



Compact Face Recognition Module Voyager-IoT P22

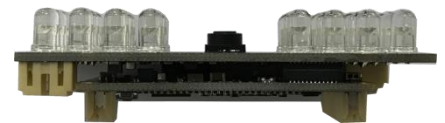
Product Introduction

Face Recognition (FR) Technology has recently attracted a high volume of attention, hailed as the most convenient mode of human identification.

Yet, FR Technology has not been widely implemented, due to previous products' excessive bulk and high price.

By implementing proprietary FR Algorithm and one-of-a-kind Hardware/Firmware Technology, CrasID proudly presents "Voyager", the standalone FR Module which achieves compactness at an affordable price.

We at CrasID hope to share the wonderful experiences that Face Recognition Technology has offered through "Voyager".



Front-side & Back-side view of Voyager-IoT P22 (Dual-Board)

Side view of Voyager-IoTP22

Key Function & Facts

- Multi-Face Detection & Face Recognition
- UART and WiFi
- Fast Linux OS
- Compact Physical Dimension : 8.0cm x 3.6cm x 2.3cm³

Hardware Specification

AP / Memory	MIPS-based 1GHz / 64MB LPDDR & 128MB SPI NAND + SD card (option)
Camera Sensor	HD CIS
LED	24EA 850nm IR LEDs
Illumination	0 Lux ~ 7,000 Lux
Interfaces	UART / WiFi
GPIO	4 pins (INPUT/OUTPUT & I/O level : 3.3V)
Power Consumption	Max. 4.2W (12V X 350mA)
Working Temperature	-20C ~ 60C
Size	8.0 x 3.6 x 2.3cm ³

Software Specification

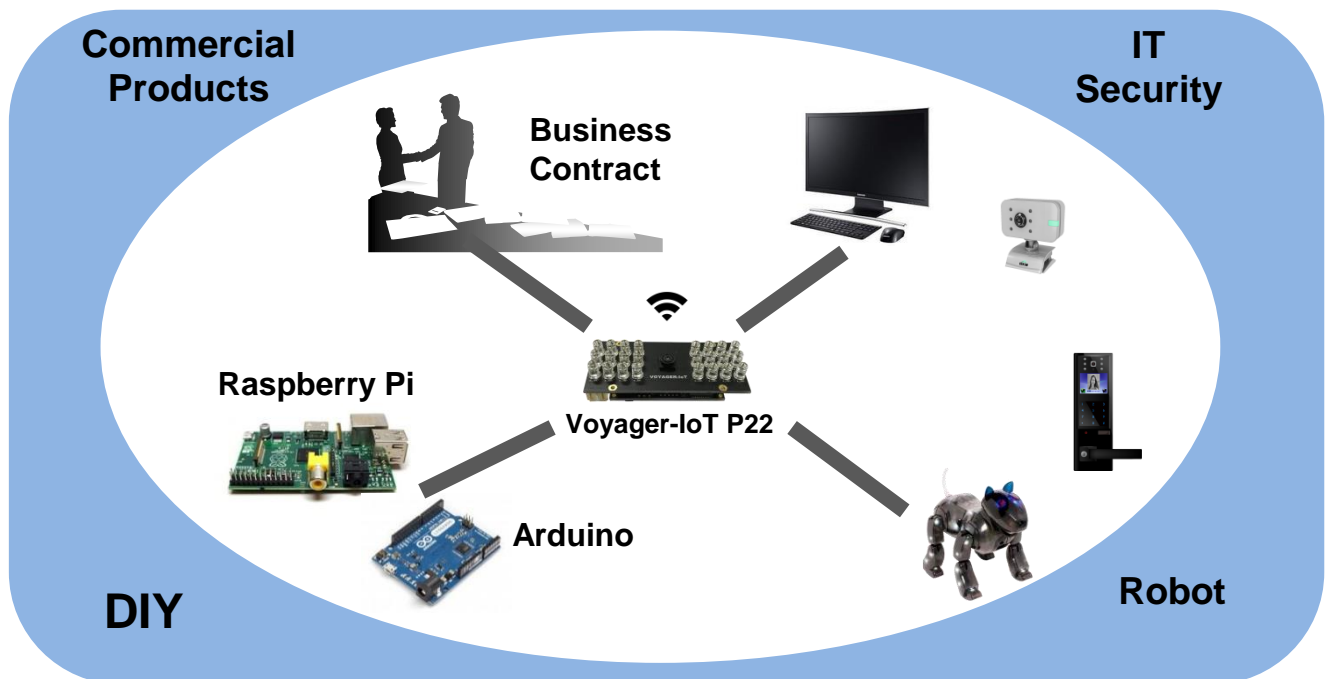
OS	Embedded Linux
Protocol	v1.2
SDK	C-code for multi-Platform

Face Recognition Algorithm (UerFace) Specification

Version	V2.0.18.x
FAR	0.1% - 0.001% (Selectable)
Face Detection	5 faces (Detection Distance : ~ 2.5m) at Face Detection ONLY
Face Registration (1:1)	1,000 FaceID without SD card 10,000 FaceID with SD card
Face Registration (1:N)	200 FaceID / Group (3 poses registration / FaceID) 2 Groups for 1:N Face Recognition
Recognition Time	< 1 sec
Recognition Distance	40cm ~ 70cm (recommended)
Remarks	1. Indoor environment away from direct sunlight 2. Indoor environment away from strong IR lighting sources

For whom the Voyager is developed

- Innovators utilizing Open Hardware (Raspberry Pi, Arduino, etc) to develop their own Face Recognition products.
- Developers who plan to integrate FR Technology into IT security products, Robot, and IoT terminals
- Entrepreneurs willing to venture into emerging business opportunities in the field of Face Recognition Technology.



Deliverables

- Voyager-IoT P22 Module (FR Algorithm, UerFace[®] v2.0.18.x, ported)
- Voyager Evaluation S/W Tool (VoyWin) for Windows
- SDK (VoySdk) : C-code for multi-platform
- Developer's Guide Manual
- 2 pin Power Connector & 5 pin Interface Connector
- RF Antenna & Speaker (option)