ARMATURA

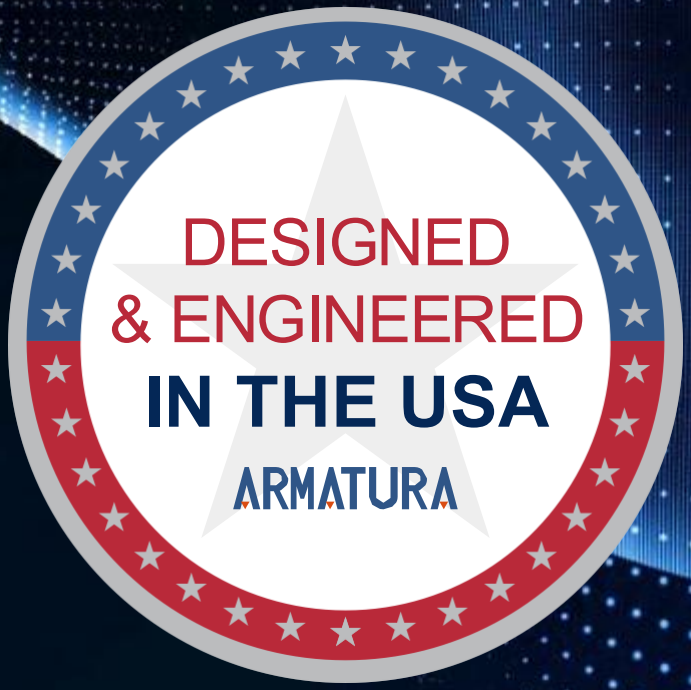
PRODUCT CATALOGUE

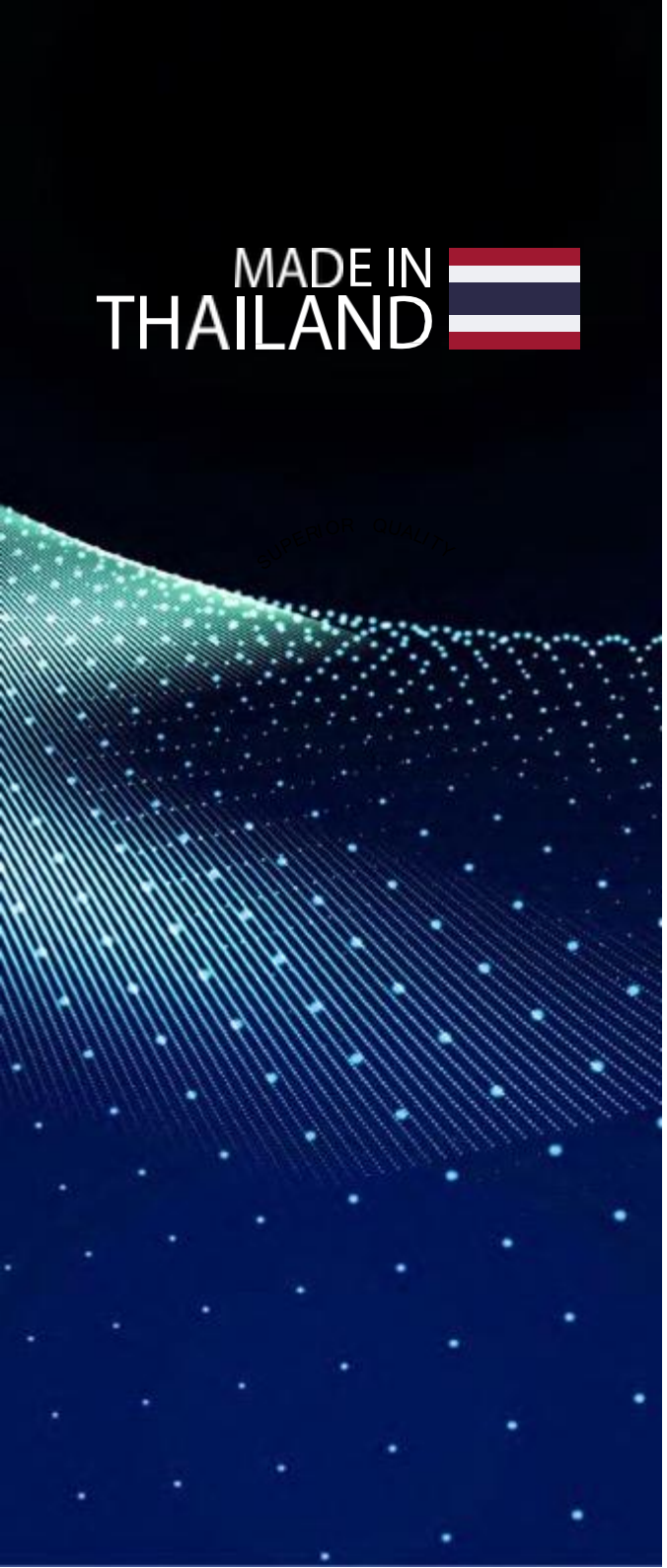
SUPERIOR QUALITY
DESIGNED & ENGINEERED IN THE USA
ARMATURA
GEORGIA • USA

SOFTWARE DEVELOPMENT KIT SDK

ARMATURA

Armatura is a Trusted Global High-tech Biometrics and Security Solution Provider





Our Mission

Our Mission: Creating a Secure, Connected Future with Biometric Solutions

At Armatura, our mission is to create a secure, connected future by developing and delivering innovative biometric solutions that seamlessly bridge the gap between the physical and digital worlds. Our advanced identity authentication and access management systems empower individuals and organizations to embrace the benefits of digital transformation with confidence, enhancing security while streamlining daily interactions and transactions.

Who We Are

Armatura is a leading provider of advanced biometric solutions that bridge the gap between the physical and digital worlds. We are dedicated to delivering innovative, secure, and accurate identity authentication and access management systems to our clients worldwide. Our diverse clientele includes systems integrators, security providers, government agencies, and multinational corporations.

