Identiv’s uTrust 4501 F Dual Interface Smart Card Reader Board is the ideal combination of contact, contactless, and NFC technologies in just one single device. Easy integration enables a short time to market for OEMs, system integrators and VARs building innovative solutions for contact and contactless security, network log-on, secure web-based transactions, or NFC-based customer loyalty programs.

Supporting ISO/IEC 7816 contact cards, 13.56 MHz contactless technology, and NFC, this PC-linked dual interface reader board 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 drives the end-user solution acceptance with convenience, transaction time efficiency, security, flexibility, and complete NFC capabilities.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UTRUST 4501 F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Interface</td>
<td></td>
</tr>
<tr>
<td>Host Interface</td>
<td>USB 2.0 CCID (USB 1.1/3.0 compliant)</td>
</tr>
<tr>
<td>Communication Speed</td>
<td>12 Mbps (USB 2.0 full speed)</td>
</tr>
<tr>
<td>Smart Card Interface</td>
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<tr>
<td>Supported Standards</td>
<td>ISO/IEC 7816 Part 1 to 4</td>
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<tr>
<td>Supported Tag ICs</td>
<td>All major ISO/IEC 7816 compliant smart card IC support</td>
</tr>
<tr>
<td>Protocols</td>
<td>T=0, T=1</td>
</tr>
<tr>
<td>Interface Speed</td>
<td>Up to 600 kB/s (depending on card), TA1=97</td>
</tr>
<tr>
<td>Clock Frequency</td>
<td>ISO/IEC 7816 compliant up to 5 MHz; operates up to 16 MHz</td>
</tr>
<tr>
<td>Supported Smart Card Types</td>
<td>5V, 3V, and 1.8V, ISO/IEC 7816 Class A/B/C</td>
</tr>
<tr>
<td>Smart Card Detection</td>
<td>Card present switch, automatic power on/off, short circuit protection</td>
</tr>
<tr>
<td>Card Size</td>
<td>ID-1</td>
</tr>
<tr>
<td>Contact Type</td>
<td>• 8 pin ID-1 sliding contact socket</td>
</tr>
<tr>
<td></td>
<td>• C4/C8 support</td>
</tr>
<tr>
<td></td>
<td>• Card detect switch</td>
</tr>
<tr>
<td>Contactless Interface</td>
<td></td>
</tr>
<tr>
<td>Protocols</td>
<td>T=CL, MIFARE™</td>
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</tbody>
</table>
## Supported Card Chips
MIFARE™ (Classic, Ultralight, Ultralight C, MIFARE PLUS, DESFire, DESFire EV1 2/4/8k), FeliCa™, Calypso, CD21, NFC Forum Tag Types 1/2/3/4

## Data Transfer Rate
106/212/424/848 kB/s (depending on card IC)

## Reading Distance
Up to 70 mm (2.756 in), depending on card chip type and card antenna size

## Antenna
Integrated

### Driver and Software

#### PC/SC Driver
PC/SC specification version 2.01.09 for:
- Windows® XP/Vista/7/8 (32&64Bit), Windows® Server 2003/2008/2012, Windows® CE 6.0, 7.0
- MacOS 10.5.x, 10.6.x, 10.7.x, 10.8.x
- Linux 2.4.x, 2.6.x (32 and 64 Bit)

#### Software
- PC/SC API
- CT-API (through wrapper on top of PC/SC)
- Synchronous-API (through wrapper on top of PC/SC)

### Operating Conditions

#### Power Supply
Bus-powered USB

#### 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

#### Durability
Sliding contact 100,000 card insertions

#### MTBF
100,000 hours

#### Connector
5-pin molex connector

#### Status Indicator
LED

#### Firmware In-field Upgradeable
Yes

### Certifications/Compliance

#### Systems/Standards
ISO/IEC 7816, USB 2.0 full speed, CCID, Microsoft® WHQL

#### Regulatory/Environmental
CE, FCC, UL94, RoHS2, REACH

### Ordering Information

#### Product Part Number
905322

Identiv, Inc. (NASDAQ: INVE) is a global provider of physical security and secure identification. Identiv’s products, software, systems, and services address the markets for physical and logical access control and a wide range of RFID-enabled applications. Customers in the government, enterprise, consumer, education, healthcare, and transportation sectors rely on Identiv's access and identification solutions. Identiv's mission is to secure the connected physical world: from perimeter to desktop access, and from the world of physical things to the Internet of Everything.

Identiv has offices worldwide. Addresses and phone numbers are listed at identiv.com/contact. For more information, visit identiv.com or email sales@identiv.com.

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