

AtlasIED Atmosphere Audio Processor Integration Guide

Overview

This guide provides complete setup and operation instructions for integrating AtlasIED Atmosphere audio processors (AZM4, AZM8, AZMP4, AZMP8, AZM4-D, AZM8-D) with your Sports Bar AI Assistant.

Supported Models

Zone Controllers

- **AZM4:** 4-Zone Signal Processor
- **AZM8:** 8-Zone Signal Processor

Powered Models

- **AZMP4:** 4-Zone Signal Processor + Amplifier (600W)
- **AZMP8:** 8-Zone Signal Processor + Amplifier (1200W)

Dante Models

- **AZM4-D:** 4-Zone + Dante Network Audio
- **AZM8-D:** 8-Zone + Dante Network Audio
- **AZMP8-DW:** 8-Zone + Amp + Dante (Wall Mount)

Network Setup Requirements

IP Configuration

- Each processor needs a static IP address on your network
- Default web interface port: **80** (HTTP)
- Ensure processors are accessible from the AI Assistant server
- Recommended network: Same subnet as the AI Assistant

Network Requirements

- **Minimum Speed:** 100 Mbps Ethernet
- **Latency:** < 10ms for real-time control
- **Firewall:** Allow HTTP (port 80) traffic to processors
- **DHCP Reservations:** Recommended for consistent IP addresses

Initial Setup Process

1. Physical Installation

1. Mount processors in equipment rack
2. Connect power (ensure proper grounding)
3. Connect Ethernet cable to network switch
4. Connect audio inputs/outputs as per AtlasIED documentation

2. Network Configuration

1. Access processor web interface: `http://[processor-ip]`
2. Configure network settings (static IP recommended)
3. Set device name/location for easy identification
4. Test web interface accessibility from AI Assistant server

3. Sports Bar AI Assistant Configuration

1. Navigate to **Management Panel** → **Audio Processors**
2. Click **“Add Processor”**
3. Fill in processor details:
 - **Name:** Descriptive name (e.g., “Main Bar Audio”)
 - **Model:** Select appropriate model (AZM4, AZM8, etc.)
 - **IP Address:** Processor’s network IP
 - **Port:** 80 (default)
 - **Description:** Optional location/purpose description

4. Connection Testing

1. Click **“Test Connection”** button
2. Verify “Connection Successful” message
3. Status should show as “Online” with green indicator
4. Click **“Web Interface”** to access processor directly

Zone Configuration

Adding Audio Zones

1. Select processor from tabs
2. Click **“Add Zone”** button
3. Configure zone settings:
 - **Zone Number:** Physical zone on processor (1-4 or 1-8)
 - **Name:** Descriptive area name (e.g., “Main Dining”)
 - **Description:** Optional details about coverage area
 - **Default Source:** Initial audio input

Zone Control Features

- **Volume Control:** Adjust zone volume (0-100%)
- **Mute/Unmute:** Instant audio muting per zone
- **Source Selection:** Switch audio inputs per zone
- **Zone Status:** Real-time monitoring of zone settings

Advanced Features

Scene Recall (API Ready)

- Save and recall complete system settings
- Multiple scenes per processor
- Instant switching between configurations
- Integration with automation systems

Message Playback (API Ready)

- Play stored messages to specific zones
- All-call and selective zone paging
- Message scheduling capabilities
- Custom audio file support

Room Combining (API Ready)

- Dynamically group zones together
- Synchronized audio across multiple areas
- Event-based room configurations
- Temporary and permanent groupings

Integration with Matrix System

Audio Routing Strategy

1. Video Matrix Outputs → Audio Processor Inputs

- Matrix Audio 1-4 outputs connect to AZM8 inputs
- Synchronized A/V switching capability
- Centralized source management

2. Zone Mapping

- TV locations mapped to audio zones
- Coordinated volume control
- Unified source selection

Recommended Connections

```
Wolf Pack Matrix → AtlasIED AZM8
- Matrix Audio 1 → AZM8 Input 1
- Matrix Audio 2 → AZM8 Input 2
- Matrix Audio 3 → AZM8 Input 3
- Matrix Audio 4 → AZM8 Input 4
```

API Control Examples

Volume Control

```
// Set zone 1 to 75% volume
POST /api/audio-processor/control
{
  "processorId": "processor-id",
  "command": {
    "action": "volume",
    "zone": 1,
    "value": 75
  }
}
```

Mute Control

```
// Mute zone 2
POST /api/audio-processor/control
{
  "processorId": "processor-id",
  "command": {
    "action": "mute",
    "zone": 2,
    "value": true
  }
}
```

Source Selection

```
// Switch zone 3 to Input 2
POST /api/audio-processor/control
{
  "processorId": "processor-id",
  "command": {
    "action": "source",
    "zone": 3,
    "value": "Input 2"
  }
}
```

Troubleshooting

Connection Issues

- **Problem:** "Connection Failed" message
- **Solutions:**
 - Verify IP address is correct and reachable
 - Check network connectivity with ping test
 - Ensure processor web interface is enabled
 - Verify firewall settings allow HTTP traffic

Zone Control Problems

- **Problem:** Zone commands not responding
- **Solutions:**
 - Check processor web interface directly
 - Verify zone numbers match physical configuration
 - Restart processor if needed
 - Review processor logs for errors

Network Performance Issues

- **Problem:** Slow response or timeouts
- **Solutions:**
 - Check network bandwidth utilization
 - Verify switch/router performance
 - Consider dedicated audio network segment

- Update processor firmware if available

Maintenance & Monitoring

Regular Health Checks

- Monitor processor status indicators
- Review connection logs for patterns
- Test zone controls weekly
- Verify web interface accessibility

Preventive Maintenance

- Keep processor firmware updated
- Monitor network switch performance
- Document zone assignments and changes
- Backup processor configurations

System Updates

- Coordinate with AtlasIED for firmware updates
- Test connectivity after network changes
- Update AI Assistant to latest version
- Review and update zone configurations

Best Practices

Naming Conventions

- **Processors:** Location-based names (e.g., “Main Bar Audio”, “Patio Audio”)
- **Zones:** Area descriptions (e.g., “Main Dining”, “VIP Section”, “Outdoor Patio”)
- **Sources:** Clear input identification (e.g., “Matrix Audio 1”, “Bluetooth”, “Microphone”)

Documentation

- Maintain zone-to-speaker mapping diagrams
- Document IP addresses and network settings
- Keep AtlasIED manuals accessible
- Record configuration changes with dates

Security Considerations

- Use network segmentation for audio equipment
- Implement access controls for web interfaces
- Monitor for unauthorized configuration changes
- Regular security updates and patches

Next Steps

1. Configure Your First Processor

- Add your AtlasIED unit to the system
- Test connectivity and basic controls
- Configure initial zones

2. Integrate with Matrix System

- Connect audio outputs from video matrix
- Map TV locations to audio zones
- Test coordinated A/V switching

3. Advanced Features

- Explore scene recall capabilities
- Set up message playback system
- Configure room combining for events

4. Optimization

- Fine-tune volume levels per zone
- Create automation rules
- Monitor system performance

Support Resources

- **AtlasIED Technical Support:** Available for processor-specific issues
 - **Sports Bar AI Assistant Logs:** Check application logs for detailed error information
 - **Network Diagnostics:** Built-in connection testing tools
 - **GitHub Documentation:** Latest updates and feature additions
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For additional support or feature requests, refer to the main project documentation or contact your system administrator.