Our team consists of talented professionals with deep expertise in the fields of biometrics, artificial intelligence, deep learning, and computer vision. We are driven by a passion for innovation, a commitment to excellence, and a belief in the transformative power of technology to improve lives.

Access Control and Biometric Solutions

A.I. Enhanced Security Solutions

Biometric Integration

Access Control Controllers

Centralization enables easy management of all access points at a single location. Armatura provides a comprehensive range of access control panels. These panels connect and operate additional devices on-site, following event-driven rules set up in the management software

AHSC Series

IP-Based Core Controller

AHSC-1000

- Main controller and integration hubs
- PoE (IEEE802.3at)
- Scalable, Supports up to 32pcs AHDU-1460 and 258 readers
- Onboard Webserver
- Threat Levels and Port Failover

AHDU Series

IP-Based Biometric Door Unit Controller

AHDU-1160 AHDU-1260 AHDU-1460

- Single Door Unit (supports 1 door and 2 readers) (AHDU-1160)
- Two Door Unit (supports 2 door and 4 readers) (AHDU-1260)
- Four Door Unit (supports 4 door and 8 readers) (AHDU-14 60)
- PoE (IEEE802.3at)
- Scalable, Supports up to 24pcs AHEB expansion boards
- Advanced Access Control Functions
- 4-States Supervised and Programmable Inputs (Active, In-Active, Open, Short)

AHEB Series

IO Expansion Board

AHEB-0808 AHEB-1602 AHEB-1616

- 8 Inputs and 8 Outputs (AHEB-0808)
- 16 Inputs and 2 Outputs (AHEB-1602)
- 16 Inputs and 16 Outputs (AHEB-1616)
- Scalable
- 4-States Supervised and Programmable Inputs (Active, In-Active, Open, Short)

Access Control Readers

Armatura offers a diverse range of external readers with impressive features. These readers boast IP68 waterproof and dustproof levels, as well as IK07 and IK10 impact resistance. Additionally, they meet fire resistance standards, ensuring robust security applications

EP10 Series
All Weather Outdoor Multi-tech Smart Reader

EP10C

- K10 & IP68 Protection Level
- Supports 100+ card types and dual RFID frequencies
- Supports Mobile Credentials (Bluetooth & NFC)
- Mullion Mount Design
- Supports Asian / European / Single-gang box back-box spacing

EP20 Series
All Weather Outdoor Multi-tech Smart Reader

EP20C EP20CK EP20CQ EP20CKQ

- Up to IK10 & IP68 Protection Level
- Physical keypad
- Supports 100+ card types and dual RFID frequencies
- Supports Mobile Credentials (Bluetooth & NFC & QR code)
- Supports Asian / European / Single-gang box

VG10CKQ
All Weather Outdoor Multi-tech Smart Reader

- Up to IK07 & IP66 Protection Level
- Physical keypad
- Supports 100+ card types and dual RFID frequencies
- Supports Mobile Credentials (Bluetooth & NFC & QR code)
- Interactive Experiences with LED Programmability

Biometric Access Control Readers

Armatura provides a diverse range of external biometric readers that integrate facial and palm authentication technology. These readers are meticulously designed to meet IP66 and IP65 waterproof and dustproof standards, ensuring exceptional security and durability for various security applications.

EP30CF
Multi-Tech Fingerprint Reader

- Up to IP65 Protection Level
- Advanced Fingerprint Scanning Technology
- Supports 100+ card types and dual RFID frequencies
- Supports Mobile Credentials (Bluetooth & NFC)

FT10CMQ
Contactless Biometric Standalone Terminal

- Up to IP66 Protection Level
- Multimodal biometric technology, touchless palm and face authentication
- Supports 100+ card types and dual RFID frequencies
- Supports Mobile Credentials (Bluetooth & NFC & QR code)
- Supports video intercom function (SIP V2.0)
- Supports Asian / European / Single-gang box

Biometric Access Control Standalone Terminals

Armatura provides comprehensive systems that seamlessly integrate access control and time & attendance management. Their range of access control solutions includes cutting-edge features such as face and palm authentication, mobile credential, and RFID identification. These solutions cater to entrance, exit, and all access points, ensuring robust security and efficient management.

OmniAC20
Contactless Biometric Standalone Terminal

- Multi-Biometric technology combining palm and face authentication
- IP66 water & dustproof protection rating
- Supports Mobile Credentials (Bluetooth & NFC & QR code)
- Slim design & form factor for a modern aesthetic design
- Supports 125 kHz and 13.56 MHz frequency RFID
- Supports Dynamic QR Code
- Mobile Credentials Remote Mode & Card Mode) (Coming Soon)
- Video Intercom (SIP V2.0)

OmniAC30
Contactless Biometric Standalone Terminal

- Multi-Biometric technology combining palm and face authentication
- IP66 water & dustproof protection rating
- Supports Mobile Credentials (Bluetooth & NFC & QR code)
- Supports 125 kHz and 13.56 MHz frequency RFID
- Supports PoE (IEEE802.3at/af)
- Supports Dynamic QR Code
- Mobile Credentials Remote Mode & Card Mode) (Coming Soon)
- Video Intercom (SIP V2.0)

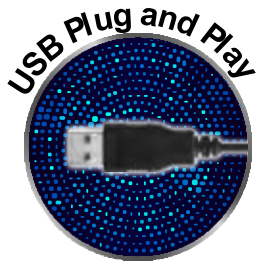
POESL10
Undermount PoE Splitter

- Compliant with the IEEE 802.3at standard
- Data rate of 10Base-T/ 100Base-TX
- Output of 12V / 1.5A power supply
- Protection against short circuits, over-current, and overheating
- Supports transmission distances of up to 100 meters

Intelligent Multi-tech Enroller

The EP20 ENC facilitates RFID enroling operations, supporting and reading most RFID cards. It connects to a PC via USB for easy plug-and-play functionality. Additionally, it meets UL94V-0 flammability standards, ensuring that it does not sustain burning combustion for more than 10 seconds after exposure to a controlled flame

