ATUC-50
Full-Featured Digital Conference System
ATUC-50 Key benefits

- Feedback suppression and individual DSP for enhanced audio quality
- Premium Sound quality and speech intelligibility
- Multi-lingual web remote based remote control
- Paintable top panel
- Plug and play installation
- Five Year Warranty
- Secure and reliable
- Cost effective
- Ease of use
You choose the scale and complexity of your communication needs and in return the ATUC-50 Discussion System gives you reliable, crystal-clear speech reproduction from a system that couldn’t be simpler to set up and use.

From small gatherings in a meeting room to medium/large-scale conferences, the ATUC-50 is designed to be easily configured – and reconfigured – while providing the professional sound quality and advanced controls that will enable you to adapt it to any number of discussion settings.

The ATUC-50 is the first with individual DSP for each discussion unit for real-time adjustment during conferences. The premium audio performance and high intelligibility results in a more engaging and less tiring conference experience. The system is easy to operate via a PC, mac or any tablet (windows, iOS, android), and the intuitive web remote control works on all web browsers.

The ATUC-50 enables full IP integration into 3rd party control systems. More functionality, higher performance and better value than other products.
The heart of the ATUC-50 system

- Supports up to 100 discussion units.
- Cascade capability to handle up to 300 discussion units and a max of six interpretation units for up to 3 spoken languages in the meeting.
- 4 configurable balanced outputs plus output 1 mirrored to unbalanced output.
- 2 Mic/Line In + 1 Aux In + 2 Return In.
- Three language simultaneous interpretation.
- Conference Mode: Free talk, Request to talk and Full remote.
- Override settings: LIFO, FIFO and Non Override.
- ‘Mic On’ trigger: Manual or Voice activation.
- Web remote interface facilitates pre-meeting system setup and management of the live discussion through a web browser.
- Built-in WAV and MP3 Recorder to external USB memory devices, up to 4 channels (2 channel MP3).
- Built-in feedback suppressor and digital audio processing (DSP).
- Gain sharing algorithm substantially reduces the risk of feedback while maintaining a natural sound.

## Control Unit

### ATUC-50CU

The heart of the ATUC-50 system

- Supports up to 100 discussion units.
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- Built-in WAV and MP3 Recorder to external USB memory devices, up to 4 channels (2 channel MP3).
- Built-in feedback suppressor and digital audio processing (DSP).
- Gain sharing algorithm substantially reduces the risk of feedback while maintaining a natural sound.

### Specifications

- **I/O connectors**
  - Inputs: MIC/LINE x 2, AUX (BAL), Interpretation Return x 2 Outputs: Balanced x 4, Unbalanced x 1
  - LINK/CHAIN: DU A/B terminals, CU A/B terminals (DU C/D terminals)
- **Recording**
  - WAV: 1/2/3/4 track with CUE point (RAW standard)
  - MP3: 1/2 track with CUE point (Original format)
- **Sampling frequency**
  - 44.1kHz
- **Latency**
  - MIC Input to Output: 1.2ms (DU to CU)
- **Frequency response**
  - -1.0 to 2.0dB, 20Hz-20kHz, refer to +4dBu output @ 1kHz
- **Dynamic range**
  - 110dB A-weighted
- **Signal to noise**
  - 90dB A-weighted
- **Headroom**
  - 20dB
- **Distortion**
  - Less than 0.03% @1kHz unity
- **Crosstalk**
  - Less than -80dB
- **OLED display**
  - 20x2 Character type, Color: Yellow, Operating life time: 100,000 hours
- **Power supply**
  - DC +48V
- **Power consumption**
  - 20W - 175W (max.)
- **Operation temperature**
  - 0 - 40°C
- **Operation humidity**
  - 25 - 85%
- **Dimensions (1 RU)**
  - 482.6mm x 331.6mm x 44mm (W x D x H)
- **Net weight**
  - 3.4kg
- **Finish**
  - Front panel: Black, Top & Rear: Black
- **Included accessories**
  - AC power cord, Quick Setup Guide x 2, Euroblock connectors x 9, Warranty Sheet

Specifications are subject to change without notice.
Web Remote Control
ATUC-50

Discussion unit with high-quality audio
The ATUC-50’s Web Remote Control function is a web application with a multi-language UI that allows you to configure and operate the system from a computer or mobile device using a standard web browser and without needing to load software. From the application’s home screen it is possible to configure detailed settings of the system, recall and adjust presets before starting a conference.

