

AVIONICS

FAA Approves First General Aviation Head-up Display

The STC for MyGoFlight's SkyDisplay head-up display brings added safety features to GA aircraft at a significantly lower price.



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After extensive design work, flight testing, and certification efforts, SkyDisplay, a division of MyGoFlight, received FAA certification on June 22 for its first supplemental type certificate (STC) covering the installation of the SkyDisplay HUD (head-up display) in a Cirrus SR22. Not only is this the first STC for the SkyDisplay HUD, but it is also the first approval for any such display for light aircraft. While HUDs have long been available in midsize and larger business jets and commercial aircraft, the [SkyDisplay HUD](#) brings the safety benefits of HUD to four-seat piston-powered airplanes through piston twins, single-engine turboprops, and light jets.

The SkyDisplay HUD, which displays data from the aircraft's certified avionics, is part of an integrated system comprised of the projector and display screen in the pilot's field of view and an aircraft interface device (AID) that connects to the aircraft's Arinc 429 and serial data buses. It is literally a visible extension of the aircraft's air data and navigation system.

While traditional HUDs have cost hundreds of thousands of dollars, the SkyDisplay HUD substantially lowers that barrier at an initial price of \$29,500, not including installation. Duncan Aviation worked with SkyDisplay on the HUD installation for the certification program.

Realizing the potential for other uses of the HUD, SkyDisplay integrated an Astronics Max-Viz enhanced vision system (EVS) infrared sensor with the HUD, with the help of Astronics, further enhancing the HUD's utility. The EVS imagery on the HUD—the airport and its environment clearly depicted while flying at night or in low visibility—is overlaid along with other critical flight information.

Another example of the HUD-EVS's utility is firefighting, allowing the airborne assets to spot fires, follow the appropriate flight path vector, and see through the smoke, further enhancing flight safety. AeroBrigham of Decatur Texas has flown the Max-Viz EVS with the SkyDisplay HUD on four Air Tractor AT802F Fire Boss aircraft. Video from MyGoFlight shows the HUD view from the Fire Boss, with the fire clearly visible on the HUD's EVS imagery and a clear depiction of another aircraft dropping water on the flames, so the pilot flying behind the HUD can see where to drop additional loads of water.

The EVS integration is available with the purchase of an EVS interface for \$5,000; the Max-Viz EVS must be purchased separately.

The SkyDisplay HUD was approved first for the Cirrus SR piston singles and is available as part of an approved model list STC for other Part 23 aircraft operating under Part 91 regulations. Among these are Beechcraft Bonanzas, Barons, and King Air 300s; Cessna turboprops and light jets; Cirrus SF50 Vision Jet; Embraer Phenom 100; Mooney M20; Pilatus PC-12; Piper Twin Comanche, Cheyenne, and Malibu Matrix; and Daher TBM 700 and 850. More than 20 aircraft are committed to installations of the SkyDisplay HUD now that it is certified, according to MyGoFlight.