EP20 ENC
Intelligent Multi-tech Enroller

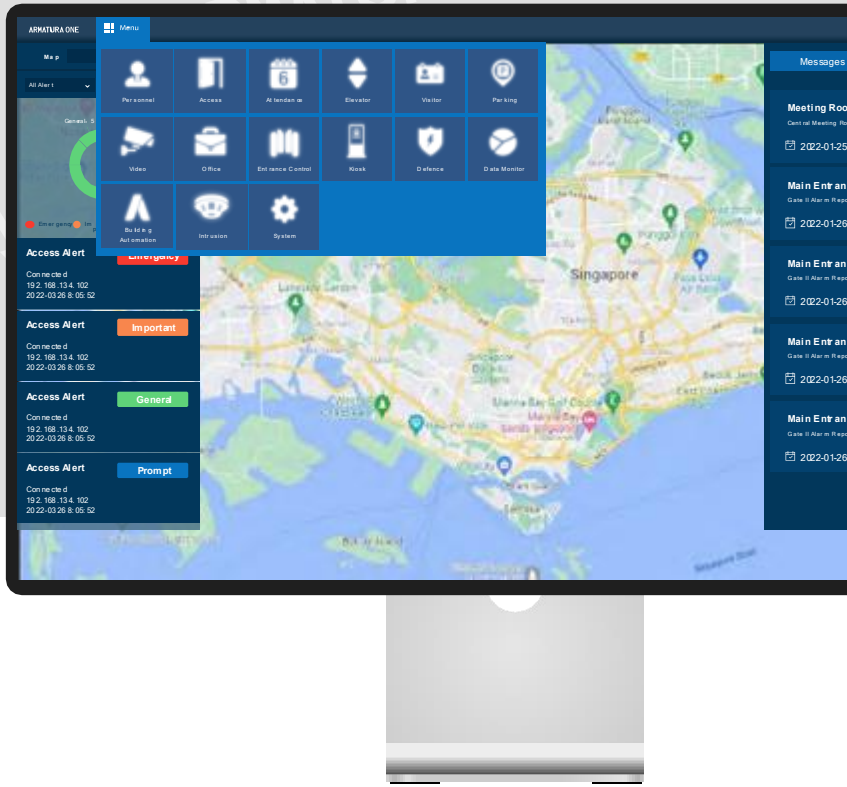


- RFID Reading Capabilities
- USB Plug and Play
- Housing Material Meets UL94-V0 Standard
- Designed For Advanced Security

Software

ARMATURA ONE

Web-Based Versatile Security Platform



Armatura One is the ultimate “All-in-One” web-based security platform developed by Armatura. It contains multiple integrated modules: Personnel, Access Control, Time & Attendance, Elevator, Visitor, Parking Management, Video Management System, Office, Entrance Control, FaceKiosk, Defence, Data Monitor, Building Automation and Intrusion.

Personnel	Access	Attendance	Elevator	Visitor	Parking	Video
Office	Entrance Control	Kiosk	Defence	Data Monitor	Building Automation	Intrusion

Mobile Application

ARMATURA CONNECT

Smartphone-Based Parameter Configuration Solutions

AES 256 · TLS · Bluetooth · NFC · OSDP

Armatua Connect is a smartphone-based parameter configuration app that allows administrators and installers to utilize their smartphones for convenient, on-the-spot configuration. When in close proximity to access control terminals or controllers, the app connect via Bluetooth, facilitating real-time parameter changes, settings customization, and firmware upgrades. The app streamlines maintenance and ensures systems remain up-to-date with the latest features and security enhancements

Company

A section for viewing the authorized account, company, or unit for management.

Parameter

Enhance convenience for technical staff by allowing them to modify parameters, access controls, and product security settings.

Template

Allow technical staff to quickly fill in the product settings. They can simply enter the suggested value for each parameter and click a button to automatically populate the parameter in the new products.

Mobile Application

ARMATURA ID

Armatura Mobile Credential App

AES 256 · TLS · Bluetooth · NFC · OSDP

The Armatura ID app offers three innovative access modes for enhanced convenience and security. The Remote Mode (BLE) allows users to send a credential via bluetooth to Armatura devices remotely through the mobile app. Card Mode turns mobile phones into access credentials, while QR Code Mode enables access by scanning QR codes. These modes provide flexible and efficient solutions for various access control needs.

Remote Mode (BLE)

Remote mode offers users the experience of remotely unlocking any Armatura access control device by tapping the button in the Armatura ID mobile app for long distance access in mobile (Android/ iOS) device, it satisfies the needs of long-distance operation.

Card mode (BLE / NFC)

Card mode utilizes mobile phones to function as a user's credential to enter offices or other business facilities. In card mode, simply present your smartphone (Andriod/ iOS) to the reader to gain access.

QR code mode (BLE/ NFC)

The Armatura ID mobile app (Andriod/ iOS) provides QR Code credentials as an option to open doors with Armatura readers.

With QR codes replacing conventional physical keys, visitors are enabled to access designated area by scanning their QR codes.

Biometric Modules

Armatura biometric modules are designed to provide developers and manufacturers with refined biometric security solutions to integrate with various applications such as access control systems, time & attendance terminals, smart lock and entrance control, to assist them in the acquisition of the original biometric data of an individual.

