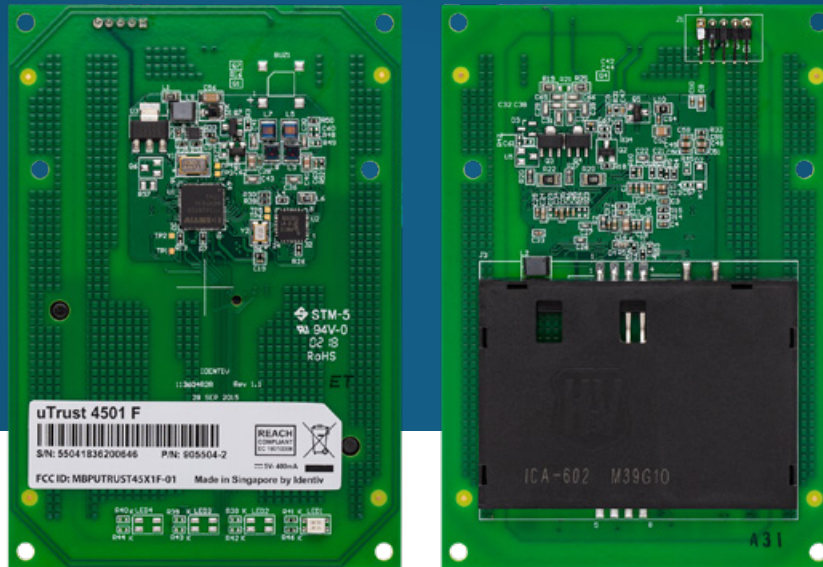


# uTrust 4501 F

## Dual Interface Smart Card Reader/Writer Module



Dual interface USB CCID reader/writer module supports contact ISO/IEC 7816 (ID-1 Slot) contactless ISO/IEC 14443.

uTrust 4501 F's state-of-the-art interoperability makes it an ideal 13.56MHz contactless and contact reader/writer module for application integration. It is in-field upgradeable and future-looking, protecting your investment. The module combines contact, contactless, and NFC technologies in a single device.

Easy integration enables a short time to market for OEMs, systems integrators, and VARs building innovative solutions for contact and contactless security, network log-on, secure web-based transactions, or NFC-based customer loyalty programs.

This PC-linked dual interface reader module supports end-user environments where virtually all types of credentials are used, even in mixed credential populations.

With its all-in-one concept, uTrust 4501 F enables a smooth transition from well-established traditional technologies into emerging NFC applications, driving new business opportunities. uTrust 4501 F provides convenience, transaction time efficiency, security, flexibility, and complete NFC capabilities.

### Simple Integration

- Easy to integrate with full ISO/IEC 14443 and ISO/IEC 7816 support

### Convergence

- Supports contactless and NFC technologies for use with mixed credential populations and form factors

### Interoperability

- Supports major contactless cards, standards, and technologies in just one device

### Fast

- Transaction time optimized at 848kB/s (ISO/IEC 14443) and 600kB/s (ISO/IEC 7816)

