

DORNIER LUFTFAHRT

A Fairchild Aerospace Company

728JET - A New Family of Regional Aircraft



**ICAS 2000
HARROGATE, UK**

Session 1.2 Subsonic and Supersonic Transport 2

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Future Needs

DORNIER LUFTFAHRT
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- **Is the Hub & Spoke System at its Growth Limits?**
 - **Are More Direct Links Needed to Communities with Smaller Airfields?**
 - **Propeller Aircraft are Out!**
 - **Regional Aircraft must have Comfort and Reliability like Large Airlines**
 - **- But at Lower Operating Cost**
- 
- A photograph of a white Lufthansa regional jet flying over a landscape. The aircraft is viewed from a low angle, showing its wings and tail. The tail features the Lufthansa crane logo. The word "Lufthansa" is written in blue on the side of the fuselage. The background shows a blue sky with scattered white clouds and a green landscape below.

The Four Major Alliances

DORNIER LUFTFAHRT
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STAR

Lufthansa, United Airlines, SAS,
Air Canada, Thai, Varig, SIA,
Air New Zealand, Ansett, ANA,
(Austrian)



WINGS

KLM, Northwest, Aer Lingus, Martinair,
Transavia, JAS, Jet Airways, Garuda



Alitalia



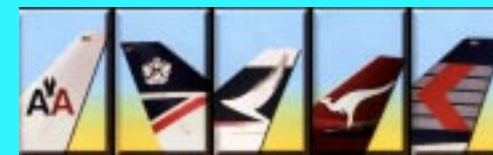
Qualiflyer Group



Swissair, Sabena, Turkish Airlines,
TAP Air Portugal, Crossair, Lauda Air,
Tyrolean Airways, Air Littoral, AOM,
Air Europe, (Austrian)

