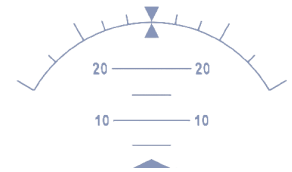




For pilots
 who never
 expected to see
 avionics technology
 this advanced
 find its way
 into their cockpits
 this soon.

From the panels of new piston singles to the flight decks of next-generation light jets, Garmin's G1000™ integrated avionics suite is changing the face of OEM cockpit design. Large-format LCD color displays



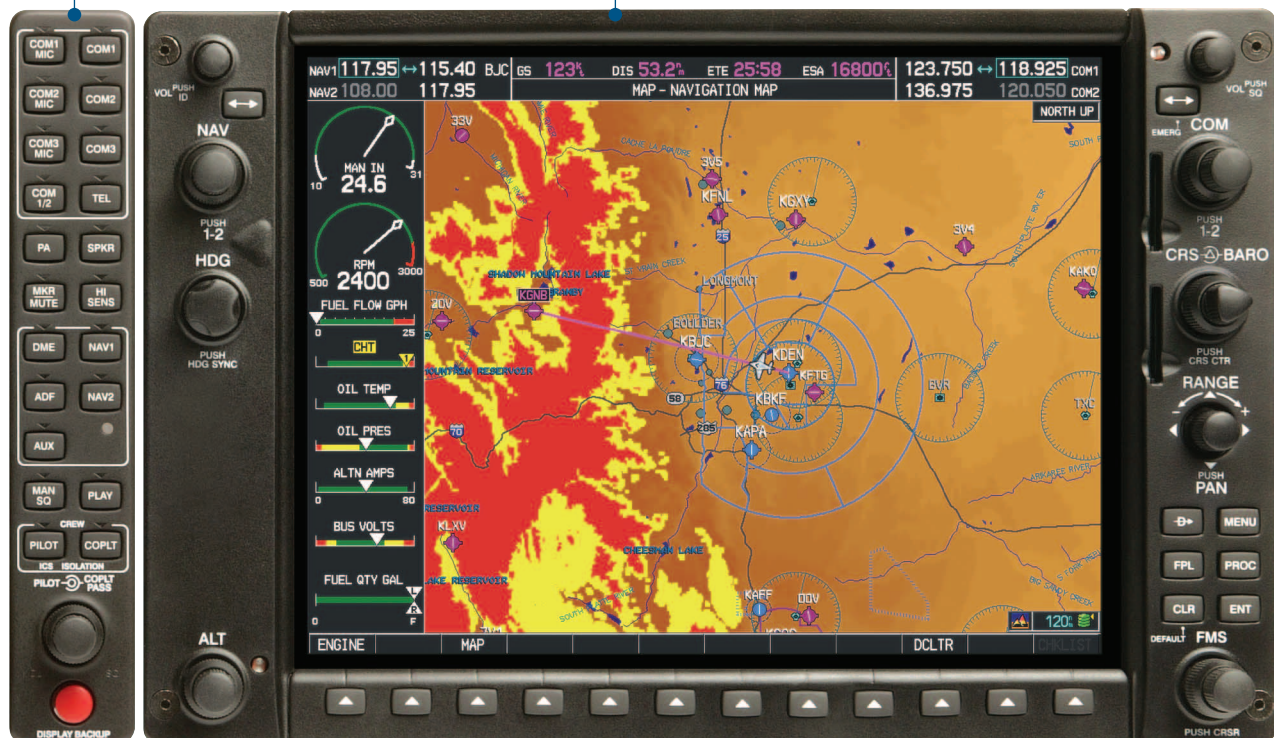
[Garmin accelerates the evolution of digital "glass cockpit" avionics]

consolidate all primary flight, navigation, engine and sensor data – bringing new levels of safety, simplicity and situational awareness within reach of most new aircraft buyers.



On most installations, the Garmin GMA 1347 audio panel is centrally located between the G1000™ PFD and MFD for easy access by the pilot or copilot. Switching inputs are provided for comm and nav radios, as well as auxiliary audio and intercom systems. Noteworthy features include high-quality digital audio, automatic squelch, plus unique audio recording/playback capability to help ensure accurate readback of ATC clearances.

The Garmin GDU 1040/1045 is the standard control/display platform for the G1000's primary flight display (PFD) and multi-function display (MFD). Powered by an X-scale microprocessor, the unit features a high-performance graphics accelerator for superior 3D rendering. It's also equipped with an infrared port to accommodate data entry via handheld Garmin PDAs.



