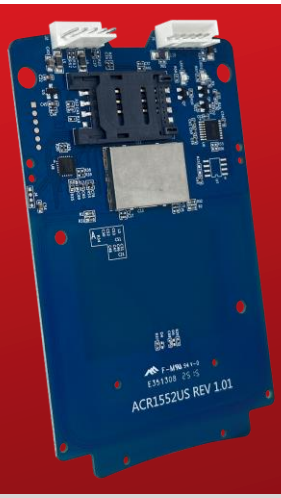
Advanced Card Systems Ltd.
Card & Reader Technologies

# ACM1552D
# USB/Serial Contactless Reader Model with SAM Slot




User Manual V1.00



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# 1.0. Introduction

The **ACM1552D** USB/Serial NFC Reader Module (With SAM Slot) is designed with 13.56 MHz contactless technology, supporting ISO 14443 Parts 1-4 Type A and B cards, MIFARE Classic® series, ISO 15693, and ISO 18092standards. It features USB/RS232 interface and offers a card reading distance of up to 70 mm.

This User Manual is applicable only to the following models.

- ACM1552D-CW
- ACM1552D-C7

Key Features:

- ISO 7816-compliant SAM slot
- Smart Card Support: Compatible with ISO14443 Type A & B, MIFARE®, FeliCa, ISO18092 NFC, and ISO15693 cards.
- High-Speed Communication: Operates at up to 848 kbps.

Flexible NFC Modes that can supports three operating modes:

- Smart Card Reader/Writer
- Card Emulation
- Keyboard Emulation

Broad Compatibility:

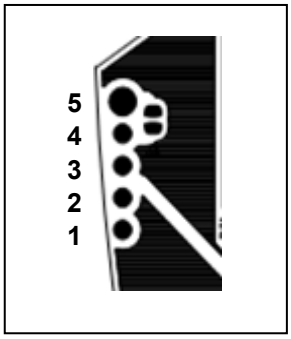
Works seamlessly with Windows®, Linux®, macOS®, Android™ and IPadOS, making it a reliable and adaptable solution for industries like finance, healthcare, and government.

# 2.0. Pin Assignment: Connect to another device via USB port

A USB port is available to connect the ACM1552D to other peripheral or devices.

To do this:

1. Connect socket **J2** via USB cable to another peripheral device (see Figure 1).




| Pin | Description |
|---|---|
| 1 | +5V Power Supply |
| 2 | USB D- |
| 3 | USB D+ |
| 4 | GND |
| 5 | GND |

