# EXPERIMENTAL AVIATION SOLUTIONS

SOLUTIONS FOR EXPERIMENTAL/AMATEUR-BUILT AND LIGHT SPORT AIRCRAFT (LSA)


GARMIN®

EXPERIMENTAL

# GET THE PERFECT PACKAGE FOR YOUR AIRPLANE. WITH FEATURES AND CAPABILITIES THAT FIT YOUR PANEL AND BUDGET.

Today you have even more choices, capabilities and screen sizes to configure the ideal avionics package for your experimental/amateur-built or light sport aircraft.

And when you choose Garmin, you reap the rewards of our tireless research, thousands of installations and millions of flight hours, which all ensure you're flying with the leader in aviation technology.

From a single electronic flight instrument to a complete integrated panel installation, our experimental avionics support a wide spectrum of plug-and-play growth possibilities. That means we can help you create a system that perfectly fits your panel, your priorities and your price range.

# EXPLORE THE POSSIBILITIES

**Garmin Flight Display Configurations**

The integration and versatility provided by Garmin avionics make it easy to customize the ideal panel layout for your aircraft. You can start with an electronic flight instrument or a single flight display. Or you can opt for a dual-screen G3X Touch™ configuration with separate PFD and MFD – or even a 4-screen system, if that best suits your needs. Garmin avionics work like building blocks, allowing you to grow your system to fit your airplane and your budget.

**Maximum Awareness.** Combine 2 10.6" G3X Touch panels as PFDs, a single 7" display as an MFD and a GTN™ 650Xi touchscreen navigator for GPS/Nav/Comm functions. Then add a G5 electronic flight instrument for backup, an optional GMC 507 autopilot controller for dedicated autopilot operation and a GTR 200 as a second comm radio. Behind the scenes, mount a GTX™ 45R all-in-one ADS-B transponder for ADS-B "Out" and dual-link ADS-B "In," as well as a 2-axis autopilot with GSA 28 autopilot servos and a GAP 26 angle of attack probe. And finally, include a GMA™ 245 audio panel for advanced audio functions, including aural alerts, intercom, BLUETOOTH® connectivity and passenger entertainment.

NOTE: The 10.6" and 7" G3X Touch and original 7" G3X™ displays are not mix-and-match interchangeable. To add G3X Touch displays to your panel, you'll need to replace existing G3X units with the G3X Touch format.



**En Route IFR.** A single 10.6" G3X Touch™ serves as a PFD, MFD and EIS, while a GNX™ 375 offers GPS nav functions. A G5 electronic flight instrument and optional GMC 507 autopilot controller supply backup capabilities, a GTR 200 provides comm and intercom functionality (plus BLUETOOTH® wireless connectivity with a GTR 200B), while a GTX 45R all-in-one ADS-B transponder delivers ADS-B "Out" and "In."

**PFD/MFD VFR.** Twin 7" portrait G3X Touch displays provide all your primary flight information, moving map and engine information. A G5 electronic flight instrument and optional GMC 507 autopilot controller provide backup autopilot operation, a GTX 45R all-in-one ADS-B transponder offers ADS-B "Out" and "In," and a GTR 200 delivers VHF communication, including automatic frequency ident, and two-place stereo intercom, plus optional BLUETOOTH wireless connectivity with a GTR 200B.

**Compact VFR.** Get the most from a small space with dual G5 electronic flight instruments, an aera® 660 portable navigator and a GMC 507 autopilot controller, which combine to provide coupled autopilot. And with a GTX™ 345 all-in-one ADS-B transponder, you get ADS-B "Out" and "In," for subscription-free weather and traffic on your portable, while a GTR 200 offers VHF communication, advanced audio features, inputs for audio alerts and two-place stereo intercom – and BLUETOOTH wireless connectivity with a GTR 200B.

# G3X TOUCH™

## Discover the Possibilities


With our G3X Touch series glass flight decks, you'll experience a whole new level of situational awareness in an affordable, easy-to-install package. The G3X Touch system is scalable for growth from single- to dual- to 4-screen cockpit layouts, and the technology is so intuitively cool and forward looking, it's enough to make you want to build an airplane just to have a platform for these amazing displays.

G3X Touch is built from the ground up with a native infrared touchscreen interface that is seamlessly blended with familiar buttons and knobs so virtually everything you'd ever need to fly in today's airspace can be accessed right from the display. Large on-screen touch points and familiar graphical icons simplify all your data entry and menu selections – and if you're flying in turbulence, the bezel design offers added support for easy operation.

Combining full primary flight display (PFD) attitude/directional guidance with detailed moving-map multifunction display (MFD) capabilities, each G3X Touch series display comes with a built-in VFR WAAS GPS receiver. You can choose among 10.6" and 7" landscape and 7" portrait formats – or mix and match – so you have even more control options at your fingertips and less clutter in your limited panel space. In fact, if your installation includes a separate PFD and MFD, you'll have additional reversionary capabilities should either display go offline. In reversionary mode, the remaining display combines critical flight instrumentation with engine readouts and navigation information in a single, consolidated presentation.

From there, G3X Touch flight displays seamlessly integrate with our family of experimental radios, transponders, audio panels, ADS-B and SiriusXM® datalinks, mobile devices via Connext® and more. And you even can easily add an affordable Garmin G3X autopilot system just by adding Garmin GSA 28 servos.

The Garmin G3X Touch: It's all about rethinking what's possible in your cockpit.



## THE BUILDING BLOCKS OF YOUR G3X TOUCH SYSTEM

**G3X Touch Flight Displays**

Featuring big, bright, high-resolution touchscreens, these easy-to-read, easy-to-use flight displays provide a whole new perspective on situational awareness with standard GPS navigation, ADAHRS, terrain/obstacles alerting, wireless connectivity, video input and more.

G3X Touch even comes preloaded with Garmin FliteCharts® for IFR approach plates and terminal procedures for airports throughout the U.S., Canada and Europe, plus an option for Jeppesen® charts for complete worldwide database coverage. And Garmin SafeTaxi® diagrams identify runways, taxiways, FBOs and hangars as well as your aircraft's exact location on the field for airports throughout the U.S., Canada and Europe.

**GSU 25C or GSU 25D ADAHRS**

The GPS-aided, digital GSU 25C ADAHRS provides highly accurate and reliable referencing of your aircraft position, rate, vector and acceleration data. And the complete sensor package takes up just a fraction of the space and weight previously required by conventional gyro-based instrument systems.

The GSU 25D ADAHRS offers the same functionality for higher-performance aircraft flying at indicated airspeeds over 300 knots. Both also include an angle of attack port.