A choice of display formats allows pilots to select the attitude/heading presentation they prefer on the G1000 PFD. Current format options include standard HSI mode or segmented arc mode.



Now, looking to the future doesn't have to mean waiting for the future. In fact, it's right here in front of you: In the visionary Garmin G1000™ Integrated Avionics Suite.

Leveraging Garmin's proven assets in comm/nav/ident (CNI) avionics integration, GPS navigation, and high-resolution displays, with new developments in flight control, air data, and Ethernet connectivity, the G1000 is a breakthrough in both capability and affordability.

Designed to fit a broad range of aircraft models – from piston singles to business jets – this lightweight, modular system seamlessly integrates control and display of virtually all avionics and instrument functions in one comprehensive “big picture” package. Garmin's all-glass flight deck is a highly flexible and scalable design, which can be configured as a two- or three-display system.

The standard 10-inch flat-panel LCDs are interchangeable for use as either a primary flight display (PFD) or multi-function display (MFD). An optional 15-inch screen is also available for even larger format MFD configurations.

An all-inclusive package

Functions provided by the G1000 include display of attitude, air data, engine and airframe status and situational reference via a moving map display, with position derived by GPS. System growth to include terrain and obstacle alerting, as well as complete engine indication (EIS) advisories will be accommodated by built-in system interfaces.

In addition, complete VHF comm, VOR/ILS and transponder functions are provided by the G1000 – and controlled by knobs and selector keys located on the PFD and MFD bezels. Onscreen navigation, communication and mapping functions are

supported by a detailed Jeppesen® flight database, which may be easily updated by means of standard front-loading data subscription cards.

The picture of confidence

By presenting key aircraft performance, navigation, weather, terrain and traffic information, in context, on its large XGA-quality (1024 x 768) high-resolution screens, the Garmin G1000 system increases situational awareness – and thus, pilot confidence. Offering wide side-to-side viewing angles and crystal-sharp, sunlight-readable TFT optics, these easy-to-scan G1000 displays put a wealth of flight-critical data right at the pilot's fingertips. This data includes:

- Flight instrumentation – Wide horizons; three-axis flight dynamics; air speed; altitude; vertical speed; horizontal situation indication (HSI) with selectable 360-degree and segmented arc directional views
- Engine performance – All engine operational parameters for piston, turboprop and turbofan engines; engine trend data; exceedance monitoring; lean assist; and more
- Weather – Future weather radar, satellite weather data link (via Weather Works and XM Radio); lightning-detection interfaces
- Terrain – Built-in growth capacity for Class-B TAWS; detailed topographic mapping
- Traffic – TIS (Traffic Information Services) data, using Garmin Mode S technology; Traffic Advisory System (TAS) interfaces; future expansion to accommodate emerging traffic-awareness technologies



Comm 1/2 control

Crs/Baro control

Joystick control

FMS control knobs

As typically configured, the G1000's multi-function display is used primarily for engine and fuel systems monitoring, plus detailed moving-map graphics. The map function is designed to interface with a variety of sensor inputs, making it easy for pilots to overlay lightning, traffic, weather, terrain and other avoidance system advisories, as desired. Sensor displays are selectable, allowing the pilot to add or deselect overlays to 'build at will' the map view he or she prefers for any given phase of flight.

Data link to the future

Emerging satellite data link technology promises to connect the G1000 system with an impressive array of commercial and NWS weather and inflight information sources. Brilliant color display of current NEXRAD radar summaries and graphical or textural METARS information can be delivered to the cockpit, anywhere in the U.S. Pilots will be able to select and display weather data for the aircraft's current location, final destination, or any flight plan waypoint, for better decision-making en route. Garmin's data link capability is the ideal supplement to onboard tactical weather technologies such as lightning detection and airborne radar.

Advanced AHRS architecture

For reliable output and referencing of aircraft position, rate, vector and acceleration data, the G1000 uses Garmin's innovative GRS77 Attitude and Heading Reference System (AHRS). Able to properly reference itself even while the aircraft is moving, the Garmin AHRS offers all the standard elements of traditional strap-down AHRS – at a fraction of the cost. What's more, it uses additional comparative inputs from GPS, magnetometer and air data computer information to achieve new levels of integrity, reliability and precision.

