Carenado

Reims Cessna F406 Caravan II

FSPilot

Reims-Cessna F406 Caravan II | Carenado

General Description

The F406 Caravan II is a twin turboprop engined, fourteen-seat low-wing monoplane of conventional aluminium and steel construction. A development of the Cessna 404 with two Pratt & Whitney PT-6 turboprop engines, it is similar to the pressurized Cessna 441. The aircraft first flew on 22 September 1983, and was produced by Reims Aviation (later known as GECI Aviation) until their 2013 demise In 2014, the Chinese based Aviation Industry Corporation of China subsidiary Continental Motors, Inc. partnered with French based marketer ASI Innovation to purchase rights to the F406, and restart production of piston and turboprop variants with diesel fuel capability.

The F406 is aimed at passenger and small cargo transport, and civilian and military surveillance. For extra cargo capacity a cargo pod can be fitted to the belly of the aircraft. The Surmar is a new maritime surveillance version of the aircraft with extra equipment such as a 360 degree radar.

Though the two engines make it more expensive to operate than similar aircraft such as the single-engined Cessna 208 Caravan I, having two engines makes it comply with European regulations regarding commercial operations, which only allow multi-engine aircraft for commercial instrument flight.

Specifications:

General characteristics:

Crew: Two
Capacity: 12 passengers
Length: 11.89 m (39 ft 0 in)
Wingspan: 15.08 m (49 ft 5¾ in)
Height: 4.01 m (13 ft 2 in)
Wing area: 23.50 m2 (253 ft2)
Empty weight: 2,283 kg (5,033 lb)
Gross weight: 4,246 kg (9,360 lb)
Powerplant: 2 × Pratt & Whitney Canada PT6A-112 turboprop, 373 kW (500 hp) each

Performance:

Maximum speed: 424[10] km/h (263 mph)
Cruising speed: 370 km/h (230 mph)
Range: 2,135[11] km (1,327 miles)
Service ceiling: 9,145 m (30,000 ft)
Rate of climb: 9.4 m/s (1,850 ft/min)

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Appraisal - Introduction:

Developers Description:

Features:
Carenado GNS530 with Reality XP integration option.
Original F406 autopilot installed.
HD quality textures (4096 x 4096).
Volumetric side view prop effect
Dynamic propeller shines effect.
32 bit real F406 3D sounds.
Customizable panel for controlling windows transparency, instrument reflections and static elements such as wheel chocks and sights props.
Real behavior compared to the real airplane. Real weight and balance.
Tested by real pilots.
Realistic night lights effects on panel and cockpit.

*Flight1 GTN 750 and Reality XP GNS430 are sold separately.

Included in the package:
6 HD liveries
1 HD Blank livery
F406 Emergency Checklist PDF
F406 Normal Checklist PDF
F406 Performance Tables
F406 Reference PDF
Carenado GNS530 PDF
Weather Radar PDF
Recommended Settings PDF

Technical Requirements:
Windows XP with SP3 installed, Vista or 7 (32 or 64 bits).
Microsoft Flight Simulator FSX with SP1 and SP2 (or Acceleration Pack) installed or Lockheed Martin - Prepar3D Flight Simulator v2.5 or v3.0.
Pentium V/3GHz or similar
Minimum 2GB RAM (Recommended 4GB RAM)
512MB graphics card.
805MB available hard disk space
INTERNET CONNECTION is required for installing this product.

NOTE:
This aircraft does not have a 2D panel.
Reality XP only work in FSX. It does not work in P3D

Appraisal - Exterior Model :

The modelling of the exterior of the aircraft is to Carenado's usual very high standard with excellent detailing and shaping. There are no visible mesh errors to be seen and absolutely no bleed anywhere on this model.

The form of the fuselage especially the nose and cockpit areas are very nicely implemented. The window cut-outs etc. have smooth edges with great screw head detailing around the cockpit and cabin window framings.

All of the cockpit / cabin windows exhibit a slight green tint and very good reflective properties. The three animated nose baggage bays & main cabin doors also have smooth cut-outs. They have detailed structural edges and exhibit no bleed when closed. The main cabin door has three sections, though its latch is not animated neither inside nor out. The main bottom rear section of the cabin door has integral footsteps. The port cockpit window is also animated, but again with no latch animations. The belly cargo container is called using options menu via keystrokes 'Shift 4', doors of the same are opened from an option on the same menu.

Other modelled details on the fuselage are antennas, pitot tubes and a tail position light. Various other ports, access panels, and the main cabin emergency exit door / window are detailed in very highly detailed texture sets.

Wings, horizontal stabs, vertical fin and the associated flying controls are well modelled with good shaping / detailing where necessary, which includes static wicks which balance when the engines are running. The wing flex also gives a subtle balance when the engines are running with minimum flex during take-off and landing. Animation of all flying controls is smooth and linear.

The wing tip strobes / navigation / wing inspection lights are nicely modelled, though they have rather poor light sources which have almost no bloom effect. The strobe lights flash from within the wing giving a strange effect. The aircraft also sports two animated landing lights on the outboard lower wing area with again a poor lighting effect.

The Engine cowlings / intakes etc. are as equally well modelled as the rest of the exterior with excellent detailed and formed intakes. The propellers and the prop spinners are also very nicely modelled with the prop disk being well defined when the engines are running. The disk also responds well to power variations.

The three landing gear units are nicely modelled / detailed. Animation of the gear is sequential and smooth with no apparent interference with local structures. When closed the main gear wheels are exposed.

Gear bay detail is simple but has good textures and a little structural detailing. There is a taxi light mounted on the nose gear leg and like the main landing lights has a poor light source.

