GARMIN UNVEILS AXIS, A NEW GENERATION OF HIGHLY INTEGRATED FLIGHT DISPLAYS

News / Manufacturer

Garmin announced AXIS, an all-new family of flight displays, designed from the ground up to offer a highly integrated and flexible cockpit display solution. AXIS brings Garmin's latest avionics technology to certified piston-powered single and twin1 engine aircraft via an expansive AML STC covering hundreds of models, as well as experimental and LSA aircraft. In an industry-first, AXIS flight displays come in a variety of models that can include a built-in IFR GPS, NAV/COMM radio, and audio panel capability – creating an integrated solution that enhances the user experience, reduces aircraft weight, and simplifies installation. Also compatible with many of the same navigators, radios, modules and sensors as Garmin's popular G3X Touch flight displays, AXIS features an easy upgrade path, including leveraging the same panel cutouts and mounting points.

Carl Wolf, Garmin Vice President Aviation Sales, Marketing, Programs & Support commented: "AXIS redefines Garmin's flight display portfolio and brings industry-first capability to a single flight display. This game-changing flight display system delivers a modern, highly capable cockpit experience while significantly reducing time, complexity and cost of installation through integration of navigation, communication and audio functions into a single flight display. The visual design

elements and crisp user interface bring together decades of Garmin innovation in a familiar yet modern design. AXIS sets the new standard for what pilots can expect from an integrated flight display system."

A next-level flight display system

The AXIS family of flight displays features three display sizes — 11.6-inch landscape, 8-inch portrait1 and 8-inch landscape1— that include highly responsive touchscreen displays as well as physical controls for quick access to key functions. Each display can be configured as a primary flight display (PFD) or multi-function display (MFD) with an optional engine indication system. Pilots can maximize their situational awareness with full-screen or split-screen options, leveraging a familiar yet modernized user interface. The flight displays are configurable for both experimental and certified aircraft and provide incredible flexibility for installation across many aircraft types.

First-of-its-kind integration

AXIS 11.6-inch displays are optionally available with a TSO certified IFR GPS, COMM radio, NAV radio and audio panel all built into a single display. This combined capability from a single display creates a highly integrated panel experience and enables a simpler and more cost-effective installation. The VHF COMM radio offers 10 watts of transmit power, supports 8.33khz frequency tuning and standby COMM monitoring, allowing pilots to monitor a standby frequency while tuned to the active ATC frequency. Pilots can access the flight plan across displays and easily load waypoints or VORs, holds, GPS and ILS procedures and more. The built-in 4-place intercom audio panel includes dual-comm switching with support for one external radio, comm playback and Bluetooth capability for music and phone calls. Available in three certified variants, the base version offers a PFD/MFD, while the GPS/COMM and GPS/NAV/COMM models include an IFR GPS and integrated audio panel. Experimental and LSA aircraft can leverage both certified and non-TSO versions of the 11.6-inch displays.

Enhanced situational awareness

Important information is easily accessible on the PFD including primary flight data, as well as the horizontal situation indicator which can include an embedded map or traffic view. Widgets provide additional situational awareness on the PFD by displaying three compact views of MFD functions including map, flight plan, weather, traffic and more. Enhanced Synthetic Vision Technology provides 3D depictions of terrain, obstacles, runway and taxiway markings and more, allowing for pilots to clearly interpret their surroundings. Pathway rectangles will help pilots to visualize the highway in the sky, depicting their flight path including enroute legs, flight track, course intercepts and more. Additionally, 3D SafeTaxi provides pilots with a three-dimensional, exocentric view of the airport environment directly on their PFD, reducing potential confusion by giving a clear, localized picture of taxiways, runways, hangars and surrounding buildings.

The MFD features dynamic mapping, ADS-B traffic, weather, waypoint information (including terminal charts) and expanded EIS. Additionally, an HDMI video input on each display allows for live-camera video monitoring.

Innovative safety tools

AXIS supports many of Garmin's award-winning safety enhancing technologies. A dedicated emergency button is located on the display bezel, allowing pilots to quickly access emergency procedure options if needed. Smart Glide™ – a Garmin Autonomí™technology – helps pilots in loss of engine power emergencies by efficiently navigating to an airport in range and, if the aircraft

is equipped with either a GFC™ 500 or GFC 600, the system can auto-engage to fly the aircraft enroute.

Terminal safety solutions include award-winning Runway Occupancy Awareness (ROA), a solution that uses ADS-B traffic to alert the crew of potential runway incursions caused by nearby airborne aircraft, taxiing aircraft and ground vehicles. Additionally, optional SurfaceWatch™ runway monitoring technology provides general situational awareness in airport environments as well as visual and aural cues to help prevent pilots from taking off or landing on a taxiway.

Advanced engine monitoring

The EIS within AXIS provides aircraft with real-time data to help better manage engine operation and protect aircraft engines. Large, prominent engine gauges provide color-coded pointers and data bands that indicate normal operating ranges, cautions and exceedances. Bar gauges display numerical values for additional precision. With an interface adapter and sensors, AXIS can serve as the primary EIS display in piston-powered aircraft equipped with most normally aspirated or turbocharged 4- to 6-cylinder engines, plus radial and turbine-powered experimental aircraft3. Upon landing, flight and engine data logs can be automatically uploaded to flyGarmin.com via the Garmin Pilot app or the GDL 60 datalink1 and PlaneSync service. Pilots can optionally choose to share these logs with analysis services such as FlySto or SavvyAviation to gain deeper insights on engine health, maintenance updates, flight analysis and more.

Stay connected

Advanced connectivity options allow pilots to stay more connected than ever before. Built-in Wi-Fi and Bluetooth allow pilots to connect with Garmin Pilot in-flight as well as share GPS, traffic, weather, flight plans and more. PlaneSync, powered by the GDL 60 datalink1, will support automatic database downloads3, remote aircraft status4 as well as automatic flight log uploading. A built-in USB-C data port supports data transfer capabilities like downloading databases and offloading flight logs. The USB-C port will also support device charging up to 27W. Additionally, Database Concierge allows pilots to download updates to their Garmin Pilot app and wirelessly transfer to their compatible avionics via a compatible mobile device.

Team X simplifies installations

Team X – the experimental aircraft specialists at Garmin – were the voice for experimental builders and pilots throughout the development of AXIS. Composed of engineers, pilots and aircraft builders, they understand the flexibility and affordability needed to execute an experimental aircraft build. That's why AXIS features a streamlined, easy upgrade path from G3X Touch that utilizes most existing sensors, LRUs and even the same panel cutout and existing mounting holes. Simplified wiring, configuration and additional built-in I/O makes AXIS an even faster and more scalable system. Team X is committed to providing support throughout AXIS upgrades for experimental aircraft builders.

Available for certified and experimental aircraft

The AXIS 11.6-inch flight displays have achieved FAA/EASA Technical Standard Order and will be available in July. The 8-inch displays are expected to be available in early 2027. The FAA Supplemental Type Certificate will cover hundreds of models of certified Part 23 Class I/II piston singles and twins. STC approvals with other civil aviation authorities are expected in the near future.

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