of your primary flight instruments into a single, easy-to-use, and easy-to-interpret display.

### Integrated EHSI

The electronic horizontal situation indicator (EHSI) puts advanced navigation display capability in the primary field of view. Fully integrated with your VLOC/ GPS, *Envision* provides synchronized switching as you transition from the enroute phase to the approach phase of your flight.

### Easy-to-Fly Trend Indicators

The *Envision* EXP5000 PFD provides 6-second trend indicators for airspeed, altitude and heading. Trend indicators, typically found on air transport and high-end corporate jets, allow you to fly with higher precision and reduced workload when changing or maintaining critical airspeeds or altitudes.

### V-Speeds & Heading Tick Marks

V-Speed labels on the Airspeed Indicator for  $V_x$  – Best Angle of Climb,  $V_y$  – Best Rate of Climb, and  $V_g$  – Best Glide, take the guesswork out of flying precise airspeeds during critical phases of flight. The addition of Heading Tick Marks across the EXP5000's horizon improve the pilot's ability to anticipate heading intercepts while reducing the pilot's scan area.

### Integrated Autopilot Functions

The *Envision* EXP5000 PFD may be coupled with the autopilot for altitude preselect, vertical speed select and heading select modes without the need for external controllers. Selection bugs and digital readouts for each of these parameters are provided for concise operation.

### Simple Controls

The straight-forward user interface makes flying *Envision* a breeze. Human-factors studies and flight test experience suggest less is more in terms of PFD modes, and we've kept it simple, yet elegant. *Envision* provides one-button access to frequent pilot settings such as BARO and altitude/ vertical speed/ heading bugs. Nav sources are push-button selectable for the EHSI needle, the bearing pointer, and the flight-plan moving map. The *Envision* EXP5000 PFD was designed to have a learning curve of less than five minutes. It's simply that easy to use.

### Full-time Wind Vector

An integrated air data computer provides you with a full-time instantaneous wind vector, taking the guesswork out of finding

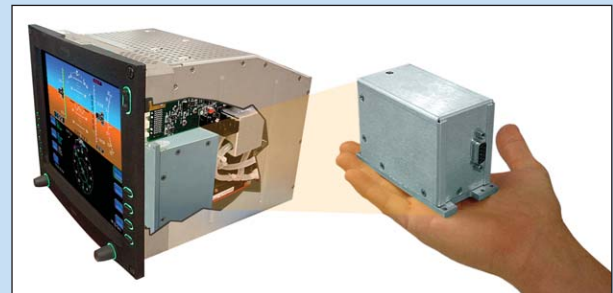


the right altitude to optimize your flight time. It is equally valuable as you correct for wind while entering the pattern or flying an instrument approach.

### Cross-Compare System™

In dual-PFD installations, Avidyne's unique Cross-Compare System™ (CCS) constantly monitors both ADAHRS and provides visual alerts in the unlikely event of any discrepancy. CCS also monitors the aircraft navigation systems and in the event of any inconsistency, provides the appropriate alerts.

### Solid-State ADAHRS – The Heart of Envision



At the heart of the *Envision* EXP5000 PFD is Avidyne's fully-integrated, solid-state Air Data/ Attitude and Heading Reference System (ADAHRS).

The compact, lightweight, ADAHRS system uses a 3-axis solid state gyro and accelerometer system combined with a magnetometer to replace vertical and directional gyros.

Avidyne's state-of-the-art ADAHRS provides Roll, Pitch, and Heading data with reliability far exceeding mechanical gyros, at a price point far below solid-state systems found in high-end corporate aircraft.

Connected to the pitot-static system, *Envision's* integrated air data computer provides airspeed, altitude, vertical speed, and outside air temperature (OAT), and continually updates the winds aloft and true airspeed (TAS) indications on the display.

## Satellite Datalink Weather & Entertainment



Avidyne leads the industry in datalink-capable multifunction displays and the EX500 and EX5000 MFDs provide the most advanced, and easiest-to-use datalink systems you can get. Interfacing the MFD with Avidyne's MLB700 Broadcast Datalink Receiver gives pilots comprehensive, graphical information about weather conditions all across the Continental United States (CONUS).