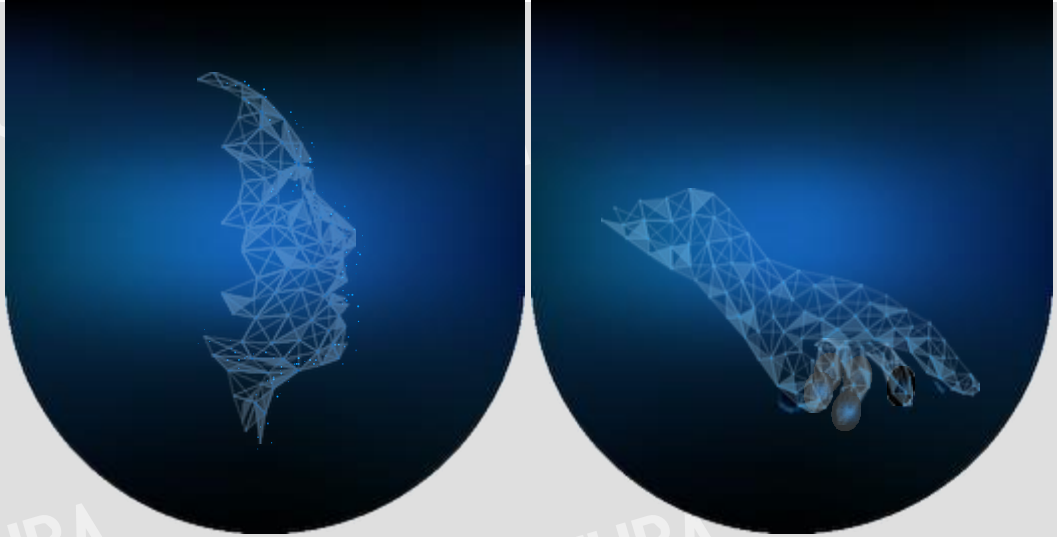
AMT-FAM-10
Dual-lens Face Module

AMT-FAR-10
Dual-lens Face Reader

AMT-PVM-10
Palm Vein Module

AMT-PVR-10
Palm Vein reader

Biometric Modules



Armatura 30 series multimodal biometric modules are a collection of compact and lightweight multimodal biometric modules that utilize both infrared (IR) and visible light (VL) cameras for face and palm authentication. The family of biometric modules supports the acquisition and transmission of face and palm images, the extraction and storage of biometric templates, as well as their matching and template data management. Additionally, it is designed to be versatile enough to adapt to various lighting conditions while providing touchless multimodal biometric authentication capabilities.

- Highly adaptive standalone touchless face and palm authentication modules for a wide range of applications.
- Auto exposure on region of interest to capture high-quality face and palm image to ensure authentication accuracy
- Lightweight, compact design with developer-friendly interfaces for easy integration with hardware and software applications.
- Auto exposure on region of interest to capture high-quality face and palm image to ensure authentication accuracy

AMT-FAPVS-30
Dual-Lens Multimodal Standalone Module
for Face and Palm Authentication

AMT-FAPVR-30
Dual-Lens Multimodal Standalone Reader
for Face and Palm Authentication

Biometric Modules

AMT-PVS-50 has been upgraded to include a dual-camera module with visible light and near-infrared (NIR) authentication, allowing the module to capture subcutaneous palm vein pattern color images and grayscale palm print images for enhanced biometric authentication.

Palm vein patterns are unique and life-long invariable to each person, invisible to human eyes, and formed by active blood flowing in live tissues. Its image can be captured only by special Infrared camera like AMT-PVS-50 module which delivers highly secure anti-spoofing protection for user authentication.

The AMT-PVS-50 module is designed to adapt to varying lighting conditions, ranging from low light conditions as low as 0.01 LUX to high light conditions of up to 100,000 LUX. This adaptability ensures reliable performance across different environments and lighting levels.

- Dual-camera to capture high-definition palm vein and palmprint images
- Wide angle and short focus Len for excellent user experience
- Built-in palm detection and extraction algorithms
- Adaptable to a variety of varying lighting conditions from 0.01LUX to 100.000LUX
- Light-weight and compact size to fit a wide range of hardware applications
- The associated SDK supports Windows, Android and Linux mainstream platforms

AMT-PVS-50
Standalone Palm Module

SOFTWARE DEVELOPMENT KIT SDK

ARMATURA

SOFTWARE DEVELOPMENT KIT SDK

Armatura offers software development kit (SDK) for developers and manufacturers to easily integrate with third-party software for flexible and scalable development.

Armatura FaceLite SDK

Armatura FaceLite SDK encapsulates Armatura near-Infrared face authentication algorithm and provides rich programming interfaces to the full cycle face authentication operations, including face detection, liveness detection, face template extraction and matching.FaceLite SDK also wraps libusb function calls to support USB 2.0 compatible communication protocols with Armatura face modules. FaceLite SDK supports popular operating systems including Windows, Android and Linux (on request).

Armatura PalmLite SDK

Armatura PalmLite SDK encapsulates Armatura near-Infrared palm authentication algorithm and provides rich programming interfaces to the full cycle palm authentication operations, including palm detection, liveness detection, palm template extraction and matching.The PalmLite SDK also wraps libusb function calls to support USB 2.0 compatible communication protocols with Armatura palm modules. The SDK supports popular operating systems including Windows, Android and Linux (on request).

Armatura PalmElite SDK

PalmElite SDK is a set of deep learning-based computer vision technologies on palm authentication running on Windows PC, Android or embedded Linux device. Working with Armatura palmvein collection module AMTPVR-10 or AMT-PVM-10, the SDK provides rich programming interfaces to perform palm authentication functionalities, including palm detection, liveness detection for forgery attack protection, biometric template generation, verification and identification operations.

Armatura MultiBio SDK

Armatura MultiBio SDK is a developer-friendly software development kit that encapsulates the programming interfaces to communicate with Armatura Multimodal modules on firmware configuration, face & palm enrollment and authentication operations, and more.MultiBio SDK supports USB 2.0 compatible UVC video streaming and HID data communication protocols, encapsulates the function calls to the on-chip face & palm algorithms that are running directly on the module.

Biometric Algorithm SDK for Mobile Platform

Armatura FacePro SDK

Armatura FacePro SDK for Android is a pure software development toolkit running on general or custom Android devices which have built-in digital camera or external web camera, such devices can be Android smartphones, tablets or handheld devices.

