Cessna Citation X

RANGE
2,890 nm

SPEED
525 kts

PASSENGERS
8 people

Cost

ACQUISITION COST	ANNUAL COST	VARIABLE COST	FIXED COST
$9,200,000	**$2,424,365**	**$3,834/hr**	**$890,791**

MAX PAYLOAD	2,375 lb	ENGINES	2 Rolls Royce AE 3007C1
TOTAL CABIN AREA	538 cu ft	AVIONICS	Honeywell Primus Elite
WINGSPAN	63.9 ft	APU	Standard

Assumptions

This report uses custom assumptions that differ from Conklin & de Decker default values for Annual Utilization (Hours), Fuel Price (Jet A).

ANNUAL UTILIZATION (DISTANCE)	188,400 nm	FUEL PRICE (JET A)	$4.45/gal
ANNUAL UTILIZATION (HOURS)	400 hrs	LABOR COST	$136/hr
AVERAGE SPEED (STANDARD TRIP)	471 kts	ACQUISITION COST	$9,200,000

Cessna Aircraft Company

The Cessna-Roos Aircraft Company was incorporated on September 7, 1927, by Clyde V. Cessna and Victor Roos. One month later, Roos resigned and sold his interest back to Cessna. Later that year, the company was renamed the Cessna Aircraft Company. Cessna continued work on the "A" series of aircraft he had begun during his partnership with Walter Beech, Lloyd Stearman and the Travel Air Aircraft Company. The partnership and Travel Air dissolved shortly before Cessna Aircraft Company was established.

The “A” series aircraft were single-wing aircraft that eliminated the need for wing struts. Cessna began offering five variations of this aircraft that were called the AW (the "W" represented the Wright engine these aircraft came equipped with). After the “A” series, Cessna developed the “B” and “C” series aircraft. In 1929, the success of these models led to the financing and development of the “D” series aircraft, Chief and Scout. All was going well, including the building of a 55,000-square-foot plant, until the stock market crash in October 1929 and the beginning of the Great Depression.

The economic conditions meant demand for private aircraft dried up and Cessna had to close its doors in 1931 and rent out the buildings. The company never went bankrupt but did not build aircraft for the next three years. In 1934, Cessna’s nephews, Dwane and Dwight Wallace, took control of the company. Clyde Cessna sold his shares in the company to the Wallace brothers. With the Wallace brothers at the helm, the Cessna Aircraft Company built its first twin-engine aircraft, the T-50 Bobcat. In 1940, the U.S. Army ordered 33 of these specially equipped aircraft, which was Cessna Aircraft Company’s largest order to date. Later in the year, the Royal Canadian Air Force ordered an additional 180 T-50s.

During WWII, Cessna expanded from a company that employed 200 people in 1940 to 6,074 by 1944. At the end of the war, Cessna was able to continue producing aircraft to sustain a short-lived demand for small aircraft that could be used for short flights. Cessna entered the business aircraft market in 1954 with production of the T-37, its first jet-powered aircraft. The U.S. Air Force purchased more than 1,000 of these to use as trainers. The Citation line of aircraft was introduced in 1972, when the Citation 500 entered service. In 1985, Cessna became a wholly owned subsidiary of General Dynamics, who then sold Cessna to Textron in 1992. Although the economic downturn from 2008 to 2010 caused Cessna to lay off more than half its workforce, Cessna is still one of the top business and general aviation aircraft companies in the world.

Cessna Citation X

At its launch, the Citation X was Cessna's largest, fastest and longest-range aircraft, and the fastest business jet in production. The Citation X has a cabin that is 5 feet longer, with greater head and shoulder room than that of the Citation III.

