

# AT288 Key Emulation Guide



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Dynamic Support  
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## AT-288

Library, Logistics, Military

### Series Highlights:

- RTOS
- RFID UHF 900MHz GEN2, ISO/IEC 18000-6C, 18000-6B(Optional)
- Bluetooth ClassII
- USB
- Cradle
- Saving data around 3000 articles autonomously

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## Before You Begin

This section provides you safety information, technical support information, and sources for additional product information.

### Who should read this manual?

This manual is written for the person who is responsible for installing, configuring, and maintaining the AT288.

This manual provides you information about the features of the AT288, and how to install, configure, operate, and maintain it.

Before you work with the AT288, you should be familiar with your network and general networking terms, such as IP address.

# Chapter1. Bluetooth SPP, HID Stack (Key Emulation)

AT288 provides 2 Stack Services for Bluetooth connection.  
AT288 Supports two Mode Serial Port Profile Stack Service or HID Stack Service.  
Please read through and familiar with the contents of this manual.

## 1. Bluetooth SPP Stack Service

### 1.1 SPP Stack Service

SPP Mode supports Stack Service of Serial Port Profile.  
SPP defines requirements to set serial connection between both Bluetooth devices which use RFCOMM.  
It is connected to RFCOMM directly the existing application for serial cable connection is able to be used without change or modification.

### 1.2 How to develop AT288 application

Use AT288 SDK provided by ATID.

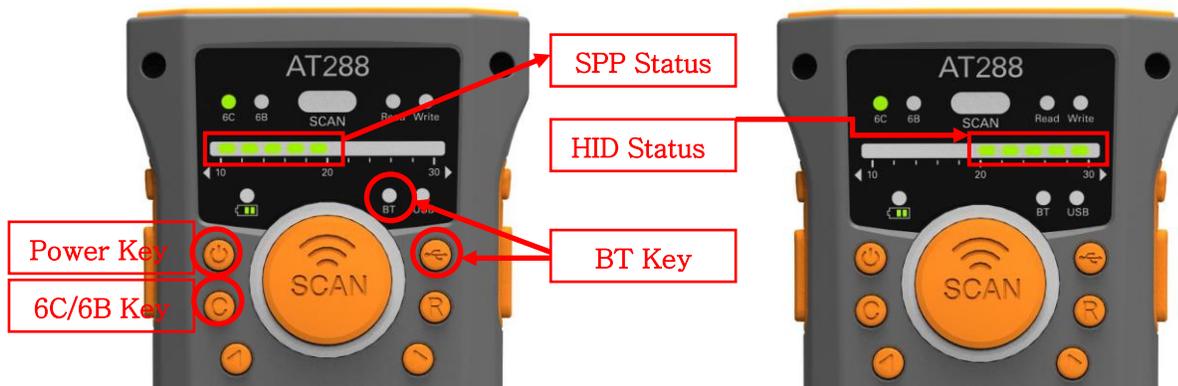
## 2. HID Stack Service (Key Emulation)

Human Interface Profile of HID Mode is a Bluetooth Service transmitting entered Data from Key button as keyboard device.

In HID Mode Status, AT288 is able to transmit EPC Data from Tag to the connected device.  
To use HID Mode, refer to below “3. How to change SPP mode, HID Mode” and change the Bluetooth Status of AT288 as HID. No need SDK for HID Mode

