Storm Interface AT02 Series AudioComm Audio Interface Module Owner's Manual

Contents

Storm Interface AT02 Series AudioComm Audio Interface Module

Specifications:

- Rating: 5V ±0.25V (USB 2.0), 190mA (max)
- Connection: mini USB B
- Audio: 3.5mm audio jack socket (illuminated)
- Ground: 100mm Earth Wire with M3 ring terminal
- Sealing Gasket: included

Product Overview:
The AudioComm device is designed for use with a host system via a single USB cable. It is available in vertical or horizontal versions with various features such as volume control keys,
illuminated jack socket, and USB connectivity to the host.

Product Features:

- Volume up/down keys
- 3.5mm Illuminated Jack Socket with insert/removal detection
- Raised Headphone symbol
- Mini USB socket for connection to host
- Reverse printed dark silver or black color front label
- Designed for under panel installation (1.2mm – 2mm thick panel)

Usage Instructions

Installation:
Mount the AudioComm device on a panel with a thickness between 1.2mm and 2mm using the provided CAD drawing for reference.

Connection:
Connect the AudioComm device to the host system using the single USB cable provided.

Customization:
Use the utility software to customize the default illumination status, ‘wake-up’ behavior, and USB codes as needed.

Functionality:
Use the volume up/down keys to adjust audio levels, insert or remove jacks from the illuminated socket, and interact with the host system via the USB interface.

FAQ:

1. **Q: Are special drivers required for AudioComm?**
   A: No, AudioComm does not require any special drivers as it functions as a standard HID keyboard and HID consumer controlled device.
2. **Q: Can the USB codes be changed on AudioComm?**
   A: Yes, the USB codes can be changed using the provided utility software for customizing the device.

Product Features

Audio Interface Module with an integrated sound processor. This accessible ADA compliant device provides for connection of a personal headset, handset or other sound reproduction devices; enabling users to hear audio content generated by the host system. The device features white, highly visible illuminated, tactile keys for sound volume control. An illuminated 3.5mm jack plug socket is easily located and identified by a raised tactile headset icon. Connection to the host system is via a Mini B USB socket with an integrated cable anchor. A suitable USB Mini B to USB A cable is sold separately By use of the utility software, default illumination status and ‘wake-up’ behaviour can be selected. The USB codes can also be changed. Connection to the host is via a single USB cable.

Available in vertical or horizontal versions, with the following features :

- Volume up/down keys
- 3.5mm Illuminated Jack Socket
- Jack insert/removal detection USB code
- Raised Headphone symbol
- Mini USB socket for connection to host
- Reverse printed dark silver colour front label , also available with black colour label
- Designed for under panel install to a 1.2mm – 2mm thick panel. CAD drawing available on request.

Part Numbers

- AT02-43001 AudioComm Module USB (Vertical Orientation) Silver Label

- AT02-430H1 AudioComm Module USB (Horizontal Orientation) Silver Label
- AT02-53001 AudioComm Module USB (Vertical Orientation) Black Label
- AT02-530H1 AudioComm Module USB (Horizontal Orientation) Black Label
- 4500-01 USB CABLE – ANGLED MINI-B TO B, 0.9M LONG

USB Interface

- HID keyboard
- Supports standard modifiers, i.e. Ctrl, Shift, Alt
- HID consumer controlled device
- Advanced audio device
- No special drivers required
- Audio Jack Insert / Removal sends USB code to host
- Factory set to Multimedia Volume Up / Down Keys (alternate code table)