### Use Cases

- Network log-on
- Secure web-based transactions
- Customer loyalty programs

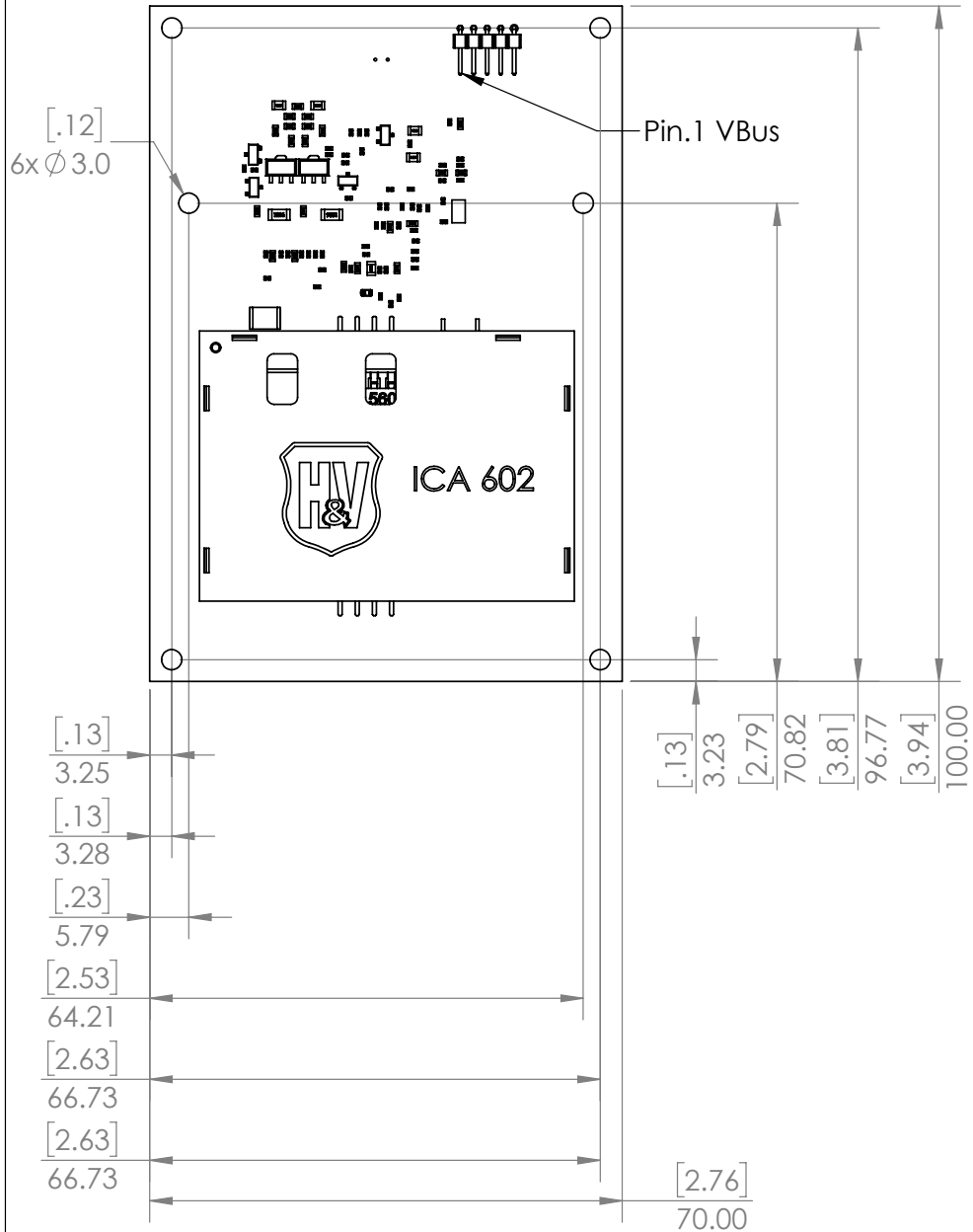
# uTrust 4501 F

Parameter	Details
Host Interface	USB 2.0 CCID (USB 1.1/3.0 compliant)
Communication Speed	12 Mbps (USB 2.0 full speed)
<b>Smart Card Interface</b>	
Supported Standards	ISO/IEC 7816 Part 1 to 4
Supported Tag ICs	All major ISO/IEC 7816 compliant smart card ICs supported
Protocols	T=0, T=1
Interface Speed	Up to 600 kB/s (depending on card); TA1=97
Clock Frequency	ISO/IEC 7816 compliant up to 5 MHz; operates up to 16 MHz
Supported Smart Card Types	ISO/IEC7816 voltage classes A/B/C (5V, 3.3V, 1.8V)
Smart Card Detection	Card present switch, automatic power on/off, short circuit protection
Card Size	ID-1
Contact Type	8 pin ID-1 sliding contact socket, C4/C8 support, Card detect switch
<b>Contactless Interface</b>	
Supported Standards	ISO/IEC 14443; ISO/IEC 18092
Protocols	T=CL
Supported Card Chips	MIFARE® Classic Family, MIFARE Ultralight Family, MIFARE Plus Family, MIFARE DESFire Family, FeliCa™, Calypso, CD21, NFC Forum Tag Types 1/2/3
Data Transfer Rate	106/212/424/848 kB/s (depending on contactless card IC)
Reading Distance	Up to 70 mm (2.756 in), depending on card chip type and card antenna size
Antenna	Integrated
<b>Driver and Software</b>	
PC/SC Driver	PC/SC Specification Ver. 2.01.14 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 2.6.x, and 3.x, 4.x, 5.x (32 and 64 bit), Android 4.0 and higher
Software	PC/SC API; CT-API (through wrapper on top of PC/SC); MCARD API (through wrapper on top of PC/SC)
<b>Operating Conditions</b>	
Power Supply	USB Bus-powered
Power Consumption	<120 mA, excluding smart card; <185 mA with smart card; <500 µA in standby mode
Dimensions	100 x 70 x 11 mm (3.937 x 2.756 x 0.433 in)
Weight	37 g (0.08 lb) ±5%
Operating Temperature Range	0° to 50° C (32° to 122° F)
Storage Temperature Range	-20° to 60° C (-4° to 140° F)
Operating Humidity Range	Up to 95% RH non-condensing

