Cockpit Control and Display System

**Description**

The CCDU-2022 is a consolidated cockpit display and control unit with engineering unit processing (EUP) and display capability. The CCDU-2022 consists of three functional sections:

- MFD-2022 - Multi-Function Display
- CDC-2022 - Cockpit Display Control (Control Panel)
- ICC-2022 - Integrated Cockpit Control

Each section is housed in a separate enclosure. Interconnections among the three sections are implemented using a simple serial interface for data interchange. Other interfaces between boxes are used as appropriate to provide required interconnections. The MFD-2022 consists of a 3.5-inch LCD display and two pushbutton switches that are matched to soft menu choices displayed on the LCD screen by the ICC-2022 EUP. The CDC-2022 acts as a Control Panel for the system. This Control Panel consists of the following:

- 10 switch matrix that provides operator and external control capabilities
- 4-digit 7-segment display for system or external numeric information
- recessed Format Select push-wheel switch
- External brightness control for LED's and 7-segment displays
- BIT (Built In Test) LED

The ICC-2022 is the control element of the CCDU-2022. It contains the intelligence and control to drive the LCD panel and to communicate with the functions in the CDC-2022 and MFD-2022. The ICC-2022 contains a Pentium class card PC that executes the control of the CDC-2022 and MFD-2022. In addition to CCDU-2022 control functions, the ICC-2022 can act as an Engineering Unit Processor.

**Applications**

- Flight Test Instrumentation System
- Vehicle Development

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**Feature**

**ICC-2022**
- 586 PC Core Processor
- 4 Serial Ports
- VGA display output
- Composite Video Output
- CAIS Remote DAU function
- Frame Correlator function
- MFD-2022 and CDC-2022 Interfaces
- General Purpose I/O
- Dual function CDC-2022 Lamp Power Control

**CDC-2022**
- 10-switch matrix capable
- External Brightness Control
- DAS Format Pushwheel
- Switch contacts and LEDs user accessible
- Serial Bus connection to ICC-2022
- Format isolated external outputs for DAS use
- 4-digit, 7-segment display

**MFD-2022**
- 3.5 inch diagonal LCD display
- 2 soft-function push buttons
- Standard VGA signal input
- Serial Bus connection to ICC-2022