

# **HF320 Hardware User Manual**

**Rev1.1**

## Revision History

Revision	Date	Author	Description
1.0	2013.04.11	C.K	1 <sup>st</sup> Release
1.1	2013.08.22	C.K	Add descript pin1 position

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## 1. Introduction

The HF320 is a OEM read/write module with antenna designed for simple integration. The serial TTL-interface can be directly connected to microprocessor and easily converted to RS232 serial interface device. The typical reading range of the module is up to 20~40mm depending on the antenna and tag.

The HF320 is a RFID module for all popular 13.56MHz RFID/contactless standard protocols. The HF320 supports and compatibles with all major global secured baseband ISO standard including ISO14443A/B, ISO15693 and Mifare family cards.

The HF320 is well suited for mobile devices due to its low power consumption and low operating voltage from 5V. The on-chip 3.3V regulators are provided to stabilize the chip's power, and simultaneously supply the power to the external companion microcontroller up to 120mA.

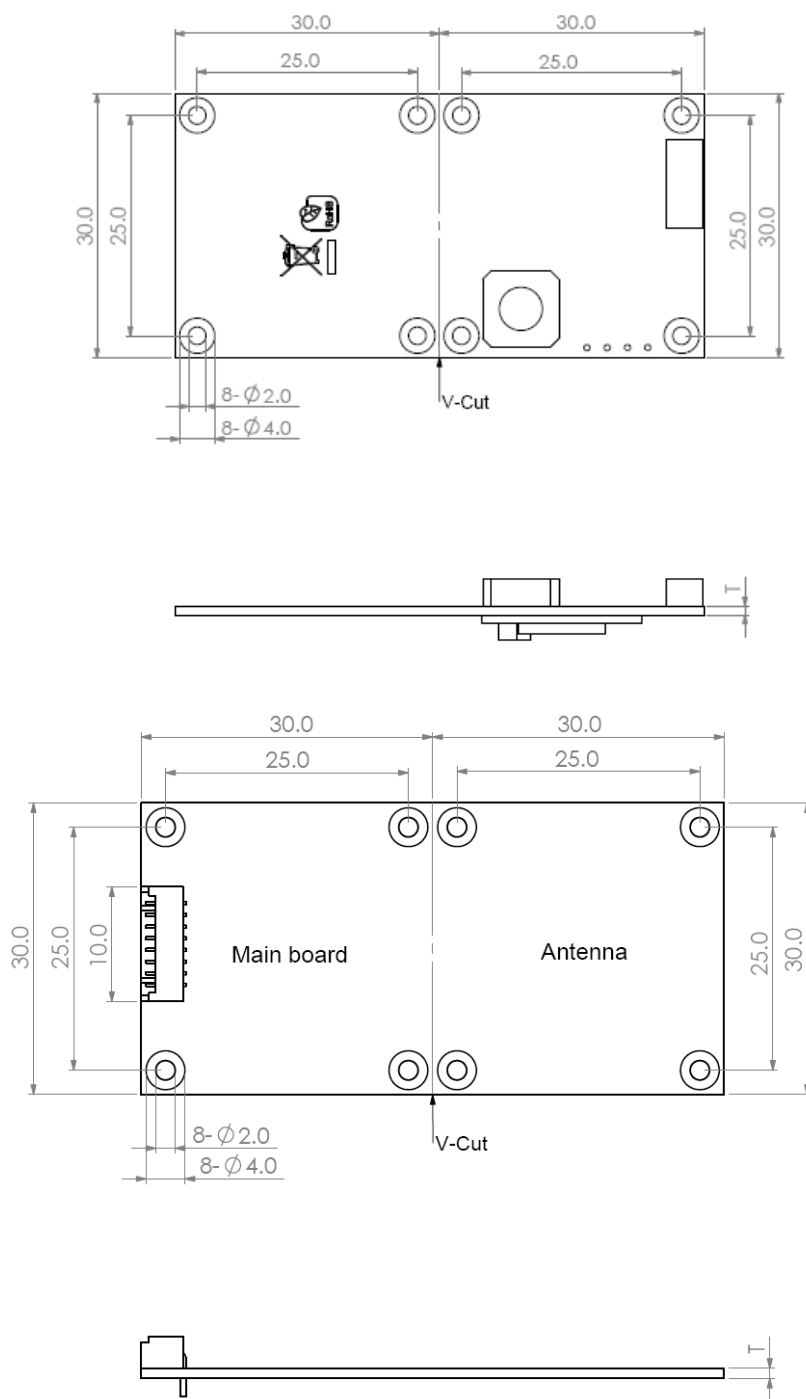
The HF320 support the DLL and easy control this module. That can be using any terminal program (VB.Net, C#...etc)

## 2. Specifications

Specifications	
<b>Power requirement</b>	5V regulated for operate voltage
<b>Current requirement</b>	Active 120mA @ 5VDC
<b>Interface</b>	HF320R – RS232 Interface HF320L – TTL Interface HF320U – USE Interface
<b>Baud rate</b>	19200 N 8 1
<b>Protocol</b>	ISO14443A Standard functionality Mifare read and write data Ultralight read and write data Ultralight C read and write data Desfire read and write data Desfire EV1 read and write data VISA pay wave read UID

