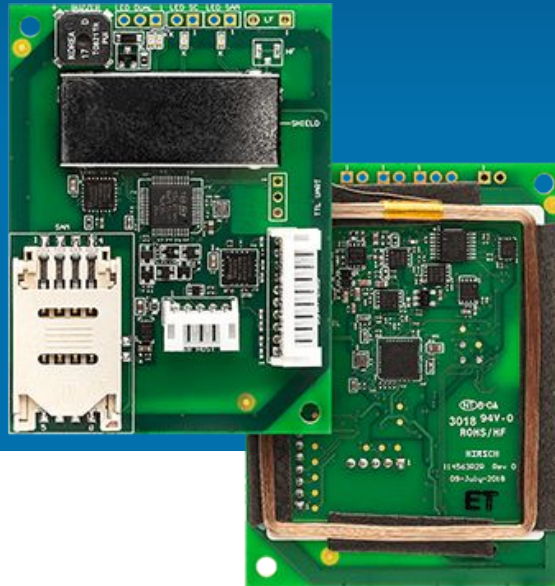# uTrust 5501 F DTC
125 kHz and 13.56 MHz Multi-Technology Smart Card Reader/Writer* Module

Multi-frequency and multi-protocol smart card reader/writer powers a variety of NFC/contactless applications.

The uTrust 5501 F module offers versatile contact and multi-frequency/multi-ISO contactless interface capabilities, supporting a range of identification applications. It supports contact smart card personalization (synchronous and asynchronous), as well as contactless high-frequency 13.56 MHz cards (ISO14443, ISO15693, FeliCa™) and low-frequency 125 kHz cards.

For enhanced security, the optional Secure Access Module (SAM) slot provides secure authentication, key management, and cryptographic functions. The SAM supports secure communication with proprietary card technologies like iClass™ and iClass Seos™.

The module also features a smart card header that accommodates an additional contact card slot (ID-1 or ID-000), allowing for expanded functionality, such as reading ID-1 contact cards or adding another SAM slot.

With FCC and IC Modular certifications, the uTrust 5501 F module enables seamless integration into various products without costly re-certification. Ideal for electronic identification, it ensures flexibility and secure operations across a wide range of applications.

Multi-Technology
- Supports contact and contactless technology

Multi-Frequency
- Supports 125 kHz and 13.56 MHz contactless cards

Multi-Protocol
- ISO 14443 A/B, ISO15693, NFC, MIFARE™, and FeLiCa™

Quick Integration
- Modular certified to ease integration without costly re-certification

Fast
- Transaction time optimized with support of 848 kbps in ISO/IEC 14443 and 600 kbps in ISO/IEC 7816 for maximum end user acceptance

Digital Wallet
- ECP supported; integration must be qualified

*Write is not supported on LF; only HF

uTrust 5501 F DTC

Parameter	Details
Supported Contactless Standards	ISO 14443 A and B, ISO 15693, and 125 kHz
Protocols	T=CL (translated to T=1 for PC/SC compliance)
Smart Card Interface Speed	Communication speed up to 600 kbps (PPS, FI parameter)
Smart Card Clock Frequency	ISO/IEC 7816 compliant; Operates up to 16 MHz (PPS, DI parameter)
Supported Contactless Card ICs	MIFARE (Classic 1K and 4K, DESFire, EV1, EV2, EV3, Ultralight, Ultralight C, PLUS, mini), FeLiCa (Lite and Secure), NFC (Type 1 - 5), Calypso cards, iClass through iClass SAM, and LF (ASK, FSK and PSK)
Data Transfer Rate	106/212/424/848 kbits/s, depending on card IC
Reading Distance	Operating distance up to 2.5 cm, depending on the frequency
Antenna	Integrated high-frequency (HF) and low-frequency (LF)
Contact Type	On board SAM slot; external slot (ID-1 or ID-000)
Operating Conditions	
Power & Communication	USB 2.0 Bus-powered
Dimensions	66 x 48 x 10 mm (2.6 x 1.89 x 0.39 inch)
Weight	26 g ± 5%
Operating Temperature Range	0° to 50°C (32° to 122°F)
Operating Humidity Range	Up to 90% RH non-condensing
Buzzer	Beeps upon card detection
Firmware	SmartOS™
Firmware In-Field Upgradeable	Yes

uTrust 5501 F DTC Continued

Parameter	Details
Driver and Software	
PC/SC Driver	PC/SC Specification Ver. 2. 04. 14. for: Windows® 7/8/10/11 (32 and 64 bit), Windows® Server 2008/2012/2016/2019, WindowsXP, MacOS 10.9.x - 12.2.x, Linux 2.x, and 3.x, 4.x, 5.x (32 and 64 bit), Android 4.0 and higher
Software	PC/SC API
Certifications / Compliance	
Systems/Standards	ISO/IEC 7816, ISO/IEC 14443, ISO/IEC 15693, USB 2.0 Full Speed, CCID, and Microsoft® WHQL
Regulatory/Environmental	RSS-210, CE RED, FCC Modular Approval, RoHS3, REACH, and WEEE
ECP	ECP1/ECP2, Digital Wallet compatibility(supported, but not qualified)
Ordering Information	
Product Part Number	905567-2 115253R3R (cable; usb-a) 115254R3R (cable; usb-c)

We are committed to ensuring that all of our products are PFAS-free and that the minerals used are responsibly sourced. Through rigorous due diligence and adherence to industry standards, we strive to provide products that are safe, sustainable, and ethically produced.