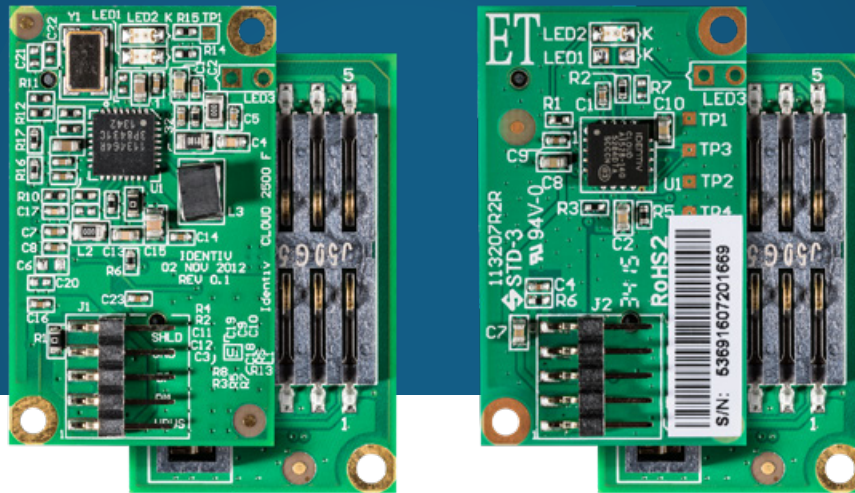# IDENTIV

uTrust 2500 R and 2500 F
Contact Smart Card Reader Module Family

Our family of OEM modules are ideal for third-party applications.

The uTrust 2500 R and 2500 Family is the ideal design for a wide range of embedded applications. Providing full compliance with all major industry standards — including ISO/IEC 7816, USB CCID, PC/SC, and Microsoft WHQL — uTrust 2500 R and 2500 F work seamlessly with virtually all contact smart cards and PC operating systems. Full support and compliance to EMV 2011 expands daily use to very specific applications requiring additional security and data protection.

The module family provides the perfect mix of performance with compact design. An extended card data transmission rate of up to 600 kbps and the support of TA1=97 enables the shortest possible transaction time for maximum end-user convenience.

Experience convenience, transaction-time efficiency, security, and reliability for embedded applications including smart metering, vending and dispensing machines, printers, payment devices, e-servicekiosks, and high-security use cases for federal governments.

The Identiv SmartOS™ firmware in uTrust 2500 F is flexible and secures investments by supporting in-field upgrades through its onboard flash memory. It features easy and complete support for all major contact smart cards.

Simple Integration
- Compact and easy-to-integrate performance-oriented design

All Applications
- Supports all major smart card ICs and technologies in one device

Fast
- Transaction time optimized for maximum end-user acceptance

Convenient
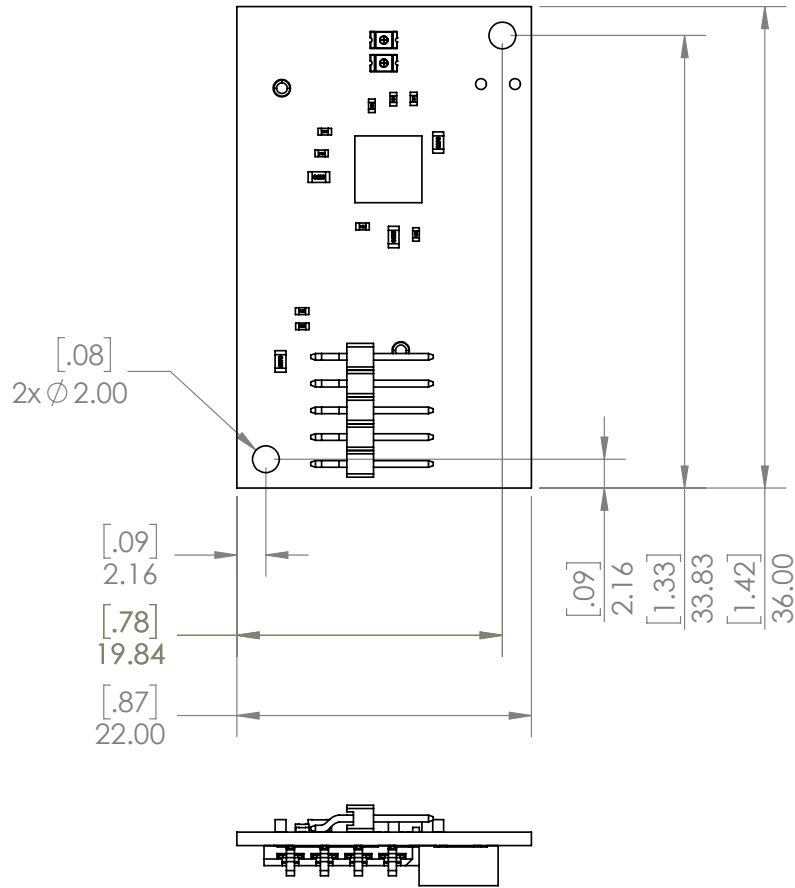- Ultra-compact and robust design streamlined for mobile operation
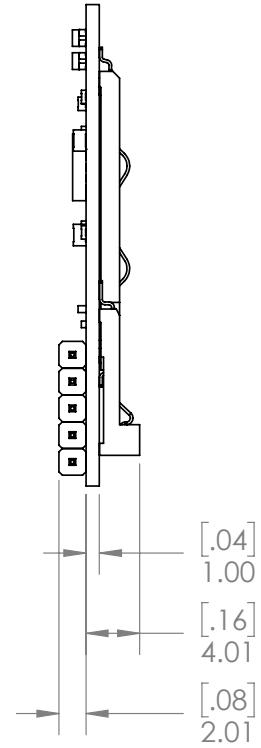
SmartOS™ Powered
- In-field firmware upgradeable for 2500 F

