

# ARCHIVED REPORT

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## Cessna Encore

### Outlook

- Cessna announced plans to phase out the Encore+ in 2009
- Deliveries of four aircraft in third quarter of 2011 expected to be final aircraft off production line
- Cessna's new CJ4 offers same size, similar performance, and greater range and payload than the Encore+ at a slightly lower price, making the Encore+ superfluous in Cessna's product line

### Orientation

**Description.** Seven-passenger, twin-turbofan, short-range executive/business jet.

**Sponsor.** Privately sponsored by Cessna Aircraft Co.

**Status.** Encore+ production superseded Encore production in 2007.

**Total Produced.** Cessna produced 158 Encores and 66 Encore+ business jets through 2011.

**Application.** Short-range executive/corporate personnel transportation.

**Price Range.** \$9.15 million.



Citation Encore

Source: Cessna

## Cessna Encore

## Contractors

## Prime

<b>Cessna Aircraft Co</b>	<a href="http://www.cessna.com">http://www.cessna.com</a> , One Cessna Blvd, PO Box 7706, Wichita, KS 67277 United States, Tel: + 1 (316) 517-6000, Prime
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## Subcontractor

<b>Goodyear Tire &amp; Rubber Co</b>	<a href="http://www.goodyear.com">http://www.goodyear.com</a> , 1144 E Market St, Akron, OH 44316-0001 United States, Tel: + 1 (330) 796-2121, Fax: + 1 (330) 796-2222 (Brakes & Tires)
<b>Honeywell Aerospace, Air Transport &amp; Regional</b>	<a href="http://www.honeywell.com">http://www.honeywell.com</a> , 21111 N 19th Ave, Phoenix, AZ 85027 United States, Tel: + 1 (602) 436-2311 (Primus II Communication System)
<b>Pratt &amp; Whitney Canada</b>	<a href="http://www.pwc.ca">http://www.pwc.ca</a> , 1000 Marie-Victorin Blvd, Longueuil, J4G 1A1 Quebec, Canada, Tel: + 1 (450) 677-9411, Fax: + 1 (450) 647-3620 (PW535B)
<b>Rockwell Collins Inc</b>	<a href="http://www.rockwellcollins.com">http://www.rockwellcollins.com</a> , 400 Collins Rd NE, Cedar Rapids, IA 52498-0001 United States, Tel: + 1 (319) 295-1000, Fax: + 1 (319) 295-5429 (Pro Line 21 Avionics System)

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## Technical Data

**Design Features.** Similar to the Citation Ultra but with new engines, new trailing-link landing gear, reduced main-gear tread width, heated wing leading-edge, digital pressurization system, new brake system

and electrical junction box, new passenger seats, and redesigned cabin overhead panel for more seated headroom.

	<b>Metric</b>	<b>U.S.</b>
<b>External Dimensions</b>		
Wingspan	15.91 m	52.18 ft
Height	4.63 m	15.19 ft
Length	14.9 m	48.87 ft
<b>Weight</b>		
Empty weight	4,780 kg	10,516 lb
Max TOW	7,634 kg	16,830 lb
Max usable fuel	2,405 kg	5,291 lb
<b>Performance</b>		
NBAA IFR Range	3,313 km	1,789 nm
Max cruise speed at 35,000 ft	793 kmph	428 kt
Ceiling	13,716 m	45,000 ft
Takeoff distance	1,073 m	3,520 ft
Landing distance	844 m	2,770 ft

**Propulsion**

Encore (2) Pratt & Whitney PW535A turbofans rated approximately 14.93 kN (3,360 lbst) each.  
Encore+ (2) Pratt & Whitney PW535B turbofans rated approximately 15.11 kN (3,400 lbst) each.

## Variants/Upgrades

**Encore+.** Announced at 2005 NBAA show, the Encore+ features slightly uprated PW535B engines, Rockwell Collins Pro Line 21 avionics, a 200-pound payload increase, and indirect light emitting diode (LED) cabin lighting.

## Program Review

**Background.** Announced in late 1998, the Encore replaced Cessna's Ultra, featuring a 10 percent increase in engine thrust, a 15 percent decrease in specific fuel consumption, and a 100-nautical-mile range increase.

A prototype flew in July 1998. The original timetable called for FAA certification in late 1999, with deliveries beginning in the second quarter of 2000.

In late 1999, Cessna slipped its timetable by six months to incorporate design changes to improve performance and reduce drag resulting from uprating the engine. Wingtips were extended 14 inches per side, a new trailing-link landing gear was incorporated, fuel load was increased, an improved anti-ice system was fitted, and the interior was updated. Deliveries began in the fourth quarter of 2000.

### *Encore+ Launched*

At the 2005 NBAA show, Cessna announced the upgraded Encore+ variant (see **Variants/Upgrades** for details). It was certificated in late 2006, and Cessna announced the first delivery, to an undisclosed customer, in May 2007. According to figures released by Cessna to the General Aviation Manufacturers Association, production of the Encore model ended in the last quarter of 2006.

The global financial crisis and recession led to a decline in demand for business aircraft and layoffs at Cessna in early 2009. Cessna management announced in March 2009 that production of the Encore+ would end during the year. The company continued to deliver the aircraft in small batches, delivering five aircraft in 2010 and four in 2011.

## Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Jul	1998	First flight
Oct	1998	Encore formally announced
Spring	2000	FAA certification
Late	2000	Initial customer deliveries
Mar	2006	First flight of Encore+
Dec	2006	FAA certification of Encore+
Early	2007	Planned debut of Encore+
Mar	2009	Plans announced to end Encore production in mid-2009

## Forecast Rationale

Cessna shipped only four Encore+ business jets in 2011. The company announced in the spring of 2009 it planned to terminate production of the Encore by the end of the year. However, the company continued to deliver the Encore+ during the year at a low rate. Deliveries totaled five aircraft in 2010, and a small batch of aircraft was delivered in the third quarter of 2011. The forecast assumes, however, that the jet has ended its production run.

The new Cessna CJ4 is about the same size as the Encore+ and offers a similar level of performance for the same price. The CJ4 offers greater range and can operate from shorter fields when needed. The CJ4 effectively functions as a replacement for the Encore+ in Cessna's product line.

The Encore has offered customers simplicity, reliability, impressive short field and climb performance, and competitive operating costs. The new Encore+, which achieved FAA certification in December 2006, was designed to help the Encore battle for market share against the Hawker 400XP and Learjet 40XR in the highly competitive light business jet segment. However, the Encore had lost substantial market share in the segment since 2002. The light segment is also witnessing the entry of new competitors into the market, including Embraer's Phenom 300. Embraer delivered 26 Phenom 300s in 2010, five times the number of Encores produced by Cessna. The decision to end production of the Encore+ makes sense under these circumstances.

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