ARMATURA

OmniAC Series - OmniAC20

All Weather Outdoor Multi-tech Smart Standalone Terminal

- Multi-Biometric technology combining palm and face recognition
- IP66 water & dustproof protection rating
- Slim design & form factor for a modern aesthetic design
- Supports 125 kHz and 13.56 MHz frequency credentials

Slim Design & Installation Made Easy

The devices slim design with its backplate suits most architectural and any flat surface mounting. Slim design & form factor makes this device easy to install. Mounting accessories for speed gates are also available.

IP66 Water & Dustproof Protection Rating

Certified IP66 water & dustproof rating ensures the readers can withstand dust, dirt, sand, and are resistant to strong winds and rain.

Advanced Security

Secure communication: OSDP(V2.1.7) over RS-485 communication between the OmniAC20 and access control panels. Using AES-128 encryption standards ensures the highest levels of data protection & security.

Supports Multi-Card Types

Supports 125 kHz and 13.56 MHz frequency credentials. Supports various card types including EM, IC Card, HID Prox, HID iCLASS, DESFire and FeliCa.

Multi-Factor Authentication Capability

Offering credential options of palm, face, physical cards and QR codes.
*IC Card, Desfire, HID Prox, iClass, SEOS, etc.
*Integrate advanced multiple biometric recognition methods such as palm and face.
*QR code scanning for visitors & employees.
*PIN code option.

Video Intercom（Coming Soon）

The OmniAC20 supports video intercom function suitable for most visitor scenarios. Two-way audio streaming with echo and noise cancellation lets you easily communicate with visitors.

Sleep-and-Wake Mode

The function enables activation of face recognition camera upon detection of face, in case always-on face recognition is not needed, which reduces the heat generated by the always-on face recognition of the camera for better protection and performance of the device.

Modern Aesthetic Design

The build of the OmniAC20 blends a high quality metal enclosure with a tempered glass panel. The elegant design fits perfectly into any usage scenario and its sleek design brings a practical and reliable experience to users.

Industry-Leading Design and User Experience

The OmniAC20 provides an improved user experience with a 2.4" high resolution touchscreen screen and intuitive UI design. Using our advanced algorithms, users can get the best verification experience.
Palm recognition distance range: 7" - 15.7" (18cm - 40cm)
Face recognition distance range: 15.7"- 47.2" (40cm - 120cm)

Variable Input Voltage

The device is compatible with 9V-24V input voltages.

Outdoor Rated for Variable Environments

IP66 Weatherproof rating - built to withstand freezing cold winters, heavy rains and dry/hot summers. -4°F - 140°F (-20°C to 60°C) operating temperature enables operation even under the most severe weather conditions.

Unrivaled Palm and Face Recognition Performance

ARMATURA's Multi-Biometric technology combines palm and face recognition with our unique deep learning algorithm to give users an efficient authentication experience.
Industry-leading combination of visible and NIR infrared recognition technology provides exceptional authentication accuracy and the industry's top-notch anti-spoofing protection.

Touchless Solution for New standards of the Post-pandemic World

The OmniAC20 meets the needs of the contactless world with features like remote user enrollment, palm, mask detection and face recognition for users with or without masks. Our Palm/ Face/ Card/ QR code recognition technology supports contactless authentication.

Better Images, Faster Recognition

This device supports palm/ face tracking, which can more intelligently capture the user's biometrics and avoid the user's biometric from continuing to be compared after verifying. At the same time, the palm/ face Automatic Exposure function enables the device to obtain higher quality images which improves the recognition accuracy.

Dimensions

General Information	
Primary Power	9 to 24 VDC (3A min @12V)
RS-485 connection	Port 1: RS-485 standard / OSDP V2.1.7
CPU	1.2 GHZ Quad Core ARM Processor
NPU	2.4 TOPs NPU
Memory	8 GB Flash + 1 GB RAM
Camera	Face Automatic Exposure Palm Automatic Exposure Face Tracking Palm Tracking WDR HDR 50Hz to 60Hz Automatic Adaption Dual Camera CMOS 2MP（Output image 720P*960P）
Primary Host Communication	Ethernet: 10/ 100 Mbps, auto MDI/ MDIX Complies with TLS 1.2 for end-to-end secure communication channel
Ethernet network connection	Port 1:10/ 100 Mbps, auto MDI/ MDIX
Data Protection	Complies with TLS 1.2 for end-to-end secure communication channel (Secured Communication between Standalone Terminal & Server) AES128 (Secured Communication between Standalone Terminal & OSDP Reader & Access Control Panel)
Number of Ports	1*TCP/IP 1*RS-485 Input: 4ch TTL Inputs Output: 1ch TTL Output 3 relays
Inputs	Wiegand in, Button, Sensor in, Aux Input
Outputs	Wiegand Output, 3 relays with dry contacts (Lock, Alarm, Bell)