**GEA 24 Engine Indication System (EIS)**

This user-configurable EIS module enables aircraft-specific tailoring of displays for engine gauges, color bands, alerts, fuel, flaps, trim and other vital sensor data. Sensor kits are available for most popular engine configurations used in experimental/amateur-built aircraft, or you can manually configure gauges with any electrically compatible sensor (see installation manual for details). A single GEA 24 can support piston engines of up to 6 cylinders and turbine applications, while a second GEA 24 allows owners to monitor engine operation for up to 12 cylinders, including radials and twin-engine applications. It even works with CAN bus interfaces for compatible FADEC engines, such as the Rotax 912 iS/915 iS.

**GMU Series Magnetometers**

GMU series remote-mount, solid-state, tri-axial magnetometers use magnetic field measurements to create electronically stabilized heading references. The GMU 11 interfaces with a Garmin GSU 25 ADAHRS to provide flight attitude and heading data, while the GMU 22 interfaces with GSU 25D ADAHRS for high-performance aircraft flying faster than 300 KIAS.

**GTP 59 Temperature Probe**

GTP 59 is an outside air temperature probe that provides ambient sensor data to the G3X Touch air data computer for true airspeed, density altitude and other essential flight calculations.

# G3X TOUCH™

## Advanced Capabilities for Your Experimental/LSA

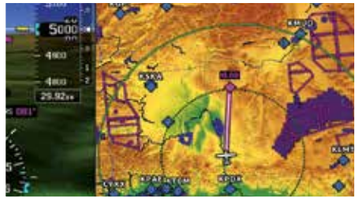
G3X Touch flight displays come standard with our exclusive SVX™ synthetic vision technology. Seamlessly integrated with your aircraft's flight attitude, airspeed, climb rate, altitude and course/heading reference, the database-generated 3-D landscape provides a lifelike perspective view of terrain features, airport environments, obstacles, towers and more – all shown in relative proximity to your aircraft. Also, with a compatible ADS-B "In" receiver, such as the GTX™ 45R all-in-one remote-mount transponder, or active traffic system, such as GTS™ 800, SVX will also display traffic targets in context, making it easier to gauge how high and how close they are.

Dual-link ADS-B[1] enables advanced traffic features such as TargetTrend™ relative motion and TerminalTraffic™ technologies so you can see other ADS-B equipped aircraft without dependence on a ground station.


Choice of AOPA Airport Directory for the U.S. – or AC-U-KWIK worldwide directory – offers detailed information on thousands of airport facilities and services.

Garmin SafeTaxi® data provides detailed taxiway diagrams and position information.

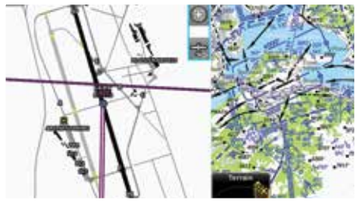

Optional SiriusXM® Radio support lets you enjoy 170+ channels of audio entertainment[2].



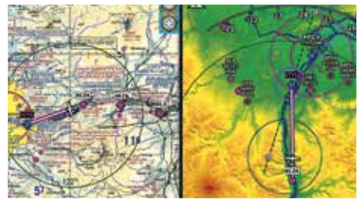
How far can you go? Graphical fuel range rings are based on real-time fuel flow calculations.

Glide range ring displays estimated area the aircraft can reach in best-glide speed (Vg) configuration.

Garmin Synthetic Vision



Worldwide Charting

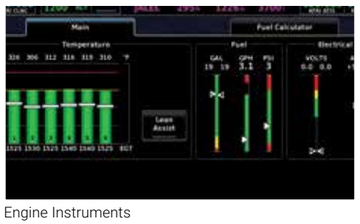


Advanced Moving Map

Terrain and Obstacle Alerting

Advanced Avionics Integration

Garmin Autopilot with ESP-X




Engine Instruments

SiriusXM and ADS-B Weather Options

[1]ADS-B datalink receiver sold separately.
[2]SiriusXM subscription required (sold separately).



## CHOOSE YOUR DISPLAYS

**7" Portrait**
GDU 470*

**7" Landscape**
GDU 450*

**10.6" Landscape**
GDU 460*

## CHOOSE YOUR INSTALLATION KIT

**Standard Kit**

GSU 25C ADAHRS
GMU 11 Magnetometer
GTP 59 Temperature Probe
Configuration Module

**High Performance Kit**
(Typically required for aircraft exceeding 300 KIAS)

GSU 25D ADAHRS
GMU 22 Magnetometer
GTP 59 Temperature Probe
Configuration Module

## GEA 24

Add the GEA 24 interface module to your G3X Touch™ system to enable display of engine indication system information. Two GEA 24 units are required for more than 6 cylinders or twin-engine applications.

## SUPPLEMENTAL ADAHRS

For enhanced G3X Touch system redundancy, add an extra GSU 25C ADAHRS unit or a GSU 25D ADAHRS for high-performance aircraft flying over 300 knots indicated airspeed. Both are also compatible backup options for existing G3X™ systems, which utilize the Garmin GSU 73 ADAHRS module as the primary sensor.

## NAVIGATION DATABASES AND UPDATES

Choose a bundled pricing program for all essential databases and update information on your G3X Touch system. The bundled database option allows you to purchase annual subscriptions for multiple databases at a reduced price — starting at $49.99 a year — including combinations of navigation, obstacles, SafeTaxi®, terrain databases and more.

And with Garmin OnePak™ options, you can purchase annual subscriptions for multiple databases for all of your aircraft's avionics at a single, reduced price, including those for panel-mount GPS units such as GPS 175/GNX™ 375 and GTN™ 750Xi/650Xi series, your G3X Touch and 1 portable device. OnePak subscriptions also provide Garmin Pilot™ subscribers an upgrade to Garmin Pilot IFR Premium at no additional cost. See flyGarmin.com for more information, availability and bundle pricing.

*Optional remote-mount SiriusXM receiver sold separately.
**Reflects manufacturer's minimum advertised price. Installation not included.


# GPS 175
# GNX™ 375
# GNC® 355

## GPS Navigators That Deliver Affordable IFR Approaches

Big capabilities come in a small package with the GPS 175, GNX 375 and GNC 355 touchscreen IFR GPS navigators. With their bright, clear, high-resolution touchscreen displays, you can have LPV approach capability to access more airports. You can even add advanced comm radio capabilities with the GNC 355 — or meet the requirements for ADS-B "Out" while experiencing the benefits of ADS-B "In" with the GNX 375. Plus, the slim 2" height fits neatly into even compact panels — and in retrofit installations, it allows you to keep the composite course deviation indicators to minimize installation cost.

Entering flight information is a cinch, and accessing every function is fast and easy. The moment you power up these navigators, you'll see a familiar Garmin home page on the 4.8" tall display that puts the most important functions within only a few touches — including hot keys for Direct-to and flight plan access. Swipe left or right for dedicated pages. Use your fingers to pan and zoom on the moving map. Enter waypoint data with the on-screen keyboard. And touch the home button to get you back to the main page at any time.

