

Primary Flight/Navigation Display (PFD/ND) 10" Cockpit/IP™ (Cockpit Information Portal) for Pilatus PC-12

The IS&S Flat Panel Display System (FPDS) is an easily installed cockpit upgrade for a variety of aircraft, including the popular Pilatus PC-12. The system is designed to replace the existing instruments, including the EADI and EHSI displays, altimeter, airspeed, and vertical speed indicators. Its unique design concept permits accelerated modification of graphic display formats, and as importantly, rapid certification by the FAA.

Benefits

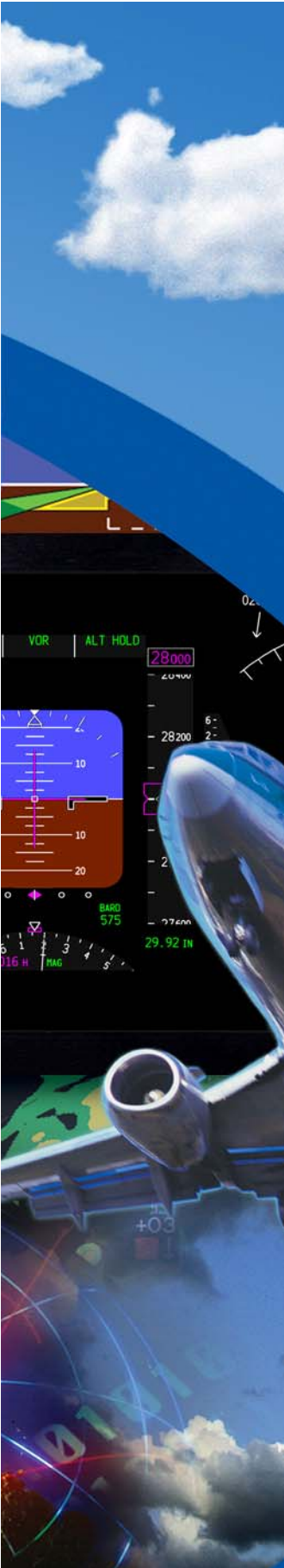
- Part 25 Performance at Part 23 Cost
- Enhanced Readability
- Up to 70% Reduction of LRUs
- Improved Dispatch Reliability
- Improved Safety Through Better Situational Awareness
- Significant Weight and Heat Savings
- Adaptable to Future Requirements and Mandates
- Minimal Changes to Existing Aircraft Wiring



PFD/ND Format – 10" Display (Typical)

The Cockpit I/P™ (Cockpit Information Portal) uses four 10" (diagonal) flat panel displays, one for each pilot. This solution provides an elegant, modern cockpit with nominal changes to other systems installed on the aircraft. Also available is a single-pilot configuration. This Flat Panel Display System (FPDS) four-display configuration consists of a pilot and co-pilot PFD/ND suite. Display Units are four (4) 6" x 8" Active Matrix Liquid Crystal Displays. Other equipment includes one (1) 3 MCU Data Concentrator Unit, and two (2) or more Control Panels (CP). Additional configurations are available.

The control panels provide the pilot and co-pilot with the ability to select reversionary (composite) display formats, TCAS and NAV range, reference speed adjustment, display dimming, course, heading, altitude select, TAWS, and overlay video balancing. A video feature is offered as an option.



The IS&S Advantage

The IS&S Cockpit I/P™ replaces existing round dial instruments or EFIS displays and symbol generators with minimal wiring changes. The display system incorporates the functionality of the existing HSI, ADI, electromechanical altimeter, airspeed, RMI/RDMI, and vertical speed instruments, making these older instruments expendable.

