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PRODUCT DATA SHEET



SKYQUEST AVIATION

SPECIALIST EQUIPMENT FOR AIRCRAFT

OTHER PRODUCTS

AIRCRAFT VIDEO/VGA DISPLAYS

- » 4" Display
- » 6.5" Display
- » 8.4" Display
- » 9" CRT Display
- » 10.4" Display
- » 12.1" Display
- » 15" Display
- » 18" Display
- » 20.1" Display

AIRCRAFT VIDEO RECORDERS

- » Mini DV Recorder
- » 4 hour DV Recorder
- » 3 Hour DV CAM Recorder
- » SHVS Recorder
- » Hard Disk Digital Recorder

MOVING MAPS

- » EuroNav IV Generation (2nd RN6) System
- » Ground Base Tracking & Communication System

DIFFERENTIAL GPS

- » Differential GPS (DGPS) Standard & High Performance System

VIDEO / RADAR CONVERTERS

- » RDR 1500 Radar Converter

AIRCRAFT

INSTALLATION / BRACKETS

- » NVG Cockpit Equipment Modifications
- » Camera Brackets & Equipment Consoles

MICROWAVE LINKS / DATALINKS

- » Long Range Automated Steerable Tracking Datalink System
- » Low Cost Short Range Omni-Direction System

CARGO HOOK CAMERA

PRODUCT DATA SHEET

AVDU-2640 COMPACT 10.4"
 XGA MULTI FUNCTION AIRCRAFT DISPLAY
 &
 OPTIONAL REMOTE CONTROL RCMP-1080

Version:01.2005

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10.4" COMPACT AIRCRAFT MULTI-FUNCTION DISPLAY HIGH BRIGHTNESS XGA RESOLUTION LCD DISPLAY

ABOUT SKYQUEST AVIATION

Skyquest Aviation supply a range of airborne role equipment specifically designed to enhance the capability of surveillance & utility aircraft. Products include ruggedised video recorders in digital tape, hard disk, flash disk and analogue tape formats and a wide range of multi function LCD video displays, GPS based moving maps, differential GPS decoders, radar converters, cargo hook cameras, microwave link systems and NVG equipment & services.

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PRODUCT INFORMATION

The AVDU-2640 is a compact multi-function LCD display designed for airborne use. It offers a wide range of video and VGA compatibility and gives the user a choice of inputs to suit most applications. As standard, the display offers excellent video quality and features such as PIP (picture-in-picture), video freeze frame, video zoom and full range dimming.

Specific to this model is its compact size, designed to aid users who require the largest possible display in the smallest possible physical space.

The unit can be supplied with a remote control module to enable full control of all monitor functions.

Features include:

- * XGA resolution high brightness display
- * PIP (picture-in-picture, sized and positioned on the screen by user menu)
- * Multiple video inputs, with instant switching between inputs to view.
- * Digital freeze frame
- * SCALAR digital zoom
- * NVG option
- * Compact and light weight design
- * Video enhancement option
- * Remote control for full functionality with user defined button legends





REMOTE CONTROL MODULE RCMP-1080 FULL FUNCTION CONTROL FOR LOCAL OR REMOTE USE

Full control of the display's functions can be gained via a wired remote control, or controlled from OEM equipment via the use of a small serial interface board (available on request).



As standard, Skyquest offer two remote control units, one designed with DZUS rail fasteners and another for use bolted to, or close to the display. Either unit can be mounted vertically or horizontally. Functionality of remote control is identical as described below.

Control & display functionality

The remote is fitted with a membrane row of backlit control buttons, along with a rotary brightness control and a set of small direction arrow keys used for maintenance and set up. All control buttons can be factory programmed to meet a variety of user or installer requirements. As standard the layout is as follows:



In this standard factory setting, zoom is controlled by the direction arrow keys.

However, if the user intends to use the display for a specific installation, for example, he has a FLIR dual sensor camera (thermal and daylight), a radar image and a moving map to display, he could order the unit with the following set up:



In this example, the zoom and freeze frame functions are controlled from the direction arrow keys.

Button backlighting control

The buttons are backlit with specially designed NVG compatible lighting. The user can dim the backlighting to suit the prevailing environment by using the simple set up menu. Backlighting can be easily changed to meet differing requirements. For example, in early evening full backlighting brightness may be selected whereas for night time use, perhaps with NVG goggles, a very dim backlighting can be set.

Screen brightness control

The rotary brightness knob gives the user easy control over the brightness of the screen. The unit has been designed to offer the most precise and controllable adjustment at the 'dim' end where users need to make fine changes.

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Menu & set up

An on-screen menu can be called up by depressing the centre direction membrane key for 3 seconds. Usually the menu is only needed for resizing and repositioning the picture-in-picture (PIP) window, however a number of other user defined options are available. The PIP window can be moved anywhere on the screen and enlarged or reduced to fit the users requirements. Once a setting is selected and stored, the display remembers this setting each time the unit is powered on and off.