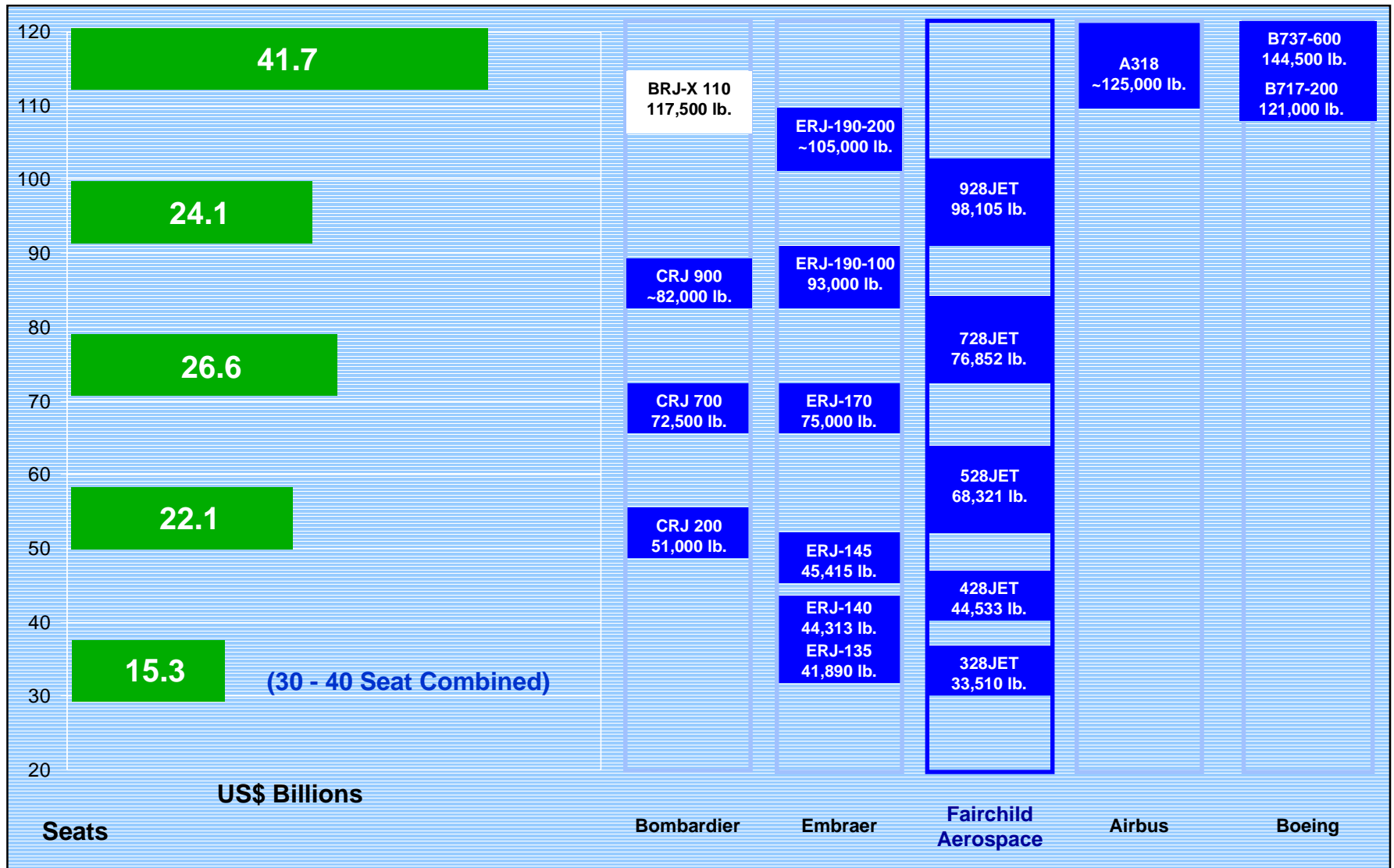


oneworld

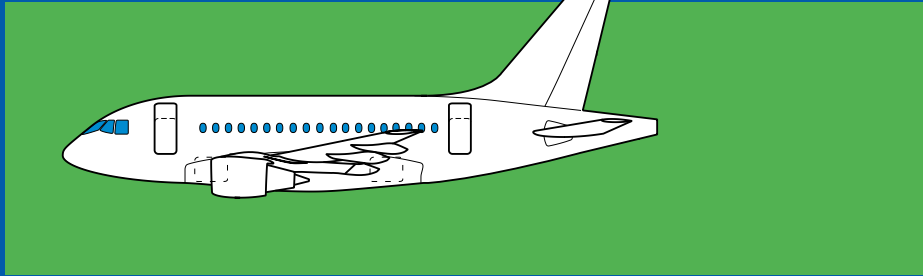
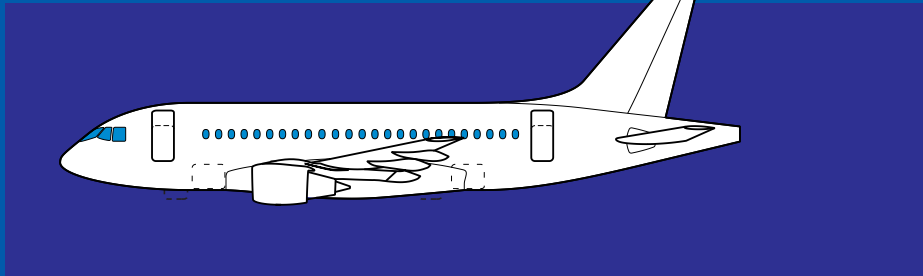
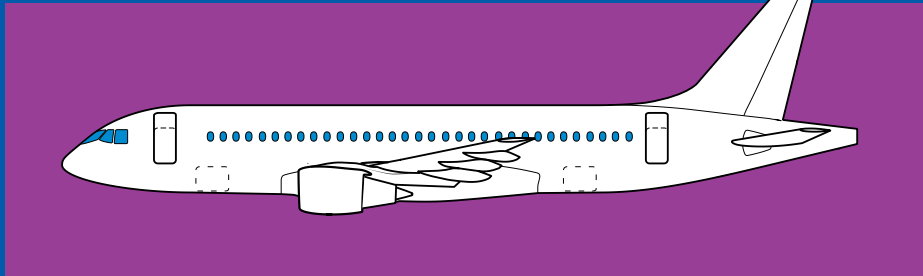


British Airways, American Airlines,
Canadian Airlines, Cathay Pacific,
Qantas, Finnair, Iberia
(LanChile, Aer Lingus)

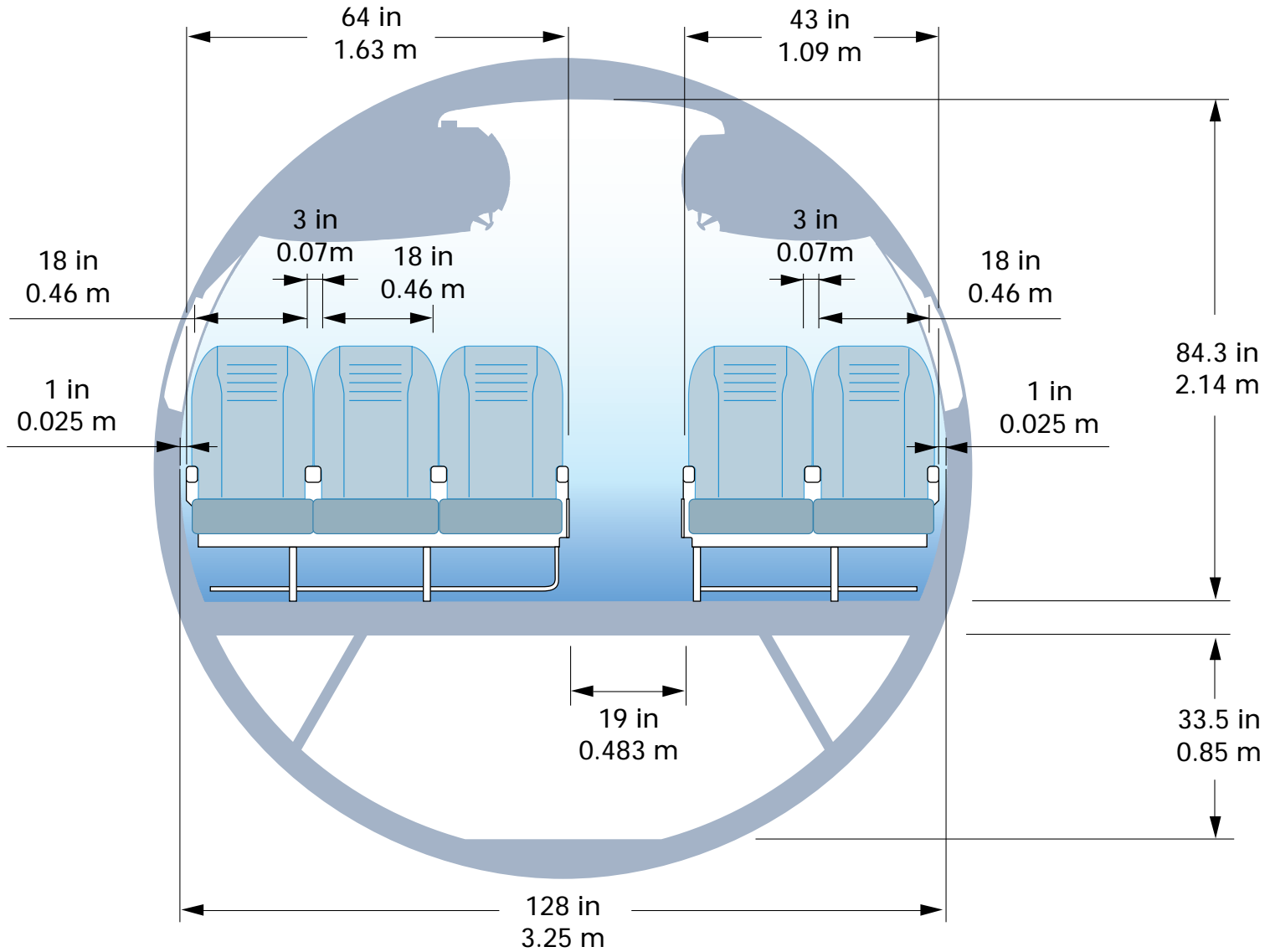
The 10 Year Market (Estimation: No. of Aircraft x list prices, in US \$ Billions)