- **Enhanced Readability**
 - High resolution multi-color AMLCD flat panel display
 - Exceptional cross cockpit viewing angle
 - Exceptional sunlight viewability
 - Knob-in-Motion, certified “Zoom” feature
- **LRU Reduction**
 - Display Instrument LRUs reduced by up to 70%
 - Logistics savings
- **Improved Dispatch Reliability**
 - Digital electronics for improved accuracy and dependability
 - Dual redundancy with reversionary display capability
 - Fault-tolerant built-in test
- **Improved Safety**
 - Enhanced situational awareness
 - Familiar, flexible formats reduce conversion training
 - Part 25, Level A certified equipment
- **Weight and Heat Savings**
 - Light weight design saves min. 40 lbs. Reduced power consumption
 - Forced air cooling not required
- **Adaptable to Future Requirements**
 - High band width processors and wiring
 - Flexible graphic symbology for user customization
 - On-aircraft software updates
- **Installation**
 - Flexible interface box reduces installation time
 - Reduced volume LRUs minimize fit problems
 - Simplified wiring between Data Concentrator Unit and Display Unit(s)
- **Options**
 - Engine Instrument Display
 - Electronic Flight Bag
 - Navigation Charts
 - Datalink Weather
 - Live Motion Video
 - RVSM
 - Troubleshooting analysis
 - Alternative display sizes (15” diagonal)



Four 10" Display Unit Configuration

System Specifications

Flat Panel Display Unit (DU):

P/N 9D-84086

Each DU is a self-contained display unit with integral Symbol Generator Module (SGM), and power supply processor, offering superior performance with the following features:

- ❑ PFD/ND, MFD, and Engine (option) data
- ❑ High resolution (1024 x 768 pixels) XGA multi-color LCD flat panel display
- ❑ 6-inch x 8-inch (152mm x 203mm) active area
- ❑ All digital electronics
- ❑ Readability in bright sunlight
- ❑ Flexible advanced graphics processing
- ❑ Non-glare, anti-reflective display surface
- ❑ Highly efficient uniform display lighting design
- ❑ Built-in-Test
- ❑ DO-160D Environmental Qualification
- ❑ DO-178B Software, Level A
- ❑ Excellent viewing angle in both portrait and/or landscape modes with same part number

Control Panels:

P/N 9D-86001, 9D-86002

The Control Panels provide pilot/co-pilot inputs and transmit data to the DCU via an ARINC 429 bus. System may include one or more of the following control panels, depending on installation:

- ❑ Pilots Display Control Panel
- ❑ Co-pilots Display Control Panel
- ❑ Auxiliary Control Panel
- ❑ EFB Control Panel (option)

Selectable functions include:

- ❑ Minimum Altitude Selection (Radio or Baro)
- ❑ Units Selection
- ❑ Barometric Setting
- ❑ Navigation Display Mode
- ❑ Navigation Display Range
- ❑ Navigation Display Overlay Selections
- ❑ Reversionary Format
- ❑ Display Dimming
- ❑ Overlay Video Balancing (option)
- ❑ Bearing Needle Selection

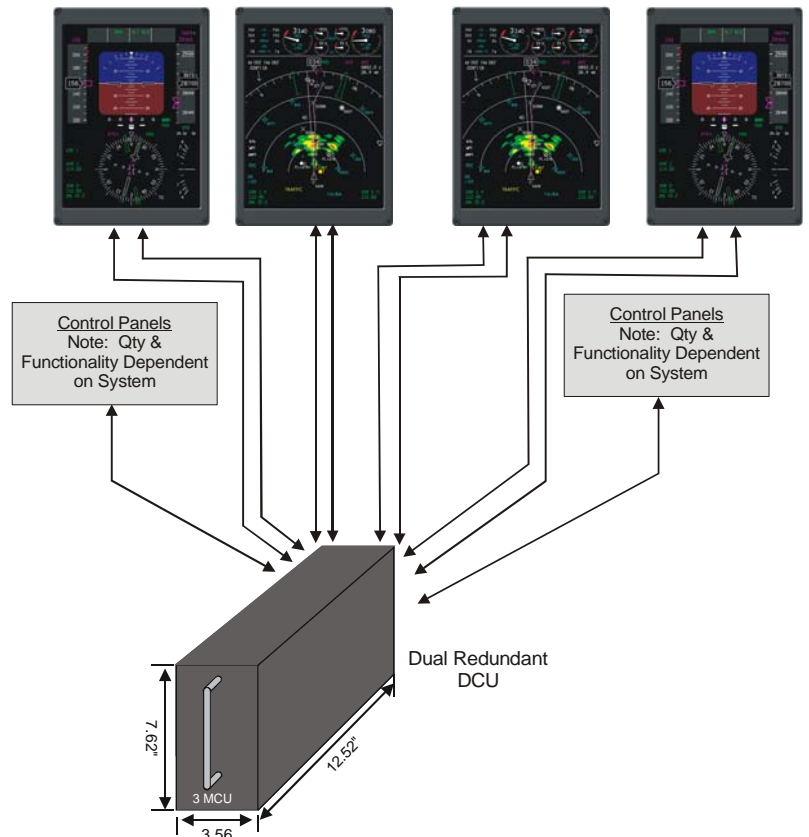
Data Concentrator Unit (DCU):

