



# Compact Face Recognition Module Voyager-2H

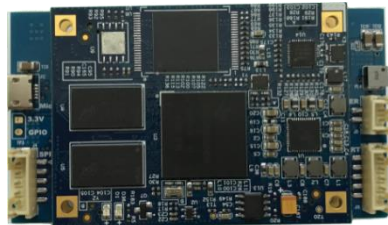
## Product Introduction

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 the Voyager-Series.



Front-side & Back-side view of Voyager-2H (Dual-Layer)

Side view of Voyager-2H

## Key Function & Facts

- Multi-Face Detection & Face Recognition
- Interfaces : UART and SPI
- RTOS (Fast Booting)
- Compact Physical Dimension : 8x4.5x1.9cm<sup>3</sup>

## Hardware Specification

AP / Memory	Cortex A9 with 4GB eMMC Flash and 512MB DDR3 SDRAM
Camera Sensor	HD CIS
LED	24EA 850nm IR LEDs
Illumination	0 Lux ~ 8,000 Lux
Interfaces	UART / SPI
Power Consumption	Max. 5.8W (12V X 480mA)
Working Temperature	0 ~ 60 °C
Size	8cm x 4.5cm x 1.9cm

## Software Specification

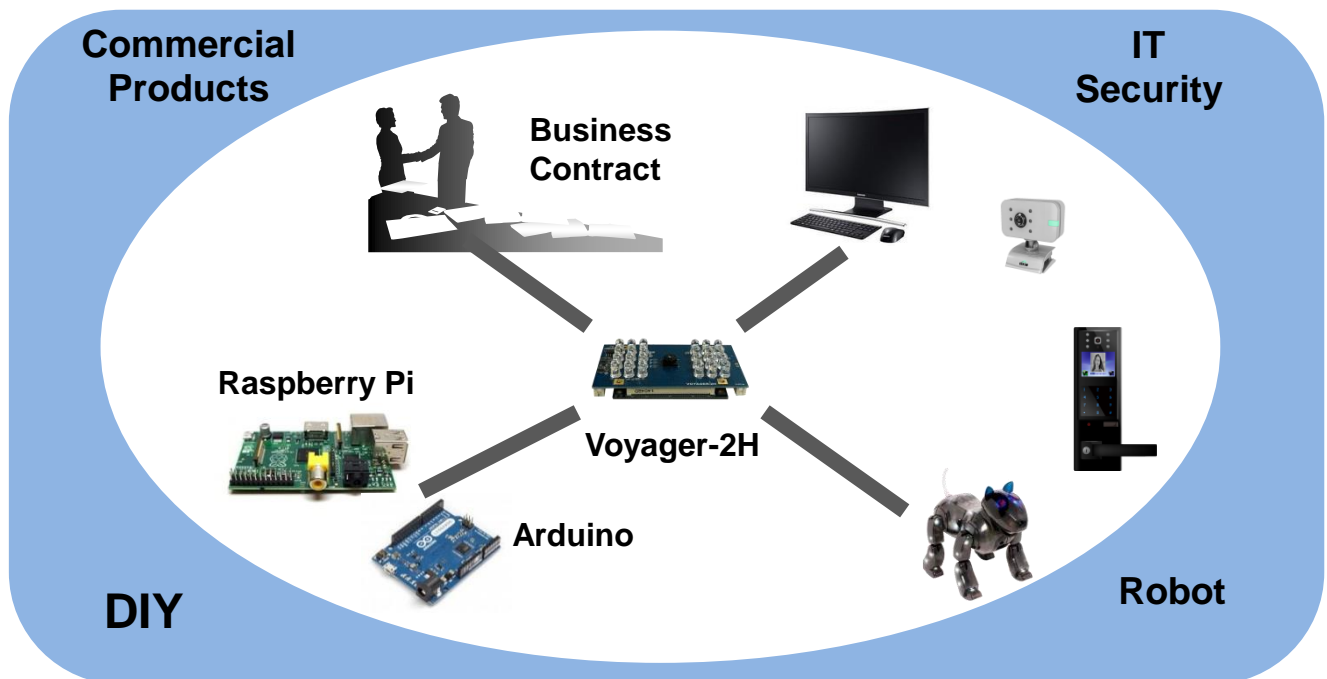
OS	v-RTOS
Protocol	v1.2
Booting Time	< 1 sec
SDK	C-code for multi-Platform

## Face Recognition Algorithm (UerFace) Specification

Version	V2.0.18.x
FAR	0.1% - 0.001% (Selectable)
Face Detection	5 faces (Detection Distance : < 2.5m)
Face Registration (1:N)	300 FaceID (3 poses registration / FaceID) per Group 10 Groups for 1:N Face Recognition (3,000 FaceID)
Face Registration (1:1)	30,000 FaceID
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 Module (FR Algorithm, UerFace<sup>®</sup> v2.0.18.x, ported)
- Voyager Evaluation S/W Tool (VoyWin)
- SDK (VoySdk) : C-code for multi-platform
- Developer's Guide Manual
- 2 pin Power Connector & 5 pin Interface Connector