728JET Family Members

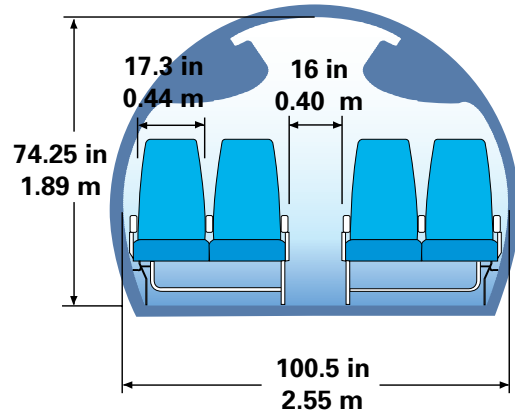
	5-abreast	
	Seats	Designations
	55-65	528JET
	70-80	728JET (Ref. Design)
	95-110	928JET

Cross-Section 5-Abreast – 128 in

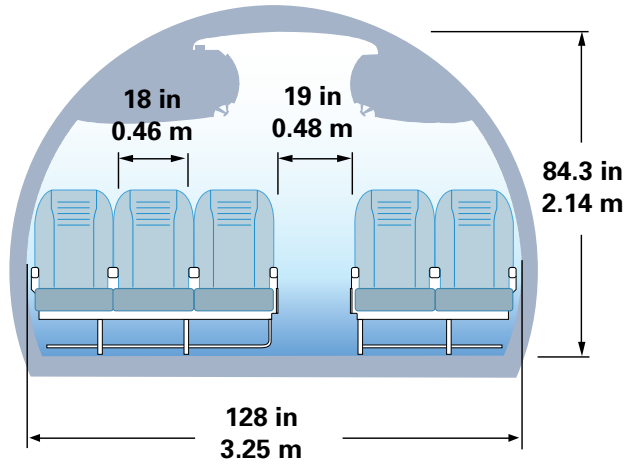


728JET vs CRJ/ERJ – Cabin Cross Section

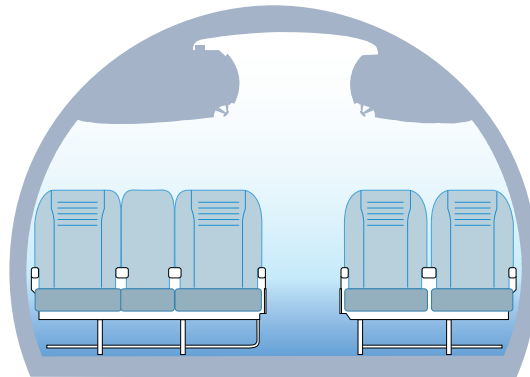
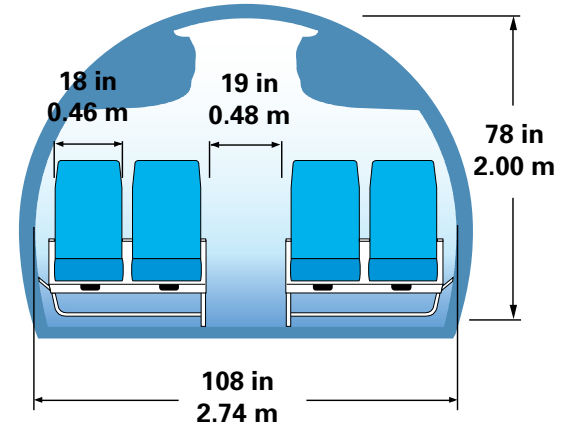
CRJ-700/900



