



Compact Face Recognition Module Voyager-1

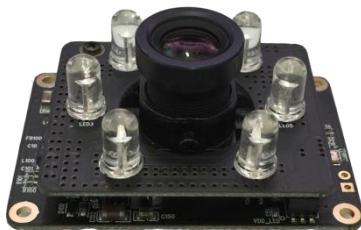
Product Introduction

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".



Side view of Voyager-1



Size comparison of Voyager-1 with coins
(Korean 100 won & US Quarter)

Key Function & Facts

- Multi-Face Detection & Face Recognition
- UART Interface with host system
- RTOS & Battery Operation
- The Most Compact Physical Dimension in the World
: 5x3.5x2.6cm³

Hardware Specification

AP / Memory	ARM9 with 4MB Flash and 8MB dRAM
Camera Sensor	VGA CIS
LED	6EA 850nm IR LEDs
Illumination	0 Lux ~ 1,500 Lux
Interface	UART 9.6kbps ~ 1.5Mbps (I/O level : 3.3V)
GPIO	1 pin (I/O level : 3.3V) : Industry use only
Power Consumption	1.75W
Working Temperature	-10C ~ 60C
Size	5cm x 3.5cm x 2.6cm ³

Software Specification

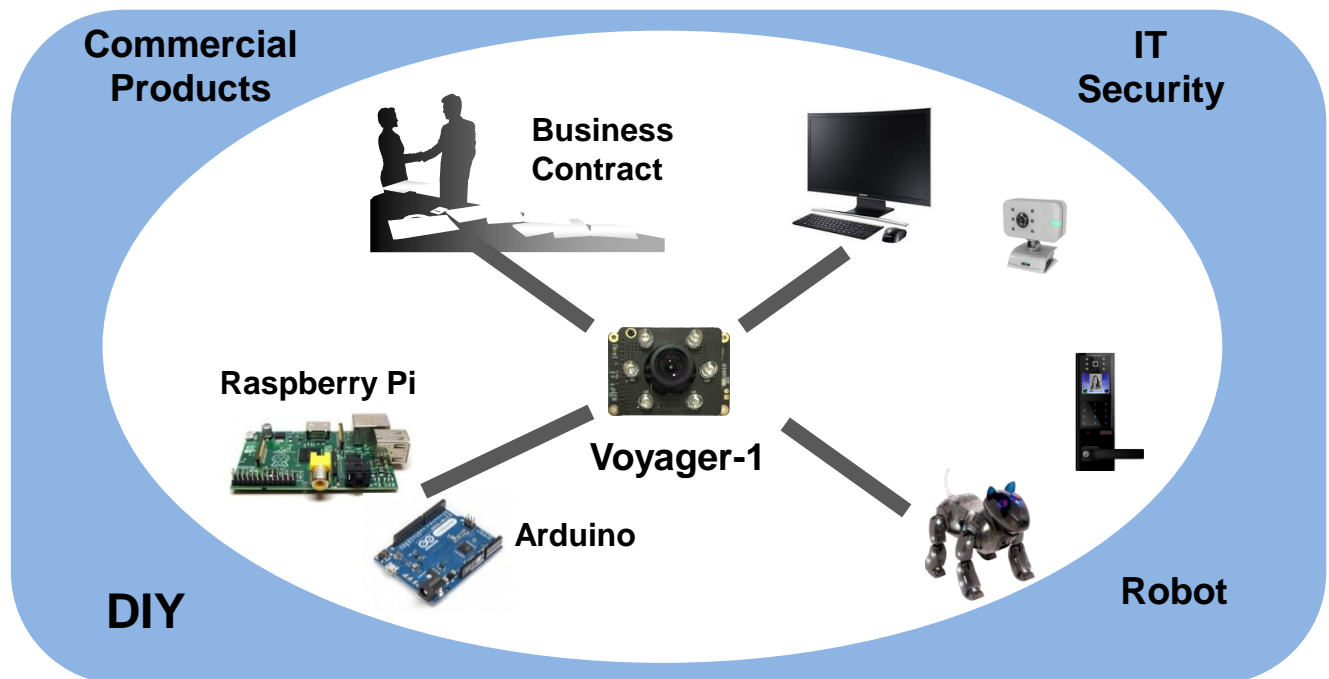
OS	v-RTOS v1.0
Protocol	Voyager v1.0
Booting Time	< 0.5 sec
SDK	Android Linux Windows Arduino

Face Recognition Algorithm (UerFace) Specification

Version	V2.0.14.2
FAR	0.1% - 0.001% (Selectable)
Face Detection	5 faces (Detection Distance : ~ 1.5m)
Face Registration	10 FaceID (2 poses registration / FaceID)
Recognition Time	< 1 sec
Recognition Distance	40cm ~ 60cm (recommended)
Remarks	1. Indoor environment away from direct sunlight 2. Indoor environment away from strong IR lighting sources

For whom 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 Main Module (FR Algorithm, UerFace[®] v2.0.14.2, ported)
- IR LED Illumination Module (6EA 850nm IR LED)
- Application Sample Codes
- User's Manual
- Power Cable & UART 4 pin Cable