Armatura PalmMobile SDK

Armatura PalmMobile SDK is a set of Artificial Intelligent Computer Vision palm authentication technologies running on PC, Tablet or Mobile device. Such devices can be Android/iOS smartphones, tablets, Android handheld devices, or PC/ Laptop. PalmMobile SDK provides rich interfaces to access the palm authentication functions, including palm detection, liveness detection for anti-spoofing protection, template generation, matching and verification.

Armatura FaceLive SDK

Armatura FaceLive SDK provides with a high-accuracy passive facial liveness detection functionalities. It detects presentation attacks using dual-channel images taken by visible light and Infrared light dual-lens camera. The detection process is passive which means no user interaction involved— no smiling, blinking, head-turning, lights flashing, or moving the camera. This unique liveness detection approach is fast, accurate, and user-experience friendly.

SOFTWARE DEVELOPMENT KIT SDK

Application Scenarios

Armatura SDK is a development toolkit with rich functions that enable flexible and efficient application development, covering a wide range of categories. It allows developers to quickly and easily integrate clients' applications, maximizing the efficacy of the solutions' functions and adding value to them.

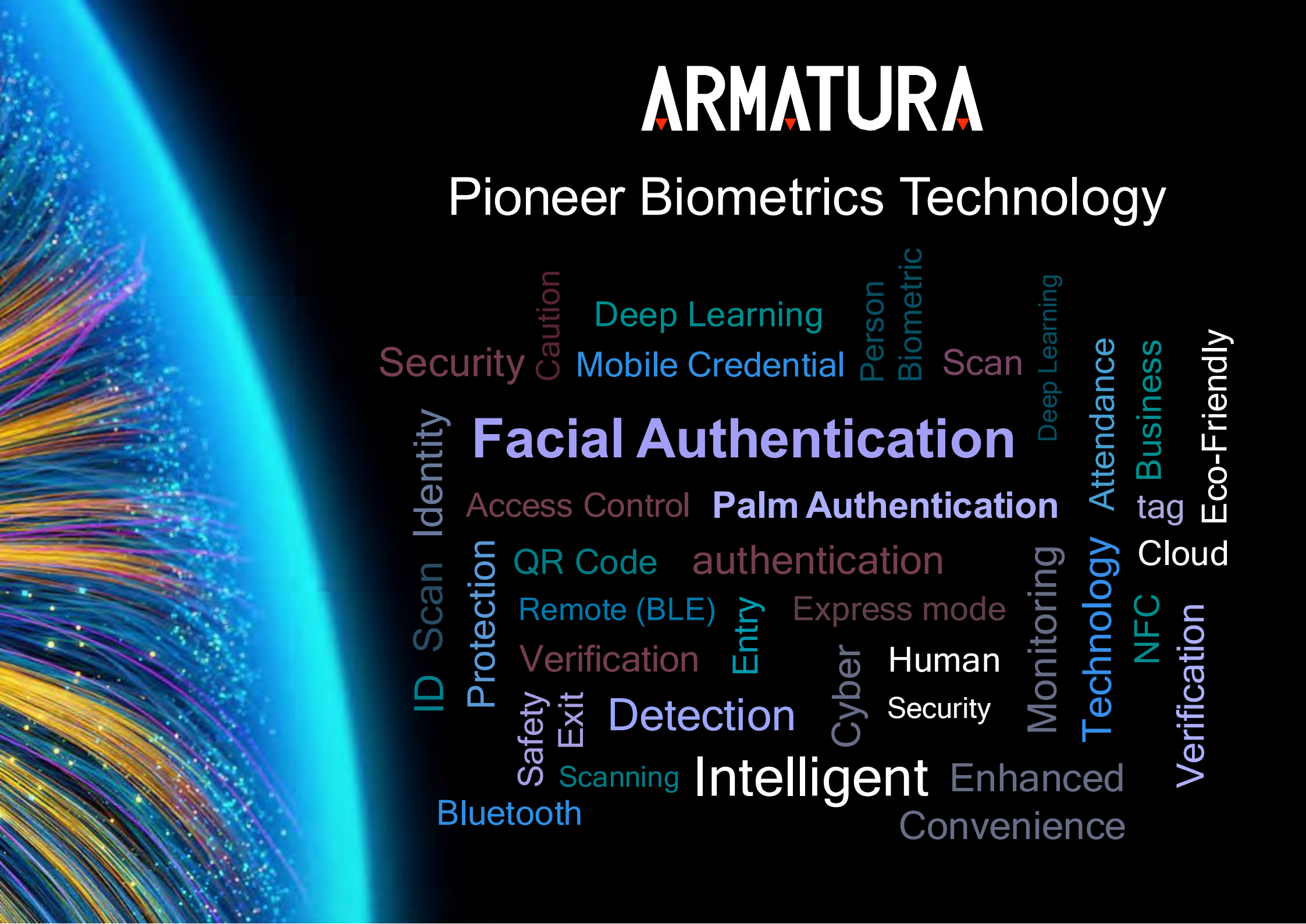
Armatura is designed with functional modules, which enable developers to utilize the advantages of Facial Authentication, Palm Authentication and Biometric QR Code techniques.

