

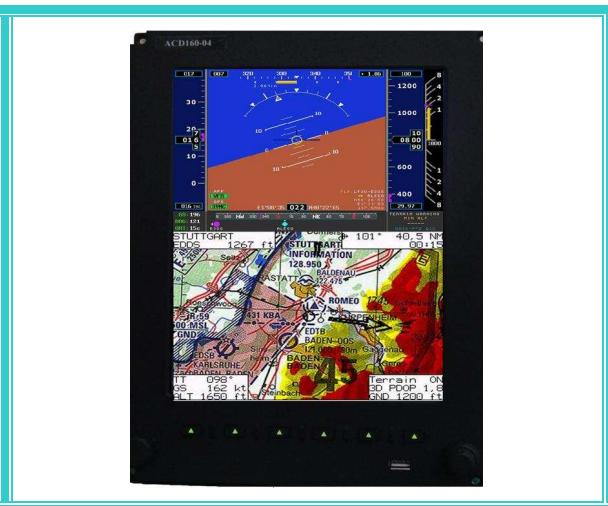
# BECKER AVIONIC SYSTEMS

## Cockpit Display System



Landscape type

**ACD160-03 (10.4")**



Portrait Type

**ACD160-04 (10.4")**

BECKER ACD-160 Airborne Computer Series are basically computer-based systems designed for the fixed-wing and rotary-wing aircraft. The series consist of several different products, each with its specific display size, CPU speed and several modules according to the scope of application.

For the past decade, BECKER has not only provided our clients with proven experience in conventional Communication, Navigation and Surveillance sensors, but with experience characterized by large full-color displays, efficient user interfaces and ergonomics in general. Since 1994, previous versions sold have shown a record of over 200,000 operating hours, as installed in various helicopters and fixed-wing aircraft. This has accumulated a good and valuable experience for developing our new avionic display.

With specific sensors and applications software, the ACD160 Series products can be used in several schemas of an aircraft area such as:

- Moving map with terrain and flight management
- Primary flight display
- Horizontal navigation display
- Engine display
- Audio system
- Radio management unit
- Aircraft monitoring display (for the electric power system)
- With other sensors for specific monitoring

All components comply with the latest RTCA DO-160E environmental regulations and fulfill stringent HIRF requirements

### Features:

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AVIONIC SYSTEMS

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## Technical Data

### Model: ACD-160-03

- Power Supply: +10 VDC to +36 VDC
- Current consumption: 1.5 A @ 24 VDC
- CPU: Embedded Intel Pentium-M Processor, CPU speed >1GHz.
- DRAM: DDR333 (400 MHz) 512MB (up to 1GB)
- Interfaces: RS-232 (x2), USB 2.0 (x 2), LAN, Keyboard, Mouse
- Mass Storage: Compact Flash card 4 GB ;
- Hard Disk Drive: None; SSD mass storage 8 GBytes (option)
- Display: 10.4", full VGA (800x600)
- Display Brightness: 500 cd/m<sup>2</sup> (1000 CD/ m<sup>2</sup> sunlight readable (option))
- Ambient Dimming Control: full range dimming control
- Back light: LED backlight technology
- Software loadable through connector
- Wide viewing angle: Horizontal: +/- 70° (typical)  
Vertical: upper: 55°; Bottom: 65° (typical)
- Contrast ratio: 500:1 (typical)
- Reflection treatment: Anti-glare, Hardness 3H
- Dimensions: 297.5 X 217 X 55.7 (WxHxD).
- Weight: 2.45Kg (w/o mounting frame)
- Video capture capability (option): Support for full-motion simultaneous video/audio capture and compression / decompression

### Model: ACD-160-04

- Power Supply: +10 VDC to +36 VDC
- Current consumption: 1.5 A @ 24 VDC
- CPU: Embedded Intel Pentium-M Processor, CPU speed >1GHz.
- DRAM: DDR333 (400 MHz) 512MB (up to 1GB)
- Interfaces: RS-232 (x2), USB 2.0 (x 2), LAN, Keyboard, Mouse
- Mass Storage: Compact Flash card 4 GB
- Hard Disk Drive: none; SSD mass storage 8 GBytes (option)
- Display: 10.4", full VGA (800 x 600)
- Display Brightness: 500 cd/m<sup>2</sup> (1000 CD/ m<sup>2</sup> sunlight readable (option))
- Ambient Dimming control: full range dimming control
- Back light: LED backlight technology
- Software loadable through connector
- Wide viewing angle: Horizontal: left:55°; Right: 65° (typical)  
Vertical: +/- 70° (typical)
- Contrast ratio: 500:1 (typical)
- Reflection treatment: Anti-glare, Hardness 3H
- Dimensions: 217 x 297.5 x 55.7 mm (WxHxD).
- Weight: 2.45KG (w/o mounting frame)
- Video capture capability (option): Support for full-motion simultaneous video/audio capture and compression / decompression

## Controls

- One optical rotary encoder with MOM push switch (ON/OFF + Dimmer functions)
- One dual optical rotary encoder with MOM push switch (Menu/Enter + horizontal and vertical menu navigation)
- Six keys, MOM push buttons, for direct function access (soft key)

## Electrical Interfaces

### Rear panel:

- One D-Sub 37-pin, male (Power, COM1, VGA output)
- One D-Sub 37-pin, female (USB, LAN, Keyboard, Mouse, COM2 and Dimming voltage input)
- One BNC receptacle (GPS antenna input)

### Front Panel:

- One USB connector (ESD protected)

## Environmental Conditions (RTCA DO-160E)

- Temperature Ranges:
  - Storage: -30°+85°C
  - Operating: -20°+55°C
  - Short time operating: +70°C
- Altitude (operating): 25,000 ft
- Humidity (max): 95%,
- Shocks:
  - Operating: 6G/11ms
  - Crash: 20G/11ms
  - Sustained: 20G/3s
- Magnetic Effect: less than 0.3 m
- Power Input: Sec. 16, Cat. B
- Induced Signal Susceptibility: Sec. 19, Cat. Z
- RF Emissions: Sec. 21, Cat. M
- ESD: Sec. 25, Cat. A