## 3. How To change SPP Mode, HID Mode(Key Emulation)

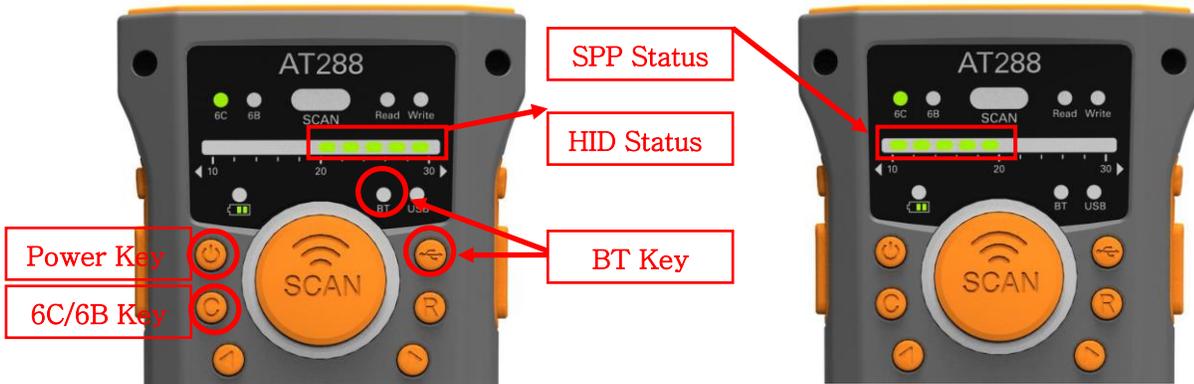
You can change the Mode simply by controlling Keys.



### <1. SPP Mode -> HID Mode >

#### 1. How to change from SPP Mod to HID Mode

1. BT LED should be on by pressing BT Key.
2. Press Power Key and press 6C/6B Key at the same time.
3. The right side of HID Status LED is on.



**< 2. HID Mode -> SPP Mode >**

**2. How to change from HID Mode to SPP Mode**

1. BT LED should be on by pressing BT Key.
2. Press Power Key and press 6C/6B Key at the same time.
3. The left side of SPP Status LED is on.

**3.1 How to connect to iPhone in HID Mode**

1. Check AT288 is in HID Mode.
2. Make a Bluetooth connection between iPhone and AT288.
3. Run Memo Program on iPhone, Read Tag by AT288.  
(Caution :Set Key in English during use Memo Program on iPhone.)

**Chapter2. How to configure Key Emulation**

AT288 Data transfer system in SPP Mode and HID Mode

Bluetooth Mode	Data Interface	Stack Status	Send(Tag Data) Command	Receive Command	Remark
SPP Mode	Bluetooth	SPP	Supported	Supported	
	USB	SPP	Supported	Supported	
HID Mode	Bluetooth	HID	Supported	Not Supported	Key Emulation-iPhone
	USB	SPP	Supported	Supported	

If Save function in HID Bluetooth mode on AT288, Save Data is transmitted as Key Emulation.

**When iPhone use**

- AT288 Bluetooth Mode :Use only in HID Mode
- AT288 Program development :No need SDK due to using it in HID Mode

**1. How to User Key Emulation**

Follow next to use Key Emulation function.

**1.1General use in HID Mode**

- Change AT288 Bluetooth Mode as HID and use.**
- Available device to use**  
**iPhone, Android Phone, PC, PDAetc, all devices which support HID Mode.**
- Attachments Manual : AT288 Reader Windows Emulator Guide**

**Shortcoming :In HID Mode, multiple Tag reading can be a cause of transmission delay owing to EPC Data transmission as Key Emulation. No problem with reading and data transfer of few tags, but multiple tag reading and transferring them at ones will take time. This is a fundamental shortcoming of HID Mode. To transfer multiple tag data fast, develop separate application by referring to below “How to develop Emulation Program by using SPP”.**

### **1.2 How to develop Emulation Program by using SPP**

To transmit multiple Tag Data in HID Mode, get EPC data by using SPP and transmit it via program as below.

1. AT288 Bluetooth Mode :Connect in SPP Mode
2. Develop Key Emulation Program by using Microsoft SDK as below and transfer the data through this Emulator after getting EPC data by using AT 288 SDK.

[ Programexample ]

```
EmptyClipboard();
clipbuffer = GlobalAlloc(LMEM_FIXED, (wcslen(pszBuf)+2)*2);
str = (TCHAR *) LocalLock(clipbuffer);
wcscpy(str, pszBuf);
LocalUnlock(clipbuffer);
SetClipboardData(CF_UNICODETEXT, clipbuffer);
CloseClipboard();
```