Flight management, simplified

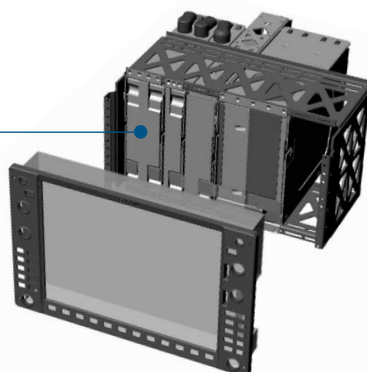
The vision for Garmin's G1000 suite was to develop a fully integrated, all-glass avionics system that would enhance situational awareness, reduce pilot workload, and make futuristic flight capabilities available today – at a price most new aircraft buyers could afford.

Clearly, that vision has become a reality.



For backup redundancy, the G1000 PFD/MFD displays are designed to enter a reversionary mode should failure or shutdown of either display occur. Fault monitoring and reversion are automatic; however, the pilot can also manually select reversion mode by pressing a dedicated red button at the bottom of the audio panel. In reversionary mode the remaining operable CDU is reconfigured to present the PFD symbology with engine parameters on the left-hand side of the display. Pop-up windows allow additional mapping, checklist or other desired inputs to remain visible on the PFD.

And it's a reality supported and reinforced by more than 700 Garmin sales/service centers worldwide. With support spares, parts and loaner units strategically located in key locations around the globe, G1000 customers are never far from the "keep 'em flying" brand of service that has made Garmin the #1 avionics supplier in the owner-flown aircraft marketplace.



A unique modular system rack accommodates major components of the G1000 suite. The rack may be conveniently panel-mounted behind the CDU or located remotely in an avionics equipment bay. Ethernet data-bus technology simplifies installation while reducing overall weight and wire count. Hand-release locking levers secure modules in the rack – so, no tools are required for removal.

GARMIN G1000 FEATURES AT A GLANCE.

- Large-format LCD displays – interchangeable for use as PFD or MFD
- Fully integrated CNI suite with WAAS-upgradable GPS
- Available with two- or three-axis, fail-passive flight control system
- Ethernet data-bus connectivity
- Selectable PFD flight view presentations
- Moving-map MFD with engine/fuel gauge cluster, checklist capability
- 16-watt VHF comm transceivers with 8.33-kHz channel spacing
- Mode-S transponders with Traffic Information Service (TIS)
- Solid-state, strap-down AHRS
- Worldwide terrain and obstacle database
- Modular rack-mounted LRUs
- Interfaces for terrain, traffic, lightning and weather sensors
- Full reversionary display capability
- Integrated IrDA interface, allowing future upload of flight-relevant data from a Garmin handheld PDA

Applicable TSOs

TSO-C2d	Airspeed Instruments
TSO-C3d	Turn & Slip Instruments
TSO-C4c	Bank & Pitch Instruments
TSO-C6d	Magnetic Direction Instruments
TSO-C8d	Vertical Velocity Devices
TSO-C10b	Pressure Actuated Sensitive Altimeter
TSO-C34e	ILS Glideslope Receiver
TSO-C35d	Airborne Radio Marker Receiver
TSO-C36e	Airborne ILS Localizer Receiver
TSO-C37d	VHF Comm Transmitter (117.975 - 137.000 Mhz)
TSO-C38d	VHF Comm Receiver (117.975-137.000 Mhz)
TSO-C40c	VOR Receiver (108-117.95 Mhz)
TSO-C43c	Temperature Instruments
TSO-C44b	Fuel Flow Meters
TSO-C45a	Manifold Pressure Instruments
TSO-C47	Pressure Instruments – Fuel, Oil & Hydraulic
TSO-C49b	Electric Tachometer; Magnetic Drag
TSO-C50c	Audio Selector Panels and Amplifiers
TSO-C55	Fuel and Oil Quantity Instruments (recip)
TSO-C74c	Airborne ATC Transponder (ATCRBS)
TSO-C106	Air Data Computer
TSO-C110	Airborne Passive Thunderstorm Equipment
TSO-C112	ATC Radar Beacon System/Mode S
TSO-C113	Airborne Multipurpose Electronic Displays
TSO-C129a	Airborne Supplemental Navigation with GPS

Display

10.4-inch diagonal XGA (1024 x 768 pixels)
Optional 15-inch MFD display
Sunlight readable
Wide ($\pm 35^\circ$) viewing angles

System weight

45 lbs. for typical dual-display system (without servos or datalink receiver)

Power requirements

250 watts for typical dual-display system (without servos or datalink receiver)

Operating altitude

Up to 55,000 feet

Operating temperature

-20°C to + 55°C minimum (varies by individual component)



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