

# Architectural & Engineering Specifications

## IDA 4M/IDA4XM/IDA4SU

The unit shall be an Ateis UK IDA4M/IDA4XM/IDA4SU or equal and approved.

The unit shall comprise a steel rack-mountable case with all connections on the rear panel.

No system configuration changes shall be possible from the unit front panel in order to deter unauthorised adjustments.

The unit shall allow high quality systems to be created with up to 256 audio inputs and 256 audio outputs/zones.

The unit shall act as the router/system controller for both public address and voice alarm use, and provide input, output, amplifier and loudspeaker circuit surveillance.

System expansion shall be facilitated by the connection of slave units (IDA4MS/IDA4XMS) to the master unit with each slave unit providing a further four inputs, outputs and zones.

Slave units shall be connected via a high speed, multi channel local rack network.

The unit shall be compatible with separate amplifiers and shall permit both single/dual channel systems (single amplifiers serving multiple zones, in conjunction with the IDA4/SU) and fully multiple channel systems (multiple amplifiers serving multiple zones).

When operating with the IDA4SU the unit shall provide two fully monitored loudspeaker circuits (A & B) per amplifier/zone with automatic circuit isolation in the event of short circuit faults to ensure the remaining circuit still operates.

In conjunction with the IDA4SU full all-call microphone access shall be possible in the event of catastrophic processor failure.

The unit shall include non-volatile storage for both emergency and routine messages, complete with timetabled replay scheduler.

All faults and activity shall be stored in an internal log file and shall be displayed on a front panel display.

Control inputs shall be provided to interface with fire detection systems, multi zone microphones, remote control panels and building management systems etc.

Software control shall also be possible via an open control protocol.

Comprehensive DSP audio processing shall be provided including multi band parametric equalisation for all inputs and outputs and programmable delays.

The IDA4XM shall also include real time ambient noise sensing and control, capable of operating during broadcast.

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## IDA 4 – Voice Alarm

- LCD Display (Master Only)
  - 2 Line
  - 16 Character
  - Faults, status, audio level bargraph
  - Membrane switch controls
    - Up/Down menu
    - Increment/Decrement value
    - Escape/Okay selection
  - LED Indication
    - Power (green)
    - Fault (amber)
    - Evacuation (red)
  - DC Power Supply
    - 21V - 28V
    - 230V AC Adaptor included
    - Screw terminal Euro-Block plug
  - Power Consumption
    - 300mA 24V no PSS connected
    - 750mA 24V PSS connected
  - Analogue Audio Inputs
    - 4 Inputs
    - 1 - 256 Inputs per system
    - 10K Ohm balanced
    - 0dB Sensitivity
    - +14dBu maximum input level
    - VOX/Contact input access
    - Screw terminal Euro-Block plug
  - Analogue Audio Outputs
    - 4 Outputs
    - 50 Ohm balanced
    - 0dB Nominal output level
    - +14dBu maximum output level
  - Audio Performance
    - 10Hz - 22kHz Bandwidth
    - 48kHz Sample rate
    - 24 bit Resolution
    - <0.02% THD 1kHz
    - <-84dBu Lin output noise
    - <-88dBu A-weighted output noise
  - >98dBu Lin dynamic range
  - >102dBu A-weighted dynamic range
- Control Features
  - PC Configuration tool
  - Configuration archive
  - On/Off-line configuration
  - Live fault/status display
  - Signal level bargraph
  - Audio inputs
  - Microphone inputs
  - Amplifier input signals
  - Amplifier output signals
- Multi language
  - English
  - French
  - Russian
  - Romanian
  - Polish
  - German
  - Czech
  - Spanish
  - Italian
  - Dutch
- Complete critical path surveillance
  - 500 Event fault log
  - Time/date stamp
- Programmable signal priority
  - 100 Priority levels
  - First come, first served option
- Timed system PA volume reduction
  - Timed global music on/off
- Programmable zone/amplifier surveillance
  - None
  - Duty amplifier
  - Duty amplifier & circuit
  - Duty amplifier & standby amplifier

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## IDA 4 – Voice Alarm

- Duty amplifier, standby amplifier & circuit
- Tone generator output option
  - 188Hz - 22kHz Frequency
  - -39dB to +6dB Level
- Message storage
  - 20Hz - 8kHz Bandwidth
  - 16kHz Sample rate
  - 16 bit Resolution
  - 26 Message capacity
  - 131 Seconds non-volatile memory
  - Programmable pre-message siren
    - 0s - 255s Duration
  - Messages available as chime
- Message scheduler
  - 32 Programmes
  - Monday - Sunday calendar
  - Start time
  - Stop time
  - Repeat interval time
  - Number of repetitions
  - Broadcast zones
- Audio Processing
  - Monitored DSP facilities
  - 7 Band parametric EQ per zone
    - 20Hz - 19kHz Centre frequency
    - 1/3 - 13 Q Filter curve
    - -12dB to +12dB Gain
    - Copy and paste facilities
  - Digital delay per zone
    - 0ms - 683ms Delay
  - 2 Volume controls per zone
    - Music level
    - Announcement level
  - 3 Band parametric EQ per input
    - 20Hz - 19kHz Centre frequency
    - 1/3 - 13 Q Filter curve
- -12dB to +12dB Gain
- Copy and paste facilities
- Including PSS and message audio
- Ambient Noise Sensing/Control (ANS)
  - IDA4XM/IDA4XMs Only
  - FFT Algorithm
  - Programmable sensitivity
    - -12dB to 0dB Minimum gain
    - 0dB to +12dB Maximum gain
    - 1s - 600s Integration time
  - Automatic calibration routine
  - Continuous operation
    - Background music compatible
  - 1 - 64 Channels per system
- IDA4SU
  - 1U 19" Case
  - 430W x 44H x 230D mm
  - RAL7016
  - Passive cooling
  - Programming integrated with IDA4M/MS/ XM/XMS configuration tool
  - RS232 Port
    - 9 Way D connector
    - Connection to IDA4M/MS/XM/XMS
    - Additional feed through connector
  - PSS microphone connector in/out
    - All-call facilities in event of IDA processor failure
    - LED fault indication
  - 8 Circuit input/outputs
    - 4 Zone A & B
  - 4 Amplifier channels
  - 8 Circuit fault indicators (amber)
    - 4 Zones
  - DC power supply
    - 21V - 28V
    - Screw terminal Euro-Block plug

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## Power present indication (green)

- Power consumption
- 250mA 24V

## Analogue audio inputs

- 4 Inputs
- 10K Ohm balanced
- 0dB Sensitivity
- +14dBu maximum input level
- Screw terminal Euro-Block plug

## Analogue Audio Outputs

- 4 Outputs
- 50 Ohm balanced
- 0dB Nominal output level
- +14dBu maximum output level
- Screw terminal Euro-Block plug

## Audio Performance

- 10Hz - 22kHz Bandwidth
- 500W maximum power capacity per channel



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