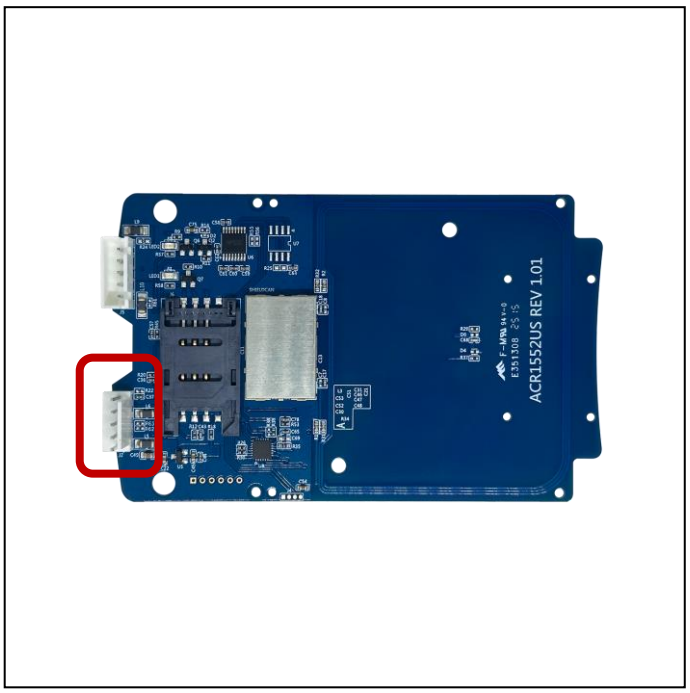



**Figure 1: ACM1552D via USB Interface**

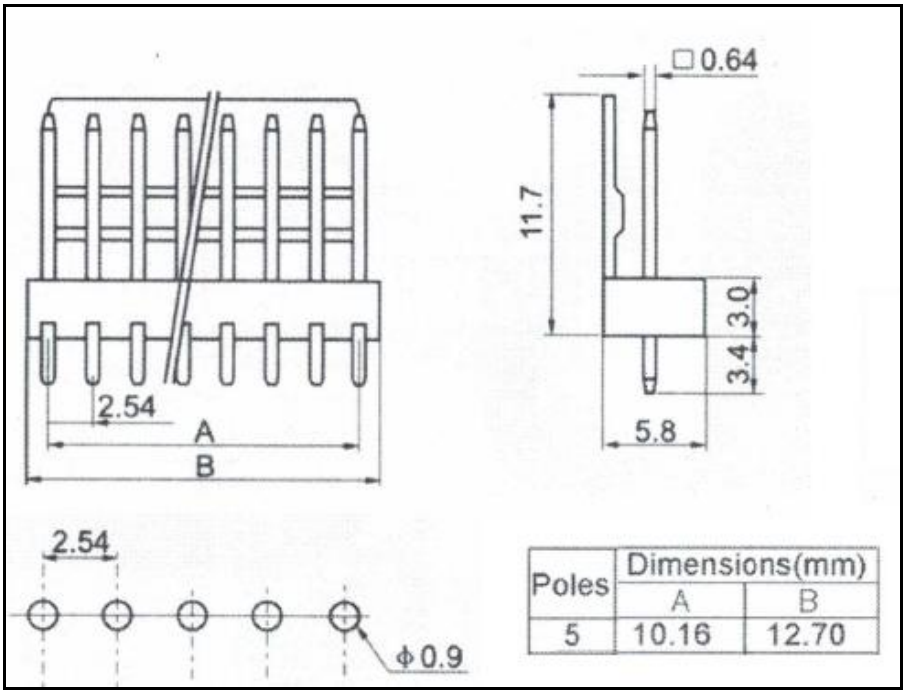



**Figure 2: Dimension of connector socket J2 soldered onto PCB**

***Note:*** This connector is compatible with the Molex KK 254 Wire-to-Board Header, 5pin.

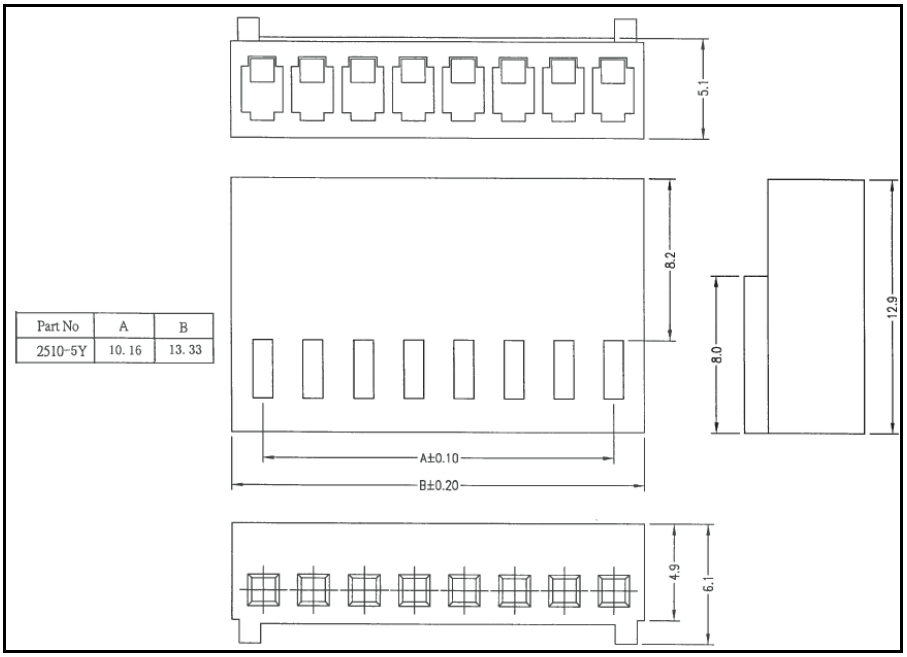


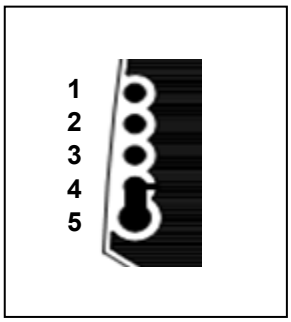

**Figure 3: Male plug (USB cable side) of J2 (Unit: mm)**

## 2.1. Pin Assignment: Connect ACM1552D to another device via Serial port (RS232)

A serial port is available to connect the ACM1552D to other peripheral or devices.

To do this:

1. Connection socket **J5** via RS-232 cable to another peripheral device (see Figure 4).




| Pin | Description |
|---|---|
| 1 | +5V Power Supply |
| 2 | RS-232 RXD |
| 3 | RS-232 TXD |
| 4 | GND |
| 5 | GND |