Exterior texture sets are very well defined HD textures with very nice detailing and alignment. They are both bump and specular mapped giving good effects to panels, rivet lines, fixings etc. The package comes with 5 color schemes.

Appraisal - Interior Model:

The Virtual Cockpit of the model is very nicely modelled / textured with very good detailing on the instrument panel, console, CB's / switch panels, and the throttle / flap selector control quadrant.

The instruments on the panel are very easily read with clear fonts and crisp dials. They have good depth between the bezel glass and dial plates.

Engine instrumentation is via conventional needle indications which again have crisp graphics, smooth movement and are easily readable.

The audio panel, DME / ADF / XPDR & GNS530 control heads are very well modelled and their apperance is just like the real units.

The main Avidyne Multifunction Display units are a combined EADI / EHSI Display. There is also a Bendix Wx Radar display. The Avidyne Multifunction Displays and Wx radar displays have very crisp / clear character sets and smooth graphical movement.

In the center console below the throttle quadrant is an AP control panel which seems to operate as you would expect.

Other Annunciator Panels, auxiliary switch panels etc. located in and around the main panel are equally as well modelled.

Rudder pedals, control quadrants, trim wheels etc. are again very well modelled.

The virtual cockpit interior trim, crew seats, side panelling etc. is again nicely modelled and textured with the crew seats having cloth covered cushions and three point safety harnesses.

The cockpit side window on the port side of the cockpit opens through a hot spot over the latch and there are hingeable anti-glare panels on the forward cockpit windows.

Also through keystrokes 'Shift 4' you can select cockpit windshield tint and instrument reflections, wheel chocks, door functions etc. nice feature. 'Shift 5' displays the pop-up window key shifts and 'Shift 6' brings up the aircraft config menu for cold & dark start / ready for take-off options.

The nose section, cockpit windshield area, nose baggage bays, aircraft ground tug, pitot blanks, cones etc. are all very well defined in this package.

The shaping of the engine cowlings in particular the intakes are very well defined. The same can be said for the propeller and its cone.

The cargo compartment is also very well detailed, with smooth contours and opening doors. Pity they didn't animate the other cabin window / door.

Open cabin doors / cockpit window have excellent detailing including curtains. Animation is very smooth with no bleed when closed!

This front view of the Reims Cessna F406 Caravan II shows off the great smooth curvatures that Carenado always seems to achieve in their modelling. The bump mapping of panel lines, fixings etc. also adds to the realism of the model.

This view shows the bottom of the wings, the main landing gear and the flap area of which the level of detailing through structure as well as the very impressive HD texture sets shows the lengths that this developer goes to in order to achieve the final product. The subtle weathering is also typical of Carenado's modelling.

If you didn't know better you would think this was a real photo. The modelling is very authentic in its appearance with great detail.

This view shows the very nice profile of the Reims Cessna F406 with its long nose and extended cabin.

This view shows off the equally great detailing of the lower section and the rear of the aircraft through the texture sets which include bump mapping of panel lines and rivets..

This view shows off the great detailing of the fuselage panel lines and the main cabin door. The vertical fin detailing is also very impressive.
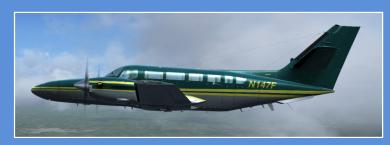
The passenger cabin is decked out with cloth covered seating and the wall / ceiling panelling etc. are modelled / textured to Carenado's very high standards. Night lighting in both the cockpit and cabin gives a realistic night environment, great work.

Appraisal - Flying the Reims Cessna F406 Caravan II:

The aircraft is relatively simple to operate in its basic functions with simple procedures for engine start etc. Procedures are detailed in various pdf files supplied along with a guide to the Avidyne Multifunction Display / Weather radar units.

Engine start-up is as realistic as the real aircraft with good start up engine sounds in the exterior environment, though in the cockpit the sound set for the engines is a little weak.

Taxiing the aircraft is simple with turns easily maintained. During take-off acceleration is good when compared to videos of real aircraft, with the engine sounds also being reasonably realistic during take-off.

The aircraft climbs very well and is easily trimmed. Handling of the aircraft is again smooth with good reaction rates to control column inputs. The aircraft handles well in all flight regimes, being very nice to fly.

The aircraft's stall is nicely reproduced with a good stall warning.

Handling on approach was good and even at slow approach speeds the aircraft is stable and doesn't over react to control inputs. Braking action was very positive on landing.

The aircraft systems all appear to operate as intended, including the autopilot which was checked on various Nav tracks and using the APR function. The aircraft flew the ball as you would expect down to decision height as long as the approach was captured at recommended distances. We did not check short or steep angle captures. Overall the aircraft flies very nicely indeed and performs well. Though the sound set is a little weak especially in the cockpit.

Appraisal - Our Findings:

Overall Carenado's rendition of the Reims Cessna F406 Caravan II is to a very high standard of quality, both inside and outside as we have come to expect from this developer. If there is any issues regarding this product then its probably the sound set which needs to be a little more realistic internally as mentioned, though its not that big an issue unless of course you are a perfectionist at all levels.

Overall we give this product our gold seal for its quality and value for money.

Visit the Carenado site for product purchase at www.carenado.com

The modelling of the office is excellent to say the least. Great detailing of the instruments and radio units. All with very clear to read fonts at all ambient conditions and all very functional.

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The main cabin is also very well defined, with cloth covered seating and nicely textured walls and panels. Looks comfortable!