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

OSDP™

### 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)

### Power & Voltage

The device is compatible with 12V 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.

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## Dimensions

| General Information | |
|---|---|
| Primary Power | 12 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<br>Palm Automatic Exposure<br>Face Tracking<br>Palm Tracking<br>WDR<br>HDR<br>50Hz to 60Hz Automatic Adaption<br>Dual Camera<br>CMOS 2MP（Output image 720P*960P） |
| Primary Host Communication | Ethernet: 10/ 100 Mbps, auto MDI/ MDIX<br>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)<br>AES128 (Secured Communication between Standalone Terminal & OSDP Reader & Access Control Panel) |
| Number of Ports | 1*TCP/IP<br>1*RS-485<br>Input: 4ch TTL Inputs<br>Output: 1ch TTL Output<br>3 relays |
| Inputs | Wiegand in, Button, Sensor in, Aux Input |
| Outputs | Wiegand Output, 3 relays with dry contacts (Lock, Alarm, Bell) |

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| | |
|---|---|
| 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)<br>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)<br>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 |

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| 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.<br>Maximum RS-485/ OSDP cable length: 500ft (152m)<br>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.<br>One twisted pair with drain wire and shield, 120 ohm resistance, 22-18 AWG,<br>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<br>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 |

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# ARMATURA RFID Card Module Supporting List

ArmaSec-13112023

| | | Card Module Abbreviation | [DF] | [SFMH] | [NO] | [NP] | [NI] | [NPL] | [NIH] | [RNP] | [RNI] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Frequency | Classification | Compatible Readers | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP20ENC/ EP30 Series | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP20ENC/ EP30 Series/ VG10CKQ* | EP10C/ EP20ENC | EP10C/ EP20ENC | EP10C/EP20CQ/ EP20CKQ/ EP20ENC | EP10C | EP10C | OmniAC20/ OmniAC30/ EP20CQ*/ EP20CKQ*/ VG10CKQ* | OmniAC20/ OmniAC30/ EP20CQ*/ EP20CKQ*/ VG10CKQ* |
| 13.56MHz | ISO14443A | LEGIC Advant | | √ | √1) | √1) | √1) | | √1) | | |
| | | MIFARE Classic, Mini S50,S70 | √4) | √ | √ | √ | √ | | √ | √4) | √4) |
| | | MIFARE Classic EV1 | √4) | √2) | √2) | √2) | √2) | | √2) | √4) | √4) |
| | | MIFARE DESFire Light | | √8) | √8) | √8) | √8) | | √8) | √4) | √4) |
| | | MIFARE DESFire EV1 | √4) | √ | √ | √ | √ | | √ | √4) | √4) |
| | | MIFARE DESFire EV2/ EV3 | √4) | √13) | √13) | √13) | √13) | | √13) | √4) | √4) |
| | | MIFARE Plus S, X | | √ | √ | √ | √ | | √ | √4) | √4) |
| | | MIFARE Smart MX | | √3) | √3) | √3) | √3) | | √3) | √4) | √4) |
| | | MIFARE Ultralight | | √ | √ | √ | √ | | √ | √4) | √4) |
| | | MIFARE Ultralight C | | √ | √ | √ | √ | | √ | √4) | √4) |
| | | MIFARE Ultralight EV1 | | √2) | √2) | √2) | √2) | | √2) | √4) | √4) |
| | | NFC (NTAG2xx) | √ | | √ | √ | √ | | √ | | |
| | | SLE44R35 | | √3) | √3) | √3) | √3) | | √3) | | |
| | | SLE66Rxx (my-d move) | | √3) | √3) | √3) | √3) | | √3) | | |
| | | Topaz | | | √ | √ | √ | | √ | | |
| | | HID iCLASS SEOS | | | | | √20) | | √20) | | √20) |
| | | NFC(HCE & NTAG2xx) | | √ | √ | √ | √ | | √ | | |
| | ISO14443B | Calypso | | √3) | √3) | √3) | √3) | | √3) | | |
| | | Calypso Innovatron protocol | | √3) | √3) | √3) | √3) | | √3) | | |
| | | CEPAS | | √3) | √3) | √3) | √3) | | √3) | | |
| | | CTS | | | √ | √ | √ | | √10) | | |
| | | Pico Pass | | √1) | √4) | √4) | √4) | | √4) | | |
| | | SRI4K, SRIX4K | | √ | √ | √ | √ | | √ | | |
| | | SRI512, SRT512 | | | √ | √ | √ | | √ | | |
| | ISO18092/ ECMA-340 | Sony FeliCa | | √5) | √5) | √5) | √5) | | √5) | √1) | √1) |
| | ISO15693 | EM4x33 | | √3) | √3) | √3) | √3) | | √3) | | |
| | | EM4x35 | | √3) | √3) | √3) | √3) | | √3) | | |
| | | HID iCLASS | | √1) | √1) | √1) | √10) | | √10) | √1) | √10) |
| | | HID iCLASS SE/ SR/ Elite | | √1) | √1) | √1) | √10) | | √10) | √1) | √10) |
| | | iCODE SLI | | √ | √ | √ | √ | | √ | | |
| | | LEGIC Advant | | √1) | √1) | √1) | √1) | | √1) | | |
| | | M24LR16/64 | | √ | √ | √ | √ | | √ | | |
| | | MB89R118/119 | | | √ | √ | √ | | √ | | |
| | | SRF55Vxx (my-d vicinity) | | √3) | √3) | √3) | √3) | | √3) | | |
| | | Tag-it | | √ | √ | √ | √ | | √ | | |
| | | Pico Pass | | √1) | √4) | √4) | √4) | | √4) | | |
| | | LEGIC Prime | | √ | | | | | | | |
| | | CPU Card | | | | | | | | | |