728JET



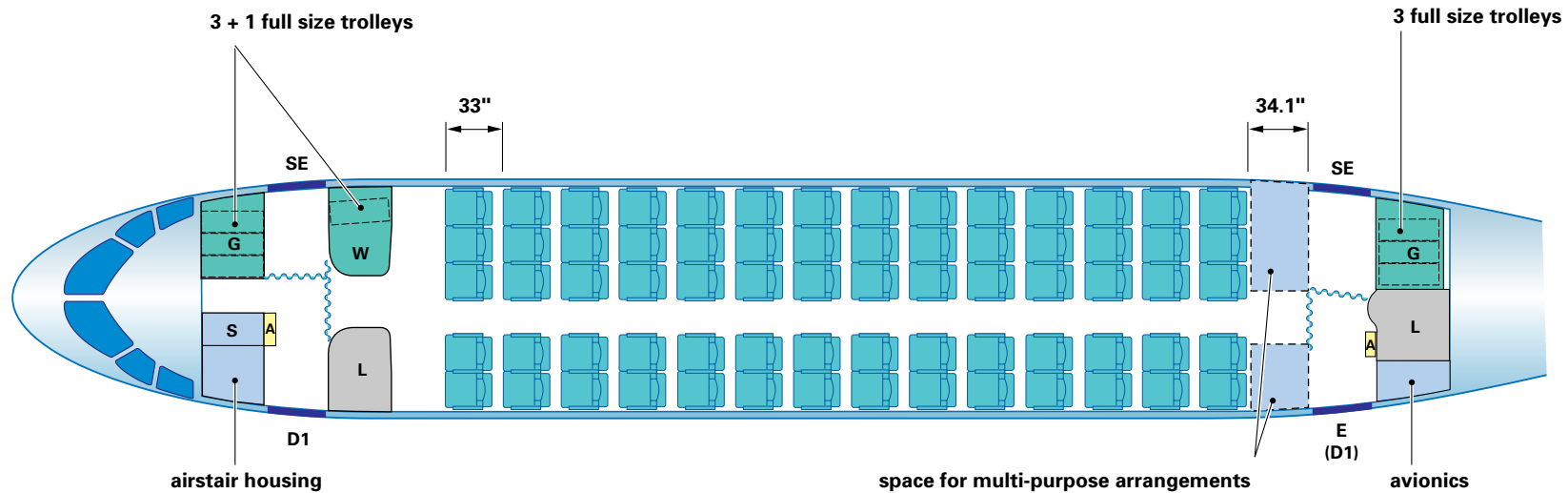
ERJ-170/190



**Business Class Arrangement
(with Convertible Seats)**

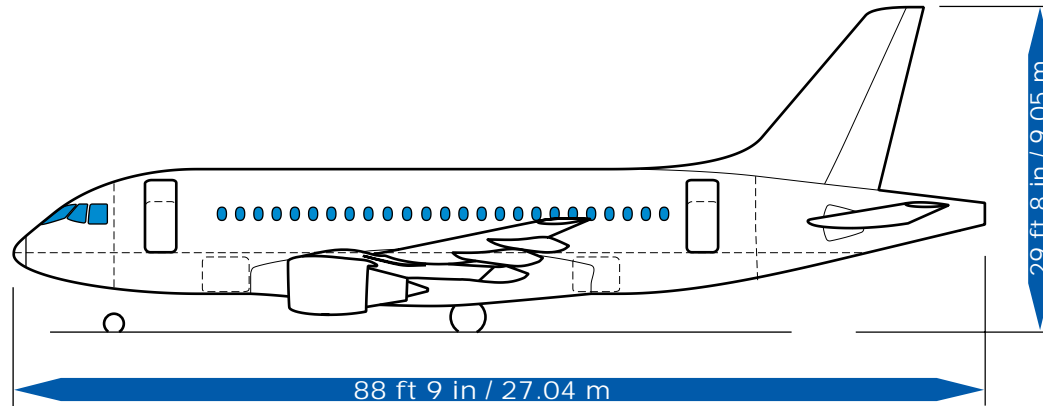
728JET Cabin Layout for 70 Passengers

70 Seats at 33" Seat Pitch

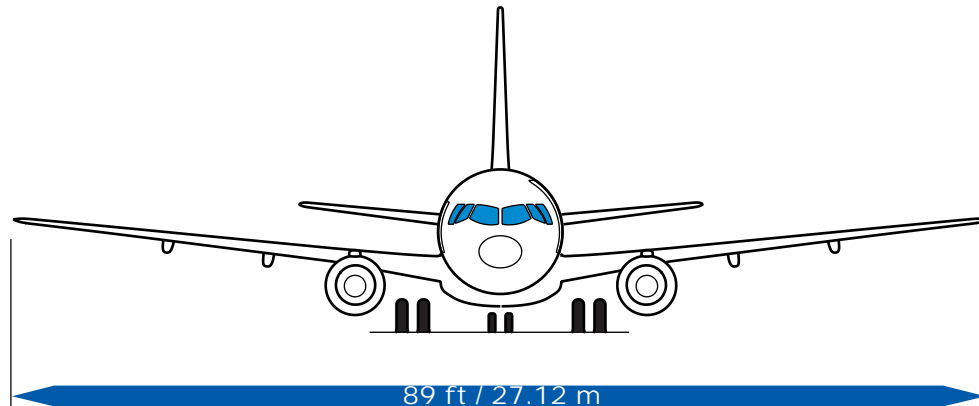
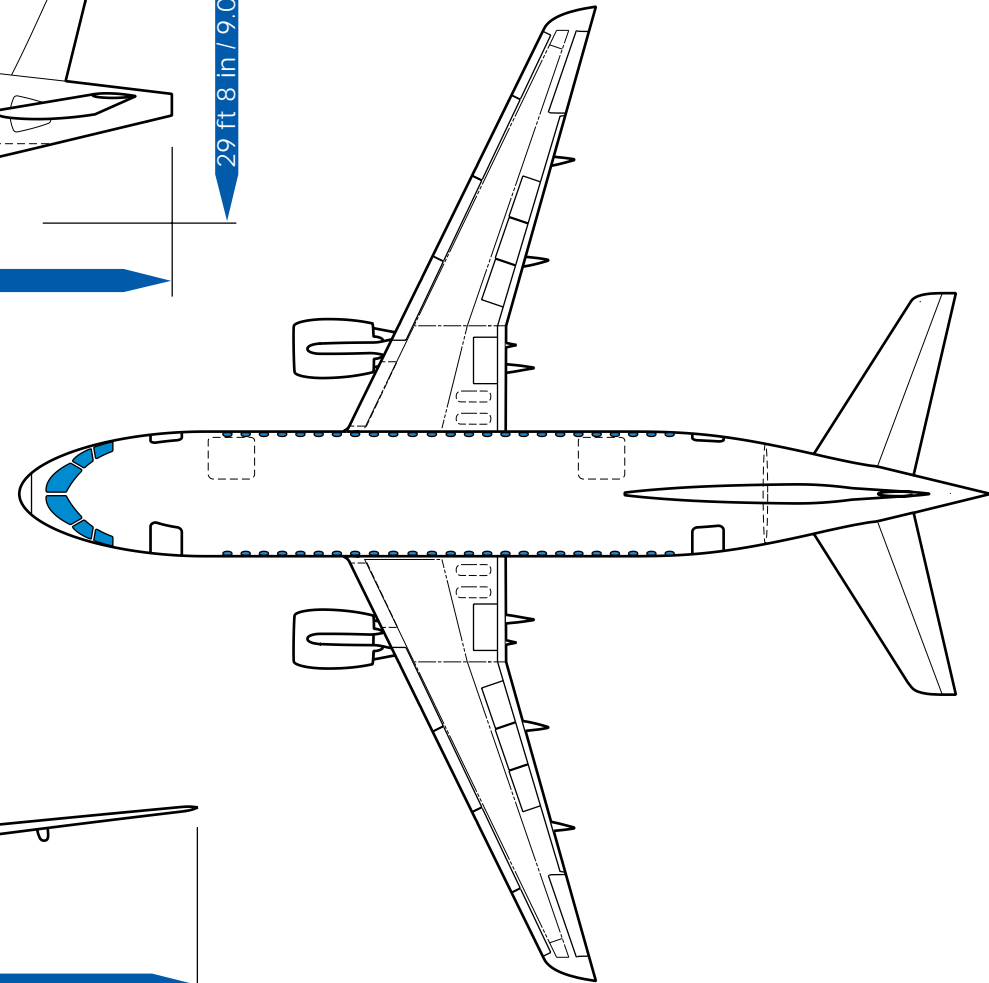