POS with Biometric Payment System
(Palm Authentication)

Fast-Pass System
(Facial Authentication)

Biometric QR Code System
(BioCode)


Armatura ID
Biometrics Technology
Biometric Modules
SDK
Application Scenarios


ARMATURA
Pioneer Biometrics Technology
Security
Caution
Deep Learning
Mobile Credential
Person
Biometric
Scan
Deep Learning
Attendance
Business
Eco-Friendly
Facial Authentication
ID
Scan
Identity
Access Control
Palm Authentication
tag
Cloud
Protection
QR Code
authentication
Technology
Monitoring
Remote (BLE)
Express mode
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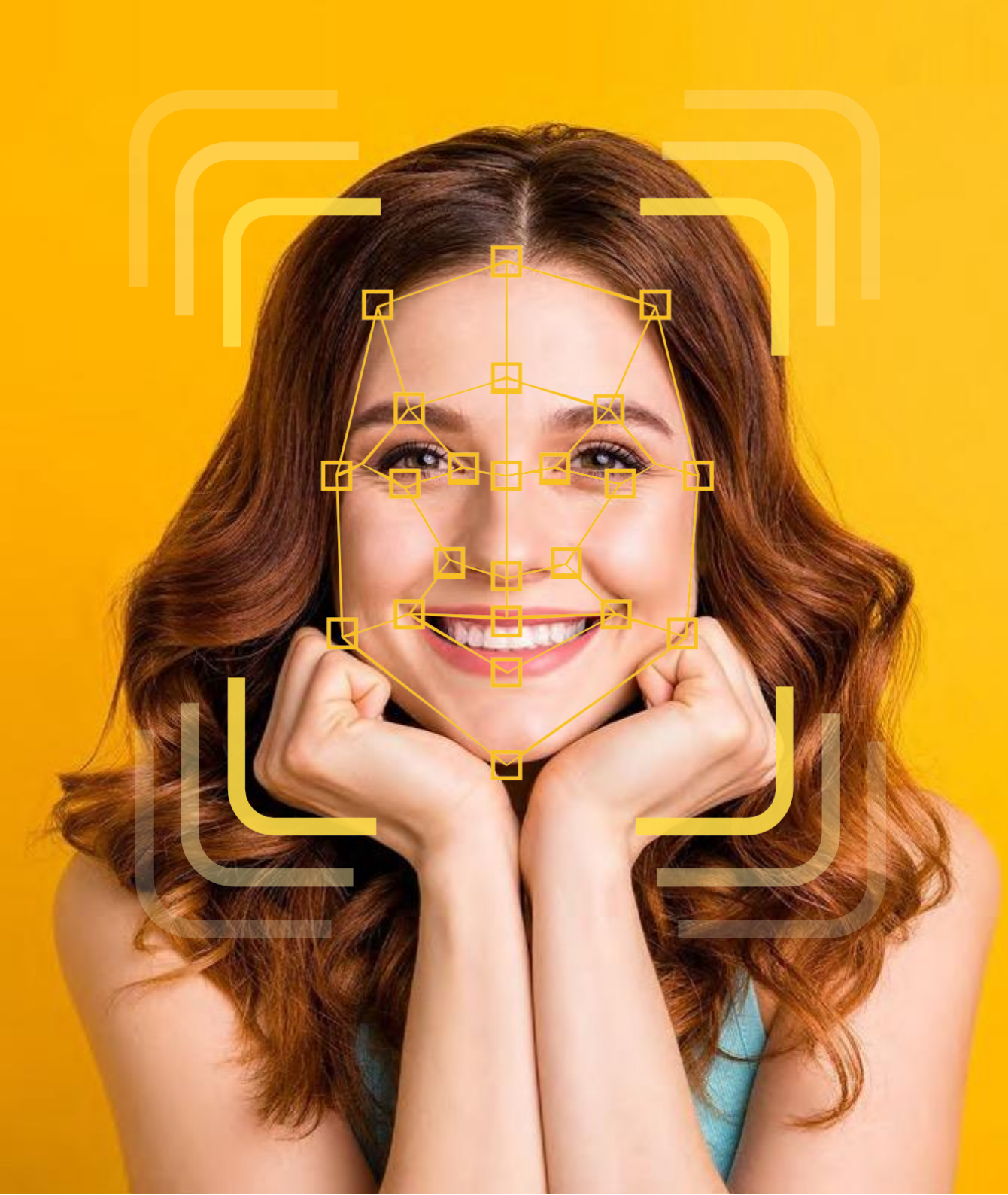
Human
Security
Safety
Exit
Detection
Intelligent
Scanning
Enhanced
Bluetooth
Convenience



Facial Authentication

Armatura’s face authentication technology is highly efficient with deep learning and computer vision algorithm for secure, flexible and dependable applications. The technology enables quick and automatic authentication of human faces, users no longer need to stand steadily in front of camera. Upon passing through the specific area, they are automatically verified.

Facial Authentication

Armatura's face authentication terminals are proactive facial authentication devices, which is enabled to actively collect face images and perform matching and identification up to 10 feets (3 meters) long with an extra-wide angle of 30 degree and 0.3 seconds ultra-fast face verification speed.

Verification Distance
10 fts

Verification Time
0.3s

Verification Angle
30°

Facial Authentication

Top ranked performance in NIST/FRVT 1:1 & 1:N Testing				
	Specified False Match Rate/ FMR	Armatura False Non-Match Rate/ FMR	TOP FRVT FNMR	Median FRVT FNMR
VISA	0.0001%	0.29%	0.06%	1.14%
MUGSHOT	0.0010%	0.26%	0.21%	0.65%
VISABORDER	0.0001%	0.25%	0.16%	1.12%
BORDER	0.0001%	0.49%	0.32%	3.84%
KIOSK PHOTO	0.0010%	5.58%	3.94%	12.57%
WILD	0.0010%	3.17%	2.93%	3.56%