Normally Open Contact Rating	5A @30Vdc resistive
Normally Closed Contact Rating	5A @30Vdc resistive
Tamper Switch	Magnetic tamper detection system
On-Board Monitor	Size: 2.4", Resolution: 320*240, Touch Screen, TFT
Audio Indicator	Internal speaker with adjustable intensity (Configurable on UI)
MIC	Supported
Video Phone	Coming Soon
User Capacity	50,000
RFID Card Capacity	50,000 (1:N)/ 50,000 (1:1)
Maximum RFID Card Number Length	Wiegand In & Out (up to 64 bits)
Face Capacity	10,000 (1:N)/ 50,000 (1:1)
Palm Capacity	5,000 (1:N)/ 20,000 (1:1)
RFID Reading Distance	13.56MHz & 125kHz: Up to 1.96"/ 50 mm (depending on environment and transponder)
Face Recognition Distance	Dual Camera Liveness Detection On: 15.7" - 55.1" (40cm - 140cm) Single Camera Liveness Detection On: 15.7" - 78.7" (40cm - 200cm)
Face Recognition Posture Adaptability	Yaw ≤ 30°, Pitch ≤ 30°, Roll ≤45°
Face Recognition Accuracy	True Accept Rate (TAR)=99%@, False Accept Rate(FAR)=0.01%
Face Recognition Mode	1:1, 1:N
Face Recognition Speed	< 100ms (Field Test Result)
Face Recognition Liveness Detection	Yes (Infrared-visible light mode, Infrared Light Mode)
Face Mask Detection	Yes
Palm Recognition Distance	Liveness Detection On: 7” -15.7” (18cm - 40cm)
Palm Recognition Posture Adaptability	Yaw ≤ 45°, Pitch ≤ 30°, Roll ≤ 90°, Bend ≤ 30°
Palm Recognition Accuracy	True Accept Rate(TAR)=98.7%@, False Accept Rate(FAR)=0.01%
Palm Recognition Mode	1:1, 1:N
Palm Recognition Speed	< 140ms (Field Test Result)
Palm Recognition Liveness Detection	Yes (Infrared Light Mode)
Recommend Installation Height	55" (140cm) (Using the plate with tilt angle) 59" (150cm) (Plate with horizontal angle)
Transaction Buffer	Records: 1,000,000
Access group	99
On-Board Access Point Control	1 access point on board
On-Board Reader Support	1 (OSDP over RS-485) or 1 (Wiegand Input)
Protection / Resistance	Weather & Dust Proof Protection Rating compliant with IP66

RFID / Biometrics Reader Interface	
Input Voltage	9 to 24 VDC (3A min @12V)(Equal to primary power input)
Maximum Input Current	9 to 24 VDC (3A min @12V)(Equal to primary power input)
RS-485 Protocol	OSDP 2.1.7 Secure Channel, AES-128
OSDP Mode	9600-115200 bps, OSDP V2.1.7, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit.
Wiegand	Wiegand In & Out (Up to 64 bits)
Data Inputs	TCP/IP, RS-485, OSDP and Wiegand standards supported. Maximum RS-485/ OSDP cable length: 500ft (152m) Maximum Wiegand cable length: 328ft (100m)

Cable Requirement	
Power & Relays	Twisted pair, 18 to 16 AWG
Ethernet	CAT-5, minimum 330 ft. (100m)
RS-485 Reader Port	9600-115200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. One twisted pair with drain wire and shield, 120 ohm resistance, 22-18 AWG, Maximum cable length: 3937ft (1200m)
Wiegand Port	20 AWG shielded ,328ft. (100m)

Mechanical	
Dimensions	2.3" W x 0.77" D x 7.3" H (58.47 x 19.5x 184.97mm)
Weight	11.53oz (327g)
Mounting	Suited for mullion-mount door installations or any flat surface mounting Supports rots-02 bracket
Housing Material	Aluminum alloy + Tempered glass