D1 = Passenger Door (Typ C)	SE = Service Door & Emerg. Exit (Typ C)	L = Toilet & Lavatory
A = Attendant Seat	E = Emergency Exit (Typ C)	G = Galley
W = Wardrobe		S = Storage

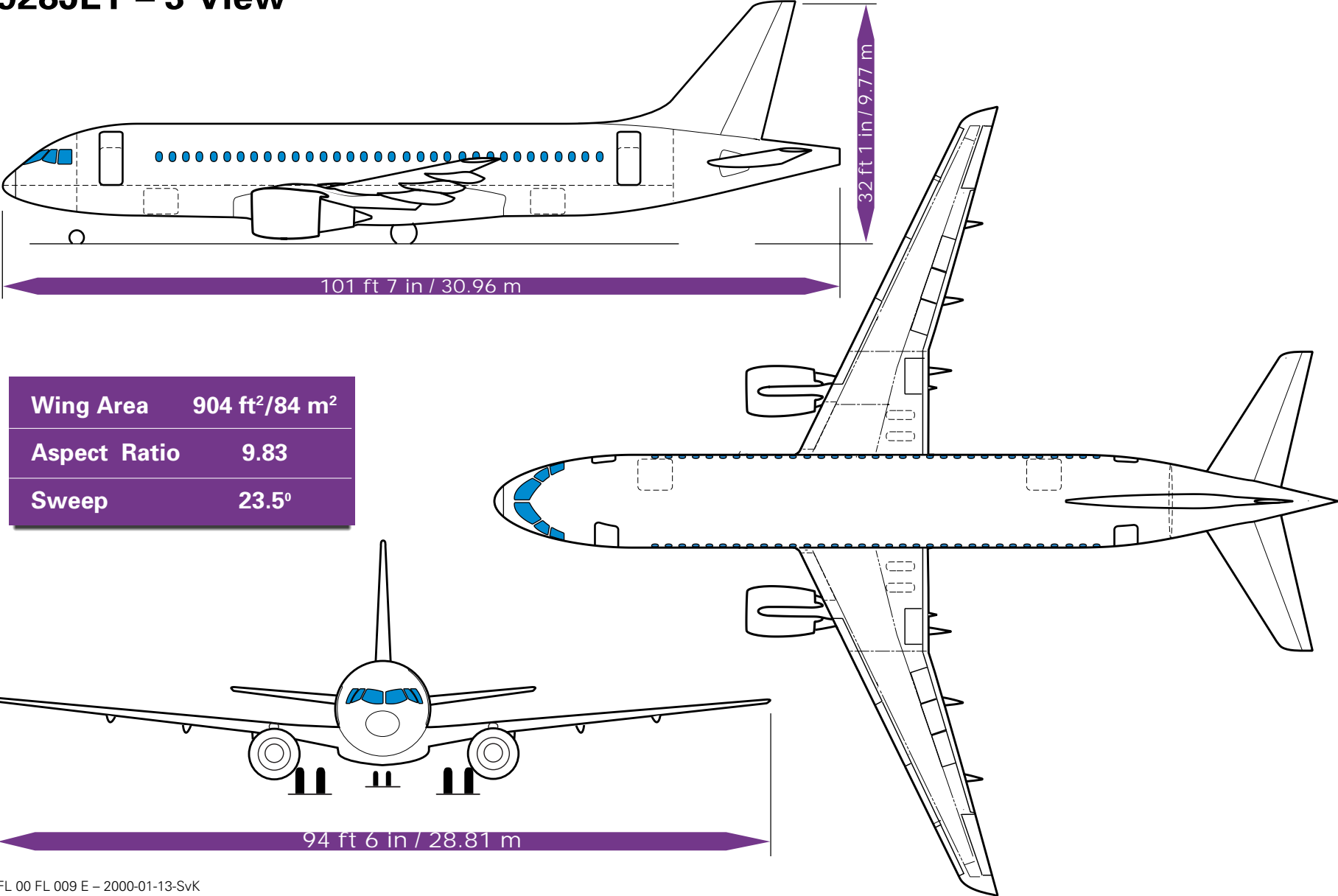
728JET – 3 View



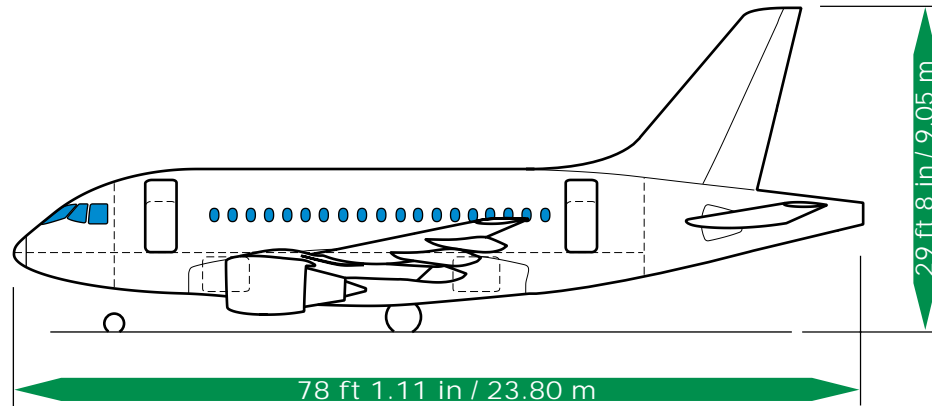
Wing Area	807 ft ² /75 m ²
Aspect Ratio	9.81
Sweep	23.5°



