![CMITECH - IMAGING EXPERTS logo]

NOVAFACE-2

Facial Recognition System

Compact terminal with ultra-fast subject finding and
most powerful face algorithm for optimal matching accuracy

APPLICATION

Compact, wall-mountable terminal for high throughput access control, time & attendance, and ID management applications

Product Description

NovaFace-2™ is an advanced face recognition terminal that provides highly accurate face recognition in a compact and cost-effective embedded system. Employing the latest of high performance ARM processors, the NovaFace-2 features an embedded face recognition module with its own imaging and algorithm co-processor for ultra-face capture and processing of face images.

This architecture allows for the utilization of the latest and most powerful, but complex, face algorithms available. Now, The NovaFace-2 face recognition system not only a provides a fully touchless and contactless user experience, but embedded solution matching accuracy is unparalleled! In authentication mode, capture speeds are virtually "walk-through", while very fast image and template processing times make authentication decisions seem instantaneous.

The NovaFace-2 system is compact, with dimensions of only 100 x 200 x 36 mm, and can readily be mounted on any wall, desktop, kiosk front-plate, or turnstile.

The user interface is effortless and intuitive. Display color boxed face to indicate that fake face to orange color, unrecognizable to white color, masked to green color, no mask to yellow color. Subject's face can be found at up to 2 meters from the NovaFace-2 system, with an active capture range of 0.4 to 2 meters. The NovaFace-2 incorporates a highly innovative digital zoom feature that enlarges the subject's face image during capture, and automatically tilting the display centering as the subject moves within the capture volume.

CMITech's proprietary deep-learning based face-detector also enhances operation in a wide range
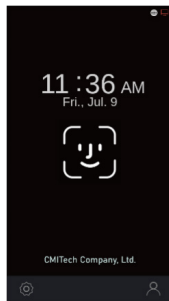
of ambient lighting for deployment flexibility. User positioning instruction are clearly shown on the display to guide subject movements, while authentication and authorization decisions are presented immediately in clear notations around the subject's face.

The on-board white and NIR illuminators expand the deployment flexibility of NovaFace-2, making it the ideal choice for advanced face recognition solutions across a diverse range of access control and time & attendance installations.

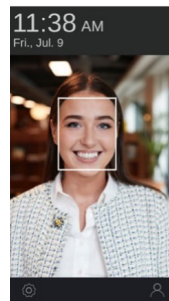## Simple and Intuitive Subject Positioning

NovaFace-2 detects and displays the subject's face over 2 meters from the system on the high-resolution color display. The subject will simple and naturally walk toward the face capture range of 0.4 to 2 meters. Once the system recognizes the face, the result will be displayed immediately with colored indication box over the subject's face image.

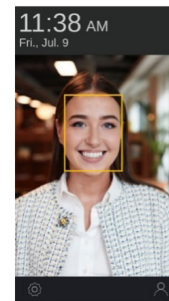## Access Control Authentication (Verification)

LAUNCHER VIEW

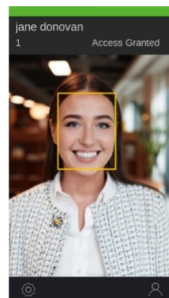Home Page for start-up and administrator control.

FACE DETECTION STARTS

White box around face shows which subject has been detected and is being actively processed.
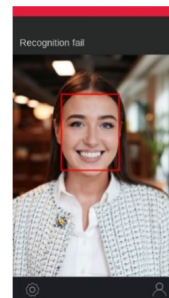

FACE RECOGNITION STARTS

Display color box around face indicates normal face (yellow) fake face (orange), or masked face (green).

IDENTIFICATION SUCCESS!

Subject is recognized and authorized: name and ID are shown.

IDENTIFICATION REJECTION

No match against internal, on-board data base.

Key Features

Feature	User Advantages
State of art optical design	Optical design utilizes highest quality optics and very fast shutter speed, allowing the system to exceed industry standards for image quality.
Dual face cameras	Two cameras—one in visible and one in NIR—optimize face detection in the lowest of ambient lighting conditions and provide for superior live face detection.
Wide angle face imaging	Outstanding capture volume allows height range of 0.4 to 2 cm.
Advanced real time subject tracking with simple user instructions	NovaFace-2 accurately locates the subject face in real time and tracks in 4 sides of angle to provides wider and deeper positioning.
Intuitive user interface	Modeled after latest smart-phone user displays, the user experience will be intuitive and effortless for almost all subjects.
Face matching engines	Advanced, embedded 8 core ARM CPU allows utilization of latest and most powerful and accurate face algorithms.
Display of authentication (matching) results	Automatic display of matching results, positioned adjacent to subject's face.
Language support	English, Korean, Simplified Chinese, Traditional Chinese, Japanese, Arabic, Spanish, Italian, Turkish, French.
Large on-board (embedded) face template data base	Stores up to 20,000 active face templates on-board in 1:N recognition (verification) identification mode.
High speed face matching	Up to 20,000 matches per second on-board.
Widest range of lighting conditions	Embedded illuminators in both white and NIR ranges expand use in adverse ambient lighting environments.
Standard multi-band RFID reader	MiFare, DesFire, FeliCa card support with standard embedded ISO/IEC 14443 reader.
Live face detection	YES, proprietary algorithm.
Powerful and simple SDK	Based on CMITech's proven high level SDK architecture and code, the NovaFace-2 is simple to integrate. All APIs reside on host-side application in Windows C++, Windows C# (.NET) and Linus OS, so no device level programming is necessary. Reference code supplied with SDK.
Full range of deployment options	Standard connections include Ethernet, dual Wiegand in / out, GPI, RS-485, Dry contact relay, Tamper, Factory Reset, SIM Socket.

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Technical Specifications

CPU	ARM octa-core
Memory	2 GB RAM, 8GB Flash
Number of cameras	Two (2)
Illumination	One visible (white) and one near-infrared (NIR) LED for optimal face detection and operation in low ambient light conditions
Dimensions	100 x 200 x 36 mm
Weight	450 g
Display	5.0 inch (nominal), touch
Operating capture range	40 cm to 200 cm
User height range	145 cm to 210 cm (with system installed at 135cm)
Face extraction (encoding) and matching algorithm	YES, on-board algorithm functions included as standard
Authentication speed	Within 1.0 second
Enrollment speed	Within 5.0 second
Fake face detection	Yes
Data base size, on-board	Maximum 20,000 subjects in 1:N mode (authentication)
Audio	YES, front speaker
Power requirement	15 to 24 V DC nominal; maximum 3.0 watt. Power supply included
RF card reader	Standard ISO/IEC 14443 for MiFare, DesFire and FeliCa cards
I/O connections	RJ45 for Ethernet, Wiegand In and Out, GPI (3), RS-485, dry contact relay, Tamper, Factory Reset, SIM Socket (optional)
USB	For host and service modes

Contact

Please Contact CMITech or your representative for more information about the NovaFace-2 product, CMIRIS Software Development Kits (SDK) and other supporting software.

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