Building and modifying flight plans is simple. As you enter waypoints, our FastFind feature automatically begins searching for the nearest identifier as soon as you start typing, so in most situations, a press or two reveals just what you were thinking. You can also create holds, insert Victor airways and corresponding exit options, and add departures, arrivals and instrument approach procedures. Additionally, you can edit your route using the map screen — a handy "rubber band" feature lets you grab any leg of your flight plan route and move it to accommodate a deviation or ATC amendment to your flight plan.

Meanwhile, a variety of dynamically drawn maps provide situational awareness and context to the flight plan by highlighting visual reporting points, navaids, SafeTaxi® diagrams and such hazards as obstacles, power lines and terrain. Plus, Smart Airspace™ automatically highlights airspace close to your current altitude and de-emphasizes airspace away from the current altitude.

**Advanced Approach to IFR**

The SBAS/WAAS-certified GPS receiver in these navigators allows you to fly GPS-guided LPV glidepath instrument approaches down to as low as 200', greatly expanding your operational capability. You can also access newer lateral performance and all area navigation approaches. Precise course deviation and roll steering outputs can be coupled to Garmin G3X™ autopilots and select third-party autopilots, so IFR flight procedures such as holds, NextGen radius-to-fix legs and missed approaches may be flown automatically. In addition, you can create and execute custom holding patterns over an existing waypoint or user-defined waypoint.

Plus, when operating in VFR conditions, GPS 175, GNX 375 and GNC 355 can provide advisory vertical approach guidance based on a published glidepath angle or a three-degree approach glideslope from the runway threshold, while considering terrain and obstacle clearance. With this advisory guidance, you're able to fly more consistent and more precise vertical glidepaths into a variety of airfields.

**Add ADS-B "Out" and "In"**

When paired with dual-link Garmin ADS-B solutions, such as our GTX™ 345 series transponder or GDL® 88 universal access transceiver, the GPS 175 and GNC 355 can display ADS-B traffic targets as well as subscription-free ADS-B weather data in the U.S. Or you can opt for the GNX™ 375 navigator, which includes a transponder for ADS-B "Out" and "In." For example, you can access animated NEXRAD imagery, METARs, TAFs, winds and temperatures aloft, PIREPs, NOTAMs and more. Additionally, our patented TargetTrend™ relative motion technology offers a faster, more intuitive way to judge the direction and closure rate of intruding targets in relation to your aircraft's position. For example, if traffic is ahead of you and traveling along the same track but at a slower rate, the motion vector would point opposite of its indicated direction of flight to show you are overtaking the traffic. Spoken audio alerts call out potential flight path conflicts ("Traffic, 10 o'clock, same altitude, 2 miles") to get you looking in the right direction. And, at the start or end of each flight, TerminalTraffic™ technology provides the most comprehensive picture of ADS-B-equipped aircraft and ground vehicles in the airport environment. ADS-B-equipped aircraft in-flight are easily distinguished from ground vehicles and taxiing aircraft, which are displayed using distinct colors and symbols. All information is presented on a simple, easy-to-understand SafeTaxi® diagram with reference to runways, taxiways, hangar locations and more.

**Add Powerful Comm Capabilities**

The GNC® 355 offers 10 W transmission power with 25 kHz frequency channel spacing or 8.33 kHz channel spacing options (GNC 355A), and it incorporates a number of functions that can save you time and effort. Using the onboard frequency database, airport, weather, center and FSS frequencies are easy to find and can be loaded to standby by simply tapping them from the airport information or flight pages. Recent, nearby and saved frequencies are easy to access too. And you'll have added confidence knowing you're talking to the desired facility with the automatic display of the station's identifier right below the frequency, for example KIXD ASOS or CHICAGO ACC.

With the standby frequency-monitoring feature in the GNC 355, you won't have to worry about missing an ATC call or other critical transmission. The GNC 355 allows you to listen to ATIS without leaving your assigned ATC frequency. Swapping your active and standby frequencies is done with a single screen touch. Pressing and holding the frequency transfer key will automatically set the emergency frequency as your active radio channel.

**Cockpit Integration**

The GPS 175, GNX 375 and GNC 355 interface with a variety of Garmin flight displays, including G3X Touch™ and G5, as well as select third-party displays[1]. Plus, they're compatible with your existing composite CDIs to provide easy, cost-effective installation.

And for even more work-saving convenience, you can use our Connext® connectivity to stream information via BLUETOOTH® wireless technology between your navigator and compatible Garmin portables and mobile devices running the Garmin Pilot™, FltPlan Go or ForeFlight apps. Create flight plans at home and upload them at the airport. And display GPS data and backup attitude information — as well as traffic and weather from the GNX 375 or another compatible ADS-B source paired to the GPS 175 or GNC 355 — to your mobile device or Garmin portable, making them even more useful cockpit companions.

Plus, our optional Flight Stream 510 installs in the memory card slot of the navigator to enable our Database Concierge database transfer and management capabilities via our Connext gateway. At home you can download selected databases onto your mobile device, using the Garmin Pilot app. Then, once you get to the airport, Flight Stream 510 will automatically establish a wireless connection to the Garmin Pilot app and upload the databases from your device to your navigator in minutes.

[1]See supported interfaces tab at Garmin.com to verify compatibility

# G5 ELECTRONIC FLIGHT DISPLAY

By combining visual cues and data readouts once scattered across a myriad of mechanical instruments, the Garmin G5 electronic flight instrument makes flight information easier to scan in a small, affordable package. The complete G5 unit fits into a single 3-1/8" standard instrument cutout, but it efficiently consolidates aircraft attitude, vertical speed, altitude, airspeed, slip/skid and baro setting, altitude and track/heading bug settings. Plus, a built-in GPS receiver and antenna provide a highly accurate ground speed and ground track readout.



## DIRECTIONAL GUIDANCE

To provide even more situational awareness, you can install a G5 as a dedicated directional gyro (DG) or horizontal situation indicator (HSI). When paired with a GMU 11 magnetometer and select VHF Nav/Comms and GPS navigators, G5 will serve as your primary reference source for magnetic heading, GPS/VOR/LOC guidance and GPS course guidance – as well as providing distance and groundspeed indications.

And by installing dual G5 displays in your panel, you also gain the advantages of backup redundancy, with dual ADAHRS and reversionary display capability. In the unlikely event of a failure in the primary attitude indicator, a secondary G5 can revert to display attitude information, and for added "get home" protection, it's available with a backup lithium-ion battery, which can provide up to 4 hours of emergency operation in case of an aircraft electrical outage. And if you use one of our aera® series aviation portables, you can fly with battery-powered moving-map navigation guidance, to make that aircraft electronics outage virtually a nonevent.