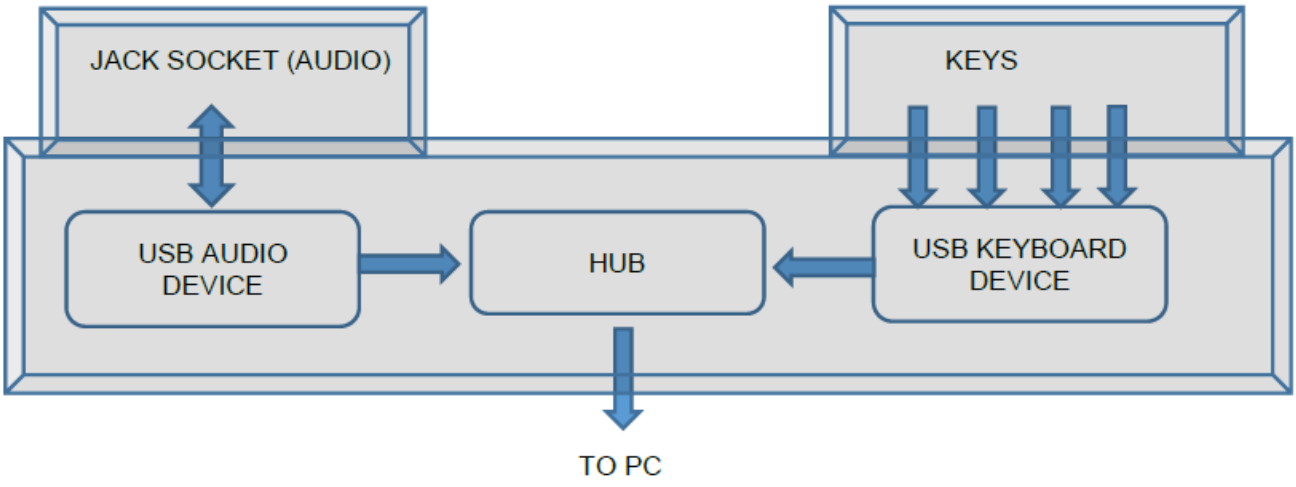
Function	HID USB Codes	Hex
Volume Up	Multimedia Vol Up	<0x01><0x02>
Volume Down	Multimedia Vol Down	<0x01><0x04>
Jack IN	Keyboard F15	0x6A
Jack OUT	Keyboard F16	0x6B

Support

- Free Windows compatible utility for changing the USB Code Tables
- API for custom integration
- Remote Firmware update support

USB Device Information

USB HID
The USB interface comprises a USB HUB with keyboard device and audio device connected.



The following VID/PID combinations are used:
For USB HUB:

- VID – 0x0424
- PID – 0x2512

For Standard Keyboard/Composite HID/ Consumer Controlled device

- VID – 0x2047
- PID – 0x0A3B

For USB Audio device

- VID – 0x0D8C
- PID – 0x0170

This document will concentrate on the Standard Keyboard/Composite HID/Consumer Controlled device. This interface will enumerate as

- Standard HID Keyboard
- Composite HID-datapipe Interface
- HID Consumer Controlled device

One of the advantages of using this implementation is that no drivers are required. The data-pipe interface is used to provide the host application to facilitate customisation of the product.

