



## Product Description

The U.are.U 5100 Module is a miniature USB fingerprint reader designed for integration into OEM equipment where fingerprint verification or identification is needed. It is tailored to the unique form-factor, power, usability and durability requirements of mobile ID devices, particularly those used in public-facing Civil ID applications such as voting, benefits-checking and micro-finance.

This self-contained module optically scans the fingerprint when the user touches the glass imaging window. Optical technology offers the highest combination of durability and ease of use.

The U.are.U 5100 Module is designed to simplify OEM integration. The top surface of the module is IP64-rated, sealed against dust and liquids\*. Its compact size and convenient mounting features help it fit easily into even small devices. The on-board electronics automatically control calibration and data transfer over the USB interface.

The U.are.U 5100 is designed to meet and exceed the FIPS 201 Personal Identity Verification (PIV) Image Quality Specification, a key industry standard. It produces 500 and 1000 dot-per-inch (dpi) fingerprint images in ANSI and ISO/IEC standard formats.

The U.are.U 5100 Module can be used with any standards-compatible fingerprint templates extractor or matcher, including the DigitalPersona® FingerJet Biometric Engine.

## Target Applications

- Mobile ID terminals
- Compact embedded devices
- Battery-operated devices
- Devices requiring PIV standards

## Features

- Low Power consumption
- Fine-grained power control
- Compact size
- Landing lights for finger tracking
- Red/green status LEDs
- Blue illumination
- 500dpi and 1000dpi images
- High-durability glass top surface
- IP64-rated top surface sealed against dust and liquid\*
- FIPS 201 PIV certified
- High quality fingerprint image
- Counterfeit finger rejection
- Drivers and SDKs for Windows CE and Linux operating systems

## Key Specifications

- Pixel resolution: 500dpi (native), 1000dpi (interpolated)
- 8-bit grayscale (256 gray levels)
- Scan capture area: 12.8mm x 16.5mm
- Module size: 52mm (l) x 31.4mm (w) x 15.8mm (h)
- IP64-rated glass top surface
- USB 2.0 (High Speed)

## Ratings

<b>Supply Voltage</b>	5.0V ±5%
<b>Supply Current—scanning</b>	< 110 mA (Typical)
<b>Supply Current—idle mode</b>	50 mA (Typical)
<b>Supply Current—suspend mode</b>	< 0.5 mA (Maximum)
<b>Temperature, Operating</b>	0 - 40 C
<b>Humidity, Operating</b>	20% - 80% non-condensing
<b>Temperature, Storage</b>	-10 - 60 C
<b>Humidity, Storage</b>	20% - 90% non-condensing
<b>Scan Data</b>	8-bit grayscale
<b>Top Surface</b>	IP64-rated seal between top case and glass surface*
<b>Interface</b>	USB 2.0 High Speed
<b>Weight</b>	22 grams
<b>Standards Compliance</b>	FIPS 201 PIV, RoHS, WEEE, UL, USB, WHQL

## Connector Pinouts

<b>USB</b>	
<b>Pin 1:</b>	+5V
<b>Pin 2:</b>	Ground
<b>Pin 3:</b>	Ground (shield)
<b>Pin 4:</b>	USB D-
<b>Pin 5:</b>	USB D+
<b>Connector Type:</b>	
Hirose DF13-5P-1.25DS/equivalent	
<b>Auxillary LED Connector</b>	
<b>Pin 1:</b>	Aux LED Left
<b>Pin 2:</b>	Aux LED Right
<b>Pin 3:</b>	GND
<b>Pin 4:</b>	+5V

Technical data subject to change without notice.

\*IP64 rating is for the seal between the top case and the glass imaging window. Devices containing the embedded module must seal the module top case to their chassis or housing to extend the IP64 protection to the device.