## STAND-ALONE AUTOPILOT

G5 integrates with autopilot and flight director functions when accompanied by a GMC 507 autopilot control panel and up to 3 GSA 28 smart servos. By adding a Garmin portable GPS, such as the aera 660/760, you enable the autopilot to couple laterally to the flight plan and vertically to support VNAV descents to pattern altitude. Adding a GTN™ Xi navigator and GAD™ 29 digital interface even permits coupled GPS approaches along with lateral and vertical guidance for all approach types.

## THE ULTIMATE G3X TOUCH™ BACKUP

The G5 even integrates with G3X Touch systems to provide even more backup display capability. Reversionary display features include primary flight information, flight-director cues, autopilot-mode annunciation, flight director, autopilot control (with a GMC 507), approach lateral/vertical guidance and more. In the unlikely event that your G3X Touch system's primary ADAHRS reference becomes unavailable, G5 will provide backup ADAHRS information to those displays as well. And the barometric pressure setting on the G5 syncs with G3X Touch so you have a single, dedicated knob to adjust your entire system.

# G3X™ AUTOPILOT

Now it's easy to add full autopilot capability to your G3X Touch™ system. All it takes is the addition of our affordable GSA 28 "smart" servos to give your system a range of autopilot capabilities similar to those provided by the high-end GFC™ 700 systems found on thousands of certified aircraft. You have the option of purchasing a 1-, 2- or 3-axis configuration (roll servo only, or pitch+roll, or pitch+roll+yaw) to add the level of capability you want. Even better, the Garmin system includes automatic trim functionality and automatic speed scheduling at no additional cost, and all of these advanced functions can be accessed directly from your G3X Touch display.

And for added redundancy, you can opt for a dedicated and intuitive autopilot controller when you install an optional GMC 507 control panel. All autopilot capabilities are easily accessible via the dedicated buttons — including modes, flight director, yaw damp and more. A control wheel allows for easy and precise pitch, vertical speed and airspeed adjustments, while separate knobs allow quick twist control of heading and altitude. Plus, for added safety, the GMC 507 has an advanced LVL mode button, which commands the autopilot to help restore the aircraft to straight-and-level flight. Installation of the system is simple and straightforward, with industry-standard servo mounting kits available – as well as airframe-specific versions for Van's RV series (RV-4/6/7/8/9/10 models).

## AUTOPILOT OPTIONS FOR YOUR G3X:

**GSA 28 Servos**

A typical Garmin autopilot installation includes 2 GSA 28 servos for pitch and roll, while roll-only and pitch-roll-yaw options are available. Auto-trim capability is included.

**Optional GMC 507 Control Panel**

Add a separate autopilot control panel for easy access to all autopilot modes and functions. An intuitive control wheel allows for easy and precise pitch, vertical speed and airspeed adjustments, while separate knobs allow quick twist control of heading and altitude. Note: G3X Touch offers altitude and heading knob controls using the display alone.

*Reflects manufacturer's minimum advertised price.

# GARMIN ELECTRONIC STABILITY AND PROTECTION (ESP-X)

With installation of the G3X autopilot, you'll also obtain Garmin ESP™ to provide assistance in maintaining the aircraft in stable flight. When you exceed user-selected pitch, roll or airspeed limitations while hand-flying the aircraft, ESP-X provides gentle nudges on the flight controls to lessen the aircraft's pitch attitude or bank angle – and that correcting force grows stronger as those exceedances increase. In addition, you'll see visual cues on the G3X Touch display indicating that ESP-X is engaged; yellow chevrons provide visual pitch guidance, and configurable roll-limit indicators show where ESP-X engages to provide bank guidance.

As you take corrective action, ESP-X fades, and it turns off when you return to normal flight. Conversely, if the system activates for more than 15 seconds – for example, if you become incapacitated – the autopilot engages with the flight director in level mode, bringing the aircraft to level flight until you command otherwise. While ESP-X will not recover an aircraft in all in-flight situations, the system does provide your experimental and light sport aircraft an extra safeguard.

But ESP-X goes beyond providing pitch and bank envelope protection to also offer high- and low-airspeed protection. In a high-airspeed situation, ESP-X engages the G3X autopilot servos to increase your pitch attitude, while built-in parameters further prevent the aircraft from exceeding G-limit load factors. In low-airspeed situations, ESP-X engages to provide a gentle pitch-down force to reduce the likelihood of a stall – and ESP-X automatically disables when the aircraft is operating within 200' of the ground. In addition, pitch, roll and airspeed envelope protection parameters are all customizable, and for flight training or aerobatics, you can easily inhibit Garmin ESP-X within the automatic flight control system menu of the G3X Touch or with an optional switch in the panel.

# ADDITIONAL AVIONICS OPTIONS TO CONSIDER

### AOA Probe

AOA probes, such as the Garmin GAP 26, provide accurate, real-time information on airfoil flight dynamics and stall characteristics to help you maintain optimum safety, efficiency and performance when combined with a GSU 25C/25D ADAHRS. Unheated probe version.

### Heated AOA Probe

For added protection against in-flight icing, a Garmin GAP 26 AOA probe with a pilot-controllable heater is also available.

### Heated AOA Probe with Regulator

To keep the unit ice-free, while efficiently controlling power usage, a Garmin GAP 26 AOA probe with automatically regulated probe heat is also available.

### GI 260 AOA Indicator

To enhance safety during critical phases of flight, this bright, easy-to-read AOA stand-alone indicator offers accurate visual cues (with aural alerting) when wing AOA is approaching a critical AOA.

### GAD™ 29 Navigation Data Adapter

This compact module provides an ARINC 429 data interface between your G3X Touch™ system and various IFR-capable GPS navigators such as GTN™ 750Xi/650Xi or GNS™ 530W/430W series. When paired with these certified GPS receivers, GAD 29 enables your G3X Touch to incorporate such advanced features as GPS steering, WAAS LPV vertical approach guidance and more.

### GAD™ 27 Electronic Adapter Unit

This small, lightweight solid-state controller replaces multiple adapter modules to bring additional inputs and systems integration to your G3X Touch system. Key functions run the gamut from electronic flap position control and configurable dimming for lighting circuits to 3-axis aircraft trim mixing, "wig-wag" exterior lighting control, configurable discrete inputs and voltage bus stabilization to keep all essential avionics online during engine start-up.

### GPS 175/GNC® 355/GNX™ 375 Series Navigators

These slim, all-in-one touchscreen GPS navigators help you take advantage of LPV glidepath approaches while saving valuable panel space. They pair with G5 and G3X Touch™ displays, or integrate directly with existing course deviation indicators. With the 4.8" screen, you can visualize your flight route, including departures, arrivals, instrument approaches, holding procedures and more on a rich, dynamic global moving map. Plus, wirelessly transfer flight plans and stream weather, traffic, GPS position and backup attitude via built-in Connext® technology to select portables and mobile devices running Garmin Pilot™, FltPlan Go and ForeFlight apps. The GNC 355 adds a 10 W comm radio, while the GNX 375 adds a built-in 1090 MHz ES transponder to meet ADS-B "Out" requirements and dual-link ADS-B "In" for advanced traffic and subscription-free weather.