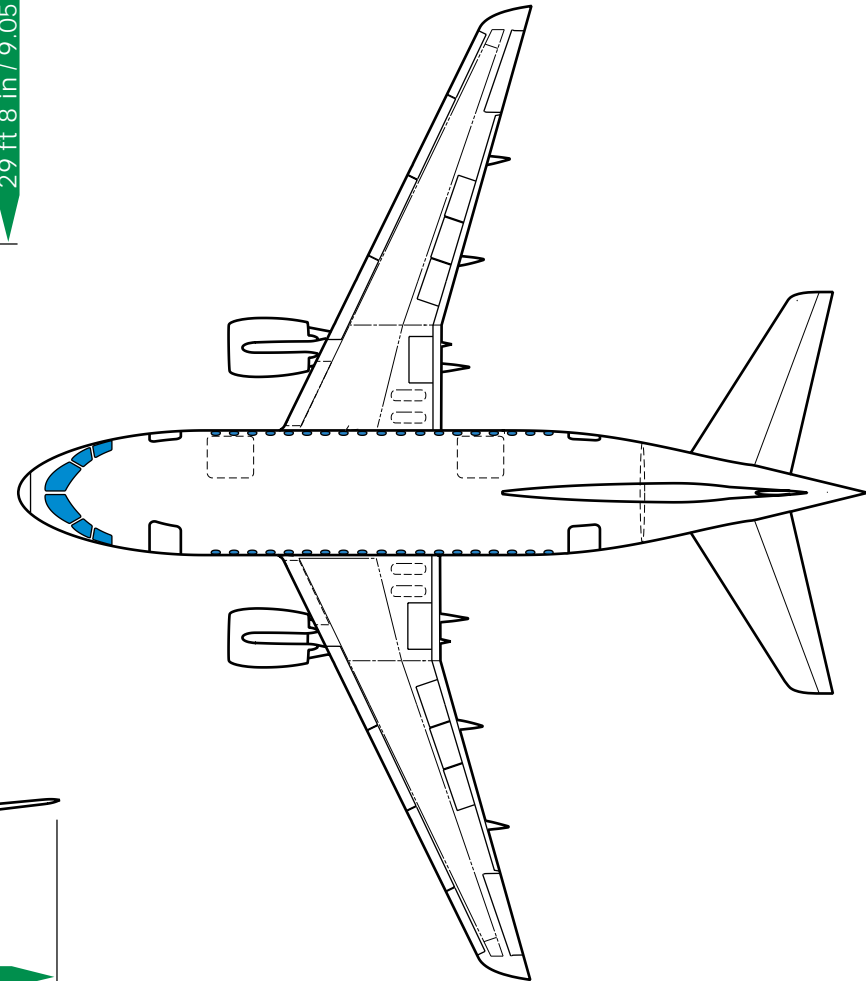
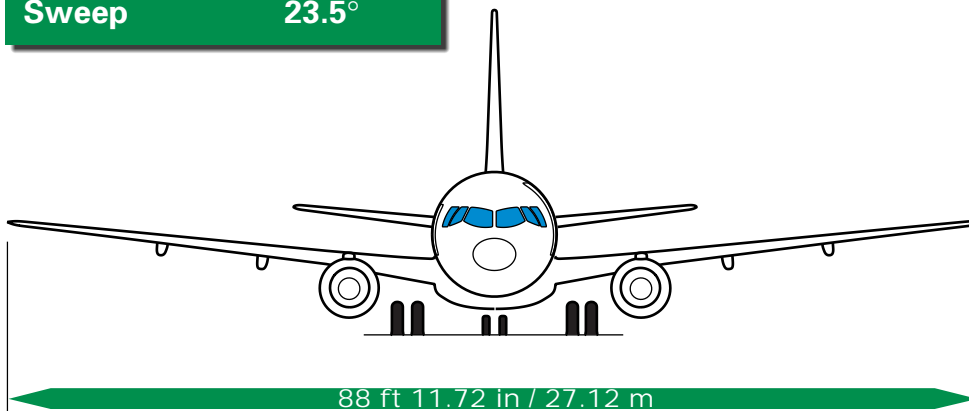
928JET – 3 View