Armatura algorithm is ranked **26th** out of 478 algorithms

Overall accuracy benchmark ranking

ALGORITHM NAME	VISA	MUGSHOT	VISABORDER	BORDER	WILD	KIOSK Photo	SUM OF RANKS	OVERALL RANK
Company A	0.0023 (29)	0.0034 (130)	0.0031 (42)	0.0057 (23)	0.0300 (16)	0.0595 (45)	285	21
Company B	0.0035 (62)	0.0024 (28)	0.0033 (56)	0.0065 (37)	0.0306 (92)	0.0532 (22)	297	22
Company C	0.0031 (51)	0.0036 (136)	0.0025 (20)	0.0065 (35)	0.0301 (37)	0.0519 (19)	298	23
Company D	0.0027 (40)	0.0023 (14)	0.0033 (54)	0.0063 (32)	0.0304 (75)	0.0786 (90)	305	24
Company E	0.0035 (63)	0.0024 (31)	0.0034 (59)	0.0066 (38)	0.0306 (93)	0.0534 (26)	310	25
Armatura	**0.0029 (44)**	**0.0026 (55)**	**0.0025 (19)**	**0.0049 (11)**	**0.0317 (151)**	**0.0558 (36)**	**316**	**26**
Company F	0.0035 (65)	0.0023 (10)	0.0035 (68)	0.0104 (95)	0.0301 (34)	0.0594 (44)	316	27
Company G	0.0032 (55)	0.0023 (15)	0.0034 (64)	0.0067 (40)	0.0304 (79)	0.0683 (67)	320	28
Company H	0.0040 (79)	0.0028 (79)	0.0035 (71)	0.0059 (27)	0.0301 (32)	0.0544 (33)	321	29
Company I	0.0019 (16)	0.0024 (25)	0.0027 (27)	0.0115 (107)	0.0303 (62)	0.0765 (88)	325	30

Palm Authentication

Armatura utilizes the newest generation of palm authentication technology, which reaches a new height of the industry by verifying images of palm and palm print. Palm image can be extracted by simply capturing the hands in front of camera for automatic authentication.

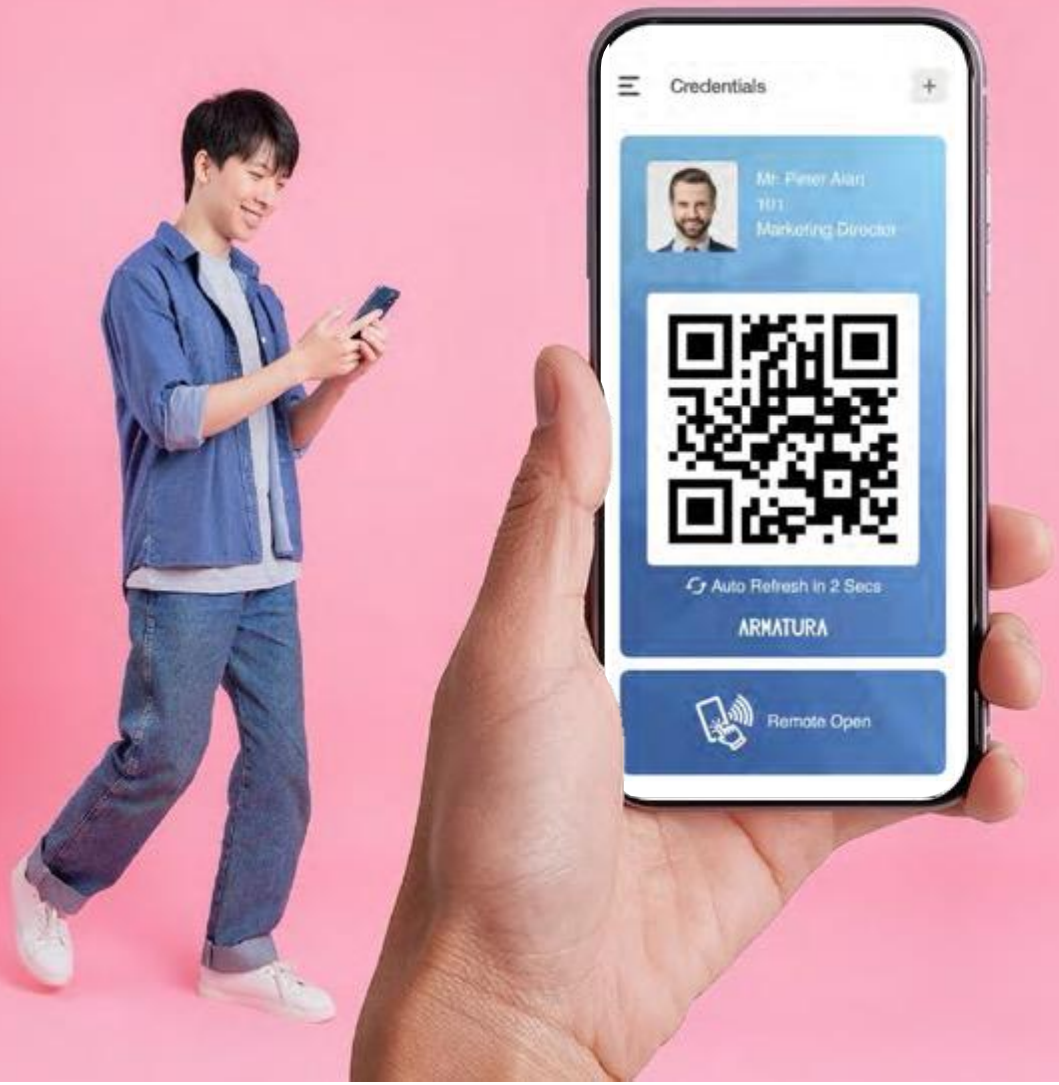
Palm Authentication

With the newest palm authentication technology, the whole authentication time can be finished in 0.35 seconds. Moreover, the computer vision technology has greatly enhanced the authentication performance, the angle tolerance is improved to as wide as +/- 60 degrees (roll axis), and the verification distance can be up to 1.6 feets (0.5 meters) upon the palm-size.

Verification Distance
1.6 fts

Verification Time
0.35s

Verification Angle
60º



Mobile Credential

With the Armatura's applications and software which enable mobile access with BLE & NFC & QR Code, users are able to use their smartphones as the RFID card to obtain access rights on Armatura's or 3rd-party access control device for identity authentication anywhere anytime.

Bluetooth™ NFC

CARD MODE

Place your smartphone over the reader like any physical access card.

REMOTE MODE

Open doors remotely by tapping a virtual button in the mobile app.

QR CODE MODE

Present your QR Code and get access.