### GMA™ 245 Series BLUETOOTH® Audio Panel

Featuring BLUETOOTH wireless connectivity, 3-D audio processing, clearance playback and impressive audio distribution, mixing and audio effects features – including bass boost and equalizer presets – the non-TSO'd GMA 245 panel-mount unit interfaces with G3X Touch onscreen inputs, offering the most versatile and most advanced audio control technology we've ever produced for experimental and light sport aircraft. It includes a USB port to power your smartphone, tablet, music player or other device, a 6-place intercom and support for dual Nav/Comm and multiple aux receivers, totaling up to 7 radios in all. A remote-mount version is also available.

### GTR 20 Remote-mount Comm Radio

Designed to save space in your panel by enabling onscreen control via your G3X Touch flight display, this remote-mount VHF comm transceiver provides full 760-channel capability (with 25 kHz spacing) and a robust 10 W of transmit power. Features include automatic frequency ident to display facility name and type (supplied by your G3X Touch database) plus storage and recall of most-used frequencies, standby frequency monitoring, auto squelch, 2-place stereo intercom with 3-D audio and more.

### GTN 750Xi/650Xi Series Navigators

This all-in-one GPS/Nav/Comm solution with touchscreen interface and built-in SBAS/WAAS navigation capabilities meets ADS-B "high integrity" position source requirements. And it's approved to fly LPV glidepath approaches into thousands of airports without an ILS.

### GTX™ 45R Series ADS-B Transponders

Our GTX™ 45R/GTX™ 35R ADS-B transponders pair seamlessly with G3X Touch™ flight displays for remote operation, including squawk code entry, right from the touchscreen. And they offer 1090 MHz extended squitter ADS-B "Out" when paired with Garmin GTN™ 750Xi/650Xi series, GNS 430W/530W series or GPS 175 navigators — or a GPS 20A stand-alone ADS-B position source — to meet NextGen requirements.

For greater situational awareness, the all-in-one GTX 45R also offers dual-link ADS-B "In" for display of advanced traffic and subscription-free weather on G3X Touch flight displays and GTN Xi series, GNS series and GPS 175 navigators with a single, behind-the-scenes installation. And when integrated into the aircraft's audio panel, it provides ATC-like audible alerts, such as "Traffic: 10 o'clock, same altitude, 2 miles," to help you keep your eyes outside the cockpit when looking for traffic.

Plus, with built-in Connext technology, GTX 45R allows you to wirelessly stream ADS-B "In" traffic, weather, attitude information, and GPS data to Garmin portables, including the aera® 660, aera® 760 and to your mobile device running the most popular apps in the industry, Garmin Pilot, FltPlan Go and ForeFlight Mobile to make them true cockpit companions.

### GPS 20A ADS-B GPS

Get TSO-certified GPS position performance at a non-TSO'd price. Pair this receiver with a GTX 35R or GTX 45R transponder to meet ADS-B "Out" requirements while adding an additional GPS source for your G3X Touch displays. Or use with compatible third-party Mode S ES transponders designed for experimental aircraft to provide ADS-B "Out."

### GTR 200 Comm Radio

Powerful 10 W, all-digital VHF comm transceiver provides full 760-channel capability (with 25 kHz spacing) in a compact 1.35" high unit. It also features automatic frequency ident (using your G3X Touch database) to verify whom you're talking to as well as standby comm monitoring, auto squelch, two-place stereo intercom with 3-D audio input separation and much more. GTR 200B adds BLUETOOTH® wireless connectivity.

### GTR 225 Comm Radio

A TSO'd comm option for your panel, GTR 225 offers versions with 25 kHz or 8.33 kHz channel spacing for European "Single Sky" compliance. Available with either 10 or 16 W of transmitter output, GTR 225 includes a two-place intercom, flip-flop frequency entry and a built-in frequency lookup database.

### GNC® 255 Nav/Comm

This fully certified 1.65"-high unit combines a powerful 10 W VHF comm transceiver with 200-channel VOR/LOC/GS Nav receiver. (A 16 W version is also optionally available – and both versions offer 8.33 kHz frequency spacing for European compliance.) The radio's built-in frequency database lets you look up the frequencies for a given airport (tower, ground, ATIS, clearance delivery, etc.) just by entering the identifier. Also, automatic ident is provided for any comm frequency you select, so you'll always know with whom you're talking. Other highlights include storage and recall of most used frequencies, standby frequency monitoring and more.

### GDL® 52R Series Receivers

The easy-to-use, remote-mount GDL 52R series of receivers makes it simple to aid situational awareness while making your time aloft even more enjoyable. Providing multiple display outputs and viewing options, these datalinks work not only with your G3X Touch avionics, but they can also communicate wirelessly with the Garmin Pilot™ app running on your compatible mobile device or with Garmin aera 660 or aera 760 aviation portables. With the all-in-one GDL 52R, you'll receive SiriusXM® aviation satellite weather and audio entertainment, plus ADS-B "In" traffic and weather (in the U.S.). Or receive SiriusXM only with the GDL 51R, or ADS-B "In" only with the GDL 50R.

### GSB™ 15 USB Charger

This dual-port USB hub can power and charge two electronic devices in the cockpit or cabin, including tablets and phones. So you can have the power to access flight plans, moving maps, charts, weather data, manuals and more on your mobile device — while your passengers can access entertainment, messaging and all types of productivity apps. The dual USB Type-A hub provides up to 18-watt output to each device, while the dual USB Type-C and USB Type-A/Type-C hubs offer the latest portables — including iPad Pro® tablets from 2018 or later — up to 27-watt output, plus USB Power Delivery technology to provide optimal power for each device. All slimline GSB 15 hubs measure just over 1.5" square and stand less than an inch deep. Two formats are available: either rear or side wiring connections to simplify installation in tight spots. The hub fits in a 1" hole and can be mounted into a standard instrument hole in the panel with an optional 2.25" or 3.125" adapter.

[1]iPad Pro is a trademark of Apple Inc., registered in the U.S. and other countries.

# ADVANCED COCKPIT CONNECTIVITY

Your G3X Touch™ comes equipped to take advantage of Connext®, our network link and in-cockpit wireless connectivity system. With a built-in Flight Stream gateway, it makes your mobile tablet – running the Garmin Pilot™ app – a true cockpit interface. Use it to create a flight plan in the comfort of your home, office or pilot lounge, and then transfer it to your G3X Touch with a tap or two – waypoints, airways, arrivals and all. That leaves you more time to focus on preflight activities once you arrive at the airport. Adding last-minute or en route flight plan amendments from ATC is just as easy. Simply make them on the tablet, and sync again. There's no duplication of effort, which brings greater efficiency and work-saving convenience to managing your cockpit.

You can also wirelessly stream graphically depicted ADS-B traffic and weather with a Garmin GDL® 52R series datalink or GTX™ 45R transponder.

