



INTRODUCTION

The **DF320** is an ideal module for embedded system that requests a low power and low profile design. **DF320** also provides a helpful open source demo software, library and documents to save the developer time to create powerful DESfire applications.

We lead from the front of the world and create the tiny size DESfire EV1 module without NXP SAM solutions.

Standard Configurations:

- ✓ **DF320----13.56MHz DESfire EV1 Reader/Writer**

FEATURES

- Anti-collision
- Mifare classic with MAD1/MAD2 /MAD3 function
- Full 3DES, 3K3DES and AES crypto methods
- Without NXP SAM AV2 solution
- T=CL ISO7816 interface supported
- Low power, low profile for portable designed
- Visual Studio.NET library supported.
- Include "Understand the DESfire /EV1" demo software and free for start-kit user.
- Low cost, ultra small outline 21x18x5.75 mm
- Plug-in fitting for 13.56Mhz
- Full MIFARE® functionality.
- Support ISO 14443 A Mifare® Class / UrtraLight Mifare® PRO DESfire, DESfire EV1
- Serial Interface, CMOS-TTL.
- Power supply Active 45mA @3.3VDC
- RF data rate: 106k, 212k, 424k, 848k bps supported

FCC Warning Statement

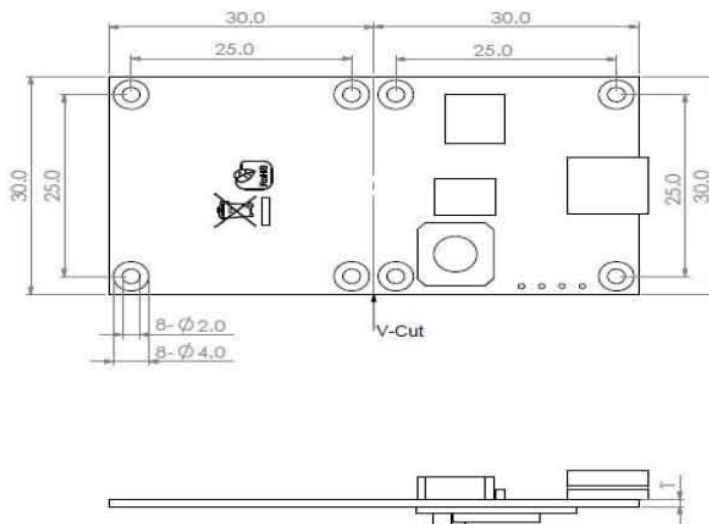
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

- ✓ We welcome OEM inquiries
- ✓ Custom device programming is available

SPECIFICATIONS:

POWER REQUIREMENT	3.3V regulated for Operate Voltage . A linear regulator is recommended.
CURRENT REQUIREMENTS	Active 45mA @3.3VDC
INTERFACE	Serial (UART) Interface 19200bps USB Virtual COM Port RS232
Protocol	GNET PLUS Binary Mode /ASCII Mode
Card Type	ISO 14443 A Mifare® Class / UltraLight Mifare® PRO DESfire, DESfire EV1
FERQUENCY	13.56MHz (DF20) standard.
TRANSPONDER	Read / Write
CONFIGURE INTERFACE	UART , 19200 bps 8N1
WEIGHT	< 10 gm
ENVIRONMENT	Operating Temp : -0°C ~ +60°C Humidity : 10 ~ 90 % relative

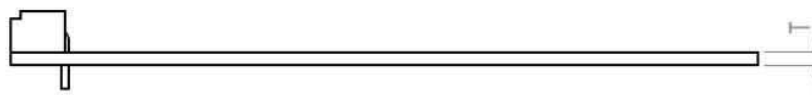
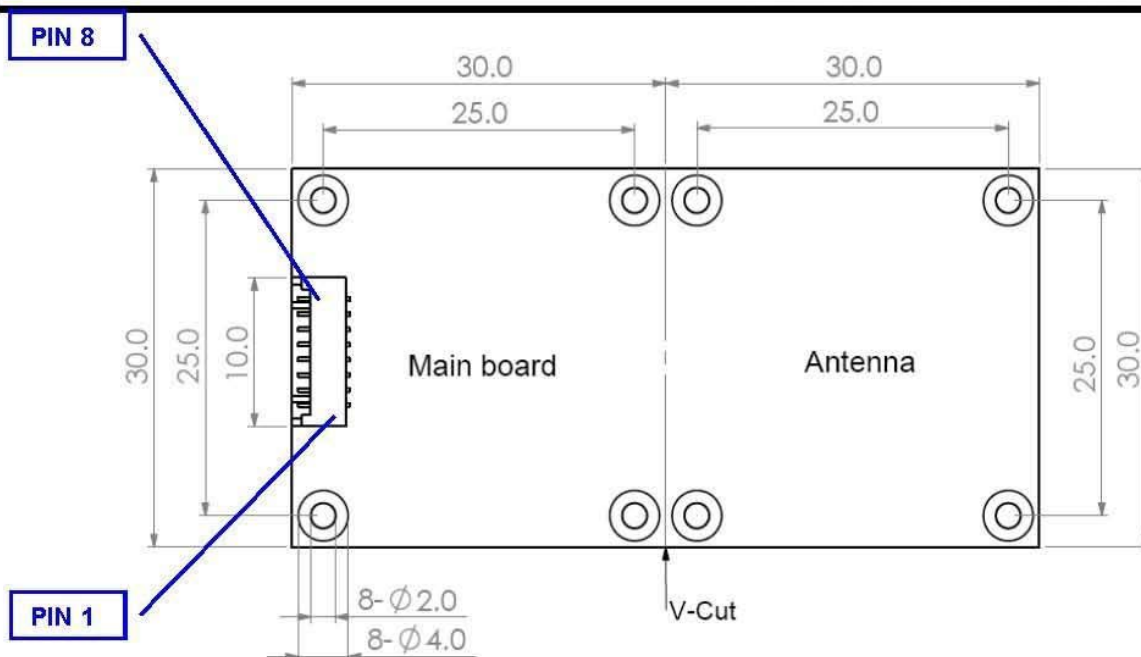
PACKAGE DESCRIPTION



