

- USB 2.0 Connection and power via a single USB cable
- Power consumption 49mA at 5Vdc (max)
- Enumerates as a Windows recording device
- Includes far-field voice capture technology
- Active noise cancelling and noise suppression
- Adjustable beam width and angle (requires factory configuration)
- Sampling rate: 8 kHz to 48 kHz (CD quality plus)
- Ultra-high 70 dBA SNR
- -32 dBV Differential sensitivity, -38 dBV single-ended sensitivity
- $\pm 2$  dB Sensitivity tolerance
- Non-inverted signal output
- Extended frequency response from 75 Hz to 20 kHz
- Enhanced RF performance
- 124 dB SPL Acoustic overload point
- -77 dBV PSR
- RoHS/WEEE Compliant

#### Microphone Array Module

Microphone Array Module  
USB 2.0 Cable, 90cm long, angled mini-B male connector to Type A male connector  
Microphone Array Kit  
(Includes Microphone Array Module, Activation Switch & cables)

#### Part Numbers

AT00-15001  
4500-01  
AT00-15001-KIT



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# Microphone Array Module

**Far-field Microphone Array for speech command, voice recognition and voice communication applications.**

The Microphone Array Module is an accessible interface device delivering clear voice reception in exposed, unsupervised, public applications.

The Microphone Array Module is designed to be permanently and easily installed to the underside of any customer facing panel. It can be oriented in either a horizontal or vertical configuration and, if required, the microphone's voice reception zone can be optimized to suit specific kiosk applications.

Active noise cancelling and noise suppression technology ensures effective voice reception even in noisy environments.

The Microphone Array Module is ideal for use in speech commanded applications and for provision of remote conferencing and concierge services. This USB peripheral device enumerates as a Windows Recording Device, requiring no additional drivers or software to achieve functionality.

The Microphone Array Module is designed for use with the Microphone Activation Switch, part number AT01-12001

Storm Assistive Technology Products provide improved system accessibility for those with impaired vision, restricted mobility, limited dexterity or reading difficulties.

#### Performance

Vibration & Shock:  
Impact Resistance:  
Certification:  
EMC:  
  
FCC:  
ESD Immunity:  
EN 301 549 / ADA: Compliant

ETSI 5M3  
IK09 (10J rating)  
CE / FCC / UL  
55032 Class B (Emissions)  
55035 (Immunity)  
47CFR15 Class B (Emissions)  
15kV Contact and Air  
Compliant

#### Environmental

Operational Temperature:  
Weather Resistance:

-20°C to +70°C (dry)  
IP65 (when panel mounted)

#### Specification

O/S Compatibility:  
  
Rating  
Connection:  
Voice Assistant Support:

Compatible with currently supported versions of Microsoft Windows  
5V  $\pm 0.25$ V (USB 2.0)  
Mini USB B Socket  
Alexa/Google Assistant/Cortana/Siri

For more information & to order visit:  
**www.storm-interface.com**

AT00 Dec 2019

Whilst every effort is made to ensure details are correct at time of print, specifications are subject to change without notice.





To indicate the presence of an active recording system the Storm ATP Microphone Activation Switch incorporates a highly visible and tactile microphone icon.

The device also includes an infrared (IR) proximity sensor that can be used to activate a microphone for Speech Recording or Voice Commanded applications.

Self Service Terminals equipped with voice recording, voice recognition or voice command are being increasingly deployed in public. However, this has raised concerns about privacy among members of the public and has prompted government agencies to review privacy regulations.

It is important that members of the public in the immediate vicinity of those terminals are made aware that voice capture technology is available at that location and may be active or in use. It may also be required that microphones situated in public spaces are, by default, maintained in a muted (or closed) condition until required for use.

The status of any microphone must be immediately obvious to anyone within recording range. These features are essential to maintain personal privacy and meet mandated requirements for personal data protection.

- The device enumerates as a USB Human Interface Device (no special drivers required).
- The device automatically calibrates for background IR levels on power up. (The icon illumination flashes during this calibration process).
- The IR Sensor detects the presence of a person within the 'activation zone' and sends a USB code to the host. This so the host can activate (open) a microphone at the appropriate time.
- When a person disappears from range the device sends a different USB code to the host. This so the host can mute (close) a microphone at the appropriate time.
- An API is provided so that the host can control specific features of the device:
  - Turn the Icon illumination on or off to indicate whether a microphone is active or muted.
  - Change the brightness of icon illumination to compensate for day / night background light levels
  - Customise the USB codes that are sent to the host by the device.