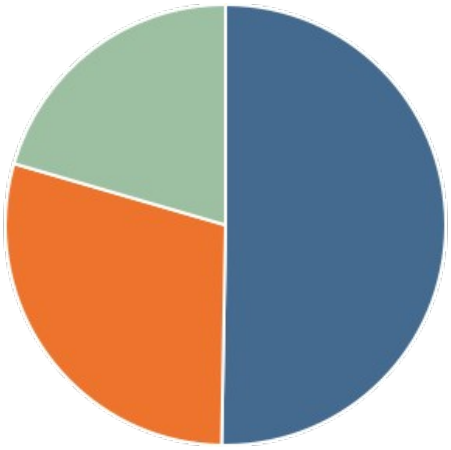
The Citation X comes with FADEC-equipped Rolls-Royce AE 3007C1 engines that produce 6,000 pounds of thrust each. The Citation X also has a new technology wing with a sweep of 37 degrees. It has a Honeywell Primus 2000 electronic flight instrument system avionics suite with five color LCD displays.

The prototype flew for the first time on December 21, 1993. The first customer delivery was to the golfer, Arnold Palmer, in 1996.

1. Cost

ACQUISITION COST	ANNUAL COST	VARIABLE COST	FIXED COST
$9,200,000	**$2,424,365**	**$3,834/hr**	**$890,791**

Total Annual Cost With Market Depreciation



$3,049,965

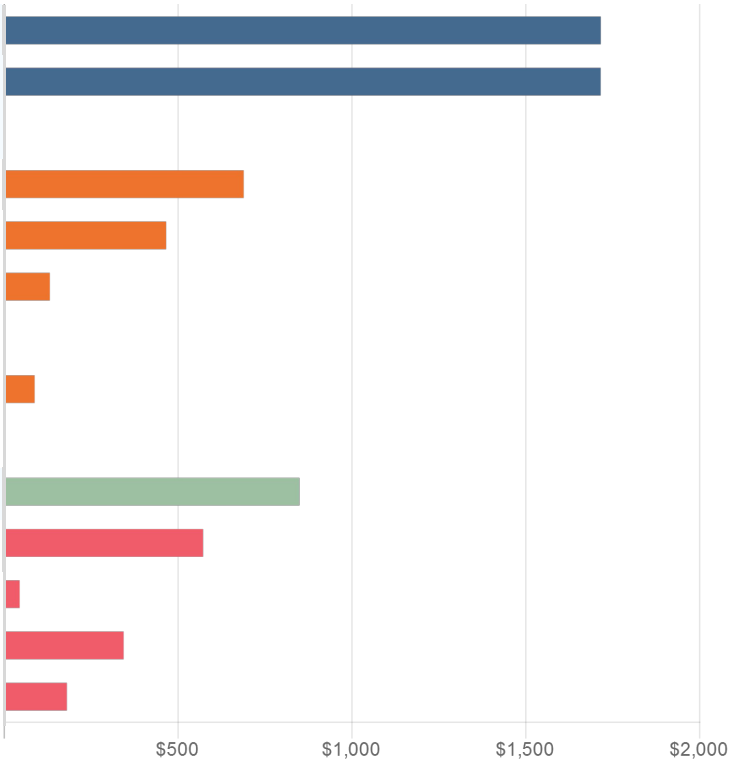
- 50% - Variable Cost - $1,533,574
- 29% - Fixed Cost - $890,791
- 21% - Market Depreciation - $625,600

Hourly Variable Cost

PER FLIGHT HOUR

$3,834/hr

Fuel [1]	**$1,718**
Fuel	$1,718
Additives	–
Maintenance	**$691**
Maintenance Labor [2]	$468
Parts Airframe/Engine/Avionics	$133
Thrust Reverser Allowance	–
APU Allowance	$90
Major Periodic Maintenance	–
Engine Reserves	$851
Miscellaneous Reserves	**$574**
Landing/Parking	$46
Crew Expenses	$346
Supplies/Catering	$182



