# ARCHIVED REPORT

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# **CASA 3000 - Archived 7/95**

#### **Orientation**

**Description**. Advanced technology, 68-76 passenger, high speed regional/commuter transport aircraft.

**Sponsor.** The CASA 3000 is currently sponsored by the Government of Spain. Additional program sponsors/partners are being sought.

Contractors. Construcciones Aeronauticas SA (CASA), Madrid, Spain. Additional partners are sought.

**Status.** Definition completed in May 1993, design/development begun June 1993. Full-scale development launch pending addition of risk-sharing partners.

**Total Produced.** Not applicable.

**Application**. Scheduled short-range regional/commuter passenger transportation. Aircraft will be optimized for 250-700 nautical mile stage lengths.

Price Range. Estimated at \$16-\$17 million in 1994 US dollars.

#### **Technical Data**

**Design Features.** Initial information from CASA showed a low-wing monoplane based upon the fuselage and tail of the Ilyushin Il-114 turboprop and the wing of the Saab 2000. The Spanish manufacturer has since begun the design of a new fuselage, as well as that of a new composite wing of longer span and with different flaps and ailerons as compared with the Saab airfoil. Present drawings show an unswept horizontal stabilizer with significant dihedral.

#### (Preliminary Data)

	<u>Metric</u>	<u>US</u>
Dimensions		
Wing Span	27.67 m	90.75 ft
Overall length	29.7 m	97.42 ft
Overall height	8.68 m	28.42 ft
Max cabin width	2.64 m	8.75 ft
Max cabin height	1.97 m	6.42 ft
Weights		
Maximum Take-Off	28,300 kg	62,390 lb
Operating Empty	17,200 kg	37,919 lb
Max payload	7,500 kg	16,534 lb
Max landing weight	27,800 kg	61,288 lb

Seating. Single aisle, four-abreast seating for 72 at 32-inch (81-cm) pitch. Alternative configurations to accommodate 68-



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78 passengers.

**Performance** 

Maximum cruise speed 648 km/h 350 kt

Range, max cruise, max

payload 1,402 km 757 nm

**Propulsion** 

CASA 3000 (2) Turboprop engines in the GMA 2100 class, each providing

approximately 3,691 kW (4,950 shp) at takeoff.

# Variants/Upgrades

Not applicable.

### **Program Review**

**Background.** Over the past five years, CASA has considered several new and/or derivative commercial aircraft to follow the C-212 and CN-235 in its long-term strategic plan. The C-212 long ago passed its peak in market demand, while the CN-235, a recent success in the military transport market, has been mired in a protracted commercial slump, due in part to a soft market and to IPTN's credibility problems.

In early 1990, CASA began to sound out various companies in the regional/commuter aircraft manufacturing industry about possible joint ventures. Only one such foray was publicly announced, that with the Ilyushin Design Bureau. Over a period of several weeks, CASA and Ilyushin discussed a variety of options ranging from simple marketing of the Il-114 turboprop in the west by CASA to a joint venture in a wide variety of commercial projects, including the 114 and larger, jet-powered Il-96. Nothing concrete came of these talks until June 1991 at the Paris Air Show, when CASA announced its intention to build the new CASA 3000 high speed turboprop with at least two risk-sharing partners.

Since Paris 1991, CASA has sounded out many of the world's aircraft builders and major airframe subcontractors, but with no announced success. Ilyushin is out and Saab appears reticent about using any of the Saab 2000's technology; more recently CASA and BAe have discussed a range of collaborative opportunities but no agreement has been announced.

Joint Venture Potential. The estimated cost of developing the CASA 3000 is \$700 million, of which the Spanish government has committed \$342 million. The remaining funds would have to come from risk-sharing partners, not yet signed or identified. Potential partners include Allison for the entire propulsion system, Saab, and now British Aerospace. Any use of the Saab 2000 wing would require the Swedish manufacturer's permission, even though CASA produces that aircraft's airfoil. CASA would retain 50 percent of any future consortia arrangement. CASA says it has memoranda of understanding with eight potential partners for work on the airframe, and with three for the propulsion system. In early 1993 CASA opened talks with government and industry officials of the People's Republic of China regarding potential launch orders and collaboration; no results have been made public.

# **Funding**

In early 1992, CASA said it would cost \$700 million to bring the 3000 to market. The Spanish Council of Ministers provided a grant of \$342 million to begin development. This amount will be allocated over the period 1992-1997.

**Analysis.** CASA continues to seek risk-sharing partners, and most recently has been talking with BAe's Jetstream Aircraft group. The UK firm is particularly anxious to salvage its turboprop operations in the face of very sluggish sales. Collaboration with CASA on a new 70-seater would result in a phaseout of BAe's Jetstream 61/ATP, a program which has generated less than 60 orders over the past ten years. Conversely, CASA and BAe could collaborate on an improved and re-engined Jetstream 61, a less costly project and one which could be brought to market sooner than an all-new



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aircraft. Little has been heard this year of potential Chinese participation but, given the protracted nature of dealing with Beijing, any such agreement could be a long way from consummation.

Although the Spanish manufacturer's public statements still call for flying a prototype by the end of 1996, with service entry in 1998, a CASA 3000 go-ahead is by no means a foregone conclusion. Despite statements to the contrary, we remain unconvinced that CASA would launch the program without one or more partners. Further, should the company's marketing efforts indicate that a fan-powered program would offer greater promise, CASA could seek to align itself with any one of half a dozen European or North American manufacturers to either take part in an existing regional jet program or to come up with a new jet design.

At this time, we believe that the most likely scenario would be a CASA/BAe collaboration. We have serious reservations over either principal's ability to "go it alone" into the late 1990s, much less into the next decade, within this market segment and a link-up could enable an Anglo-Spanish team to contest the current market dominance enjoyed by the ATR consortium. However, as the resulting product line from any such joint venture remains purely speculative at this time, we are not forecasting a CASA 3000.

#### **Timetable**

Early	1990	CASA and Ilyushin discuss Il-114
Jun	1991	CASA announced intention to proceed with CASA 3000
Mid	1994	Possible launch of full-scale development
	1996	First flight planned
	1998	Certification and service entry
Beyond	2000	Planned production and product development

#### **Worldwide Distribution**

Not applicable.

# **Forecast Rationale**

Given the wide range of collaborative options available, and the growing need for product line rationalization among the respective manufacturers, we are not forecasting a production go-ahead for the CASA 3000.

#### **Ten-Year Outlook**

No forecast of prototype or production aircraft.

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