GS 100kts	TRK 038°	Scale	5nm	Time 17:17:18	UTC 21:17:18		
WPT	BRG	DTK	NM	ETE	ETA	METAR	
To: SIE	038°	038°	38.8	0:23	17:40	KWWD	KBTB Info
Wx:			109.4			KBLM	
JFK	039°		142.5	1:25	18:42	KJFK	Display METAR
Wx:			199.7			KOXC	
Wx:			314.4			KVSF	
Dest: KBTB	019°		374.3	3:44	21:01	KBTB	
METAR Conditions at KBTB		Age:		10 minutes			
Cloud: 3500 feet few		Wind:		260° at 4 kts			
9000 feet scattered		Gust:		none			
Weather: none		Visibility:		10SM			
		Temp/Dew:		24°C / 14°C			
		Altimeter:		29.82 inches of Hg			

The trip page shows all waypoints in the flight plan, along with graphical and textual METARs at each reporting waypoint.

Using the industry-leading WSI InFlight® Weather Service, and the SIRIUS® Satellite Radio Network, the EX500 and EX5000 MFDs display critical, near-real time information for pilots including WSI's exclusive high-resolution NOWRad® radar mosaic, overlaid right on the moving map. The satellite datalink weather system also provides Storm Track Vectors, Hail Warnings, AIRMETS, SIGMETs, graphical and textual METARs, TAFs, Temperatures and Winds Aloft, and Lightning from the National Lightning Detection Network®.

GS 100kts	TRK 038°	Scale	5nm	Time 17:18:37	UTC 21:18:37		
WPT	BRG	DTK	NM	ETE	ETA	METAR	
To: SIE	038°	038°	36.5	0:21	17:40	KWWD	KBTB Info
Wx:			107.2			KBLM	
JFK	039°		140.2	1:24	18:42	KJFK	Display WINDS
Wx:			197.5			KOXC	
Wx:			312.2			KVSF	
Dest: KBTB	019°		374.3	3:44	21:01	KBTB	

EX500/EX5000 shows Winds & Temperatures Aloft to help determine best cruising altitude.

### SIRIUS Satellite Radio

Access more than 130 channels of digital-quality music, sports, news, and talk radio through your aircraft's audio system. Audio content can be selected from anywhere in the aircraft using the RC70 wireless RF remote control.



## Integrated Situational Awareness

### CMax™ Maximizing Your Approach

Avidyne's CMax™ Electronic Charts option offers a world-wide library of geo-referenced approach charts and airport diagrams, helping you manage and access critical flight information and reducing the amount of paper required on board your aircraft.



Available for the EX500 MFD as well as for the large-format EX5000 MFD (shown here), CMax utilizes Jeppesen's trusted JeppView™ Electronic Airway Manual, and makes accessing an approach or viewing an airport diagram a breeze.



At startup, your departure airport chart is automatically loaded for ease of orientation, especially at unfamiliar fields. Your destination airport diagram and the list of available approaches are automatically loaded at the time your flight plan is entered, and can be viewed easily using the Auto-fill capability, or you can easily select and view any approach at any airport in the database.

## Specifications

(behind panel)

Size	Height	Width	Depth	Weight
EXP5000 PFD	8.5" 21.6cm	10.7" 27.2cm	9.4" 23.9cm	12.0 lbs 5.45kgm
EX5000 MFD OR	8.5" 21.6cm	10.7" 27.2cm	4.62" 11.7cm	6.75 lbs 3.07kgm
EX500 MFD	4.35" 11.04cm	6.25" 15.9cm	10.75" 27.03cm	7.20 lbs 3.24kgm

### TSO Compliance

TSO-C2d	Airspeed Instruments
TSO-C3d	Turn & Slip Instruments
TSO-C4c	Bank & Pitch Instruments
TSO-C6d	Magnetic Direction Instruments
TSO-C8d	Vertical Velocity Instruments
TSO-C10b	Altimeter, Pressure Actuated
TSO-C37d	VHF Radio Communications Transmitting Equipment
TSO-C38d	VHF Radio Communications Receiving Equipment
TSO-C43c	Temperature Instruments
TSO-C63c	Airborne Weather Radar
TSO-C106	Air Data Computer
TSO-C110a	Airborne Passive Thunderstorm Detection
TSO-C113	Airborne Multipurpose Electronic Display
TSO-C147	Traffic Advisory System (TAS)
TSO-C157	Flight Information Systems-Broadcast (FIS-B)

### Displays

10.4" Diagonal, Color Active-Matrix LCD  
Sunlight readable  
800x600 pixels, 65,536 colors