• Accessible from web browser on Mac, PC, iOS and Android tablets.
• No need to install addtion software.
• Intuitive licence free software based on Google Material design principles.
• Multi lingual user interface (with a choice of 10 preloaded languages and the possibility to upload two additional languages).
• General system settings with the system upgrade facility.
• Network settings.
• Administrator and Operator access levels, with optional password protection.
• Configuration of conferencing and audio parameters for the control unit.
• General and individual discussion unit (ATUC-50DU) and integration unit (ATUC-50IU) settings.
• Assignment of the preprogramed functionalities to the GPIO’s of the priority ATUC-50IU integration units.
• Configuration of the interpretation settings.
• Configuration of recording settings and control of (start, stop, pause) recording sessions.
• Creation of conference presets.
• Three different audio special effects, assignable for each preset.
**ATUC-50DU**

**Discussion unit with high-quality audio**

- Configurable user type unit e.g. delegate, chairman, VIP.
- Microphone connector compatible with standard 3-pin XLR microphones.
- Low Noise (EIN: –121 dBu) microphone preamp using discrete transistors, with individual adjustable gain control.
- Multi colour RGB rear LED bar for general visualisation purposes.
- Multi-colour LED on the speak button for user’s colour preferences.
- LED display for volume control and listening channel selection.
- High quality speaker for enhanced speech intelligibility.
- 24-bit / 48kHz High Resolution Audio.
- Multiple independent indicator (multi-coloured RGB LED bar on rear of Discussion Unit and LED on the talk button).
- Clear LED display for volume control and listening channel selection.
- 2 x RJ45 Port for connecting to the Control Unit and other Discussion Units and 1x expansion terminal for future options.
- 1 x stereo mini jack headphone output.

**Microphones**

**ATUC-M43H and ATUC-M58H**

**Specially designed 3-pin microphone with LED Ring**

- Unique 3-pin balanced microphone with remote red LED ring offering high sound quality and user flexibility.
- Patent-pending design isolates the microphone connector from the Discussion Unit socket.
- Double layer pop filter (inside microphone and detachable wind screen).
- RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI).
- Two lengths available (430mm, 580mm).

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### Specifications

| Dynamic range | 107 dB A-weighted |
| Frequency response | + 1 dB, – 2 dB, 250Hz - 25kHz, refer to + 6dBu output @ 1 kHz |
| Audio sampling | 24 bit/44.1kHz |
| Signal-to-noise | 87 dB, A-weighted |
| I/O connectors | Inputs: MIC (Neutrik XLR-F) - Outputs: Headphones x 1 (XLR-CH/1) 0/3-5V |
| Headroom | 20 dB |
| Equivalent input noise | Less than –121dBu, Rs=150 ohm |
| Total harmonic distortion | Less than 0.07% @1kHz |
| Phantom power | DC +48V |
| Power supply | DC +48V |
| Power consumption | 2.2 W |
| Operation temperature | 0-40°C |
| Operation humidity | 25-85% |
| Dimensions (W x D x H) | 135mm x 148.3mm x 84.2mm |
| Net weight | 570g |
| Finish | Top panel: Charcoal grey - Enclosure: Black |

