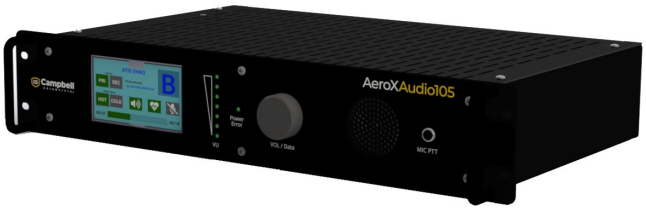
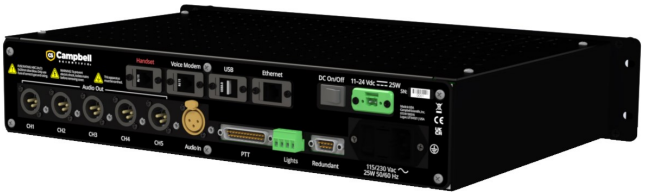
AeroX Audio105 Data Sheet

Communications Device

1. Introduction

The AeroX Audio105 is an audio controller that allows digital voice files to be transmitted over ground to air radios. Furthermore, it allows users to append audio messages to be transmitted through multiple audio inputs/outputs. Thus, the AeroX Audio105 fulfills the hardware component of an Automatic Terminal Information Service (ATIS) that produces critical flight safety information in the form of an audible voice information stream that can be transmitted over a radio for pilots. The information transmitted are the weather conditions at the airport, as well as operational information, such as the current runway in use, available approaches, the state of the runway, and breaking conditions. Other information, such as if the airport has certain restrictions, can also be broadcasted through this system.





2. Features

- 48.3 cm (19 in) 2U rack mount.
- Computer controlled AeroX Audio105 with color LCD display for status and setup.
- Comprehensive PSU monitoring to facilitate automatic uninterrupted redundant fail-over in the event of a unit failing (redundant operation requires two AeroX Audio105s per audio stream).
- Analog audio stream is output on five XLR / 3.5 mm jacks that can be connected to VHF/UHF radio, Air Traffic Control tower, Legal recorders and may other analog audio devices.
- 5 independent PTT volt free normally open / normally closed relay contacts that can be used to control VHF radio transmit and other devices, software allowing.
- XLR / 3.5 mm jack for analog audio input is provided that allows recording of audio from VHF/UHF receivers and many other analog audio sources.
- Support for a handheld PTT microphone on the front panel that can provide manual recording of audio messages.
- Loudspeaker and VU meter monitors selected audio source.
- Power source 115/230 VAC and or 11 to 24 VDC inputs for flexibility.
- Simple to use setup and firmware updates using USB memory stick.
- Ethernet port for communication with Campbell Aero™ controller.
- Runway or helipad light control relay contacts for Radio Operated Lighting Controller (ROLC) (contact Campbell Scientific for details).
- Auxiliary isolated digital input (contact Campbell Scientific for details).
- Options for telephone dial in audio message output and handset (contact Campbell Scientific for details).

January 19, 2023

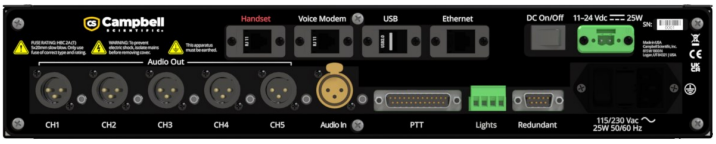
3. Specifications

Case material:	Aluminum
Mount:	2U rack mount
Dimensions	
Front panel:	48.3 cm (19 in) width, 8.9 cm (3.5 in) height
Case:	43.2 cm (17 in) width, 8.1 cm (3.2 in) height, 27.9 cm (11 in) depth
Weight:	3.5 kg (7.7 lb)
Power requirements:	80 to 264 VAC @ 25 W typical, 40 W maximum, 50/60 Hz 11 to 24 VDC @ 25 W typical, 40 W maximum
Temperature:	–20 to +70 °C

> **NOTE:**
> The display limits operational temperature range to –20 to +70 °C, but a heater fitted on the display back can increase that range. Contact factory for more information.

