



Garmin technology brings sweeping improvement to weather avoidance.

# GWX™ 68 weather radar specifications

Bringing 4-color storm cell tracking to your compatible Garmin multifunction display (MFD), the GWX 68 digital radar is a powerful weather avoidance tool.

It's designed to interface with the Garmin MX 20 and GMX 200 panel-mount displays, as well as the G1000 and G600/G500/G500H series of glass cockpit MFDs. Excellent range and adjustable scanning profiles combine with high-definition radar target display to bring you reliable, easy-to-interpret, real-time weather analysis.

Available with either a 10-inch or 12-inch phased array antenna, the GWX 68 fits a wide variety of aircraft radome configurations. The compact, all-in-one antenna/receiver/transmitter unit saves space and simplifies installation. Also, to keep your weather picture tracking smoothly during climbs or turns, the system offers full radar stabilization to 30 degrees of pitch and roll (when interfaced with your aircraft's analog gyro or AHRS system.)

To focus radar scanning on the areas you want to watch, the GWX 68 offers pilot-adjustable horizontal scan angles of up to 90 degrees. What's more, the system also includes a vertical scanning function to help you analyze storm tops, gradients and cell buildup activity at various altitudes.

Other helpful technologies include Sensitivity Time Control (or STC) logic that digitally integrates weather attenuation and distance compensation, so cells don't suddenly appear to loom larger as they get closer.

In addition, all display configurations offer Garmin's WATCH™ (Weather Attenuated Color Highlight) feature which identifies the "shadowing" effects of short-range cell activity – highlighting areas where radar signals are weakened, or attenuated, by intense precipitation (or large areas of lesser precipitation) and that may not fully reflect the "storm behind the storm." There's also an automatic Target Alert feature for the G1000 and G600/G500/G500H lineup that looks ahead for intense cell activity in the 80 to 320 nm range, whether you're monitoring those range displays onscreen or not.

With 6,500 watts of pure magnetron muscle, this unit has more than enough power output to penetrate serious weather. So, as a pilot, you're equipped to make smarter decisions sooner. The Garmin GWX 68: When it comes to steering clear of the ugly stuff, this is the "see and avoid" system you want.



Weather data from the GWX 68 digital radar is displayed on compatible Garmin MFDs via ARINC 429/453 interface.



A vertical scanning function on the GWX 68 lets pilots analyze cloud tops and storm gradients to see a more complete weather picture.

## General

<b>Operational Mode:</b>	Weather (WX): Green, Yellow, Red, Magenta Mapping (MAP): Cyan, Yellow, Magenta, Blue
<b>Display Ranges:</b>	Selectable 2.5, 5, 10, 20, 40, 80, 160, and 320 nm (MX 20; GMX 200). Selectable 2.5, 5, 10, 20, 40, 60, 80, 100, 120, 160, 240 and 320 nm (G1000, G600/G500/G500H).
<b>Performance Index:</b>	12-Inch Antenna: 217 dB (Nominal per DO-173) 10-Inch Antenna: 214 dB (Nominal per DO-173)
<b>Weather Avoidance Range:</b>	12-Inch Antenna: 305 nm max. 10-Inch Antenna: 270 nm max.
<b>Rx Sensitivity:</b>	-110 dBm MDS
<b>Manual Gain:</b>	+12 to -64 dB (G1000; G600/G500/G500H) +3.5 to -28 dB (MX 20; GMX 200)
<b>Antenna Beamwidth:</b>	12-Inch Antenna: 7.8 degrees 10-Inch Antenna: 9.0 degrees
<b>Horizontal Scan Angle:</b>	Pilot adjustable; 20, 40, 60 or 90 degrees (G1000; G600/G500/G500H); 20 or 90 degrees (MX 20; GMX 200)
<b>Scan Centerline:</b>	Pilot adjustable
<b>Scan Rate:</b>	12 looks per minute
<b>Manual Tilt:</b>	+/- 15 degrees
<b>Vertical Scan Angle:</b>	60 degrees (G1000; G600/G500/G500H); 10 – 60 degrees (MX 20, GMX 200)

## Antenna/Receiver/Transmitter

### Mechanical

<b>Size:</b>	Width: 10.0 in. (25.4 cm.) diameter at base Depth: 6.3 in. (16.0 cm.) Antenna: 10 in. or 12 in. diameter flat-plate
<b>Unit Weight:</b>	12-Inch Antenna: 9.1 lbs. (4.13 kg) 10-Inch Antenna: 9.0 lbs. (4.08 kg)

### Environmental

<b>Operating temperature range:</b>	-55 Degrees C to +70 Degrees C
<b>Humidity:</b>	95% non-condensing
<b>Altitude Range:</b>	-1,500 feet to 50,000 feet
<b>TSO Compliance:</b>	C63c, Class 7
<b>Environmental Category:</b>	RTCA DO-160C

### Electrical

<b>Power requirements:</b>	28 VDC; 2.0 amps
<b>Magnetron Power:</b>	6.5 kW nominal, 5.0 kW minimum
<b>Output Frequency Range:</b>	X-Band
<b>Pulse Width:</b>	4 Microseconds (nominal)
<b>STC Logic:</b>	Effective to 80 nm
<b>Extended STC:</b>	80 nm to 320 nm (Modifies targets from end of STC to maximum range)
<b>Stabilization:</b>	+/- 30 Degrees combined pitch, roll and manual tilt
<b>Max. Altitude:</b>	50,000 feet (unpressurized)
<b>Target Alert:</b>	(G1000 and G600/G500/G500H only) Annunciates targets (between 80 and 320 nm) that are beyond displayed range on radar screen
<b>Interface:</b>	Garmin HSDB (G1000 and G600/G500/G500H installations); ARINC 429/453 (MX 20, GMX 200 installations)



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