1. Fuel is calculated using Fuel Cost x Fuel Burn + 15% - 386 gal/hr

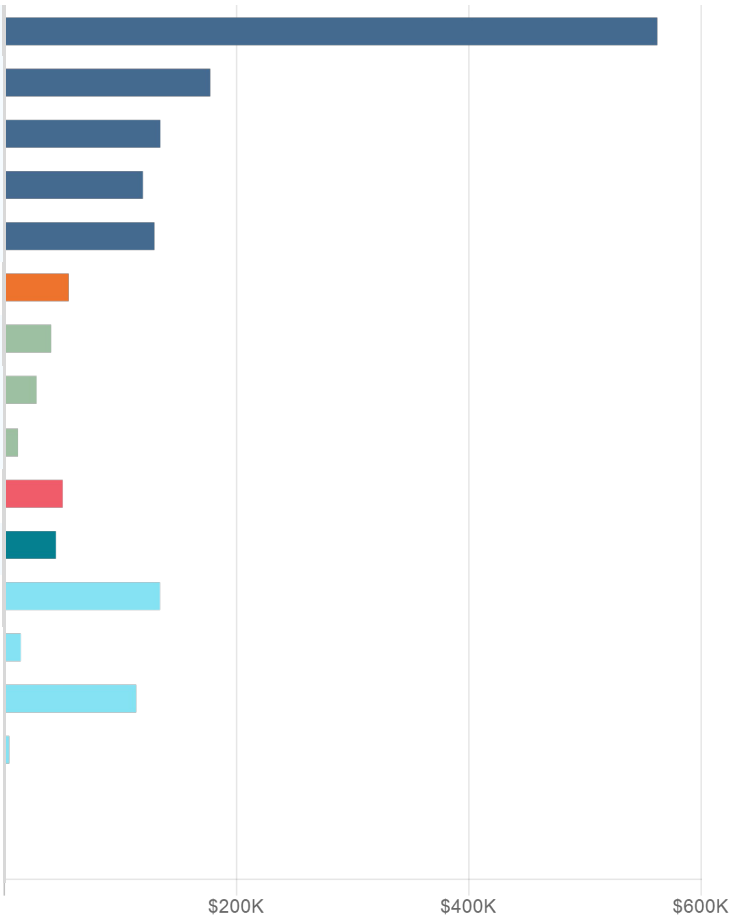
2. Maintenance Labor Cost is calculated using the ratio of Maintenance Labor Hours per Flight Hour and the Labor Rate: 3.44 labor-hr/Fhr @ $136/hr

Annual Fixed Cost

ANNUAL COST

$890,791

Crew	**$562,900**
Captain	$178,000
Copilot	$135,000
Flight Attendant	$120,000
Benefits	$129,900
Hangar	$56,100
Insurance	**$41,020**
Hull	$28,520
Single Limit Liability	$12,500
Aircraft Modernization	$51,000
Training	$45,084
Miscellaneous	**$134,687**
Navigation Chart Service	$14,847
Refurbish	$114,240
Computer Maintenance Program	$4,900
Weather Service	$700
Other	–



Costs are forward looking estimates based on Conklin & de Decker Research. For comparison purposes only.