Environmental	
Operating & Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Operating Humidity	0 - 90% RH (Non-condensing)
Certification(s)	FCC, CE, RoHS

Software Interface	
TCP/IP Mode	Ethernet: 10 - 100Base-TX
TCP/IP Protocol	VLAN, SSH, HTTP, IPv4, DNS
TCP/IP Encryption	Complied up to TLS1.2 end to end secure communication channel
TCP/IP Communication	Push Protocol over HTTP, HTTPS
Supported Software	Armatura One Security System

ARMATURA RFID Card Module Supporting List

ArmaSec-03012023

Frequency	Classification	Card Module Abbreviation	[RNP]	[RNI]
		Compatible Readers	OmniAC20 & OmniAC30	OmniAC20 & OmniAC30
13.56MHz	ISO14443A	LEGIC Advant		
		MIFARE Classic, Mini S50,S70,S50	√4)	√4)
		MIFARE Classic EV1	√4)	√4)
		MIFARE DESFire Light	√4)	√4)
		MIFARE DESFire EV1	√4)	√4)
		MIFARE DESFire EV2	√4)	√4)
		MIFARE Plus S, X	√4)	√4)
		MIFARE Pro X	√4)	√4)
		MIFARE Smart MX	√4)	√4)
		MIFARE Ultralight	√4)	√4)
		MIFARE Ultralight C	√4)	√4)
		MIFARE Ultralight EV1	√4)	√4)
		NFC (NTAG2xx)		
		PayPass		
		SLE44R35		
		SLE66Rxx (my-d move)		
		Topaz		
		HID iCLASS SEOS		√20)
		NFC (HCE Mode, works with Armatura ID)		
	ISO14443B	Calypso		
		Calypso Innovatron protocol		
		CEPAS		
		HID iCLASS		
		CTS		
		Moneo		
		Pico Pass		
		SRI4K, SRIX4K		
		SRI512, SRT512		
	ISO18092/ ECMA-340	Sony FeliCa	√1)	√1)
	ISO15693	EM4x33		
		EM4x35		
		HID iCLASS	√1)	√10)
		HID iCLASS SE/ SR/ Elite	√1)	√10)
		iCODE SLI		
		LEGIC Advant		
		M24LR16/64		
		MB89R118/119		
		SRF55Vxx (my-d vicinity)		
		Tag-it		
		Pico Pass		
		LEGIC Prime		
		CPU Card		

To be released

ARMATURA RFID Card Module Supporting List

Frequency	Classification	Card Module Abbreviation	[RNP]	[RNI]
		Compatible Readers	OmniAC20 & OmniAC30	OmniAC20 & OmniAC30
125kHz		AWID		
		Cardax		
		CASI-RUSCO	√	√
		Cotag		
		Deister		
		EM4100, 4102, 4200	√	√
		EM4050, 4150, 4450, 4550		
		EM4305		
		FDX-B, EM4105		
		Ultra Prox		
		G-Prox		
		HID DuoProx II (1336)	√1)	√1)
		HID ISO Prox II (1386)	√1)	√1)
		HID Micro Prox II (1391)	√1)	√1)
		HID Prox III (1346)	√1)	√1)
		HID Prox	√1)	√1)
		HID Prox II (1326)	√1)	√1)
		HITAG 1, 2, S		
		ICT		
		IDTECK		
		Indaia		
		ioProx		
		ISONAS		
		Keri		
		Miro		
		Nedap		
		Nexwatch		
		PAC		
		Pyramid		
		Q5		
		T5557, T5567, T5577		
		TITAN (EM4050)		
		UNIQUE		
		ZODIAC		
		Globally Available	Y	Y
	Availability	Globally Available Except for U.S., E.U., Japan, Australia, Canada, U.K., Albania, Iceland, Liechtenstein, Monaco, North Macedonia, Norway, San Marino, Serbia, Switzerland, Turkey, and the United Kingdom		

1) UID only
2) Read /write enhanced security features on request
3) Read /write in direct chip command mode
4) UID only, read/write on request
5) UID + read /write public area
6) Hash value only
7) Only emulation of 4100, 4102
8) On request
9) Without encryption
10) UID+PAC (CSN & Facility Code), read /write on request
11) In preparation
13) EV2/EV3 supported as part of the EV1 upward compatibility
14) From FW V4.05
20) PAC (CSN & Facility Code), read /write on request

To be released

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