

Advanced Simulation Technology inc.



ACU2

The latest addition to ASTi's ACENet audio and I/O distribution devices is the ACU2. The ACU2 expands on the family of 2, 4, and 6 channel ACU devices with the following enhancements:

Stereo Support: Stereo operation (independent left and right output) is supported on a single connector, greatly reducing cabling complexity and installation footprint for applications requiring binaural operators.

Reduced Footprint: Each ACU2 supports four configurable mono/stereo operator positions in a single, compact unit. At one-fourth the size of the current ACU, the ACU2 fits easily on a desktop. In addition, mounting two ACU2 units side-by-side in 1U 19" rack space provides 8 mono/stereo operator positions.

Share Power: A convenient power cable connection allows operation of two ACU2 units from a single power supply.

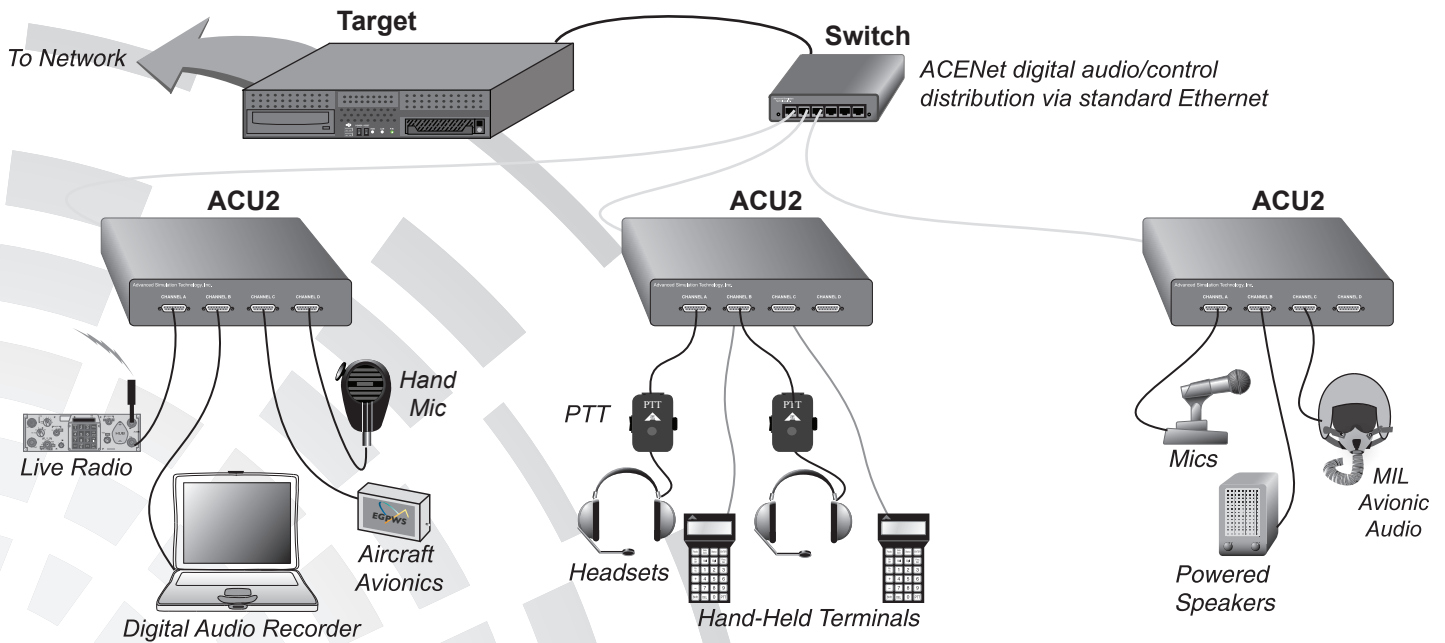
The ACU2 also includes the same audio distribution features present on the current ACU:

High Fidelity Audio: 48kHz digital audio and balanced pro-audio interfaces

Software Configurable: Adjustable amp/preamp gains and mic power for easy, direct connection to military and commercial headsets and a wide variety of audio/communications systems and peripherals

Serial Data Ports: Provide convenient control interface for ASTi hand-held terminals, simulated panels, and live radio control

Integrated I/O: Configurable digital and analog I/O for direct connection of PTT units, volume controls, switch detection, radio PTT activation, and other control applications



ACU2 Features

Audio I/O

- 4 stereo audio inputs/outputs provide support for multiple mono/stereo operators and audio equipment.
- Software configurable input and output gains
- Software selectable microphone power
- Balanced inputs for increased noise immunity and ease of interfacing
- Ability to drive military headsets, as well as a wide range of audio peripherals directly

Digital I/O

- Three control inputs supplied with each D-sub connector for direct connection of PTT, reducing delays and voice cutoff; may be used in digital (on/off) or analog (8-bit) operating modes.
- Opto-isolated digital output supplied with each D-sub connector for sending PTT signals to real radio or comms equipment, or driving LEDs
- Ideal for dual sensing PTT inputs, ASTi 4-channel PTTs, and other general purpose control

Serial I/O

- Two for interfacing to simulated communications panels, ASTi hand-held terminals, and general purpose I/O modules

ACENet / ACU2 Architecture

- Provides multiple user interfaces and a highly-scalable architecture
- ACENet allows ACU2 installation close to operators and equipment, thousands of feet from Target using fiber optic media.
- The ACU2 and ACENet architecture reduce cabling requirements and noise susceptibility.

General

- Combined with Target platforms and ACE software, the ACU2 is a distributed audio conversion building block for constructing small and large stand-alone communications simulation and conferencing networks.
- In the Telestra 4 product suite, the ACU and ACE-RIU also provide remote audio distribution through the ACENet architecture. Contact ASTi for more information.

ACU2 Specifications

Audio Inputs (per channel)

- Input Impedance: 1 k Ω
- Input Level: \pm 2.5V peak max
- Input Gain: 0 to +62 dB s/w configurable

Audio Outputs (per channel)

- Output Impedance: 10 Ω

Control Inputs

- Quantity: 12 (3 per connector)
use as digital or analog input
- Configuration: 6 pins per connector

Digital Outputs

- Quantity: 4 (1 per connector)
- Configuration: Opto-isolated, 120mA
2 pins on each audio connector
(output and return pin)

Serial Ports

- Quantity: Two
- Type: RS-422
- Connection: Standard RJ-12 Jack (6 pin)

ACENet Connectors

- Connection: One ACENet port
RJ-45 female connection

Mechanical

- Approximate Size: 7" wide x 1.55" high x
7.5" deep
- Mounting: 1U 19" rackmount panel
(up to two units per 1U rack)

General

- Power: +15VDC, 3 A (plug-in AC/DC converter supplied)
- Audio Connection: 15-pin female D-sub
(1 stereo audio output,
1 audio input, 3 control inputs,
1 digital output per connector)
- ACENet Cabling: Category 5e cable or better