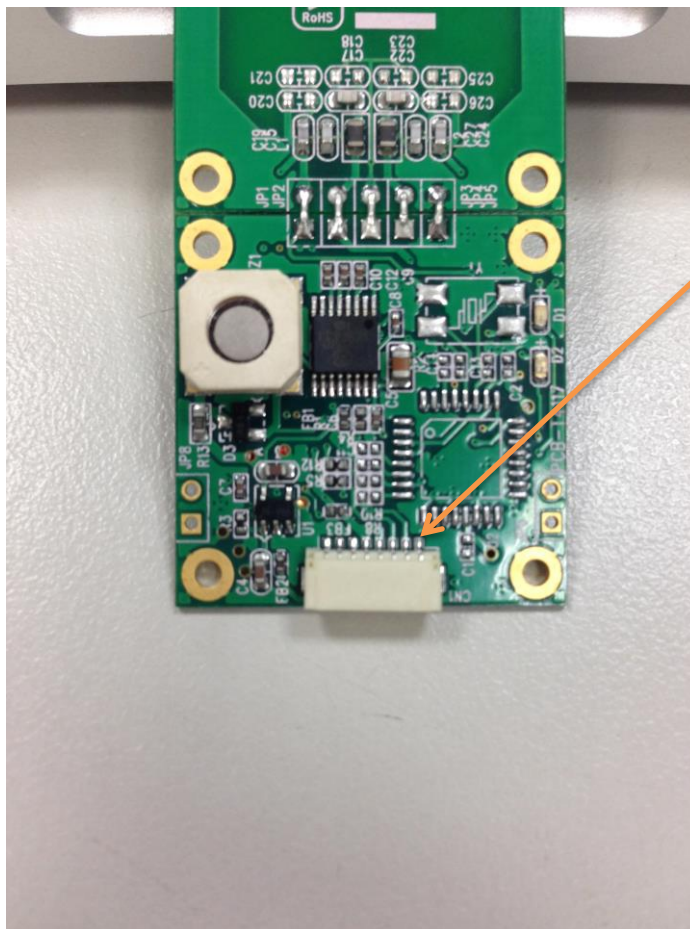
	Master pay wave read UID T=CL ISO14443B Standard functionality Cepas read UID SRI read and write data VISA pay wave read UID Master pay wave read UID T=CL ISO15693 Standard functionality Tag-IT read and write data I-Code series read and write data SIC5600 read and write data PicoTag read UID and data Felica read UID
<b>Frequency</b>	13.56MHz
<b>Read Range</b>	Mifare : 1~3 cm IS15693 : 2~4cm
<b>Dimensions</b>	SMT: 60(L) x 30(W) x 7.8(H) mm
<b>Weight</b>	7.2g
<b>Environment</b>	Operating temperature : 0℃ ~ 50℃ Humidity : 10 ~ 90 %relative

### 3. Package Description



## 4. Pin Definition

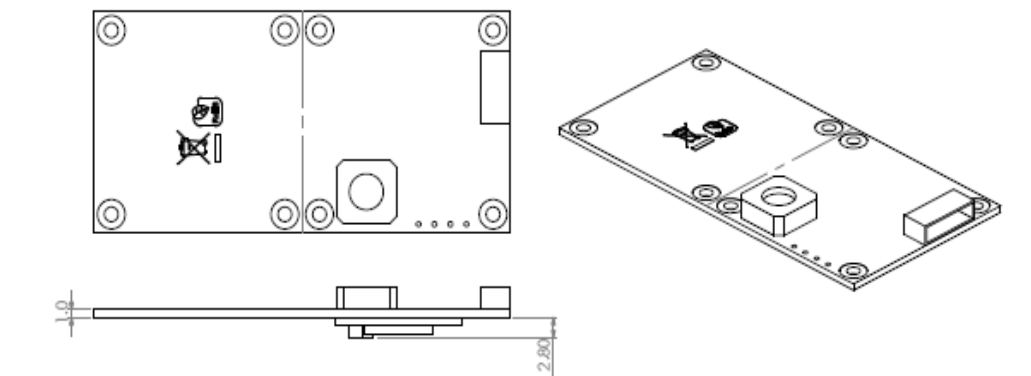
	HF320R-00	HF320L-00	HF320U-00
Interface	<b>RS232</b>	<b>TTL</b>	<b>USB (Visual comport)</b>
Pin numbers	<b>8</b>		
Connector	<b>JST SH 1.0mm</b>		
Pin #1	<b>+5VDD</b>		
Pin #2	<b>TXD</b>	<b>TXD</b>	<b>D-</b>
Pin #3	<b>RXD</b>	<b>RXD</b>	<b>D+</b>
Pin #4	<b>GND</b>		
Pin #5	<b>SHIELD</b>		
Pin #6			
Pin #7			
Pin #8			



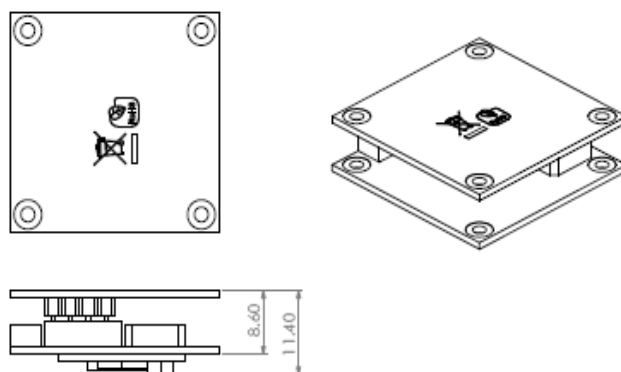
Pin1

## 5. Transform Type

Type : 0



Type : 1



Type : 2