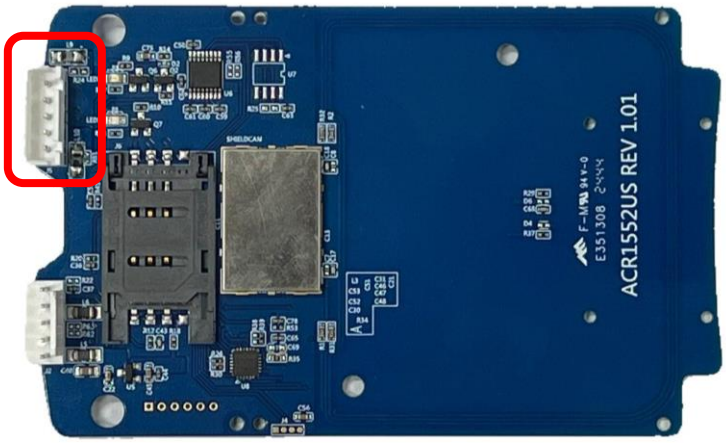



**Figure 4: ACM1552D via Serial Interface**

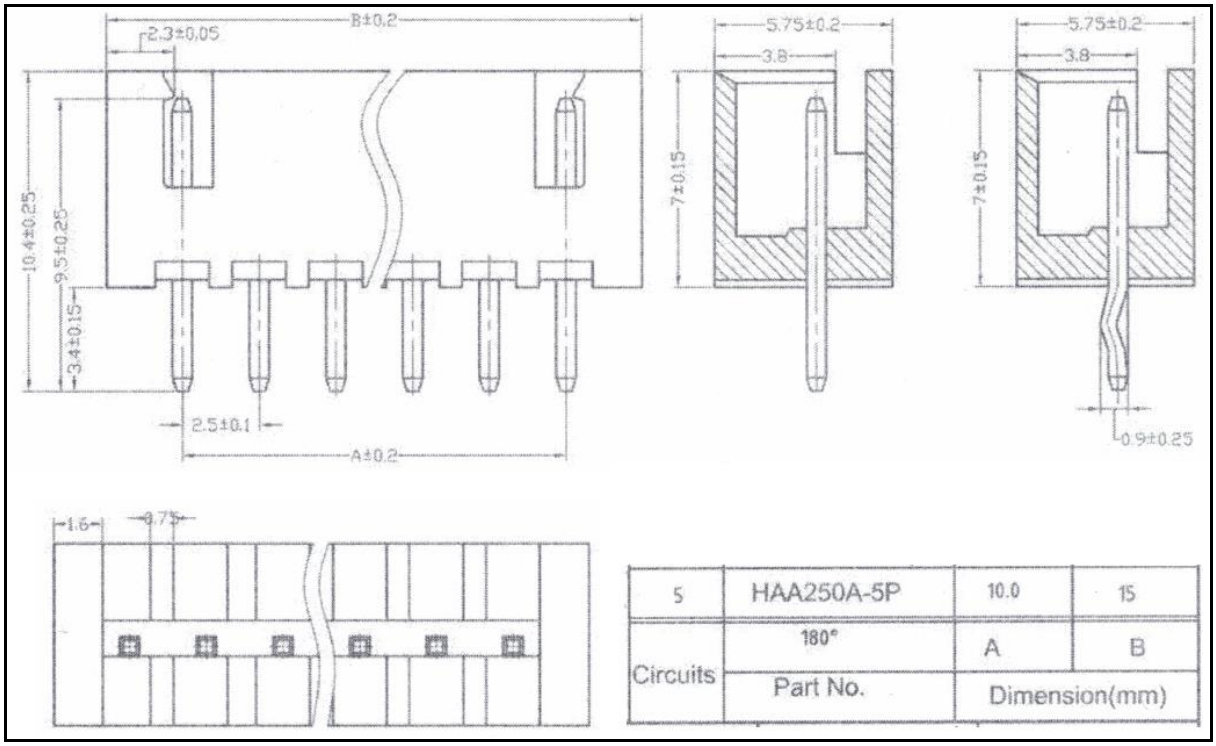



**Figure 5: Dimension of connector socket J5 soldered onto PCB**

***Note:*** This connector is compatible with the JST B5B-XH-A, 5pin.