### ATUC-M43H versus ATUC-M58H

<table>
<thead>
<tr>
<th>Element</th>
<th>ATUC-M43H</th>
<th>ATUC-M58H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar pattern</td>
<td>Fixed-charge back plate, permanently polarized condenser</td>
<td></td>
</tr>
<tr>
<td>Frequency response</td>
<td>100-15,000Hz</td>
<td></td>
</tr>
<tr>
<td>Open circuit sensitivity</td>
<td>–40 dB (10.0 mV) re 1V at 1 Pa</td>
<td></td>
</tr>
<tr>
<td>Maximum input sound level</td>
<td>114 dB SPL, 1 kHz at 1% T.H.D.</td>
<td></td>
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<tr>
<td>Signal-to-noise ratio</td>
<td>64 dB, 1 kHz at 1 Pa</td>
<td></td>
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<tr>
<td>Impedance</td>
<td>250 ohms</td>
<td></td>
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<tr>
<td>Finish</td>
<td>Low-reflectance black</td>
<td></td>
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<tr>
<td>Dimensions (W x D x H)</td>
<td>Ø18.9x430</td>
<td>Ø18.9x580</td>
</tr>
<tr>
<td>Weight</td>
<td>62g</td>
<td>72g</td>
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</table>
ATUC-50 System Components

Integration Unit

**ATUC-50IU**

- The integration unit is a microprocessor unit for custom designed flush mount conference units.
- The unit is of compact robust metal casing with the fixing ears with holes, perfectly designed to fit the installation under the table, in-between the armrest of the chairs underneath the elevated floor or any other hidden place.
- With 39 Euro block pins the unit features an output for microphone with red lighting ring signalling, loudspeaker, mini jack, 3 language channel selector for the headphone, volume control of the headphone output, speak button, priority/mute button, 5V power outlet and 16 GPIOs.
- When the system is controlled by the CU via the web remote than the IU unit with no priority would have only one GPIO and that is the “self-mute”
- When the system is controlled by the CU via the web remote than the up to 9 IU units with priority can get assigned a variety of preprogrammed GPIOs such as: next on, master volume up and down, start and stop recording, up to 8 presets, up to 3 SFX - special sound effects.
- When the IP control is applied to the system the GPIO’s of all the units regardless the priority level, can be custom programmed to the functionalities one’s desires functionalities as e.g. external voting (up to 8 buttons) and many others.

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**Specifications**

<table>
<thead>
<tr>
<th>Dynamic range</th>
<th>106dB A-Weighted</th>
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<tbody>
<tr>
<td>Frequency Response</td>
<td>+1dB / -2dB 20Hz – 20kHz, +4dBu input @ 1kHz</td>
</tr>
<tr>
<td>Audio Sampling</td>
<td>24bit / 48kHz</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>86dB A-Weighted</td>
</tr>
<tr>
<td>Headroom</td>
<td>25dB</td>
</tr>
<tr>
<td>Phantom Power</td>
<td>DC +48V</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>DC +48V</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>3.4W</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 – 40°C</td>
</tr>
<tr>
<td>Connectors</td>
<td>2x RJ45, 39 pin on EuroBlock</td>
</tr>
<tr>
<td>Dimensions</td>
<td>116 x 173 x 25mm</td>
</tr>
<tr>
<td>Weight</td>
<td>460g</td>
</tr>
</tbody>
</table>
ATUC-50 System Components

Interpretation Unit
ATUC-50INT

- This unit enhances the ATUC-50 system with 2 or 3 cost effective language simultaneous interpretation.
- The unit in its simplicity does not require trained personnel or extensive training to learn how to operate it.
- The unit has buttons for the incoming, out-going language choice and the control volume buttons.
- Stereo mini jack outlet for the headphone and 3 pin XLR plug for the microphone.
- The unit features both direct and relayed simultaneous interpretation.
- There can be 2 units per language and in total 6 units in system.
- The unit can be programmed to work either uni-directional L1 -> L2 or bi-directional L1 <-> L2 way.
- With 2 INT unit per language it is possible to choose how they interact one with each other: interlock, no-interlock or combine.
- The INT units can be seamlessly combined with any other contribution conference unit, DU and IU.

