

NOAA'S CESSNA CITATION

PROVIDING AIRBORNE REMOTE SENSING FOR THE COASTAL ENVIRONMENT

The **Cessna Citation (CE-550)** is a versatile twin-engine jet aircraft modified for acquiring remote sensing imagery. The aircraft can support a wide variety of remote sensing configurations, including large-format aerial photography as well as data collection for digital cameras, hyperspectral, multi-spectral, and LIDAR systems.

Standard configuration includes space for two pilots, two equipment operators, and basic scientific equipment package. The aircraft can accommodate an additional two passengers depending on the amount of scientific equipment.

The aircraft has a unique side-by-side sensor port modification allowing two different sensors to collect data simultaneously. Glass optical flats allow the cabin to remain pressurized. Additionally, two high-precision GPS antennas provide signals to user receivers.

The Citation primarily supports the Remote Sensing Division of the National Geodetic Survey, collecting remote sensing data in support of coastal mapping and remote sensing research. Imagery acquired onboard the Citation is used for updating the shoreline and shore features on NOAA's nautical charts. The Citation has been flown in support of hurricane and flood damage assessment. With LIDAR, the aircraft acquired 3-D images of the World Trade Center and Pentagon just days after the attacks on Sept. 11.



Standard Aircraft Specifications

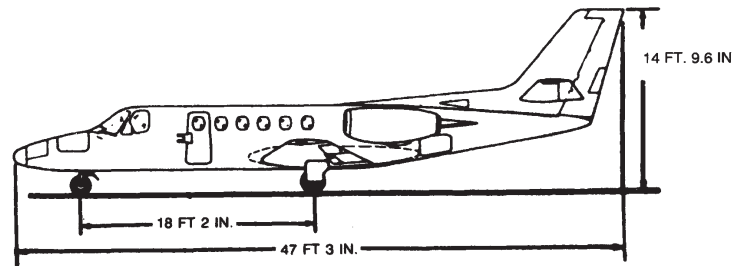
- Type: Cessna Citation II/ Model 550
- Crew: 2 Pilots and 2-4 Scientists
- Ceiling: 43,000 feet (without supplemental cabin oxygen)
- Rate of Climb 2500 ft/min at sea level (20 minutes to climb to 30,000 ft)
- Cruise Airspeed: 350 knots (true)
- **Scientific Power:**
 - 25 amps @ 115 volts (10 standard outlets)
 - 50 amps @ 28 volts DC
- **Aircraft Weight:**
 - Max. Gross Weight: 14,600 lbs
 - Empty Weight: 7,800 lbs
 - Useful Load: 6,800 lbs (fuel, personnel, cargo)
 - Fuel Load: 5,008 lbs
- **Standard Fuel Burn:**
 - Normal Cruise (98%): Range-1325 nm Duration-4 hrs 15 min
 - Max. Cruise (104%): Range-1200 nm Duration-3 hrs 40 min
 - Max. Endurance: Range-1610 nm Duration-5 hrs



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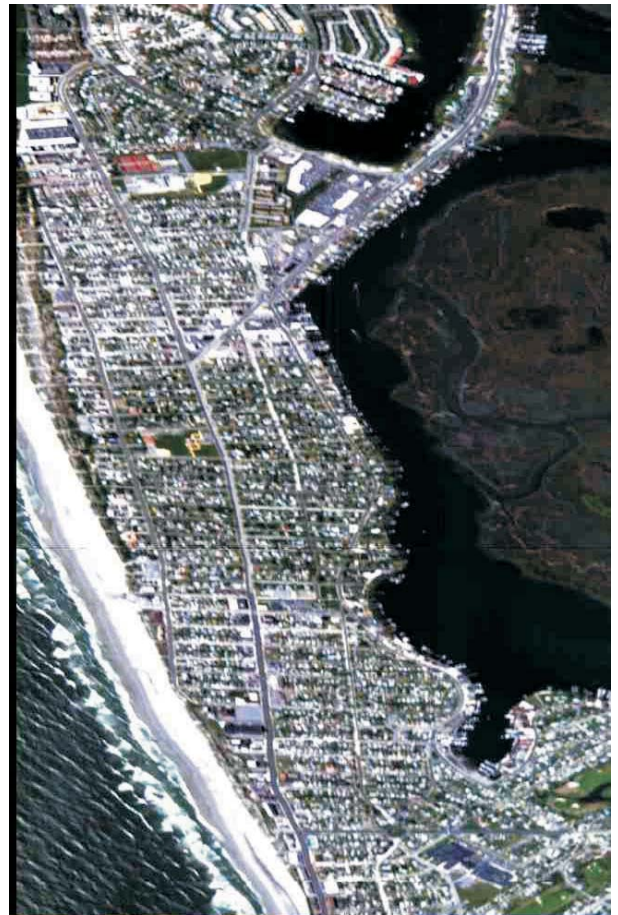