***To be released**

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# ARMATURA RFID Card Module Supporting List

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| | | Card Module Abbreviation | [DF] | [SFMH] | [NO] | [NP] | [NI] | [NPL] | [NIH] | [RNP] | [RNI] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Frequency | Classification | Compatible Readers | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP20ENC/ EP30 Series | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP20ENC/ EP30 Series/ VG10CKQ* | EP10C/ EP20ENC | EP10C/ EP20ENC | EP10C/EP20CQ/ EP20CKQ/ EP20ENC | EP10C | EP10C | OmniAC20/ OmniAC30/ EP20CQ*/ EP20CKQ*/ VG10CKQ* | OmniAC20/ OmniAC30/ EP20CQ*/ EP20CKQ*/ VG10CKQ* |
| 125kHz | | AWID | | | √ | √ | √ | √ | | | |
| | | Cardax | | | √ | √ | √ | √ | | | |
| | | CASI-RUSCO | | | √6) | √6) | √6) | √6) | | √ | √ |
| | | Deister | | | √6) | √6) | √6) | √6) | | | |
| | | EM4100, 4102, 4200 | √ | | √7) | √7) | √7) | √7) | | √ | √ |
| | | EM4050, 4150, 4450, 4550 | | | √ | √ | √ | √ | | | |
| | | EM4305 | | | √ | √ | √ | √ | | | |
| | | Ultra Prox | | | √ | √ | √ | √ | | | |
| | | G-Prox | | | | √6) | √6) | √6) | | | |
| | | 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 | | | √9) | √9) | √9) | √9) | | | |
| | | ICT | | | √8) | √8) | √8) | √8) | | | |
| | | IDTECK | | | √ | √ | √ | √ | | | |
| | | Indala | | | | √ | √ | √ | | | |
| | | ioProx | | | | √ | √ | | | | |
| | | ISONAS | | | √ | √ | √ | √ | | | |
| | | Keri | | | √ | √ | √ | √ | | | |
| | | Miro | | | √ | √ | √ | √ | | | |
| | | Nedap | | | √6) | √6) | √6) | √6) | | | |
| | | Nexwatch | | | | √ | √ | √ | | | |
| | | Pyramid | | | √ | √ | √ | √ | | | |
| | | Q5 | | | √ | √ | √ | √ | | | |
| | | T5557, T5567, T5577 | | | √ | √ | √ | √ | | | |
| | | TITAN (EM4050) | | | √ | √ | √ | √ | | | |
| | | UNIQUE | | | √ | √ | √ | √ | | | |
| | | ZODIAC | | | √ | √ | √ | √ | | | |
| | | Globally Available | | Y | | | | Y | Y | 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 | Y | | Y | Y | Y | | | | |

√) UID only, customization upon request for reading encryption content
1) UID only
2) Read/ write (customisation) enhanced security features on request
3) Read/ write (customisation) in direct chip command mode
4) UID only, read/ write (customisation) on request
5) UID + read/ write (customisation) 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(customisation) on request
11) In preparation
13) EV2/ EV3 supported as part of the EV1 downward compatibility
14) From FW V4.05
15) 134.2 kHz only
20) PAC (CSN & Facility Code), read/ write (customisation) on request

The final interpretation of this data sheet belongs to Armatura LLC.

All information regarding the card formats supported by the RFID card modules are claimed by the provider(s) of the card modules. Armatura LLC accepts no liability.

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ScreenCheck India, a Centena group company, is a one-stop solution provider of identity and security in India. Screencheck provides individual as well as end-to-end integrated solutions for

- ID Card Issuance
- Attendance Management
- Access Control
- CCTV Solutions
- A.I Enhanced Security Systems
- Security Inspection
- Parking Barriers & Solutions

and other innovations that meet 21st-century security requirements. The unique solutions are catered to Government, Corporate, Educational, Manufacturing, Retail and other major industries across India. The global domain expertise built over these years has made Screencheck the entrusted identification and security solutions partner in the region.

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