Humidity:	0 to 100% RH, non-condensing

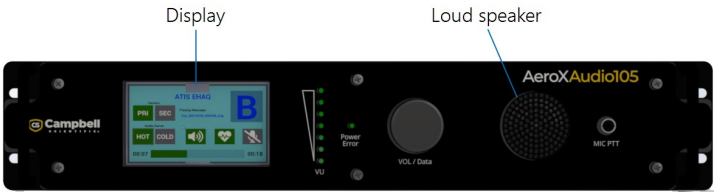
3.1 Rear panel



AUDIO OUT terminal (CH1 to CH5):	Male 3-pin XLR 600 ohm balanced Transformer isolated Separate 3.5 mm, 3-pole jack to the right of the XLR
Adjustable audio level maximum:	+4 dBu, 1.23 V rms, 1.74 V peak, 3.48 V peak-to-peak
AUDIO IN:	Female 3-pin XLR 600 ohm balanced Transformer isolated Separate 3.5 mm, 3-pole jack to the right of the XLR
Adjustable audio level maximum:	+4 dBu, 1.23 V rms, 1.74 V peak, 3.48 V peak-to-peak
PTT (push-to-talk):	5x Volt free, break before make, normally open / closed relay contacts (contact rating 50 V @ 1 A), NOT protected against overload +5 VDC, 100 mA limited output used with relay contacts to configure pull ups or pull downs.
Isolated auxiliary digital input:	3.5 to 12 V
LIGHTS terminal strip:	Four screw terminals Volt free, break before make, normally open / closed relay contacts (contact rating 50 V @ 1 A), NOT protected against overload
Redundant 9-pin D connector:	Signals between AeroX Audio105s to control redundant operation
USB port:	USB 2.0 compatible type-A socket
ETHERNET port:	RJ45 socket LAN

115/230VAC/25W-50/50HZ, Main power inlet:	80 to 264 VAC IEC C14 socket 50/60 Hz 40 W maximum On/Off power switch
11-24VDC @ 25W, power input screw terminals:	40 W maximum, reverse polarity protected On/Off power switch
Special features:	
HANDSET socket:	Supports FAA handset with electret microphone including bias and speaker
VOICE MODEM socket:	Telephone dial in voice modem

3.2 Front panel



MIC PTT:	Supports Electret hand-held microphone with PTT button
Loudspeaker:	Monitors selected audio source (user-adjustable audio volume)
VOL/DATA dial:	Volume control Navigate menus and data entry
VU LEDs:	Visual indication of selected monitor audio source
POWER/ERROR LED:	Green Steady state when power on and status ok Flashing when power on but error detected. When this occurs, all VU LEDs will be continuously lit until the error is cleared.
LCD color display:	Show status Data entry dial allows set up changes Bright, high contrast Resolution: 800 x 480 pixels Dimensions: 95.0 mm (3.742 in) width, 53.9 mm (2.083 in) height

4. Compliance and testing

> **NOTE:**
> Further details regarding compliance and testing are available upon request.

EMC compliance: EN 61326-1:2013 (CE) and BS EN61326-1:2013 (UKCA)