#### **Microphone Activation Switch**

Microphone Activation Switch

#### **Part Numbers**

**AT01-12001**

USB 2.0 Cable, 90cm long, angled mini-B male connector to Type A male connector

**4500-01**

Microphone Array Kit  
(Includes Microphone Array Module Activation Switch & cables)

**AT00-15001-KIT**

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#### **Performance**

Vibration & Shock:  
Impact Resistance:

Certification:  
EMC:

FCC:  
ESD Immunity:  
EN 301 549 / ADA:

ETSI 5M3  
IK09 (10J rating)  
CE / FCC / UL  
55032 Class B (Emissions)  
55035 (Immunity)  
47CFR15 Class B (Emissions)  
15kV Contact and Air  
Compliant

#### **Environmental**

Operational Temperature:  
Weather Resistance:

-20°C to +70°C (dry)  
IP65 (when panel mounted)

#### **Specification**

O/S Compatibility:

Rating  
Connection:

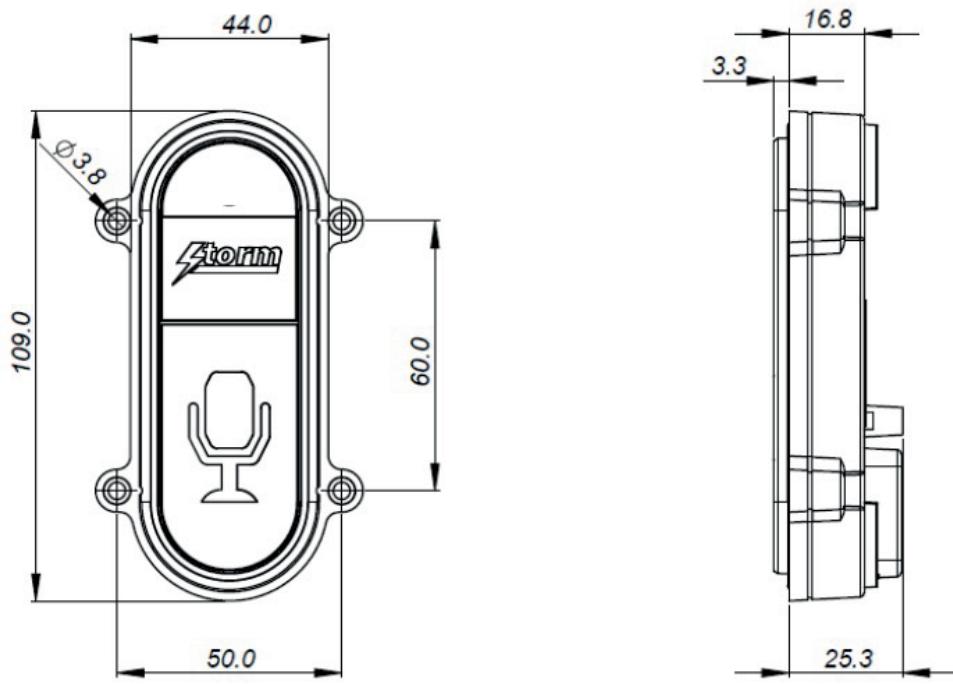
Compatible with currently supported  
versions of Microsoft Windows  
5V ±0.25V (USB 2.0)  
Mini USB B Socket

For more information & to order visit:  
**[www.storm-interface.com](http://www.storm-interface.com)**

ATP 1400EF Dec 2019

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The Storm ATP Microphone Activation Switch is a USB peripheral device that includes an internationally recognised microphone icon to indicate the presence of a voice recording device. The illuminated microphone icon is both highly visible and tactilely discernible.

When the integrated IR proximity sensor detects a person in the 'addressable zone' situated immediately in front of the terminal, it transmits a USB code to the host as a signal to activate the microphone and to illuminate the microphone icon.

The icon illuminates with a bright white light, giving a clear indication that voice recording is in process. An audible signal or message can also be triggered to inform blind users that "voice command is now activated". Another USB code is transmitted by the integrated sensor when the person moves away from the addressable zone and ceases to be detected by the sensor.

This second transmitted code can be used to close (mute) the microphone and turn off the illumination. This proximity sensing feature allows the microphone to be closed (muted) as its default condition. This is an important feature designed to protect the privacy of those in the general vicinity of the host terminal who may not be intending to use the voice recording or voice commanded technology.

Designed in consultation with the UK's Royal National Institute of Blind People, the Microphone Activation Switch has been certified as an RNIB Tried & Tested product.

**The microphone Activation Switch is part of the Storm Assistive Technology Products range and is designed for use with the Storm ATP Microphone Array Module (part number AT00-15001), or other sound recording devices.**

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