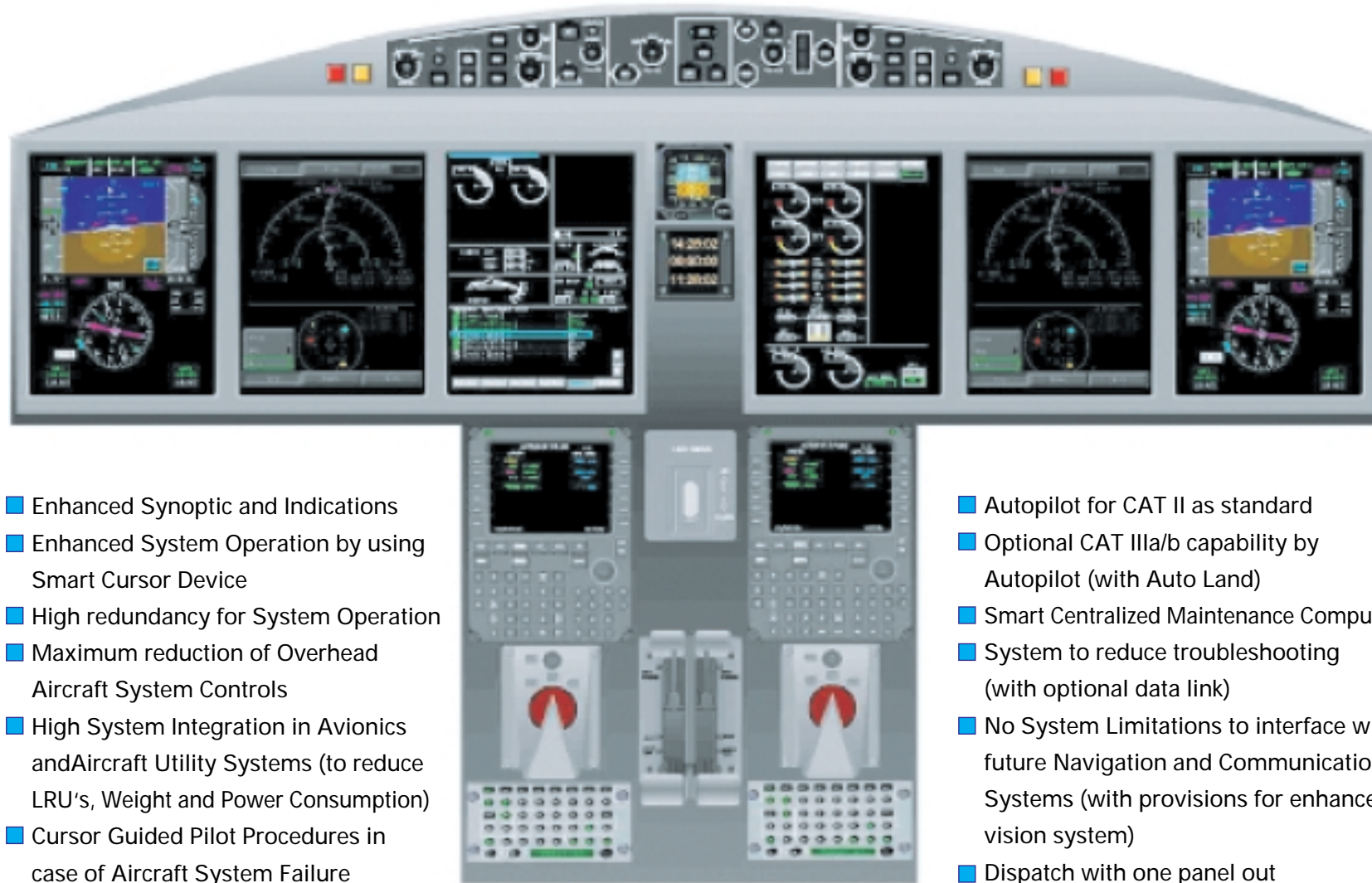
528JET – 3 View



Wing Area	807 ft ² /75 m ²
Aspect Ratio	9.81
Sweep	23.5°



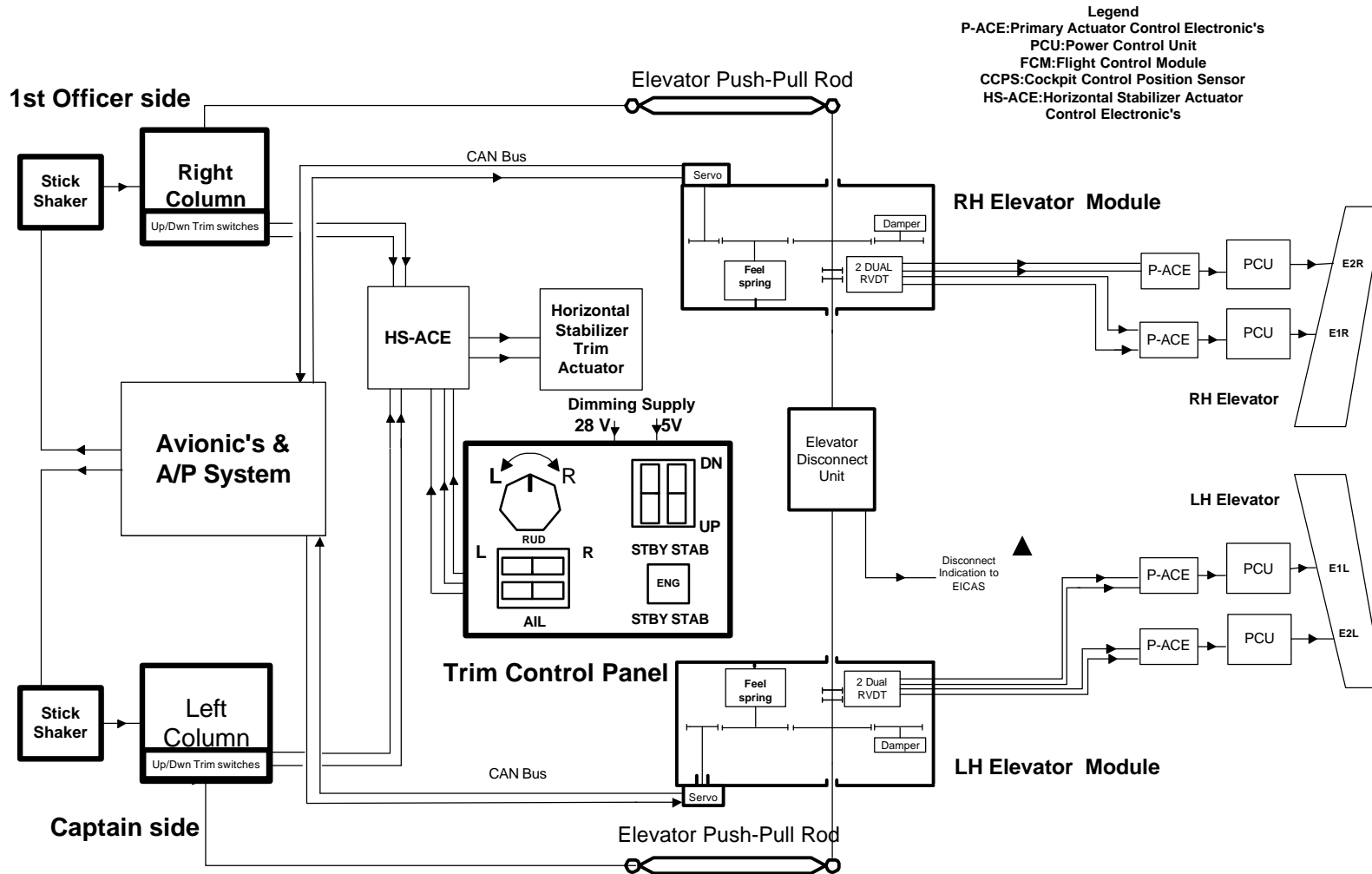
Primus EPIC Avionic System (Honeywell)



