Unity™ 20 Bluetooth Datasheet
HU20-ASF-BT

Thank you for your interest in SecuGen fingerprint technology. We focus all our efforts on creating the highest possible quality in fingerprint sensor technology at an affordable price. We hope that this product meets your requirements, and we welcome your feedback.

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FCC STATMENT

This device complies with part15 of FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device & its accessories must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Part15.21 statement

Changes or modifications not expressly approved by the manufacturer (or party responsible) for compliance could void the user's authority to operate the equipment

This device comply with RF exposure requirements.

1. General Description

The Unity™ 20 Bluetooth is a standalone fingerprint recognition system that captures and stores fingerprint data and identifies or verifies registered users. The Unity 20 Bluetooth consists of the U20-ASF-BT module housed in an ergonomic case with a multi-functional button, LED indicators, rechargeable battery, and USB port. The Unity Bluetooth can also serve as fingerprint reader that transfers fingerprint data to host devices such as smart phones or tablets via Bluetooth for further handling. The fingerprint reader is rotationally-independent and was designed to comfortably scan fingers from either direction, whether held in the hand or on a desktop.
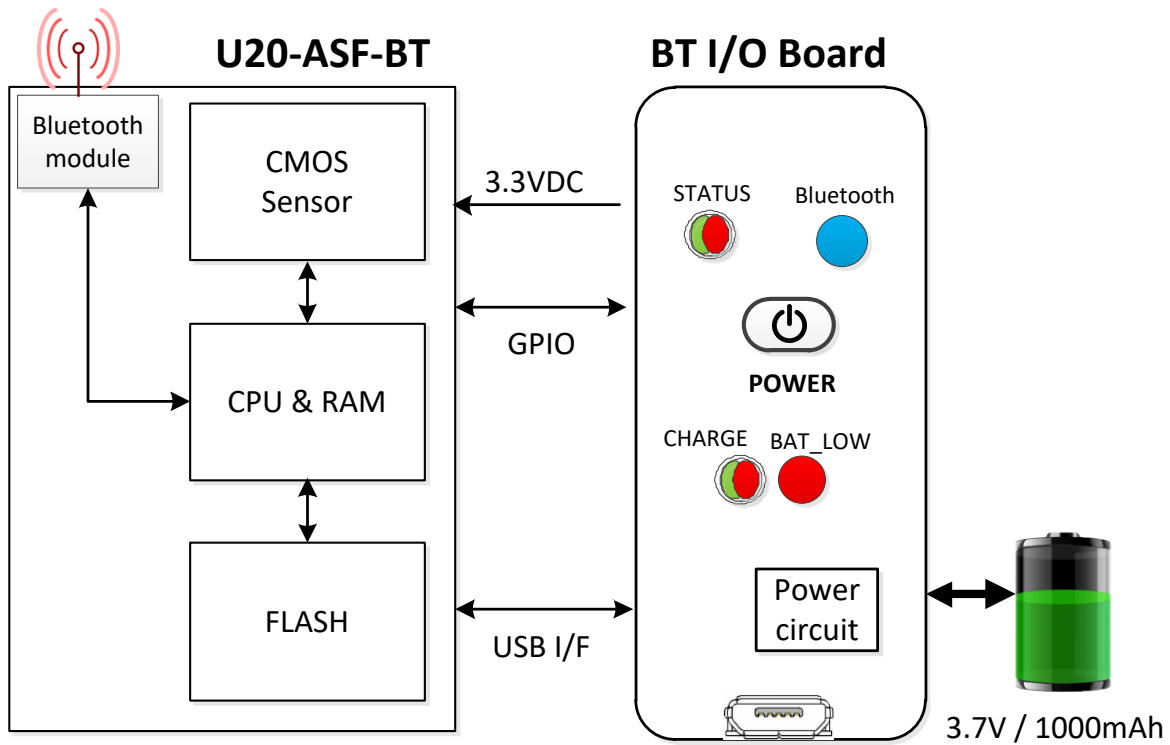
Key Features

