CANYON
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DACS

Digital Audio Control System
Complete Communication
Management

DACS

Digital Audio Control System

Canyon's Digital Audio Control System (DACS) is a flexible solution designed to fit the needs of mid- to large-size helicopters and a range of fixed wing aircraft performing a broad range of missions.

DACS is software-configurable to the exact audio distribution, control, and warnings needed to meet each aircraft's unique mission. Removable legends permit operators to quickly and inexpensively adapt radio updates over an aircraft's lifetime.

DACS is a fully-digital audio processing and control system that provides the most crisp and clear audio quality in our industry. When compared to traditional analog system installations, DACS provides a dramatically simplified installation with reduced wiring and maintenance costs. DACS also provides improved performance, with more features, reduced crosstalk, and higher immunity to noise.

System Description

DACS is a communication management system designed to distribute and control all audio in an aircraft, to/from all transceivers, and aural alert sources. The integrated, multi-channel intercom system and programmable user definition allow the audio system to be configured to suit customer-specific requirements.

DACS Features

- Fully-digital audio processing & control
- Designed for tactical operations
- Reduced system weight due to reduced wiring compared to legacy analog systems
- Cockpit / cabin control configurations available
- Manages up to 8 receivers, 8 transceivers
- Remote-mount management / memory units
- Interface audio levels, discretes, and multiple system functions are on-site software configurable using Device Configuration Software (DevCS)
- Low cost of ownership
- FAA: TSO-C139 (RTCA/DO-214 Class 1b, RTCA/DO-160E,RTCA/DO-178B Level C)
- EASA: ETSO-C50c (RTCA/DO-214 Class 1b, RTCA/DO-160E, RTCA/DO-178B Level C)

Installations

Flexible and configurable, DACS is the perfect audio solution for virtually any aircraft:

- Civil Prop: B-N Islander, King Air to DHC-7 (Dash 7), HS 748
- Civil Jet: Lear 25 to Westwind 1124, G-II & G-III
- Military Prop: Cessna C-208, S-3 Viking, C-26 to DHC6, Fokker F-27
- Military Jet: T-1A
- Light, medium, and heavy helicopters – civilian, commercial, special mission

DACS is forward fit on more production helicopters than any other digital audio system in the world, including H135, H160, H175, H215, H225, AW109SP, AW149, AW169, and AW189.

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Audio Management Unit: AMU50

- Termination point for all relevant aircraft system interfaces, radios, audio control panels (ACP) and headsets
- Multiple power supplies
- Multiple audio/interface amplifiers
- DO-178B Level C software
- All audio inputs and outputs are electronic differential type for enhanced crosstalk rejection
- Inputs and outputs reject HIRF and Radio Frequency Interference
- Smart connector pin layout ensures failure of one connector does not bring down the entire system
- 8 channel aural alert generator

Audio Control Panel: ACP53

- Digital Interface Terminal to AMU
- Snap-in Radio Labels
- Individual receive volume adjustment with on/off select
- VOX Setting
- ICS, Receive Audio
- Level Adjustment
- Norm /Back-up /Emergency System Mode Selection
- Intercom Isolation Select
- Manual Tx PTT, ICS PTT
- Intercom Isolate and Transmit Indicators
- Cabin Call Indicator
- LED backlighting improving dimming, NVIS optional

Remote Memory: RM01

- Stores System Configuration and Aural Alert Files
- Restores AMU50 programmable settings in the unlikely event that an AMU50 must be replaced
- Reduces downtime by simplifying removals
- Allows profile management via a simple box change, reducing downtime

Audio Control Panel: ACP51

- Digital Interface Terminal to AMU
- Snap-in Radio Labels
- Individual receive volume adjustment with on/off select
- VOX Setting
- ICS, Receive Audio Level Adjustment
- Manual Tx PTT, ICS PTT
- Intercom "Call" Select
- Patient Normal System / Isolate Mode Selection
- LED backlighting improving dimming, NVIS optional

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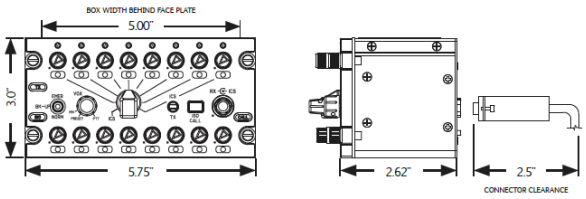
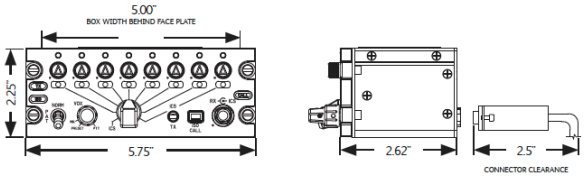
DIMENSIONS

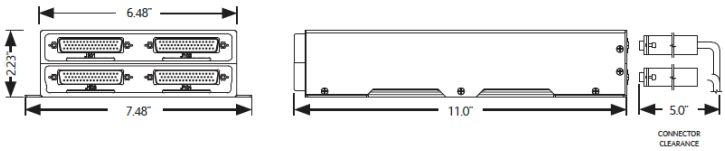
ACP53 weight: 1.76 lbs. max (0.80 Kg)



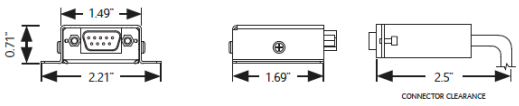
ACP51 weight: 1.01 lbs. max (0.46 Kg)



AMU50 weight: 4.11 lbs. max (1.87 Kg)



RM01 weight: 0.09 lbs. max (0.04 Kg)



SPECIFICATIONS

Power	27.5 Vdc, 2.5A nominal
Microphone Inputs	7 inputs, 3 impedances selectable: 5 ohms (250 uVrms), 75 ohms (850 mVrms) or 150 ohms (250 mVrms)
Headphones	7 outputs, 3 impedances available: 8 ohms (250 mW), 150 ohms (250 mW), or 600 ohms (250 mW)
Radio Audio Inputs	16 inputs, 1 to 20 Vrms input range 600 ohms input impedance
Radio Mic Outputs	8 outputs, 50 mVrms to 1 Vrms output range, < 60 ohms output impedance
Radio PTT Outputs	8 outputs, active Lo
Direct Audio Inputs	6 inputs, fixed audio output levels, 1 to 15 Vrms input range, 600 ohms input impedance
CVR Outputs	2 CVR outputs, one for pilot and one for co-pilot, < 600 ohms output impedance, 500 mVrms output
Aural Warnings	8 internal alerts, messages are .WAV files, assigned by configuration management software, can be active Hi or Lo
DF Blanking Output	1 blanking output, active Lo
Music Inputs	2 inputs, 2 input ranges - 400 mVrms or 2.5 Vrms, 1000 ohm input impedance
ACP/AMU Protocol	RS-422
Lighting	5/28 V standard, 5 V optional, NVIS compliant versions optional

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