Biometric-Encrypted QR Code on Smart Phone

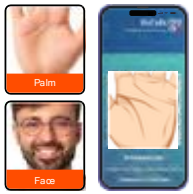
With BioCode, you get a fully scalable and decentralised system that allows storing all your biometric data and templates on your phone, which can then be converted into a fully encrypted QR code. This minimize the need for expensive front-end terminals, complicated network infrastructure, and high-speed servers, making BioCode the perfect solution for organisations that demand optimal performance and cost-effectiveness.

TOTP
Time-based One-Time Password

GDPR

How it works: Discover our Mobile Biometric Identity Solution

Launch the app and register your palm and face



Launch the BioCode mobile app on your smart device and initiate the biometric identity registration process by scanning both your palm and face.

Secure Generation of BioCode

The app can generate a QR code by converting your biometric templates

Presenting BioCode for Authentication

Open the BioCode mobile app, and present the BioCode in front of the terminal.

Biometric Verification

Second Steps, Biometric Verification, it can be either palm or face, depends on which biometric you are using.

Get Access To Secured Area

If both verifications are successful, proceed directly to the assigned area.

RFID Reader

Armatura’s innovative RFID products ensure easy, simple and worry-free verification experiences, with only one swipe to go.

ARMATURA's products support multi-RFID frequency and 100+ RFID card types, including most of the world's common RFID formats such as ID, IC, DESFire EV1/2/3/4, Legic, Felica, NFC, etc.

LED Light Programmability

Discover the versatility of our customizable LED lights, offering a wide range of colors and display styles to suit diverse scenarios.

Certified of Data Protection

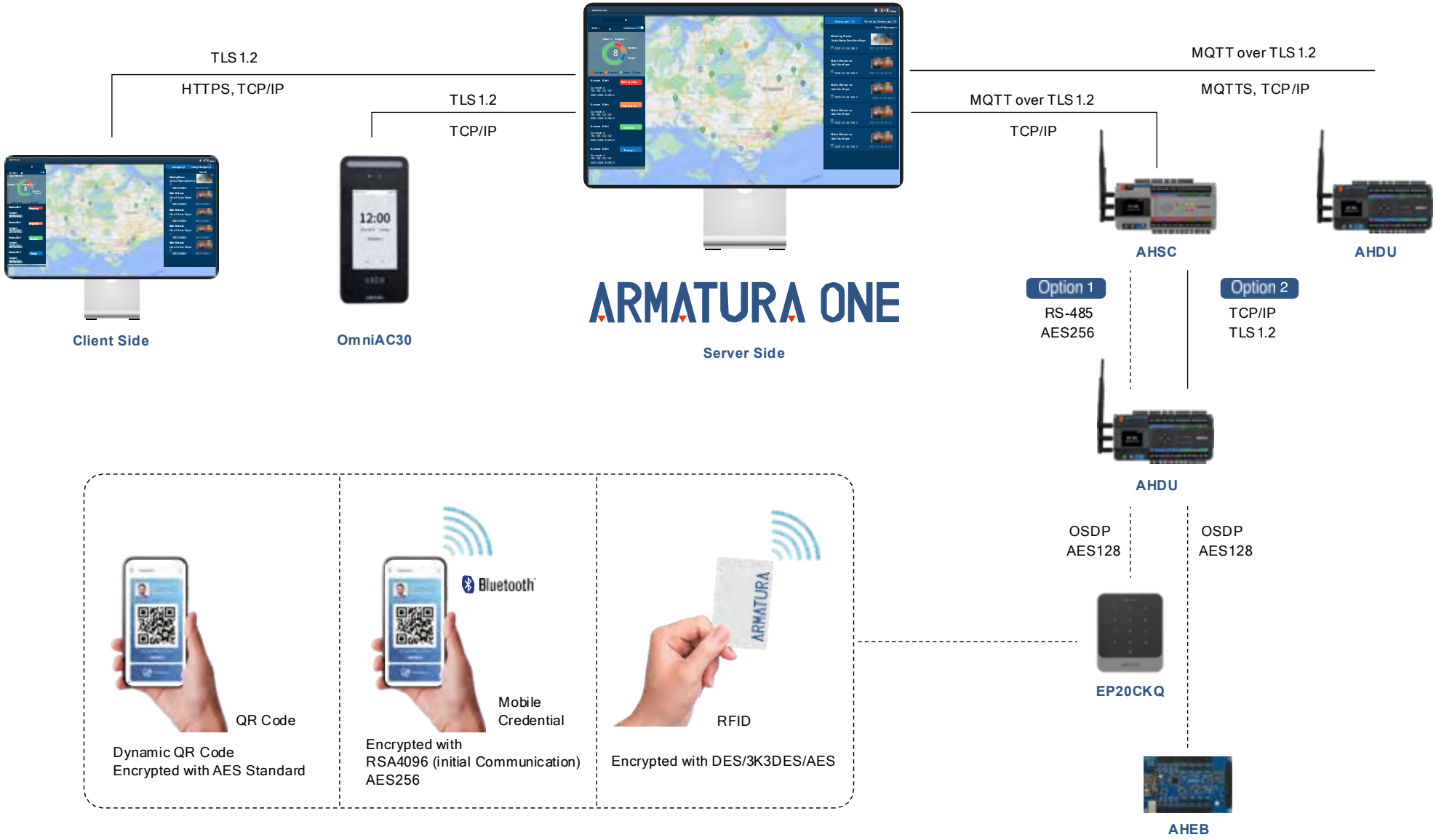
ARMATURA

Certified of Data Protection

Data and privacy protection are always one of the primary concerns of Armatura; all of Armatura's engineers and researchers have done their best to deliver Armatura's system with the highest level of data protection in the industry.

Armatura's systems, developed by experienced R&D teams, which reached the CMMI5 standard, are GDPR and CCPA compliant and are certified by ISO 27001, 27701, 27017 data protection measures.
All Armatura's communications are encrypted with the best measures by using different encryption methods such as AES128, AES256, TLS1.2, etc., and all vital information is stored in certified EAL6+ crypto chips, with access routes securely blocked.

Certified of Data Protection



Versatile Integration

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