Created on Aug 21, 2019, by Doug Strangfeld
Data Version: V 19.1

2. Performance

NORMAL CRUISE
525 kts

LONG-RANGE CRUISE
470 kts

MAXIMUM CRUISE
525 kts

RATE OF CLIMB
3,650 ft/min

MAX CERT. ALTITUDE
51,000 ft

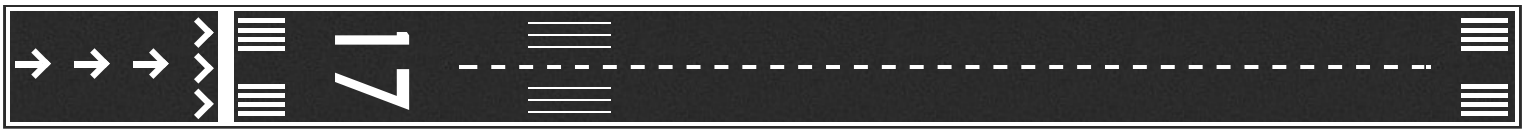
INITIAL CRUISE ALTITUDE
43,000 ft

TIME TO CRUISE ALTITUDE
28 min

ENGINE OUT RATE OF CLIMB
1,120 ft/min

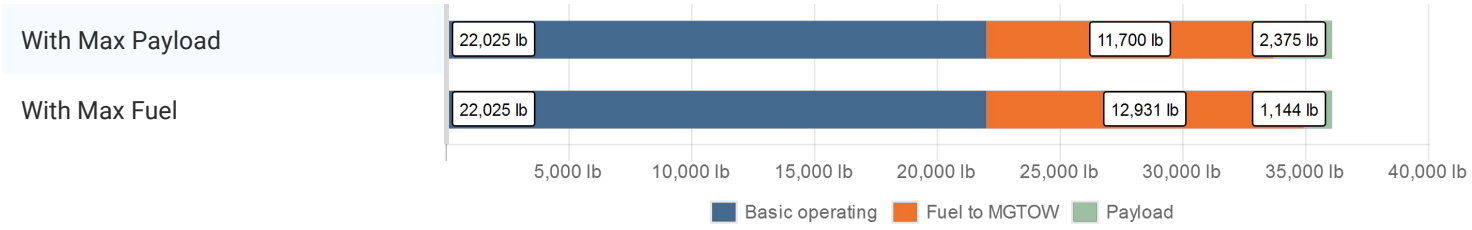
ENGINE OUT CEILING
26,000 ft

Field Length



3. Weight/Payload

Weight Breakdown



With Max Payload

MAXIMUM PAYLOAD
2,375 lb

RANGE AT MAX PAYLOAD
2,840 nm

RAMP	36,400 lb
MAX LANDING	31,800 lb
BASIC OPERATING	22,025 lb
USEFUL LOAD	14,375 lb

With Max Fuel

AVAILABLE PAYLOAD
1,444 lb

PASSENGER CAPACITY
7.2 people

MAX TAKEOFF	36,100 lb
ZERO FUEL	24,400 lb
USABLE FUEL	12,931 lb

4. Range

Long-Range Cruise

RANGE
3,140 nm

AVERAGE SPEED
470 kts

ENDURANCE
6.68 hrs

PASSENGERS
4 people

Maximum Cruise

RANGE
2,915 nm

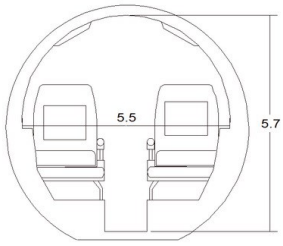
AVERAGE SPEED
500 kts

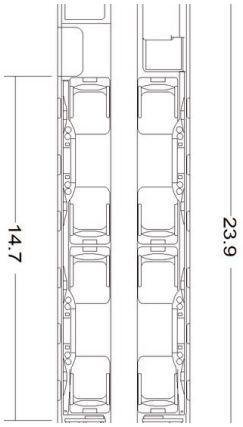
ENDURANCE
5.83 hrs

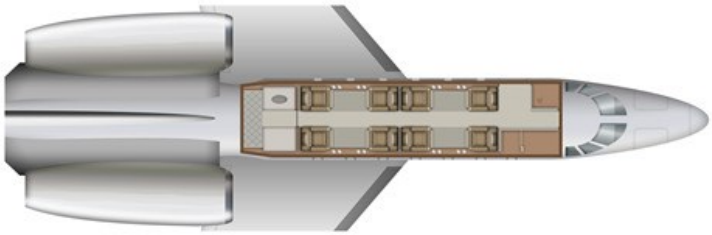
PASSENGERS
4 people

SEATS FULL RANGE	2,890 nm
FERRY RANGE	3,125 nm