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	DF320R- 00	DF320L- 00	DF320U- 00	
Description	RS232	Serial TTL	USB (Virtual serial port)	
Pin Numbers	8	8	5	
Connector	JST SH 1.0mm	JST SH 1.0mm	JST SH 1.0mm	
PIN#				
1	+5 VDD	+5 VDD	+5 VDD	
2	TXD	TXD	D-	
3	RXD	RXD	D+	
4	GND	GND	GND	
5	SHIELD	SHIELD	SHIELD	
6	--	--	--	
7	--	--	--	
8	--	--	--	

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Quick Start to connect the DF20SK/DF320X on PC

Step 1

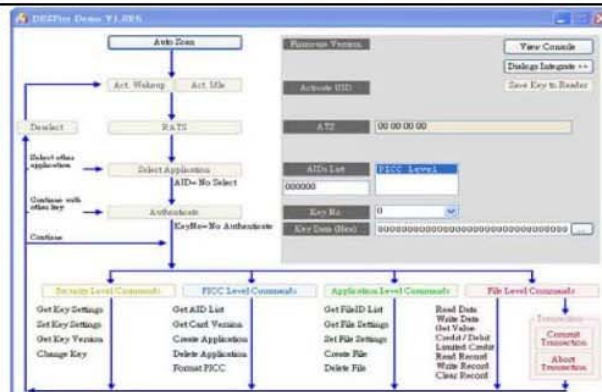
Connect DF20SK/DF320X to PC with (WAS-T05333) cable



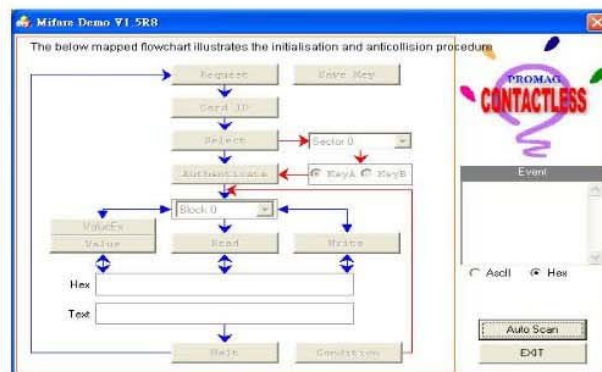
Step 2

Use "DESFire_Demo" can reader/write DESFire card.(Feg.1)

Use "MifareDemo" can reader/write MiFare card.(Feg.2)



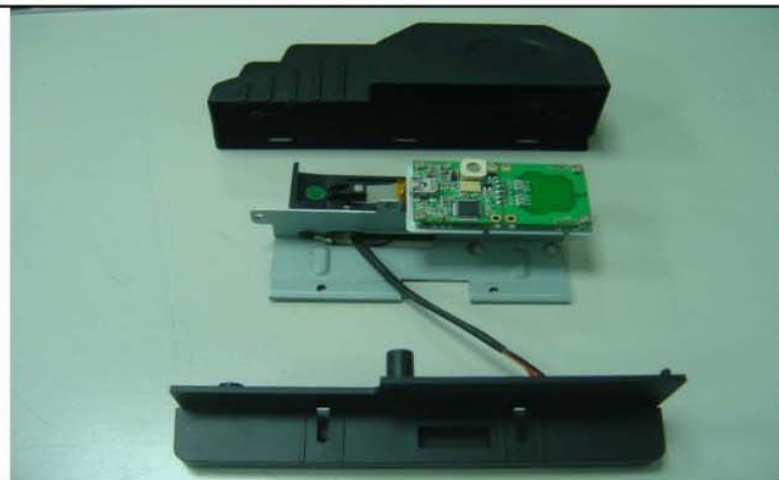
Feg.1



Feg.2

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