P/N 9B-84080

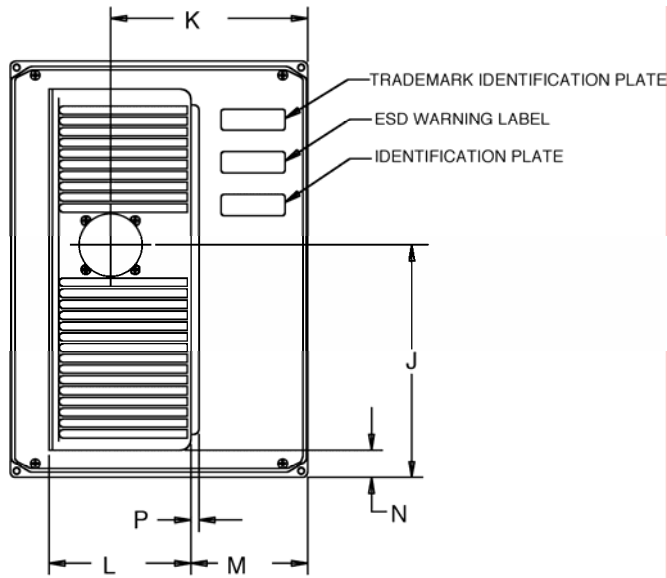
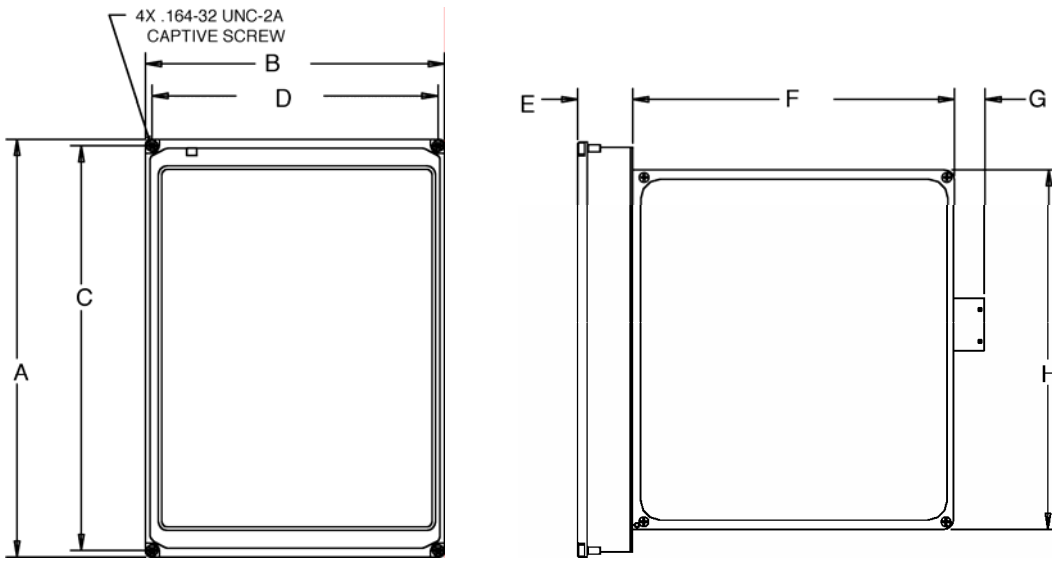
The DCU gathers aircraft data via the following inputs: ARINC 429, ARINC 708, Analog, RS422, and Discretes. Outputs include analog and ARINC 429, RS422, Discrete, and Ethernet 100 Base-T. The 3 MCU DCU is a dual-redundant unit. The DCU replicates the existing instrument outputs, and interfaces with the following typical aircraft components (as applicable):