Cockpit master dimming

The displays can be wired to enable the master cockpit lighting controller to dim and brighten the display in line with other avionics in the cockpit. This feature can be used or left unused as required by the installer or user.

NVG

Using the latest NVG technology, Skyquest displays offer high quality NVG compatibility. The filter, in combination with the smooth dimming control, allows the user to comfortably work in a night vision goggle environment.

Image enhancement module

As an option, all displays can be fitted with "Skyquest ClearVision" a specially designed contrast module that enhances vision when mist or smog is present. On selection of the function, a window appears centralized on the display and the image within the window is enhanced using powerful algorithms. "ClearVision" gives the visual effect of penetrating the atmospheric mist or haze.

STANDARD DISPLAY FEATURES

Video Freeze Frame

By pressing the freeze frame button, the currently displayed picture is frozen in perfect quality on the screen. To return to live video, the Freeze button is pressed again. Once frozen, an image can be electronically zoomed using the Zoom function.

Video Zoom

The displayed video image can be zoomed using a built in mathematical SCALAR zoom. This offers users true video zoom capability rather than pixel replication. The zoom function can be used on any freeze frame image.

PIP

Picture-in-Picture mode selects the currently viewed video image and places it as a window (the user can set size and position of PIP window) on top of the VGA or RGB image (for example, a live FLIR or video image can be placed in a window on top of the moving map or radar image)

Contrast

Adjust the contrast of the display to give optimum viewing of video and FLIR images.

Video compatibility

Each Skyquest display offers multiple video, RGB and VGA inputs so almost any installation configuration can be handled using a standard unit. Switching between inputs is as simple as pressing the button required. The display will switch to the selected input.

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Physical

Dimensions 250mm(w) x 183mm(h) x 63mm(d)
 9.882"(w) x 7.205"(h) x 2.480"(d)

Weight 2.8 kg/ 6.17 lbs

Finish Matt black anodised

Electrical

Input voltage 28V DC

Power dissipation 50 watts (max)

Temperature

Operating -25°C (-13°F) to + 55°C (131°F)

Storage -30°C (-22°F) to +80°C (176° F)
 (internal heater as standard)

Video and Graphic Signals

Video input standards Composite video, S-video
 (Y/C) and Component video (R,G,B/Y,Cr,Cb) or
 STANAG 3350/B/C. PAL 50 Hz, NTSC 60 Hz

Graphic input standards

Standard XGA, auto scaling of VGA, SVGA, SXGA and UXGA

Connectors

Video in/out 4 x BNC (isolated)

Power D38999/20WB 98PN

Signal D38999/20WD 35PN

Remote D38999/20WB 35SN

Display Performance

Resolution 1024 x 768 pixels XGA (auto scaling from VGA - UXGA)

Viewing area 210.432mm (w) x 157.824mm (h)
 8.285"(w) x 6.213"(h)

Pixel pitch 0.2055mm(w) x 0.2055mm(h)
 0.008"(w) x 0.008"(h)

Pixel configuration RGB vertical stripe

Colour capacity 6 bits per colour; 256K colours

Grey scale capacity 64 grey scale

Viewing angle +/-55° horizontal; +40° to -35°vertical

Luminance at optimum viewing angle Max>800 cd/m² Min<7 cd/m² (max 1200 cd/m²)

Contrast ratio at optimum viewing angle >200:1

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Environmental Performance (to EUROCAE/ED-14D and RTCA/DO-160D)

Section

- 4 - Temperature & Altitude
Category A1 This unit is considered satisfactory for operation up to an altitude of 25,000 feet un-pressurised.
- 5 - Temperature Variation
Category C
- 6 - Humidity
Category A
- 7 - Operational Shocks & Crash Safety
Category B , Operation 6g 11/ms, Non operation 15g/11ms
- 8 - Vibration
Category R+U
(equiv: DO-160C Helicopter -Test curve 'N', 1.5g p-p)
- 9 - Explosion Proofing
N/A Category A, Equipment located within the passenger cabin.
- 10 - Waterproofing
Category W
- 11 - Fluid susceptibility
Category X
- 12 - Sand & Dust
Category D
- 13 - Fungus Resistance
N/A Category F
- 14 - Salt Spray
N/A Category X
- 15 - Magnetic Effect
Category A The unit has no perceivable effect when mounted within 460mm (18") of an aircraft magnetic compass
- 16 - Power Input
Category B
- 17 - Voltage Spike
Category A
- 18 - Audio Frequency
Categories A + Z
- 19 - Induced Susceptibility
Category Z
- 20 - RF Susceptibility (Radiated & Conducted)
Category U
- 21 - RF Emission
Category B
- 22 - Lightning Induced Transients
Not considered
- 23 - Lightning Direct Effects
Not considered
- 24 - Icing
Category X
- 25 - Electrostatic discharge
Not considered

Ordering Information

Description 10.4" XGA multi-function LCD display
Part Number AVDU-2640-01
AVDU-2640-02 (with NVG)

Option:

Description Remote control module
Part number RCMP-1050

Availability 10-12 weeks