### System Power

6.0 A @ 28VDC

### Operating Altitude

Up to 25,000 ft. (cabin pressure)

### Operating Temperature

-20C to +55C  
+70C Short term

### Warranty

2 Years parts & labor included  
Extended warranty service available

## Functionality

### Datalink Interface

- Avidyne MLB700 Broadcast Datalink Receiver – for WSI InFlight® Aviation Weather and SIRIUS® Satellite Radio
- Heads Up Technologies XMD-076/A for Baron Services weather and XM Satellite Radio

### Vector-Graphic Moving Map

- Americas Jeppesen NavData®
- International Jeppesen NavData (optional)
- Portable Dataloader or USB Flash Drive (optional)

### GPS/FMS/LOC Interface

- ARINC 429 GAMA Graphics (PFD & MFD)
- RS-232 (MFD)

### Electronic Approach Charts

- CMax™ – Jeppesen Electronic Airway Manual Charts (optional)

### Lightning Interface

- Avidyne TWX670 Tactical Lightning Detection
- L3 WX-500 Stormscope® Weather Mapping Sensor

### Traffic Interface

- Avidyne TAS600/TAS610/TAS620 TAS
- Ryan 9900B/9900BX TAS
- Honeywell KTA870/KMH880 TAS/IHAS
- L3 Skywatch 497 /Skywatch HP TAS
- Garmin GTX330 TIS Transponder
- L3 791 TCAS I
- Honeywell CAS66A TCAS I

### Autopilot Interfaces

- S-TEC Intelliflight 2100
- S-TEC 55X
- Bendix/King KAP140

### Terrain Awareness

- Color-Contoured Terrain Base Map Built in – Americas Terrain & US Obstacle Data – International Terrain Data (Optional)

### EGPWS/TAWS Interface

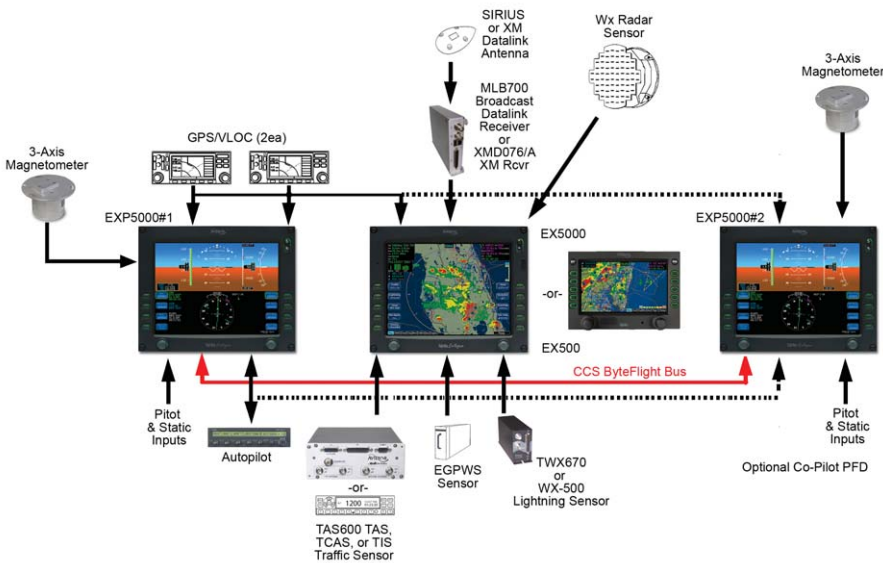
- Honeywell MK V, VI, VII, VIII
- Honeywell KMH880 IHAS
- Honeywell KGP560

### EX500 Radar Interface

- Collins WXR250/270/300
- Bendix RDR130/150/160
- Bendix RDR1100/1200/1300
- Bendix RDS81/82/82VP/84/84VP/86/86VP
- Bendix/King RDR2000/2100

### EX5000 Radar Interface

- Bendix/King RDR 2000/2100
- Bendix RDS 81/82/82VP/84/84VP/86/86V



*Avionics installations require special skills and test equipment. Avidyne's limited warranty is valid only for equipment installed by an authorized Authorized Avidyne Distributor. Avidyne reserves the right to make changes to product specifications and design features without notice. Avidyne® is a protected trademark of Avidyne Corporation. All other trademarks are the property of their respective companies.*



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