- ❑ Air Data System (ADS) – Dual Redundant
- ❑ Angle of Attack (AOA)
- ❑ Attitude – Dual Redundant
- ❑ Automatic Direction Finder (ADF) – Dual Redundant
- ❑ Distance Measuring Equipment (DME) – Dual Redundant
- ❑ Terrain Awareness Warning System (TAWS)
- ❑ Flight Director/Autopilot System – Dual Redundant
- ❑ Flight Management Computer (FMC) – Dual Redundant
- ❑ Global Positioning System (GPS) – Dual Redundant
- ❑ Heading – Dual Redundant
- ❑ Instrument Landing System (ILS) – Dual Redundant
- ❑ Radar Altimeter (RA)
- ❑ Traffic Collision Avoidance System (TCAS) – Single Unit
- ❑ VOR/ILS Radios – Dual Redundant
- ❑ Weather Radar (WXR) – Single Channel (Digital)

System Diagram – IS&S Standard EFIS System (four 10" DUs)

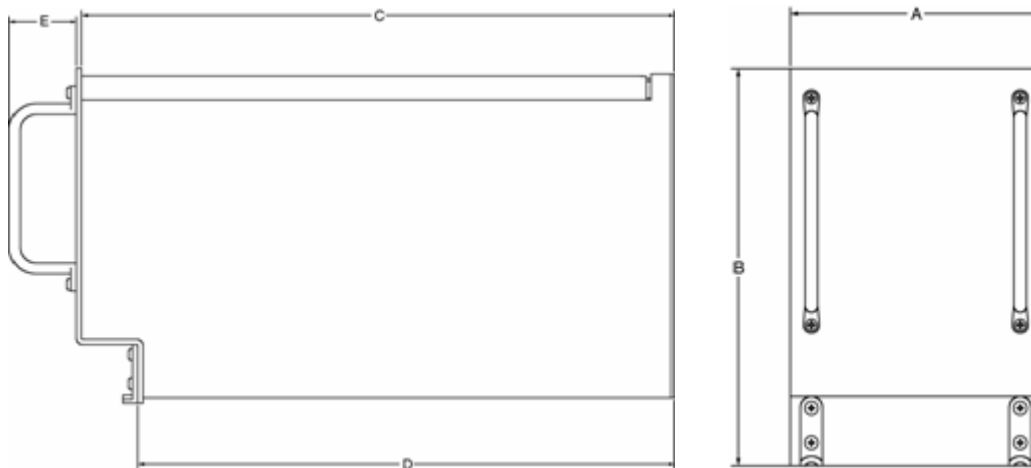


Flat Panel Display Unit – P/N 9D- 84086



	Inches	Millimeters
A	9.80	248.9
B	7.00	177.8
C	9.50	241.3
D	6.68	170
E	1.30	33
F	7.59	193
G	0.72	18.3
H	8.50	216
J	5.48	139.2
K	4.63	117.6
L	3.33	84.6
M	2.74	69.6
N	0.65	16.5
P	0.19	4.8
Weight:	8.0 lbs (3.63 kg)	
Power:	35 Watts	
Voltage:	28 VDC	

Data Concentrator Unit – P/N 9B-84080 (3 MCU)



3 MCU Box		
	Inches	Millimeters
A	3.64	92.46
B	6.41	162.8
C	14.12	358.6
D	12.67	321.8
E	1.63	165.6
Weight:	< 8 lbs (3.64 kg)	
Power:	30 Watts	
Voltage:	28 VDC	



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All specifications are subject to change without notification.