

VC-DF-T8002 Specification

Release History

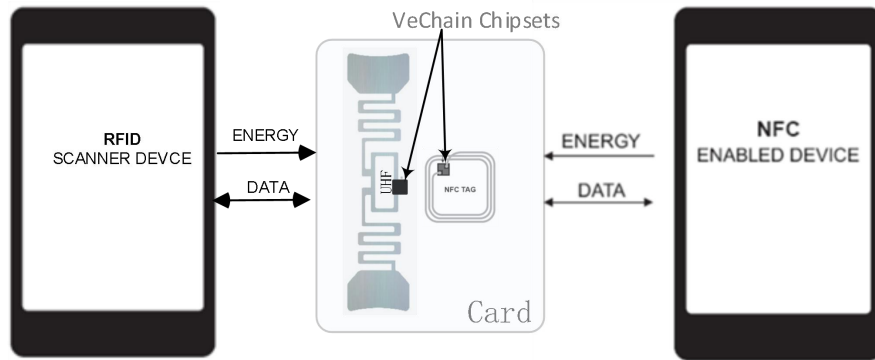
Version	Change history	Date
V1.0	Initial Release	20/11,2018
V1.1	Change naming rule: change specification number from VC-DFTG-C8003 to VC-DF-T8002. Modify the chip naming rule : add a bit identification chip type at the end	23/04,2019

Contents

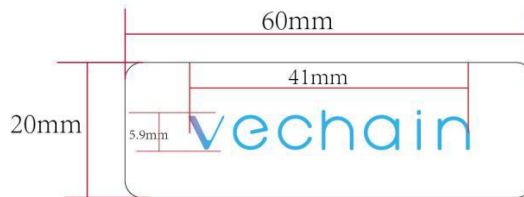
GENERAL DESCRIPTION.....	4
KEY FEATURES.....	5
ELECTRIC PARAMETER.....	6
KEY APPLICATION.....	6
APPLICABLE DOCUMENTS.....	7
ORDERING INFORMATION.....	7
LEGAL INFORMATION.....	8
CONTACT INFORMATION.....	8

General Description

VC-DF-T8002 Series is a passive dual frequency tag product, which is compliant with the ISO/IEC14443A /NFC Forum Standard and RAIN ISO /IEC18000-6C /RFID and EPC global Gen2v2 standard. It can communicate with NFC device (e.g. mobile phone) contactless to transfer data as below picture shows. It can also communicate with UHF reader to do the EPC+TID inventory for supply chain management, retail, brand protection and so on.



a. Contactless System



b. Product Pic



c. Package Pic

The tag is pre-programmed with VeChain IDs and cryptographic keys, which can be used in VeChain Blockchain solutions, such as anti-counterfeiting, traceability and inventory in logistics supply chain management and consumer engagement.

The product dimension is 20*60mm, the compact size fits for most scenarios, with good RF performance. In addition, we can provide size customized service according to your requirement. Substrate material is PET. The product can be packaged by plastic bag, please refer figure C.

Special function: Optional deactivate function to address privacy concerns for retail application.

Key Features

- Protocol: ISO/IEC 14443A (NFC) and NFC Forum standard, RAIN RFID/ISO18000-6C and EPC Global Gen2v2standard
- Data Transfer Rate: 106 kbit/s for NFC, Encoding throughput up to 9,500 tags/minute for RFID
- EEPROM Size: 144bytes for NFC, 128-bits of EPC memory, 96 bits of Serialized TID Memory and 64bits of user memory for RFID
- Read protection for private key in NFC, Write lock and kill password protection in RFID
- Multiple verification for cloning protection
- Dimension Information: 20*60*0.75mm
- Date retention: 10 years
- Working temp: -40°C ~85°C

Electric Parameter

- Operating Distance (determinate by reader and use environment):
NFC: 0-30 mm
RFID: 1.5m for handheld device RFID reader
- Operating Frequency:
NFC: 13.56 MHz
RFID: 860-960MHz

Key Application

- Goods and device authentication
- Product information
- Loyalty (vouchers, coupons)
- Logistic management



Applicable Documents

- [ISOIEC 14443-2]
 - ISO/IEC 14443-2 Type A Identification Cards- Contactless Integrated circuit(s) cards- Proximity Cards- Part 2: Radio frequency power and signal interface
- [ISOIEC 14443-3]
 - ISO/IEC14443-3 Type A Identification Cards- Contactless Integrated circuit(s) cards- Proximity Cards- Part 3: Initialization and Anti-collision
- [NDEF]
 - “NFC Data Exchange Format (NDEF)”, NFC Forum™, Technical Specification, May 2006.
- [ISO18000-6C]
 - ISO/IEC 18000-63:2015 Preview Information technology -- Radio frequency identification for item management -- Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C

Ordering information

Part number	Antenna Description	Product Description	Package Description
VC-DF-T8002-017	HF: copper UHF: copper + aluminum	20*60mm, thickness 0.75mm (tolerance +/-0.05mm) Chip IC: - EM	By piece and packaged by plastic bag

Legal Information



Contact information



For more information, please visit: <https://www.vechain.com>

For sales office addresses, please send an email to: bd@vechain.com