Electrical safety compliance: EN 61010-1:2010+A1:2019

5. Warranty

5-year standard warranty

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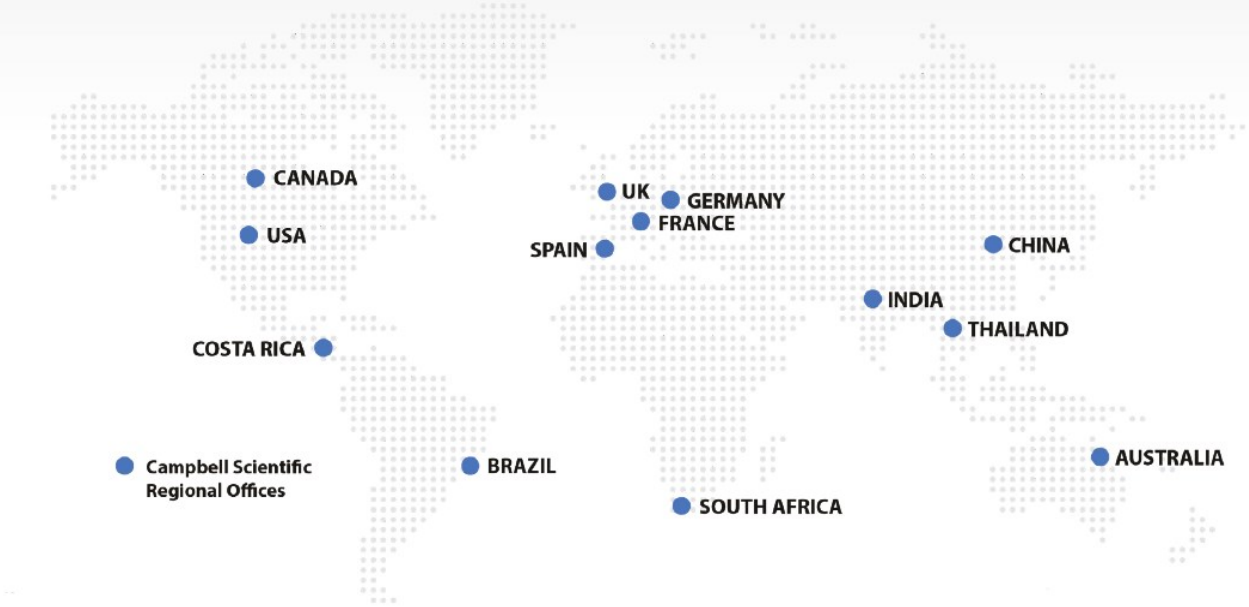

Campbell Scientific Regional Offices

Australia

Location: Garbutt, QLD Australia
Phone: 61.7.4401.7700
Email: info@campbellsci.com.au
Website: www.campbellsci.com.au

Brazil

Location: São Paulo, SP Brazil
Phone: 11.3732.3399
Email: vendas@campbellsci.com.br
Website: www.campbellsci.com.br

Canada

Location: Edmonton, AB Canada
Phone: 780.454.2505
Email: dataloggers@campbellsci.ca
Website: www.campbellsci.ca

China

Location: Beijing, P. R. China
Phone: 86.10.6561.0080
Email: info@campbellsci.com.cn
Website: www.campbellsci.com.cn

Costa Rica

Location: San Pedro, Costa Rica
Phone: 506.2280.1564
Email: info@campbellsci.cc
Website: www.campbellsci.cc

France

Location: Vincennes, France
Phone: 0033.0.1.56.45.15.20
Email: info@campbellsci.fr
Website: www.campbellsci.fr

Germany

Location: Bremen, Germany
Phone: 49.0.421.460974.0
Email: info@campbellsci.de
Website: www.campbellsci.de

India

Location: New Delhi, DL India
Phone: 91.11.46500481.482
Email: info@campbellsci.in
Website: www.campbellsci.in

South Africa

Location: Stellenbosch, South Africa
Phone: 27.21.8809960
Email: sales@campbellsci.co.za
Website: www.campbellsci.co.za

Spain

Location: Barcelona, Spain
Phone: 34.93.2323938
Email: info@campbellsci.es
Website: www.campbellsci.es

Thailand

Location: Bangkok, Thailand
Phone: 66.2.719.3399
Email: info@campbellsci.asia
Website: www.campbellsci.asia

UK

Location: Shepshed, Loughborough, UK
Phone: 44.0.1509.601141
Email: sales@campbellsci.co.uk
Website: www.campbellsci.co.uk

USA

Location: Logan, UT USA
Phone: 435.227.9120
Email: info@campbellsci.com
Website: www.campbellsci.com