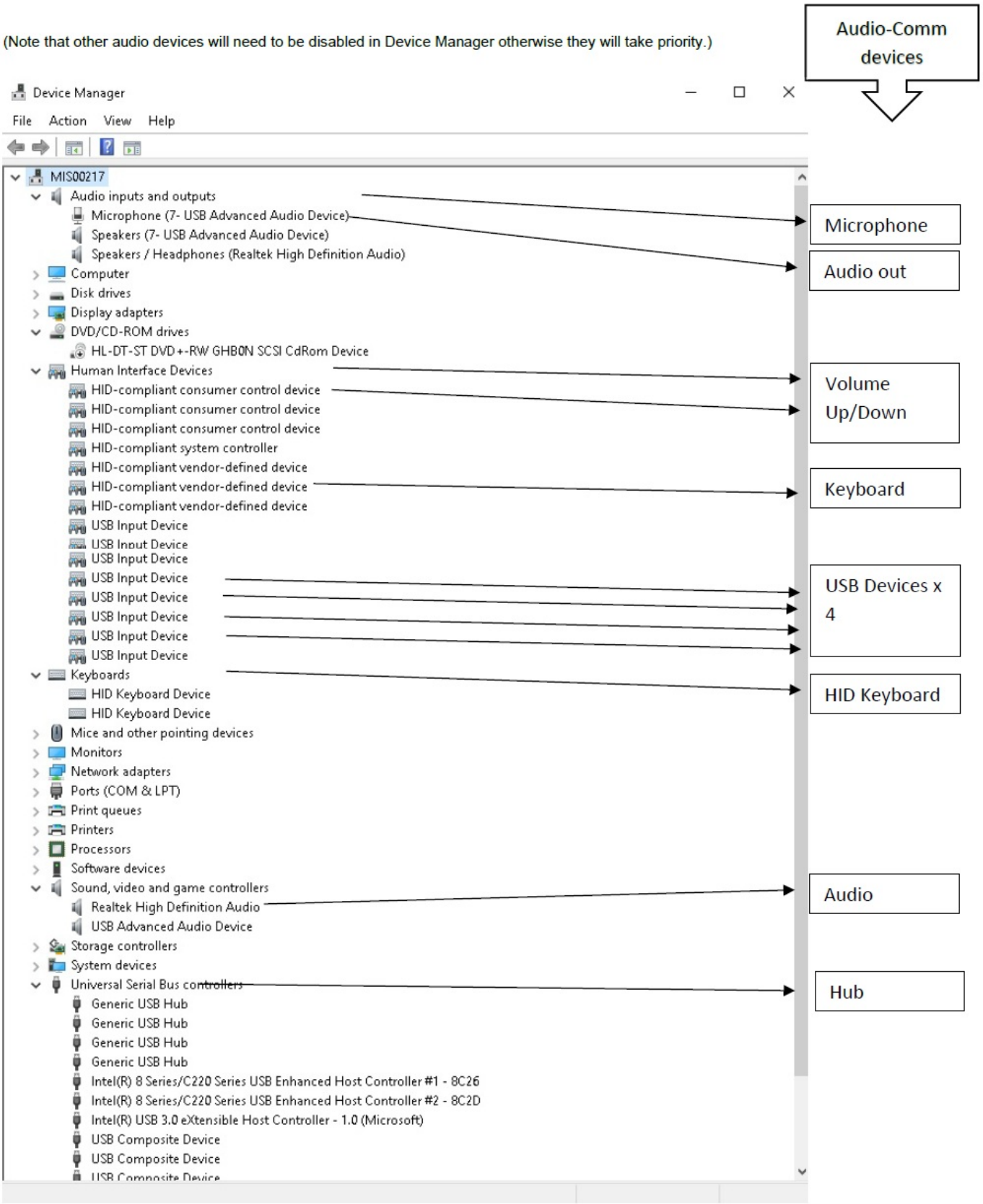
Supported Audio Jack Configurations
The following jack configurations are supported.

Notes: Application software should always ensure the same audio is present on both Left and Right Channels for correct mono operation. Headsets with microphones can be used. (microphone input is supported on this product)

Device Manager

When connected to a PC, the AudioComm module should be detected by the operating system and enumerated without drivers.

Windows shows the following devices in the Device Manager:
(Note that other audio devices will need to be disabled in Device Manager otherwise they will take priority.)



Code Tables

The available USB code tables are shown below.
The product ships with the alternate code table loaded (so that up / down are multimedia volume control keys)

	DEFAULT CODE TABLE		ALTERNATE CODE TABLE		CUSTOMISED CODE TABLE	
Function	**Hex**	**USB**	**Hex**	**USB**		
Uo	0x68	F13	<0x01><0x02>	Multimedia Vol Up	Up Arrow	Set initially to the factory default values
Down	0x69	F14	<0x01><0x04>	Multimedia Vol Down	Down Arrow	
Jack IN	0x6A	F15	0x6A	F15	F15	
Jack OUT	0x6B	F16	0x6B	F16	F16	

Using the Windows Utility to change USB Codes
If any other keypad utility software is installed (e.g EZ-Key Utility) then you should un-install that before you start.

System Requirements
The utility requires .NET framework to be installed on the PC and will communicate over the same USB connection but via the HID-HID data pipe channel, no special drivers are required.

Compatibility

- Windows 11 ✓
- Windows 10 ✓

The utility can be used to configure the product to

- Select Code Table
- LED brightness (0 to 9)
- Test
- Create customised keypad table
- Load a saved configuration from file Reset to factory default
- Update Firmware

Change History

Tech Manual	Date	Version	Details
	14 Nov 18	1.0	First Release
	06 Jan 21	1.1	Utility update
	15 Aug 24	1.2	Split out Utility & API instruction as separate docs

Product Firmware	Date	Version	Details
	1 Nov 18	ATv02	First Release

www.storm-interface.com

Documents / Resources

	Storm Interface AT02 Series AudioComm Audio Interface Module [pdf] Owner's Manual AT02 Series AudioComm Audio Interface Module, AT02 Series, AudioComm Audio Interface Module, Audio Interface Module, Interface Module, Module

References

- User Manual