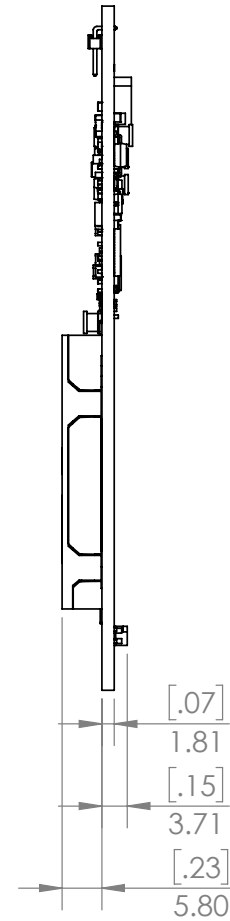
# uTrust 4501 F

Parameter	Details
Durability	Sliding contact 100,000 card insertions
MTBF	100,000 hours
Connector	5-pin Molex connectors (2mm pitch)
Status Indicator	LED
Firmware In-field Upgradable	Yes
<b>Certifications / Compliance</b>	
Systems/Standards	ISO/IEC 7816, USB 2.0 full speed, USB-CCID, Microsoft WHQL
Regulatory/Environmental	CE, UL94, RoHS2, REACH, FCC ready
<b>Ordering Information</b>	
Product Part Number	905322

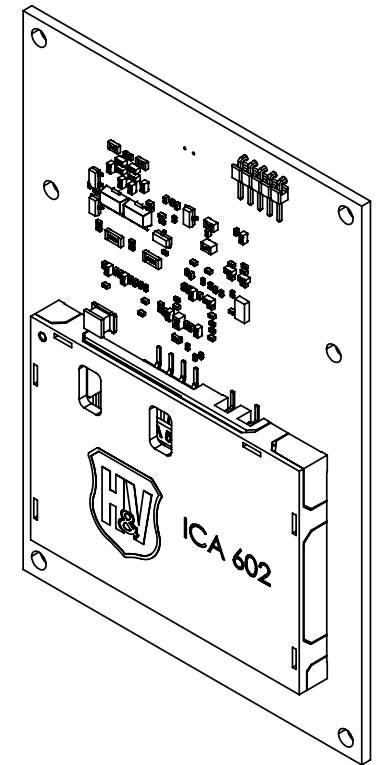
### Top View



### Right Side View



### Isometric View



		1	09-Mar-2022	Initial Release
		REV.	DATE	Rev. History
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SCALE : 1:1		APPROVED BY :	DATE :	Description:
MATERIAL : xxxx		CHECKED BY : Murugasamy	DATE : 09-Mar-2022	uTrust 4501 F PCB R1.1
FINISHING : xxxx		DRAWN BY : Karthick	DATE : 09-Mar-2022	UNIT: <input type="checkbox"/> Inches <input checked="" type="checkbox"/> Millimeter PART NO. : 113604R2R DRW NO. : TBD SIZE : A4 SHEET : 1 OF 1