

# ARCHIVED REPORT

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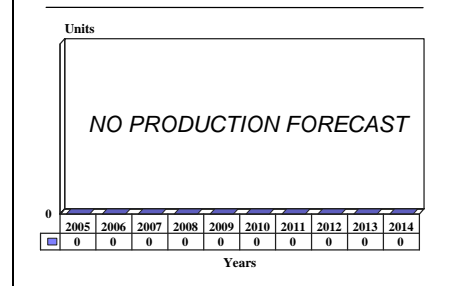
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## IAe N2130 - Archived 5/2006

### Outlook

- The N2130 program is shelved
- No aircraft have been built

10 Year Unit Production Forecast  
2005 - 2014



### Orientation

**Description.** Short/medium-range, twin-turboprop-powered regional/commuter transport aircraft.

**Sponsor.** The N2130 program was sponsored by Indonesian Aerospace (IAe).

**Status.** The N2130 program is shelved.

**Total Produced.** Not applicable.

**Application.** Short/medium-range scheduled and non-scheduled regional and commuter passenger transportation.

**Price Range.** The price target was \$20-\$30 million.

### Contractors

PT. Dirgantara Indonesia (Indonesian Aerospace - IAe), <http://www.indonesian-aerospace.com>, Jalan Pajajaran 154, Bandung, 40174 Indonesia, Tel: 62 22 6034562, Fax: 62 22 6019538, Email: [infosales@indonesian-aerospace.com](mailto:infosales@indonesian-aerospace.com), Prime

### Technical Data

(N2130-100)

**Design Features.** Low-swept-wing design with wing-mounted, podded turboprop engines. The N2130 had a circular design fuselage with an all-swept tail unit. It had retractable tricycle type landing gear, with twin wheels on each unit. The aircraft was to have a fly-by-

wire flight control system, possibly similar to that of IAe's N-250 turboprop. Fuel was to have been carried in wing tanks; an optional center-section fuel tank would have been available.

	<u>Metric</u>	<u>U.S.</u>
<b>Dimensions</b>		
Length	31.25 m	102.53 ft
Fuselage diameter	3.95 m	12.96 ft
Wingspan	29.89 m	98.07 ft

### Weight

Max takeoff weight

	<u>Metric</u>	<u>U.S.</u>
BGW	49,550 kg	109,258 lb
HGW	51,500 kg	113,557 lb
Max payload	11,400 kg	25,137 lb
<b>Performance</b>		
Design range	2,963 km	1,600 nm
<b>Propulsion</b>		
N2130	(2)	Unspecified turbofan engines in the 85-102 kN (19,000-23,000 lbst) class. Potential candidates included the CFM International CFM56-9, the Pratt & Whitney PW6000, and the Rolls-Royce BR715.

**Seating**

The N2130-100 would have accommodated 104 passengers in a two-class arrangement, or 114 passengers in a single-class configuration. The stretched N2130-200 would have accommodated up to 130 passengers in an all-tourist configuration.

## Variants/Upgrades

N2130-100. Basic 104-114 passenger aircraft. Two versions of the -100 were planned: a basic gross weight (BGW) version with a maximum takeoff weight of 49,550 kilograms (109,258 lb), and a high gross weight (HGW) version with a maximum takeoff weight of 51,500 kilograms (113,557 lb).

(8.56 ft) longer than the baseline -100. Two versions of the -200 were also planned: a BGW version with a maximum takeoff weight of 56,450 kilograms (124,449 lb), and an increased gross weight version with a maximum takeoff weight of 58,700 kilograms (129,411 lb).

N2130-200. Stretched derivative with capacity for up to 130 passengers. It was to have been 2.61 meters

## Program Review

**Background.** IAe's N2130 Technology Program (NTP) began in October 1994 as a market and product definition study. Consultations took place initially with Indonesia's five main airlines: Bouraq Indonesia, Garuda Indonesia, Mandala Airlines, Merpati, and Sempati Air.