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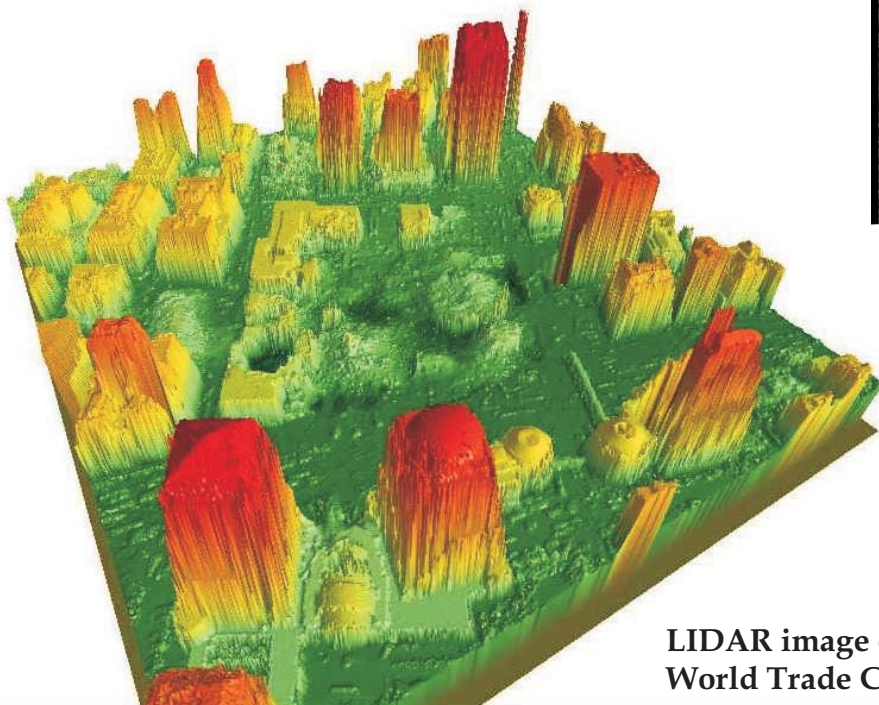


Standard Aircraft Specifications (con't)

- **Dimensions:**
 - Wing Span: 51 ft 8.4 in
 - Total Length: 47 ft 3 in
 - Fuselage Height: 4.8 ft
 - Tail Height: 14 ft 9.6 in
 - Cabin Doors: 39 in x 21.25 in
 - Baggage Doors (rear): 22 in x 27: in
 - Cabin Length: 20.9 ft
 - Cabin Width: 4.9 ft
 - Useable Cabin Volume: 491 cu ft
 - Nose Baggage: 28 cu ft
 - Cabin Baggage: 947 cu ft
- **Additional Standard Equipment:**
 - Cockpit: Color weather radar, radar altimeter, integrated flight director system, HF radio, GPS flight management system
 - Cabin: Available Sensors: Wild RC-30, Applanix Emerge Digital Camera, OpTech 1233 LIDAR, and Applanix POS/AV IMU system.



Hyperspectral image of
the New Jersey coast



LIDAR image of the
World Trade Center area



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