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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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.
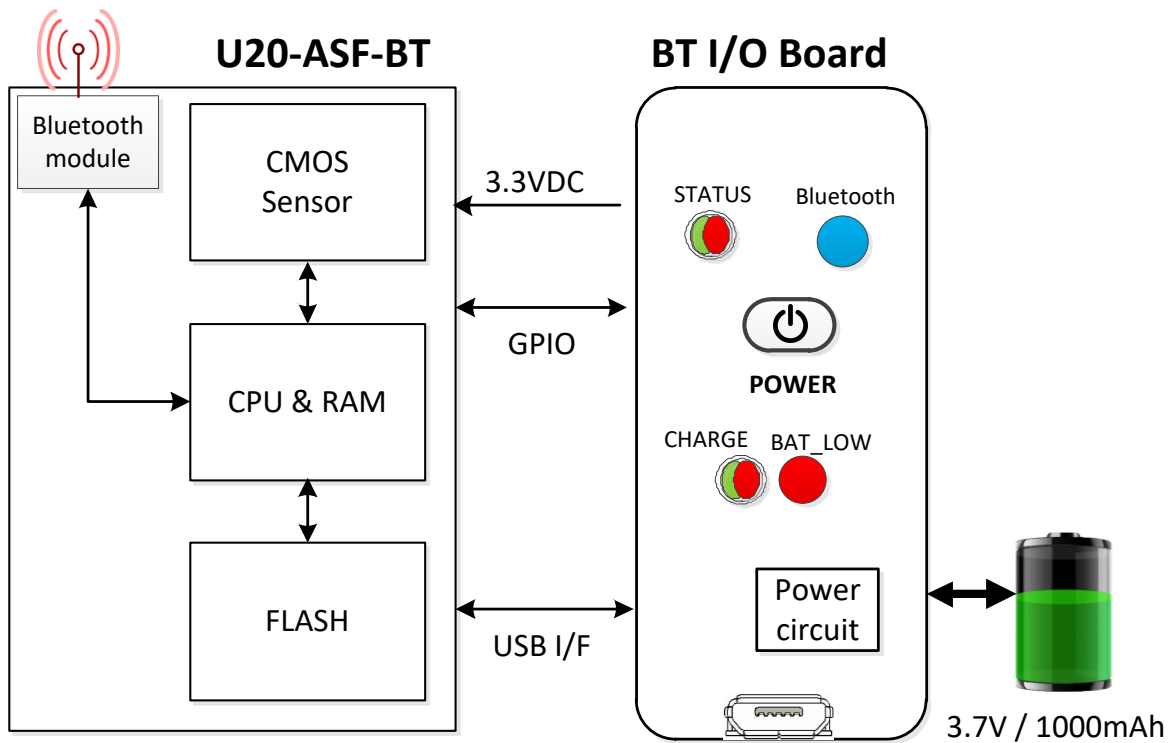
Key Features

- 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)
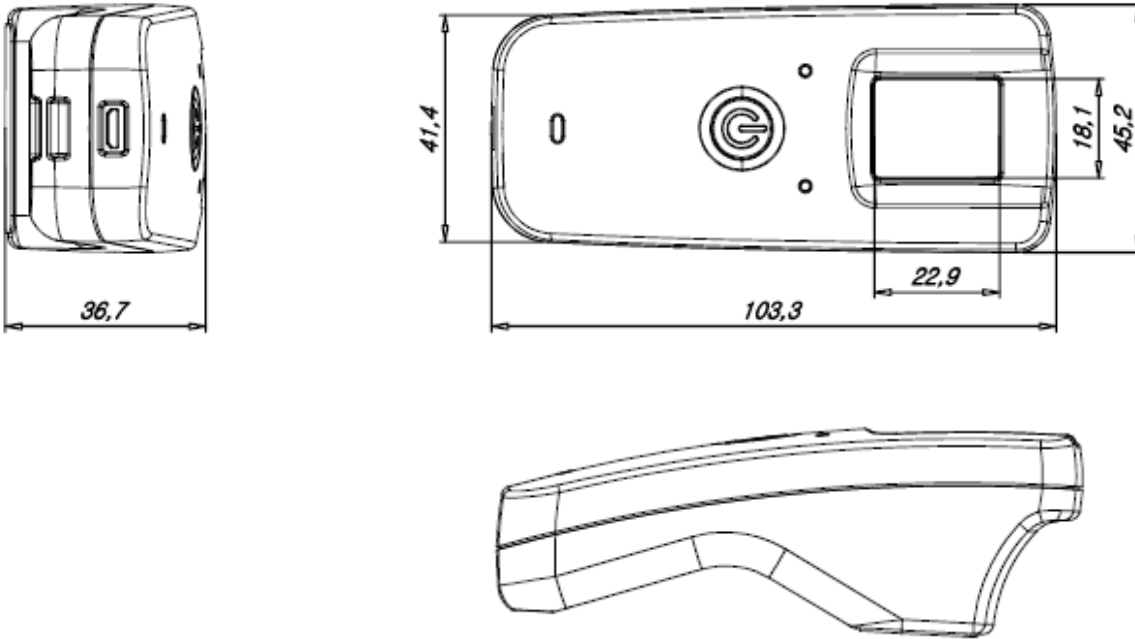- Built-in lithium ion polymer rechargeable battery

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

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