IAe (then known as Industri Pesawat Terbang Nusantara, or IPTN) had been planning to build three versions of the N2130 regional jet: a baseline 100-passenger model; a stretched, 130-passenger derivative; and a short-fuselage, 80-passenger version. However, in early 1997 the company dropped the 80-passenger model. Airlines had shown little support for this version.

IAe's most recent plans called for building a baseline aircraft, tentatively named the N2130-100, that could accommodate 104-114 passengers. A stretched derivative, called the N2130-200, was also planned. Basic gross weight and increased gross weight versions of both the -100 and the -200 were to have been marketed.

In early 1996, the Indonesian government created a company called PT Dua Satu Tiga Puluah (DSTP) to secure funding for the N2130 development effort. However, in mid-1998, DSTP shareholders began considering whether to end support for the program.

In January 1998, as part of a \$43 billion bailout of the Indonesian economy, the International Monetary Fund (IMF) demanded that budgetary and extrabudgetary support and credit privileges granted to IPTN's aircraft projects be discontinued, effective immediately.

**Powerplants.** The N2130 was to have been powered by a pair of 19,000-23,000 lbst class turbofan engines. Potential candidate powerplants included the CFM International CFM56-9, the Pratt & Whitney PW6000, and the Rolls-Royce BR715. IAe never decided whether to market the N2130 with one engine or a choice of two. This decision was to depend on whether a risk-and-revenue-type exclusivity deal could be made with a single supplier.

**Subsystems.** The N2130 was to feature a full-authority, fly-by-wire flight control system. Goodrich and Liebherr-Aero-Technik had been developing a three-

axis fly-by-wire flight control system for IAe's N-250. These companies, teamed with BAE Systems, might have eventually proposed a version of the N-250 system for the N2130. Other possible contenders to supply the flight control system were Dassault, Lockheed Martin, and a team of EADS and Thales.

Contenders for the N2130's avionics suite included the Honeywell Primus system, the Rockwell Collins Pro Line 21 system, and the Thales Integrated Modular System. The leading contender to supply the N2130's landing gear was Messier-Dowty, which provided the landing gear for the N-250.

**MoUs.** IPTN signed Memorandums of Understanding with three Indonesian airlines for N2130 aircraft. Garuda Indonesia signed for 20 aircraft, Merpati for 15

(with 15 options), and Sempati Air for up to 21 (with 20 options).

**Program Schedule.** A schedule announced in February 1996 for the N2130 program called for roll-out of the initial prototype in early 2002, followed by its initial flight in mid-2002. Four or five prototypes were planned. Initial customer delivery was scheduled for 2004.

This tentative schedule, which was not met, represented an acceleration of earlier plans that had called for first flight in 2004 and initial delivery in 2006.

In November 1999, an IPTN spokesman announced that the N2130 program had been canceled. However, work on the program resumed shortly thereafter at a slow pace. The N2130 effort was later shelved, however.

## Funding

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Development cost of the N2130 was estimated at \$2.0 billion.

## Timetable

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<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Oct	1994	Initial N2130 study begun
Jun	1997	Preliminary design phase begun

## Worldwide Distribution

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Not applicable.

## Forecast Rationale

The N2130 project is currently shelved. IAe completed the preliminary design final document in 2000, and had hoped to find partners to help finance the program and to jointly pursue further development of the aircraft. However, at this writing, no suitable partners have been found. IAe has also attempted to sell the N2130 program outright, but this effort has been unsuccessful as well.

If the N2130 had gone forward, it would have been entering a crowded market. Sales competitors would have included the Airbus A318 and A319, the Boeing 737-600, and Embraer's new 190 and 195 models. Though the imminent demise of the Boeing 717-200 does free up some room in the 100-130 seat market for a new competitor, this void may well be filled by Bombardier's proposed new 110-135 passenger CSeries family.

## Ten-Year Outlook

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None

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