# SPECIFICATIONS

## GPS 175

| | |
|---|---|
| **Display size:** | 4.8" (122.5 mm) diagonal |
| **Active area:** | 4.6" (116 mm) (w) x 1.5" (38 mm) (h) |
| **Resolution:** | 732 pixels (w) x 240 pixels (h) |
| **Bezel height:** | 2.02" (51.0 mm) |
| **Bezel width:** | 6.25" (159.0 mm) |
| **Rack height (dimple to dimple):** | 2.025" (51.0 mm) |
| **Rack width:** | 6.30" (160.0 mm) |
| **Depth behind panel with connectors (measured from face of aircraft panel to rear of connector backshells):** | 6.58" (167 mm) |
| **Unit weight:** | 1.3 lb (0.83 kg) |
| **Humidity:** | 95% non-condensing |
| **Maximum altitude:** | 35,000 ft |
| **Input voltage range:** | 9 VDC - 33 VDC |
| **Brightness range:** | 0.015 fL - 260 fL |
| **Operating temperature range:** | -20 degrees C to 55 degrees C<br>(-4 degrees F to 131 degrees F) |
| **Power specifications:** | |
| 14 volt current draw: | Typical 0.6 A<br>Maximum 0.9 A |
| 28 volt current draw: | Typical 0.3 A<br>Maximum 0.6 A |
| **BLUETOOTH specifications:** | |
| BLUETOOTH version: | 4.2 |
| BLUETOOTH class: | 2 |
| Maximum transmitter power: | +4 dBm |
| Unimeded BLUETOOTH range: | 100 ft |

## GNC 355

| | |
|---|---|
| **Display size:** | 4.8" (122.5 mm) diagonal |
| **Active area:** | 4.6" (116 mm) (W) x 1.5" (38 mm) (H) |
| **Resolution:** | 732 pixels (W) x 240 pixels (H) |
| **Bezel height:** | 2.02" (51.0 mm) |
| **Bezel width:** | 6.25" (159.0 mm) |
| **Rack height (dimple to dimple):** | 2.08" (52.7 mm) |
| **Rack width:** | 6.30" (160.0 mm) |
| **Depth behind panel with connectors (measured from face of aircraft panel to rear of connector backshells):** | 11.23" (285.2 mm) |
| **Unit weight:** | 3.30 lb (1.5 kg) |
| **Humidity:** | 95% non-condensing |
| **Maximum altitude:** | 35,000 ft |
| **Input voltage range:** | 9 VDC - 33 VDC |
| **Brightness range:** | 0.015 fL - 260 fL |
| **Operating temperature range:** | -20 degrees C to 55 degrees C<br>(-4 degrees F to 131 degrees F) |
| **Power specifications:** | |
| **14 volt current draw:** | Typical 2.4 A<br>Maximum 6.9 A |
| **28 volt current draw:** | Typical 1.2 A<br>Maximum 3.4 A |
| **BLUETOOTH® specifications:** | |
| BLUETOOTH version: | 4.2 |
| BLUETOOTH class: | 2 |
| Maximum transmitter power: | +4 dBm |
| Unimeded BLUETOOTH range: | 100 ft |

## GNX 375

| | |
|---|---|
| **Display size:** | 4.8" (122.5 mm) diagonal |
| **Active area:** | 4.6" (116 mm) (w) x 1.5" (38 mm) (h) |
| **Resolution:** | 732 pixels (w) x 240 pixels (h) |
| **Bezel height:** | 2.02" (51.0 mm) |
| **Bezel width:** | 6.25" (159.0 mm) |
| **Rack height (dimple to dimple):** | 2.025" (51.0 mm) |
| **Rack width:** | 6.30" (160.0 mm) |
| **Depth behind panel with connectors (measured from face of aircraft panel to rear of connector backshells):** | 10.85" (276 mm) |
| **Unit weight:** | 3.2 lb (1.44 kg) |
| **Humidity:** | 95% non-condensing |
| **Maximum altitude:** | 30,000 ft with optional GAE module<br>35,000 ft with optional GAE module |
| **Input voltage range:** | 9 VDC - 33 VDC |
| **Brightness range:** | 0.015 fL - 260 fL |
| **Operating temperature range:** | -20 degrees C to 55 degrees C<br>(-4 degrees F to 131 degrees F) |
| **Power specifications:** | |
| 14 volt current draw: | Typical 1.20 A<br>Maximum 1.80 A |
| 28 volt current draw: | Typical 0.60 A<br>Maximum 0.90 A |
| **BLUETOOTH specifications:** | |
| BLUETOOTH version: | 4.2 |
| BLUETOOTH class: | 2 |
| Maximum transmitter power: | +4 dBm |
| Unimeded BLUETOOTH range: | 100 ft |

## GTX 35R

| | |
|---|---|
| **Physical Dimensions (unit, rack, connectors):** | 1.65"x 6.30"x9.9" (42x160x224mm) |
| **Weight (unit, rack, connectors):** | 2.5/2.6 lbs (1.13/1.18kg) |
| **Voltage range:** | 14/28VDC (15/17W Max) |
| **Transmit power:** | 200W minimum |
| **Tempertaure:** | -45°C to +70°C |
| **Operating altitude:** | To 55,000ft (16,800m) |
| **Environmental Compliance (TSO Approved):** | DO-160G |
| **Software compliance (TSO Approved):** | DO-178 Levels B, C, D |
| **Hardware compliance (TSO Approved):** | DO-254 Level C |
| **TSO compliance (Approved):** | TSO-C88b (w/opt. alt. encoder);<br>TSO-C112e (Class 1, Level 2els);<br>TSO-C166b (Class B1S) |
| **Mount type:** | Remote |
| **Transponder type:** | Mode A/C, S and ES |
| **Squawk code selection:** | Remote entry via G3X Touch display |
| **Traffic Information Services (TIS) alerts compatible:** | Yes |
| **Transponder Features:** | |
| Solid state transmitter (more efficient, longer life): | Yes |
| Aural alerts: | Yes |
| Automtatic ALT/GND mode: | Yes |
| 1090 MHz ADS-B Out: | Yes |