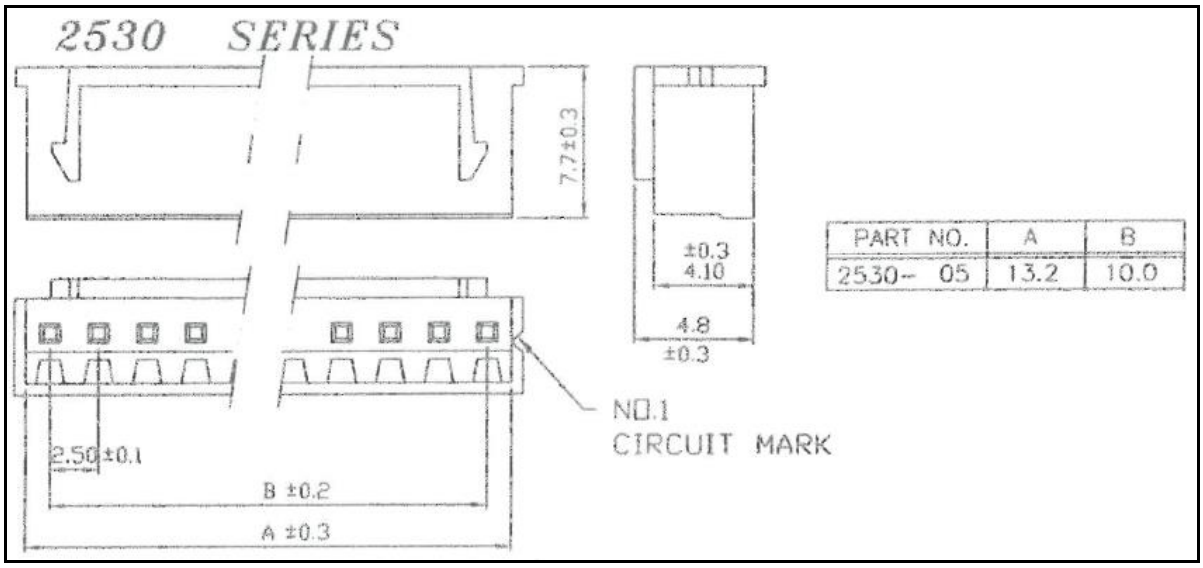
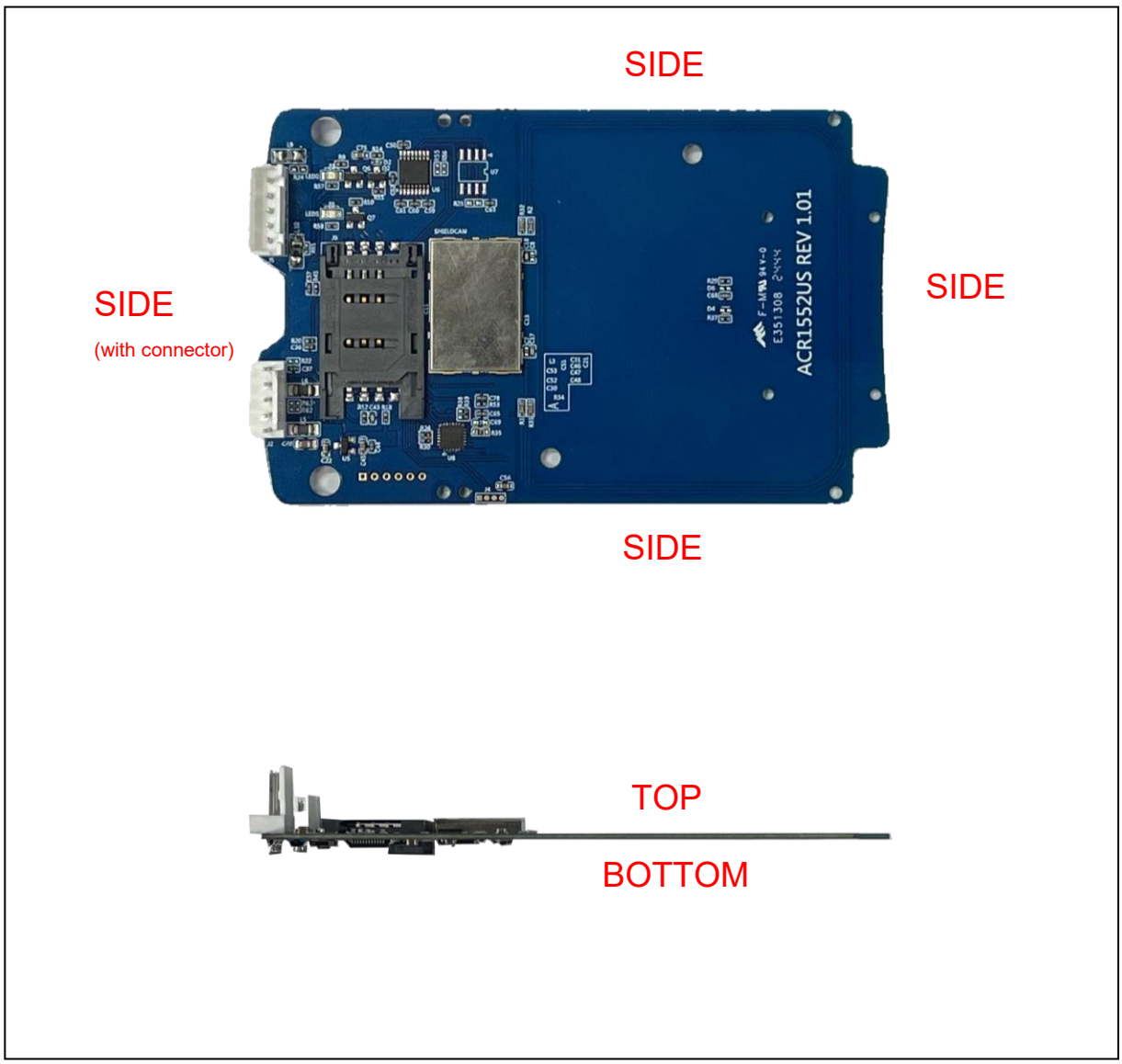



**Figure 6: Male plug (RS-232 cable side) of J5 (Unit: mm)**

## 2.2. Minimum Distances from Conductive Materials

The figure below illustrates the recommended minimum distances of the ACM1552D board from conductive materials.




| Location | Minimum Distance |
|---|---|
| Sides | 30 mm |
| Side (with connector) | 5 mm |
| Top and Bottom | 30 mm |

**Table 1: Recommended Minimum Distances from Conductive Materials**