

**FC320U**

**Reader**

# **Product specification**

**DOC. VERSION 1.0**

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April 2017

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## Revision History

Doc. Version	Revision Description	Date
1.	Initial version	2017/04/20

## 1. Overview

### 1.1 Description

FC 320U is a single fingerprint capture device designed to meet the stringent USA government's FIPS 201/PIV requirement, an image quality level demanded by FBI's Image Quality Specifications (IQS) for fingerprint readers. Startek's NIST MINEX-approved template extraction and matching algorithms (optional) can serve together.

FBI's PIV testing ensures excellent image quality of the capturing hardware; NIST's MINEX testing not only ensures accuracy of matching algorithms and characteristics extraction but also interoperability of extracted fingerprint templates. By meeting and exceeding the criteria of both PIV and MINEX testing, FC320U proves to be perfect candidates for customers requiring fingerprint authentication applications to be compliant with FIPS 201/PIV, a sure trend of industry adoption, behind which objective, third-party certification against rigorous standards backs.

### 1.2 Features

- High scanning resolution 500dpi  $\pm$  1%
- Consistent forensic-quality flat fingerprint images
- Distortion < 1%
- Linearity and rectilinearity less than one pixel (average)
- Generous coating-free capture platen area 1.2" x 1.2"
- Effective sensing area 0.9" x 0.9"
- Larger sensing area to take rolled fingerprints
- Rugged design
- MINEX compliant SDK available (optional) with easy-to-follow instructions (including how to capture, enroll images and verify, and how to build and retrieve user profiles)

### 1.3 Applications

- Fingerprint capturing for national ID card /PIV card personalization
- Fingerprint enrollment and verification station
- Social security/pension schemes
- Border control
- e-passport and e-VISA issuing and verification
- Law enforcement /criminal ID

### 1.4 Specification

Sensors	CMOS sensor
Image resolution	500 dpi ( H ) ,500 dpi ( V )
Effective sensing area	0.9"*0.9" ( H * V )
Platen Size	1.2" × 1.2" ( H * V )
Scanner output image size	450 * 450 pixels ( H * V )
Gray Level	8bits/pixel, max 256 gray scales
Image ratio of length to width	1 : 1
Scanner interface cable	Standard USB compliant cable
Power supply	DC 5V (from USB port)
Dimension	145mm ( L ) ×62mm ( M ) ×51mm ( H )
Weight	195.8g ( Approximated )
Distortion	< 1%
Operation temperature	0°C ~45°C
Humidity	10-85% non condensing
Minimum hardware requirement	P3 800MHz CPU or up, 256MB, USB 2.0
Software platform	Windows XP/Windows 7

## 2. FC320U SDK PIV Plus

Minutia size	< 1k bytes
Matching speed	Less than 1 second
False rejection rate ( FRR )	1/100~1/30
False acceptance rate ( FAR )	1/100,000~1/1,000,000
Allowable fingerprint rotation	±35°
Allowable fingerprint displacement	±5mm
Software platform	Windows XP/XP Embedded/Vista/ ( 32bit and 64bit ) , Linux with kernel 2.6 ( x86 )
Functions of API ( ISO19794-2/ISO19794-4 and FIPS201*compliant	Image capture, Enrollment/Template Generating, Matching