5. Interior





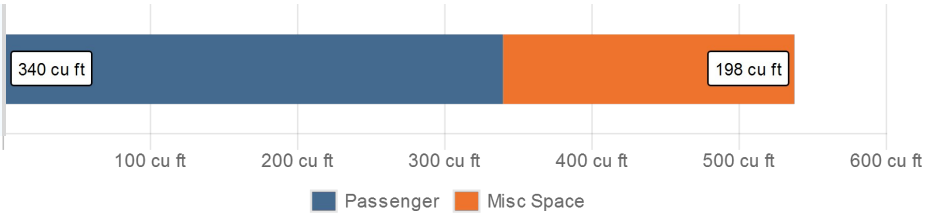


PASSENGERS
8 people

CREW
2 people

AREA PER PASSENGER
42.5 cu ft/person

CABIN VOLUME BREAKDOWN
538 cu ft



TOTAL CABIN AREA
538 cu ft

PASSENGER AREA
340 cu ft

MISC SPACE (GALLEY, LAV, ETC.)
198 cu ft

CABIN WIDTH
5.5 ft

CABIN LENGTH
23.92 ft

CABIN HEIGHT
5.7 ft

TOTAL BAGGAGE AREA
82 cu ft

INTERNAL
—

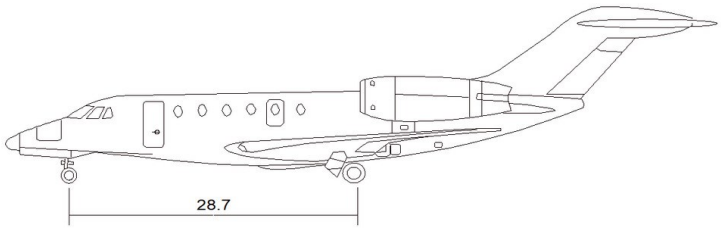
EXTERNAL
82 cu ft

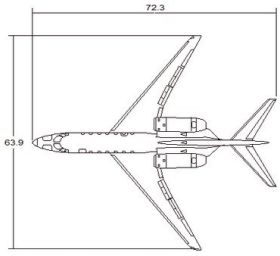
DOOR
9.45 sq ft

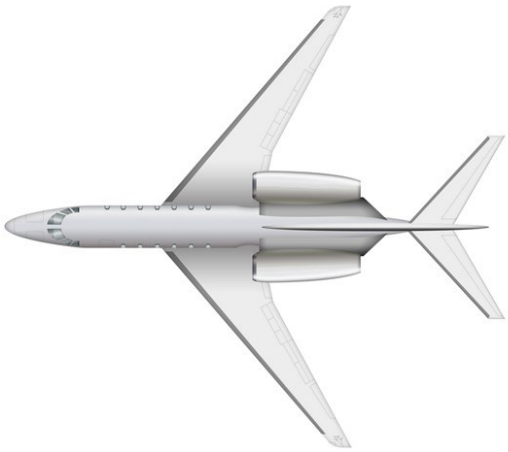
WIDTH (DOOR)
2.1 ft

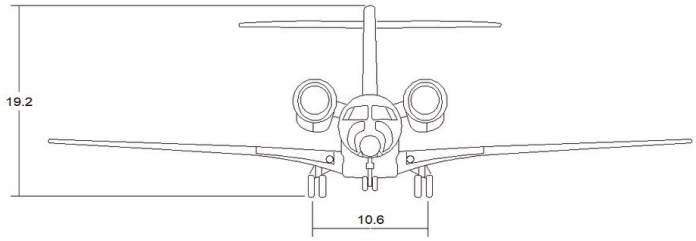
LENGTH (DOOR)
4.5 ft

6. Exterior









WINGSPAN
63.9 ft

FUSELAGE
72.3 ft

POWERPLANT
2 Rolls Royce AE 3007C1

THRUST
6,442 lb

THRUST REVERSER
Standard

7. Equipment

AVIONICS

Honeywell Primus Elite

COCKPIT VOICE RECORDER	Standard
FLIGHT DATA RECORDER	Optional
EICAS	Standard
GROUND WARNING SYSTEM	EPGWS
TRAFFIC WARNING SYSTEM	TCAS 2000
MAINT DIAG SYS	Standard
VHF 8KHZ SPACING	Standard

AUXILIARY POWER UNIT

Standard

MEETS STAGE 3 NOISE LEVELS	Yes
REGULATORY CERTIFICATION	1996
IFR CERTIFIED	Yes
PRODUCTION	1996 - 2012
SINGLE POINT REFUEL	Standard
EXTERNAL LAV. SERVICE	Standard