## GTX 45R

| | |
|---|---|
| **Physical Dimensions (unit, rack, connectors):** | 1.65" x 6.30" x 9.9" (42 x 160 x 224 mm) |
| **Weight (unit, rack, connectors):** | 2.8/2.9lbs (1.27/1.32kg) |
| **Voltage range:** | 14/28VDC (18/20W Max) |
| **Transmit power:** | 200W minimum |
| **Tempertaure:** | -45°C to +70°C |
| **Operating altitude:** | To 55,000ft (16,800m) |
| **Environmental Compliance (TSO Approved):** | DO-160G |
| **Software compliance (TSO Approved):** | DO-178 Levels B, C, D, E |
| **Hardware compliance (TSO Approved):** | DO-254 Level C |
| **TSO compliance (Approved):** | TSO-C88b (w/opt. alt. encoder);<br>TSO-C112e (Class 1, Level 2els);<br>TSO-C154c (Class A1S); TSO-C157a (Class 1); TSO-C166b (Class A1S);<br>TSO-C195a (Class C1,C2,C3,C4) |
| **Mount type:** | Remote |
| **Transponder type:** | Mode A/C, S and ES |
| **Squawk code selection:** | Remote entry via G3X Touch display |
| **Traffic Information Services (TIS) alerts compatible:** | Yes |
| **Transponder Features:** | |
| Solid state transmitter (more efficient, longer life): | Yes |
| Aural alerts: | Yes |
| Automtatic ALT/GND mode: | Yes |
| 1090 MHz ADS-B Out: | Yes |

## GDU 450/455 Display Unit

This product holds no TSO certification

| | |
|---|---|
| **Display:** | 7" diagonal (17.78 cm) 480 x 800 pixels, High-resolution color infrared touchscreen display with adjustable backlighting. Optional lighting bus voltage input available for automatic backlight control. |
| **Electrical:** | 10-32 VDC<br>30 W typical<br>Dual isolated power inputs |
| **Size:** | 7.99"W x 5.93"H x 3.57" D<br>(20.30 x 15.50 x 9.07 cm) |
| **Weight:** | GDU 450, 2.69 lb (1.22 kg)<br>GDU 455, 2.82 lb (1.29 kg)<br>Weight does not include nut plate and connector |
| **GPS Receiver:** | Noncertified, high-sensitivity GPS receiver with WAAS position accuracy and 5 Hz update rate |
| **Interfaces:** | Six RS232 ports per display, supporting NMEA 0183, GTR 225/GNC 255 series comm frequency tuning, Aviation format data from panel-mounted GPS and GTX 330 TIS data. |
| **GPS/XM Antennas:** | In-cabin and externally mounted options available |

## GDU 460/465 Display Unit

This product holds no TSO certification

| | |
|---|---|
| **Display:** | 10.6" diagonal (26.92 cm) 1280 x 768 pixels, high-resolution color infrared touchscreen display with adjustable backlighting. Optional lighting bus voltage input available for automatic backlight control. |
| **Electrical:** | 10-32 VDC<br>30 W typical<br>Dual isolated power inputs |
| **Size:** | 10.85"W x 7.82"H x 3.57"D (27.56 x 19.86 x 9.07 cm) |
| **Weight:** | GDU 460, 4.6 lb (2.09 kg)<br>GDU 465, 4.82 lb (2.15 kg)<br>Weight does not include nut plate and connector |
| **GPS Receiver:** | Non-certified, high-sensitivity GPS receiver with WAAS position accuracy and 5 Hz update rate. |
| **Interfaces:** | Six RS232 ports per display, supporting NMEA 0183, GTR 225/GNC 255 series comm frequency tuning, Aviation format data from panel-mounted GPS, and GDL 39R traffic and weather data. |
| **GPS/XM Antennas:** | In-cabin and externally mounted options available |

## GDU 470 Display Unit

This product holds no TSO certification

| | |
|---|---|
| **Display:** | 7" diagonal (17.78 cm) 480 x 800 pixels, high-resolution color infrared touchscreen display with adjustable backlighting. Optional lighting bus voltage input available for automatic backlight control. |
| **Electrical:** | 10-32 VDC<br>30 W typical<br>Dual isolated power inputs |
| **Size:** | 6.01"W x 7.82"H x 3.68"D (15.3 x 19.9 x 9.07 cm) |
| **Weight:** | GDU 470, 2.65 lb (1.2 kg); weight does not include nut plate and connector |
| **GPS Receiver:** | Non-certified, high-sensitivity GPS receiver with WAAS position accuracy and 5 Hz update rate |
| **Interfaces:** | Six RS232 ports per display, supporting NMEA 0183, GTR 225/GNC 255 series comm frequency tuning, Aviation format data from panel-mounted GPS, and GDL 39R traffic and weather data. |
| **GPS Antenna:** | In-cabin and externally mounted options available |

## GSU 25C ADAHRS Unit

This product holds no TSO certification

| | |
|---|---|
| **AHRS:** | • Provides accurate digital output and referencing of aircraft attitude, rate, vector and acceleration data<br>• Leverages solid-state sensors and sophisticated attitude determination and integrity monitoring algorithms<br>• Capable of in-flight dynamic restarts<br>• Capable of maneuvers through a range of 360° in bank and pitch<br>• Rotation rate: Up to 200°/sec |
| **Electrical:** | 14-28 VDC |
| **Size:** | 4.00"W x 2.50"H x 2.12"D (10.16 x 6.35 x 5.38 cm) |
| **Weight:** | GSU 25, 0.48 lb (0.217 kg)<br>Weight does not include mounting hardware and connector |
| **Environmental:** | |
| Aircraft pressure altitude range: | -1,400 ft. to 30,000 ft. |
| Aircraft vertical speed range: | -20,00 to +20,000 fpm |
| Aircraft airspeed range: | 0 - 300 kts IAS |
| Operating temperature range: | -45°C to +70°C |

## GEA 24 Engine Indication (EIS) Unit

This product holds no TSO certification

| | |
|---|---|
| **EIS:** | Provides accurate digital monitoring of engine and airframe sensors interfaced with the G3X cockpit displays |
| **Electrical:** | 14 or 28 VDC systems |
| **Size:** | 6.50"W x 1.90"H x 3.00"D (16.51 x 4.83 x 7.62 cm) |
| **Weight:** | GEA 24, 0.71 lb (0.322 kg)<br>Weight does not include mounting hardware and connector |
| **Engine/Airframe interfaces:** | Support is available for most popular piston or turbine engine configurations used in experimental/amateur-built aircraft. See installation manual or contact g3xpert@garmin.com for details.<br><br>Configurability of the GSU allows measurement of many different aircraft parameters including but not limited to:<br>• Ammeters (2)<br>• Thermocouples (Monitor up to 6 cylinders and 2 turbo inlet temperatures)<br>• Aircraft bus voltages<br>• Resistive Sensors (Up to 6)<br>• Powered Transducers<br>• Frequency Counter Inputs (Up to 4)<br>• Discrete I/O (4 In / 2 Out) |

## GMU 11 Magnetometer Unit

| | |
|---|---|
| **Electrical:** | 10-32 VDC |
| **Size:** | 2.74"W x 0.92"H x 3.93"D (7 x 2.3 x 10.0 cm) |
| **Weight:** | 0.16 lb (0.725 kg)<br>Weight does not include connector |

## GMU 22 Magnetometer Unit

| | |
|---|---|
| **Electrical:** | Powered through GSU 25 |
| **Size:** | 2.10"H x 3.35" in diameter<br>(5.33 x 8.51 cm) |
| **Weight:** | GMU 22, 0.35 lb (158.8 g)<br>Weight does not include mounting hardware and connector |

