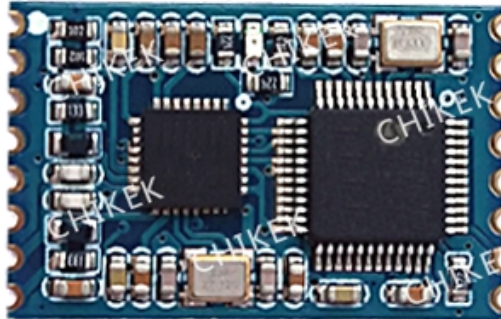


MIFARE® DESFire/AES Encrypted Core Module

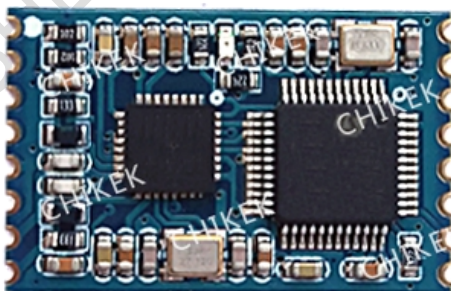
MIFARE®Desfire EV1/EV2, MIFARE®Plus, DES/AES, ISO14443A/B,ISO15693, etc



Key Features:

- 3.3V ~5V power supply, UART-TTL interface;
- Tiny size, single-face laying components with stamp-hole
- Compliant with ISO14443A/B, ISO15693, ISO18092 Standard
- Read/Write or Read UID only working mode
- Support MIFARE® DESFire standard Data file, Back-up Data file, Value file, Linear Record file, Cyclic Record file and Transaction MAC file creating, etc;
- Support KEY Authenticate,get KEY Version, change KEY, etc;
- Support DES/3DES/AES/MAC encryption algorithm;
- Available to operate MIFARE® DESFire PICC level, Application ID create/delete/format, etc
- External LED and BUZ available (external driver circuit needed)

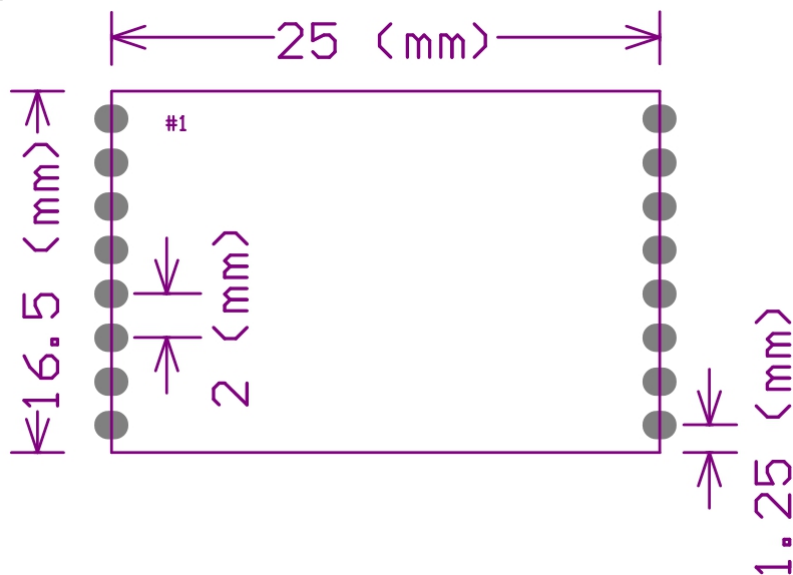
PIN Definition:



GND	#1	RXD
RST		TXD
UCC		I01
TVDD		I02
ANT-		I03
RFU		I04
ANT+		I05
RFU		I06

PIN	Signal	I/O Type	Description
PIN1	GND	PWR	GND
PIN2	RST	Input	Low Power Reset, active level for the RST is low (shortened to GND), normal status (operating) is open (not connected) or pull up with 10 k Ω resistor.
PIN3	VDD	PWR	DC 3.3V
PIN4	TVDD	PWR	Power for RF, DC 3.3 ~ 5V
PIN5	ANT-	PWR	GND
PIN6	RFU	Input	RFU
PIN7	ANT+	Output	Antenna output
PIN8	RFU	Input	RFU
PIN9	IO6	Output	A group of IO used for control full color RGB Light
PIN10	IO5	Output	
PIN11	IO4	Output	
PIN12	IO3	Output	
PIN13	IO2	Output	External Buzzer
PIN14	IO1	Output	
PIN15	TXD	Output	UART TX(TTL Level)
PIN16	RXD	Input	UART RX(TTL Level)

Dimension:



Technical Parameters:

Electrical Specification

Power supply	DC 3.3V ~ 5V
Power consumption	Max current: <50mA, Standby current: <1 mA
Operation frequency	13.56MHz
Baudrate	9600~115200 bit/s (default 115200bps)
Interface	UART TTL
Antenna	External, stamp hole
Reading range	Up to 4 cm ~ 10 cm(depends on antenna and cards)

Mechanical Specifications

Dimension	25mmx16.5mmx2.8mm (LxWxH)
Weight	3g
Material	FR-4, Blue
Model	CHK305MT

Environmental Conditions

Operation temperature	-20°C ~ +80°C
Storage temperature	-40°C ~ +85°C
Humidity	Relative humidity 5% ~ 95%

Supported Standard/ Tags

ISO14443 A	Read/write: MIFARE® Classic 1K /4K, MIFARE Ultralight®, MIFARE Ultralight® C, MIFARE® DESFire®EV1, MIFARE® DESFire®EV2, MIFARE® Smart MX, MIFARE® Plus S / X, MIFARE® Pro X, NTAG 21x Read UID only: Read UID only of all other ISO14443A RFID tags
ISO14443 B	SRI4K, SRIX4K, AT88RF020, 66CL160S, SR176
ISO15693	EM4135, EM4043, EM4x33, EM4x35, I-Code SLI / SLIX, M24LR16/64, TI Tag-it HF-I, SRF55Vxx (my-d vicinity)

SDK information

Demo software	WINDOWS, C# language
Files	Comprotocol document API document User Manual Demo.exe

Note: Other functions and details to be continued and upgrade