Specifications

| Dynamic range | 107 dB A-weighted |
| Frequency response | +1 dB, –2 dB at 20Hz, +48dBu output at 1kHz |
| Audio sampling | 24 bits/48 kHz |
| Signal-to-noise | 87 dB, A-weighted |
| I/O connectors | Inputs: MIC (Neutrik XLR-F) - Outputs: Headphones x 1, LINK/CHAIN: DU RJ45 A/B terminals |
| Headroom | 20 dB |
| Equivalent input noise | Less than ~125dBu, 80mV RMS |
| Total harmonic distortion | Less than 0.07% at 1kHz unity |
| Phantom power | DC +24V |
| Power supply | DC +48V |
| Power consumption | 2.2 W |
| Operation temperature | 0-40°C |
| Operation humidity | 25-85% |
| Dimensions (W x D x H) | 135mm x 148.3mm x 84.2mm |
| Net weight | 570g |
| Included accessories | Quick setup guide, warranty sheet |

Link Extender
ATLK-EXT165

- The ATLK-EXT165 provides additional power to the ATUC-50 system where the interactive connectivity chart indicates the placement the unit is required.
- The unit is equipped with the mains input, and 2 x RJ45 outlets.
- The LED indicators indicate which chain is engaged and the red LED indicates that the unit is powered on.
- The unit has a switch that enable remote switching on and off in relation to the ATUC-50CU.
- Robust metal cased unit is adapted to the placement in hidden places e.g. under the floor, under the table, or wherever else the unit is required to supply the ATUC-50 installation with required power.

Specifications

| I/O Connectors | Outputs | LINK power status |
| Power requirement | AC 100-240V 50/60Hz |
| Power consumption | 15W-160W (MAX) |
| Operation temperature | 0-40°C |
| Operation humidity | 25-85% |
| Dimensions (W x D x H) | 217mm x 326mm x 41mm |
| Net weight | 2.2kg |
| Finish | Front panel: Black, Top & Rear: Black |
| Included Accessories | AC Power Cord, Quick Guide, Euroblock connectors (1pc), Table mount kit, Warranty |
ATUC-50  A New Class of Conferencing

Simple, reliable and full-featured digital discussion system

Whatever your conferencing or discussion needs, the ATUC-50 is designed to offer reliable, clear and intelligible communication to significantly increase meeting efficiency and effectiveness.

Voice is the quickest and most efficient tool medium for exchanging ideas - whether in meeting rooms, in councils, in classrooms or through videoconference, speech is the most direct way of communication and understanding.

Audio-Technica’s new wired ATUC-50 conference system is designed to offer a reliable and effective way to speak and to be heard.

Ease of use

Using standard Cat 5e (and above) cabling, the ATUC-50 system connects easily through a daisy chain or ring topology.

The Web Remote Control Interface allows quick and easy configuration, plus management directly from any web browser, without need to install dedicated software.

The on-board audio recorder can support up to 4 discrete channels for easy archiving without the need of an external recording device.

All settings can be saved as presets and easily recalled before the start of each meeting.

Reliability

For added redundancy the ATUC-50 can be configured using a ring topology.

The Web Remote Control Interface allows two user permission levels to avoid any unwanted access or accidental programming changes.

Flexibility

Advanced configuration can be used to tailor the system to the users’ needs. Each configuration can be saved and recalled instantly.

Multiple modes such as ‘Free Talk’, ‘Request To Talk’, ‘Full Remote’; various ‘override settings’: ‘LIFO’, ‘FIFO’ and ‘Non Override; and flexible ‘Mic On trigger mode’: manual or voice activation; allow for adaption to each and every situation.

IP Control allows full parameter access from most third party control systems.

Floor plus 2 Interpretation channels answer today’s need in contemporary meeting rooms.

Sound quality and Speech Intelligibility

Individual Mic Gain and EQ to adjust each participant’s voice.

24-bit/48kHz uncompressed digital audio for natural sounding voice reproduction.

12 band feedback suppressor allows higher volume levels without causing feedback.

Dynamic processing and 8-band parametric EQ on the main Analog output.

Wiring Diagrams
ATUC-50 System connection example