- Enhanced Synoptic and Indications
- Enhanced System Operation by using Smart Cursor Device
- High redundancy for System Operation
- Maximum reduction of Overhead Aircraft System Controls
- High System Integration in Avionics and Aircraft Utility Systems (to reduce LRU's, Weight and Power Consumption)
- Cursor Guided Pilot Procedures in case of Aircraft System Failure

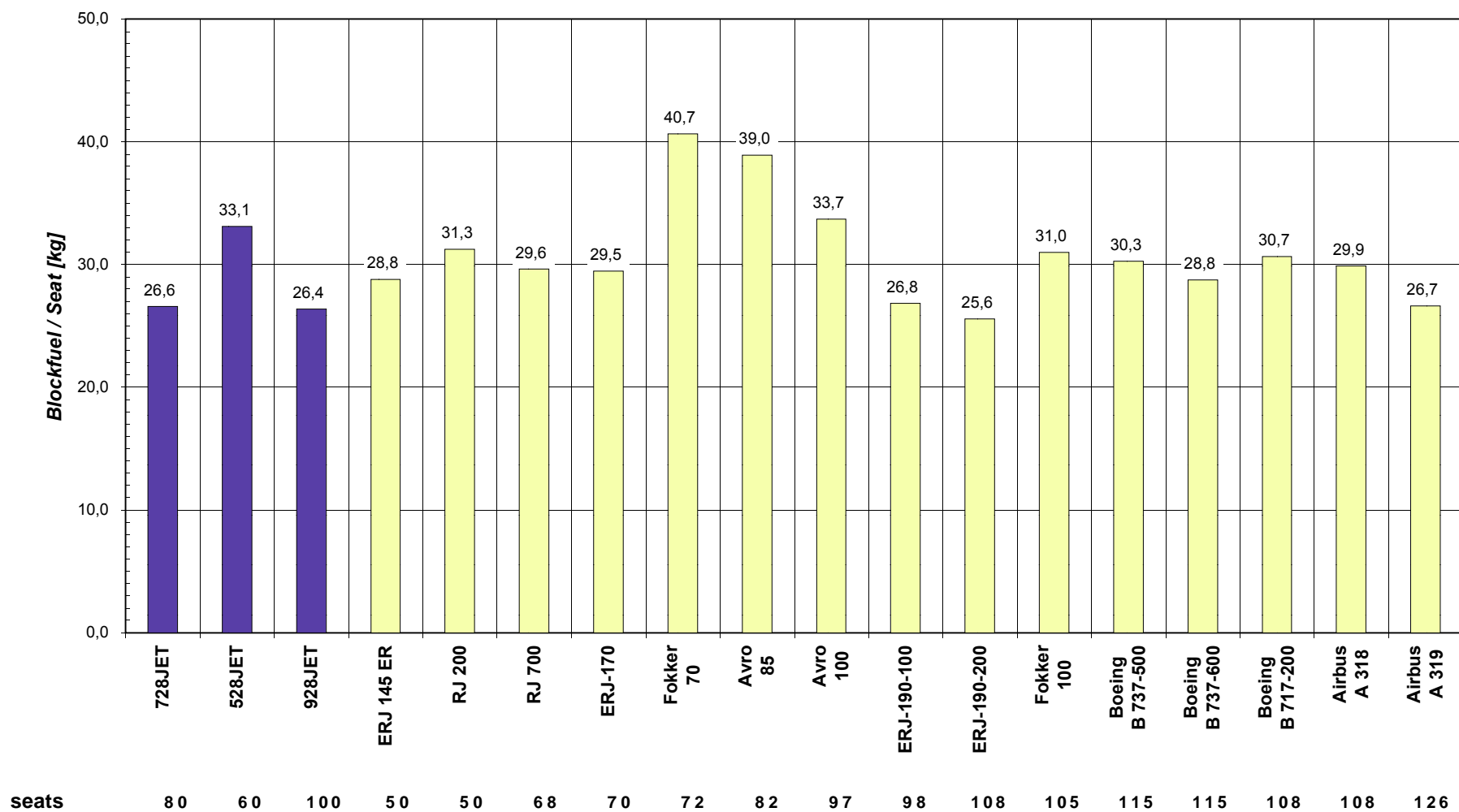
- Autopilot for CAT II as standard
- Optional CAT IIIa/b capability by Autopilot (with Auto Land)
- Smart Centralized Maintenance Computer
- System to reduce troubleshooting (with optional data link)
- No System Limitations to interface with future Navigation and Communication Systems (with provisions for enhanced vision system)
- Dispatch with one panel out

Pitch Cockpit Control Module



Index Blockfuel per Seat - Comparison

Stage Length 500 nm



Cost Savings - Executive Summary

27 x A/C X + 15 x A/C Y versus 27 x 728+ 15 x 928	Savings	
	Less Investment Cost	Less Annual Cost
Simulator Economics (buy-in of training considered)	0 US\$	← no simulator required
Aircrew Training (Type Rating) in 2 years	961.000 US\$	
Aircrew Attrition Training		1.056.100 US\$/year
Aircrew Recurrent Training		259.000 US\$/year
Aircrew Productivity (Crew Cost)		6.132.000 US\$/year
Airframe Spares	11.305.000 US\$	
Engine Spares	1.600.000 US\$	
Maintenance Training (Type Rating) in 2 years	100.000 US\$	
Maintenance Recurrent Training		0 US\$/year
Maintenance Crew Productivity (Crew Cost)		1.059.300 US\$/year
Total Fleet Add. Investment Savings:	13.966.000 US\$	
Total Fleet Add. Annual Savings:		8.506.400 US\$/year
Total Fleet Investment Savings	71.966.000 US\$	

728JET - A New Family of Regional Aircraft

Future traffic growth in regional transport can be served by bigger aircraft operated in the hub-and-spoke system and by more direct links

The 4 major alliances are having more and more influence on the regional airlines

The fierce competition is down to 3 OEMs

Regional aircraft have to offer comfort and operation like airliners, but at lower cost

Higher aircraft system integration and fly-by-wire flight controls are good examples of technical improvements

Design of operation commonality can produce attractive cost savings in investment and operation of aircraft sized for different capacities