# SPECIFICATIONS

## GI 260 AOA Indicator

**Electrical:** 14 or 28 VDC systems

**Size:** 1.36"W x 3.19"H x 2.36"D
(3.45 x 8.10 x 6.06 cm)

**Weight:** 0.27 lb (0.122 kg)

**Environmental:** Operating temperature range:
-45°C to +70°C

## GAP 26 AOA Probe

**Electrical:** Unheated versions of the GAP 26 do not require power.
Supply voltage for heated pitot is 14 VDC

**Optional Control Box Size:** 2.25"W x 1.11"H x 4.55"D
(5.72 x 2.82 x 11.56 cm)

**AOA Probe Size:** 0.82"W x 16.00"H x 6.12"D (2.08 x 40.64 x 15.54 cm)

**Weight:** Unheated, 0.33 lb (149.7 g)
Heated , 0.39 lb (176.9 g)

## GSA 28 Autopilot Servo

GSA28 is used to drive a flight-control axis (pitch, roll, yaw) of the aircraft in order to stabilize the aircraft in pitch, roll, and/or heading.

**Electrical:** 14 or 28 VDC systems

**Size:** 2.5"W x 4.00"H x 3.00"D (6.35 x 10.16 x 7.62 cm)

**Weight:** 1.42 lb (644.1g)

**Torque:** 60 inch-lbs (maximum rated)

## GMC 507 Autopilot Control Panel

**Electrical:** 14 or 28 VDC systems

**Size:** 6.25"W x 2.10"H x 2.61"D (158.8 x 53.3 x 66.3 mm)

**Weight:** 0.70 lb (308 g), unit only

## G5 Electronic Flight Display

This product holds no TSO certification

**Electrical:** 14 or 28 VDC systems

**Size:** 3.4"W x 3.6"H x 3.6"D (86.9 x 91.4 x 91.4 mm)

**Weight:** 10.0 oz.(283.5g) unit
5.0 oz. (141.8 g) battery (optional)

**Display:** 3.5" diagonal (88.9 mm diagonal)

**Environmental:**
Aircraft pressure altitude range: -1,400 - +30,000 ft
Vertical speed: ± 20,000 fpm
Pitch roll range: ±360°

## GMA 245 Audio Panel

**Electrical:** 14 or 28 VDC systems

**Size:** 6.3"W x 1.33"H x 8.09"D (160 x 34 x 205 mm)
includes mounting rack and connectors

**Weight:** 1.78 lbs. (807.4g) includes rack, backplate and connectors

**Environmental:**
Temperature: -20° C to +55° C (Operating)
Altitude range: to +55,000 ft. MSL unpressurized

## GTR 200 Comm Radio

This product holds no TSO certification

**Electrical:** 14 or 28 VDC systems

**Size:** 1.35"H x 6.25"W x 7.98"D (3.43 x 15.88 x 20.2692 cm)

**Weight:** 1.34 lbs (0.61 kg) unit only;
1.91 lbs (0.87 kg) with mounting rack

**Depth:** 9.39 inches (23.85 cm) behind panel, including mounting rack and connectors

## GTR 20 Comm Radio

This product holds no TSO certification

**Electrical:** 14 or 28 VDC systems

**Size:** 1.28"H x 6.15"W x 8.80"D (3.24 x 15.62 x 22.35 cm)

**Weight:** 1.19 lbs (0.54 kg) unit only; without mounting hardware and connectors

**Depth:** 10.22 inches (25.95 cm) behind panel, including mounting rack and connectors

## GTR 225 Comm Radio

**Electrical:** 14 or 28 VDC systems

**Size:** 1.65"H x 6.25"W x 10.4"D (4.19 x 15.88 x 26.42 cm)

**Weight:** 2.30 lbs (1.04 kg) unit only; 3.06 lbs (1.38 kg) with mounting rack

**Depth:** 11.23 inches (28.52 cm) behind panel including mounting rack and connectors

## GNC 255 Nav/Comm Radio

**Electrical:** 14 or 28 VDC systems (Accepts 9 to 33 VDC input)

**Size:** 1.65"H x 5.25"W x 10.4"D (4.19 x 15.88 x 26.42 cm)

**Weight:** 3.02 lbs (1.37 kg) unit only;
3.46 lbs (1.57 kg) with mounting rack
1.91 lbs (0.87 kg) with mounting rack

**Depth:** 11.23 inches (28.52 cm) behind panel, including mounting rack and connectors

## GDL 52R ADS-B Datalink

**Electrical:** 14 or 28 VDC systems

**Size:** 6.10" W x 1.60" H x 5.00" D (154.9 x 40.6 x 127.0 mm)

**Weight:** 0.83 lb (380 g), unit only

## GSB™ 15 USB Charger

**Charging Port Types:** Dual USB Type-A
USB Type-A/USB Type-C
Dual USB Type-C

**Input Voltage:** 14V, 28V

**Output Voltage:** Dual USB Type-A: 5-12V
USB Type-A/USB Type-C: 3.6V-12V / 5-12V
Dual USB Type-C: 5-12V

**Power Consumption:** Max (while charging):
40W (Dual USB Type-A Only), 68W
Min (not charging): 500mW

**Maximum Power Output per Port:** Dual USB Type-A: 18W
USB Type-A/USB Type-C: 27W
Dual USB Type-C: 27W

**Required Circuit Breaker Size:** 28v Input: 5A
14v Input: 5A (Dual USB Type-A Units), 7.5A
(USB Type-A/USB Type-C and Dual USB Type-C Units)

**Dimensions:** Side Connector: 1.50" x 1.55" x 0.84"
Rear Connector: 1.50" x 1.50" x 0.92"
Weight: 0.16 lbs

**Certifications:** TSO-C71
Qualcomm® Quick Charge™
Technology (USB Type-A Ports Only)

## GTS 800 Active Traffic System

**Unit Size:** 6.25"W x 2.7"H x 12.7"D (15.87 x 6.86 x 32.25 cm)

**Weight:** 11.3 lb (5.13 kg) LRU; Vert. Rack 1.35 lb (0.61 kg);
Horiz. Rack 1.94 lb (0.88 Kg) excludes connectors

**Temperature:** -55°C to +70°C

**Operating Altitude:** To 55,000 feet

**Power Input:** 14 or 28 VDC
40 W max. (GTS 800)

**Cooling Input:** Integrated

## G3X Accessories

**Standard:** Free single database update (includes one update for navigation, FliteCharts®, SafeTaxi®, obstacles and towers), quick reference guide

**Optional:** GA 26 In-cabin GPS antenna
GA 26XM In-cabin XM antenna
GA 57X External XM/GPS combo antenna
GA 56 External GPS antenna
GA 55 External XM antenna

GARMIN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