



Cockpit solutions

Human Machine Interface

Features

- Precision grips
- Lightweight aluminium construction
- Accommodates 5th - 95th percentile user
- Quick-release mounting arrangements
- Modular switches
- Configurable for platform variants
- Integrates to Ultra network interface products
- Display Panels
- Terminal Blocks

Cockpit solutions from Ultra Electronics, PCS, encompass all aspects of the Human Machine Interface (HMI) for all types of aircraft. Ultra technology can be equally applicable to the fast jet pilot, cargo loadmaster or helicopter winch man. Ultra's range of cockpit equipment includes:

- Direct user input devices, including Hands on Throttle or Collective and Stick (HOTAS/HOCAS)
- High integrity switch panels for pilot or other crew stations
- Data bus interface electronics
- Night vision compatible, sunlight readable, dimmable indicators and displays, with discrete or data bus drive electronics
- Aural Warning Generators
- Switches & Indicators

The experience developed over many years allows Ultra to offer both stand alone cockpit equipment or integrated sub-systems which may be hosted jointly in the cockpit and avionics bay.



Cockpit solutions

Warning panels

The Display Warning Panel (DWP) is a highly reliable LED display panel providing aircraft crew with critical warning and caution information. The display is sunlight readable and dimmable. In order to achieve exceptional reliability and remove single point failures the panel employs a discrete logic design approach. Captions have been designed to be easily re-configured enabling variants of the display to support different aircraft and roles.

DWP specification

EMC Compatibility	Designed to DO-160D
Input Voltage	28Vdc to DO-160D
Operating Temperature	-40°C to +70°C
Dimensions	80 x 85 x 45 mm
Mass	475 g



High integrity switches & indicators

The wide range of indication devices provides solutions for most cockpit applications. New developments include direct viewed, sunlight readable LED indicators and warning panels which meet Night Vision Goggle (NVG) and Night Vision Imaging System (NVIS) specifications. LED indicators incorporating the latest LED technology have been developed as drop-in replacements for

Ultra offers a comprehensive range of high integrity switches, indicators, miniature joysticks, trackballs, optical encoders and terminal blocks designed and approved to operate in harsh environments. High integrity switches include toggle, push button and hermetically sealed limit switches which incorporate failsafe contact designs. These products are used extensively in flight critical systems.



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Printed in England

cs/110713/4

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