- Auto-On™ Automatic Finger Detection
- Smart Capture™
- USB 2.0 for charging
- FBI certified fingerprint sensor for FIPS 201, PIV and Mobile ID FAP 20 compliant
- Interface to host: Bluetooth
- Three LED status indicators
- Class 2 Bluetooth transceiver
- Support for Bluetooth Serial Port Profile Services (SPP)
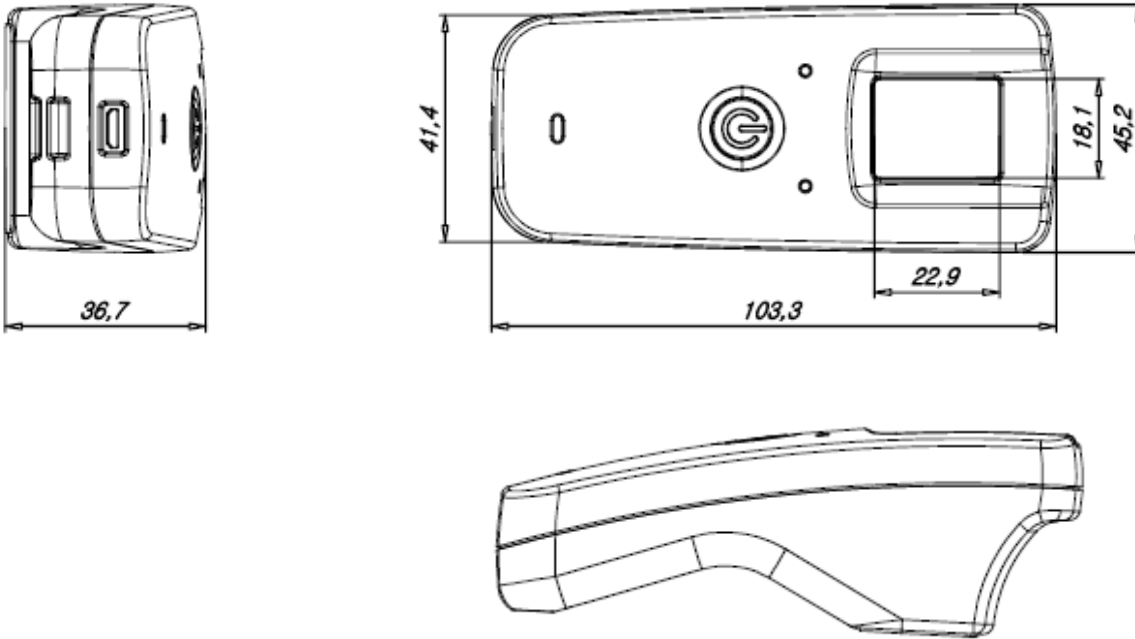- Built-in lithium ion polymer rechargeable battery

2. Block Diagram

HU20-ASF-BT

3. Technical Specifications

General	
Dimensions	45.2 mm (W) x 103.3 mm (L) x 36.7 (H) mm
Operating Temp. / Humidity	-10°C ~ 60°C / 90% RH (max., non-condensing)
Charging Temp.	10°C ~ 45°C
Weight	90 g
Supply Voltage	Built-in battery or 5.0V DC $\pm$ 5% via USB connection
Current Consumption	200 mA (max. Operating), 500mA (max. Charging & Operating)
USB Interface	For charging
Operating Systems Supported	Windows, Linux, Android and iOS
Fingerprint Reader	
Model	SecuGen® U20™ Optical Fingerprint Reader
Image Resolution	500 PPI
Image Size	300 x 400 pixels
User Capacity	Up to 700 users (1,400 templates)
Effective Sensing Area	18.1 mm x 22.9 mm
Sensing Area	15.24 mm x 20.32 mm
Image Grayscale	256 levels (8-bit)
Light Source / Typical Lifetime	LED / 60,000 hours
Fingerprint Capture Time	0.2 ~ 0.5 second with Smart Capture™
Bluetooth	
Class 2 Module	
Dual-mode Bluetooth / Low energy (BLE) radio	
Fully qualified Bluetooth 4.0	
Supports 802.11 coexistence	
Battery	
Rated Capacity	1000 mAh
Internal Resistance	≤70 mΩ
Voltage	3.7 V (nominal), 4.2 V (charged), 2.75 V (discharge cut-off)

4. Dimensions

Dimensions (mm)

5. Ordering Information

Product	Part Number	Description
Unity 20 Bluetooth (HU20-ASF-BT)	EA4-1002	All-in-One Fingerprint System with Bluetooth interface, multi-functional button, LED indicators, rechargeable battery, and USB port in a finished case

SecuGen Sales Contact

Sales@secugen.com
Sales Tel: +1 (408) 834-7712