uTrust 2500 Family

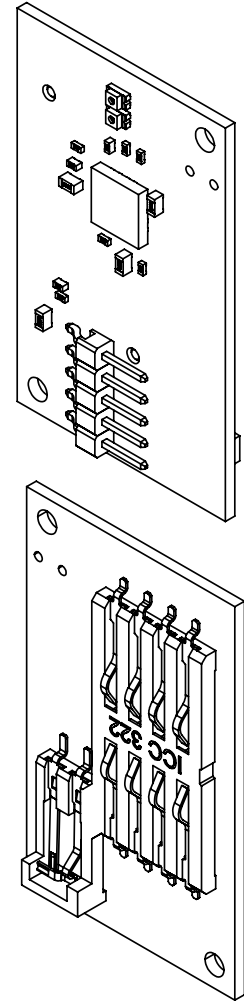| Parameter	Details
Host Interfaces	USB 2.0 Full speed (12 Mbps)
Supported Standards	ISO/IEC 7816 Part 1 to 4; EMV 2011 Ver 4.3 Level 1 (compliant)
Supported Tag ICs	All major ISO/IEC 7816 compliant Smart Card and Synchronous cards
Protocols	T=0, T=1, Synchronous cards I2C and 3-wire
Interface Speed	Up to 600 kbps; A1=97
Clock Frequency	ISO/IEC 7816 compliant; Operates up to 16 MHz for uTrust 2500 R and up to 12 MHz for uTrust 2500 F
Supported Smart Card Types	5V, 3V and 1.8V, ISO/IEC 7816 Class A/B/C
Power to Smart Card	60mA in Class A; 55mA in Class B; 35mA in Class C
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
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, Windows® 6.0, 7.0, WindowsXP, MacOS 10.9.x - 12.1.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); M-Card API (through wrapper on top of PC/SC)
Power Supply	USB Bus-powered
Power Consumption	uTrust 2500 R: <6mA excluding smart card; <20mA with standard card; <500µA in standby mode uTrust 2500 F: <15mA excluding smart card; <25mA with standard card; <500µA in standby mode
Dimensions	36 x 22 x 6.5 mm
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
Durability	100,000 card insertions
Connector	5-Pin Header connector; 2 mm pitch
Status Indicator	Dual-color LED: Green/yellow
Firmware	SmartOS™
Firmware In-Field Upgradeable	uTrust 2500 R: No uTrust 2500 F: Yes
Systems/Standards	ISO/IEC 7816, USB 2.0 Full Speed, CCID, Microsoft WHQL
Regulatory/Environmental	CE, FCC, RoHS2, REACH, WEEE
Product Part Number	uTrust 2500 R: 905369-2 uTrust 2500 F: 905399-2

Top View

Right Side View

Isometric View

[.08]
2x Ø 2.00

[.09]
2.16

[.78]
19.84

[.87]
22.00

[.09]
2.16

[1.33]
33.83

[1.42]
36.00

[.04]
1.00

[.16]
4.01

[.08]
2.01

ICC 322

IDENTIV

	1	20-Jan-2021	Initial Relase
	REV.	DATE	Rev. History

TOLERANCE: ±

SCALE : 2:1		APPROVED BY :	DATE :	Description:		TITLE :
MATERIAL : xxxx		CHECKED BY : Sixtus	DATE : 20-Jan-2021	uTrust 2500 R PCB R1.1		uTrust 2500 R
FINISHING : xxxx	3rd ANGLE PROJ	DRAWN BY : Karthick	DATE : 20-Jan-2021	UNIT : [Inches] mm(Millimeter)	PART NO. : TBD	REV. 1
					DRW NO. : TBD	SIZE : A4	SHEET 1 OF 1