

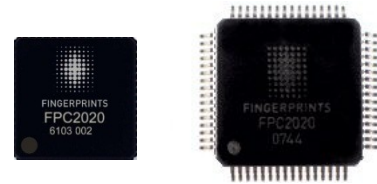


### Features

- Extremely easy to integrate minimizing time-to-market
- Supports area sensor FPC1011C
- One-To-One verification mode
- One-To-Many identification mode
- Flash interface for program and template storage
- Straightforward serial command interface
- Download/upload template functionality
- Single supply 2.5 – 3.3 V

### Application examples

- Access control systems
- Time & Attendance
- Locks, safes
- POS terminals



### General description

FPC2020 is an extremely small, fast and power efficient ASIC that acts as a biometric sub-system with a direct interface to the FPC1011C sensor as well as to an external flash memory for storing templates. Thanks to its small size and low power consumption it fits as well in door locks, card readers and safes as in smaller portable and battery powered devices without losing identification speed or performance.

FPC2020 can easily be integrated into virtually any application and be controlled by a host sending basic commands for enrolment and verification via the serial interface. Fingerprint templates are created automatically and stored in flash memory connected to FPC2020. Templates used for verification can also be uploaded/downloaded to an external storage, e.g. central database, smart card or portable flash memory. FPC2020 has no internal limitation in number of templates it can handle. Size of external flash memory will set the limitation.

### Quick reference data

PARAMETER	VALUE	
Package	80 pin TQFP 12*12, 64 pin QFN 9 * 9 mm*	
Number of templates	(2 Mbit Flash)	223
	(4 Mbit Flash)	479
	(8 Mbit Flash)	991**
Verification time	(1:1)	0.2 s (typical)
Identification time	(1:150)	1.0 s (typical)
	(1:500)	2.0 s (typical)
Enrolment time		7 s (typical)
Template Size		938 bytes
False-Rejection-Rate	(FRR)	Adjustable, Data dependent
False-Acceptance-Rate	(FAR)	Adjustable from 1/1,000 to 1/100,000
Host interface		Serial UART or SPI
Flash interface		SPI
Sensor interface		Direct interface to FPC1011C
Supply voltage		2,5 to 3.3 VDC
Average supply current active 3,3 V		70mA @ full speed, 25 mA @ half speed
Supply current idle mode 3,3 V		10 mA
Supply current sleep mode 3,3V		30 µA
Crystal		7,3728 MHz
Frequency		7 – 96 MHz Depending on workload and power mode

\* The QFN package is only available in large volumes

\*\* Recommended number of templates during Identification: <500