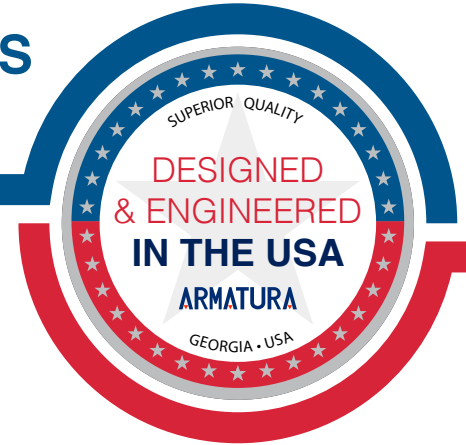
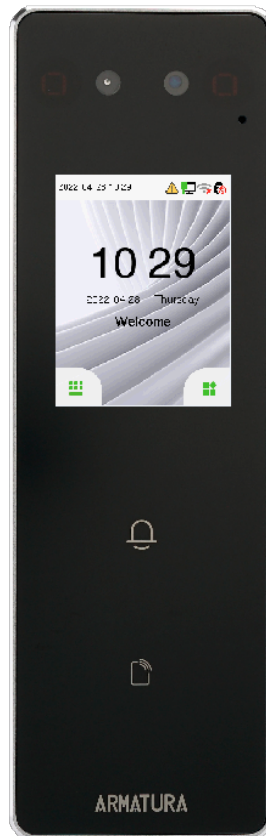


ARCHITECTURAL AND ENGINEERING SPECIFICATIONS



OmniAC Series
OmniAC20
All Weather Outdoor Multi-tech
Smart Standalone Terminal



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Section 1

1. Purpose

The purpose of this architectural and engineering specifications (A&E) document is to provide guidance for the design, implementation, and installation of the OmniAC Series, an all-weather outdoor multi-tech smart standalone terminal for access control applications and security management.

2. Goals and Objectives

The OmniAC20 an all-weather outdoor multi-tech smart standalone terminal A&E document aims to achieve the following goals and objectives:

- Provide a highly secure and reliable multi-tech smart standalone terminal with multi-biometric technology combining touchless palm and facial authentication.
- Ensure scalability and flexibility to accommodate varying user and system requirements.
- Meet or exceed relevant industry standards and regulations.
- Provide a clear and detailed specifications for the design, supply, installation, and commissioning of the OmniAC20.

3. Key Features and Requirements

The OmniAC20 an all-weather outdoor multi-tech smart standalone terminal, shall have the following key features and requirements:

- Multi-Biometric technology combining palm and face authentication. Support contactless Palm, face and RFID card authentication.
- Unrivalled palm and facial authentication with unique deep learning algorithm. A combination of visible and NIR infrared authentication technology offers exceptional authentication accuracy.
- Supports palm and face tracking for more intelligent capture the users' biometrics and avoid the users' biometrics from continuing to be compared after verifying.
- Supports 125 kHz and 13.56 MHz frequency credentials. Supports various card types including EM, IC Card, HID Prox, HID iCLASS, DESFire and FeliCa.

- Offers a 2.4-inch high-resolution touchscreen and intuitive UI design with advanced algorithms, supporting palm authentication at distance ranging from 7” to 15.7” (18cm to 40 cm), posture angle tolerance includes: pitch +/- 35° , yaw +/- 60° , roll +/- 35° and blend +/- 30° . While the facial authentication at distances ranging from 15.7” to 17.2” (40cm to 120 cm) for dual camera liveness detection.
- Compatible with input voltage from 9V to 24V.
- Support standard SIP Version 2.0 protocol for video intercom function. With a two-way audio streaming with echo and noise cancellation for an easy communication with visitors.
- Reach IP66 protection rating, providing waterproof and dustproof, fully operate in extreme weather conditions, including cold winters, heavy rains and dry or hot summers.
- A tap-to wake function enables the enables activation of face authentication camera upon detection of face, in case always-on face authentication is not needed and reduce heat generation.
- A modern aesthetic design with a high-quality metal enclosure and a tempered glass panel.
- Slim design with its backplate suits most architectural and interior designs. Supports various mount types, including mullion-mount door installations or any flat surface mounting. It also supports rots-02 bracket.

4. Design And Implementation Constraints

The design and implementation of the OmniAC20 all-weather outdoor multi-tech smart standalone terminal shall adhere to the following constraints:

- The design shall be scalable and flexible to accommodate varying user and system requirements.
- The implementation shall be done by trained installers who have been certified by the manufacturer.
- The implementation shall comply with relevant standards and regulations.
- The implementation shall ensure high-level cybersecurity to protect against unauthorized access or data breaches.

5. Existing Standards and Regulations

The OmniAC20 all-weather outdoor multi-tech smart standalone terminal shall comply with the following standards and regulations:

- FCC Standards
- CE Standards
- RoHS Standards
- MIC Standards

6. Submittals

The following submittals shall be provided by the manufacturer.

- Product data sheets
- Installation and operation manuals
- Technical support contact information
- Warranty information

7. Qualifications

The manufacturer shall have the following qualifications:

- ISO 9001 certification, ISO27701, ISO27001, ISO9001, ISO14001.
- Minimum of 5 years' experience in producing access control equipment.

8. Warranty

The manufacturer shall provide a limited 36-month warranty for the OmniAC20, an all-weather outdoor multi-tech smart standalone terminal to be free of defects in material and workmanship.

Section 2

1. Key Features and Requirements

1.1 Key Features and specifications

- i. Support multi-factor authentication capability
 - Provides users with multiple ways to access it, such as palm and face authentication, cards, QR codes, and PIN codes. It supports various types of IC cards and offers advanced biometric authentication methods like palm and facial authentication.
 - User capacity supports 50,000; Face capacity supports 10,000 (1:N) or 50,000 (1:1). Palm capacity supports 5,000 (1:N) or 20,000 (1:1).
 - Facial authentication distance range is 15.7" to 55.1" (40cm to 140cm). And the face authentication posture adaptability consists of Yaw $\leq 30^\circ$, Pitch $\leq 30^\circ$ and Roll $\leq 45^\circ$.
 - Palm authentication distance and angle tolerance is about 7" to 15.7" (18cm to 40cm) and the palm authentication posture adaptability consists of Yaw $\leq 45^\circ$, Pitch $\leq 30^\circ$, Roll $\leq 90^\circ$ and Bend $\leq 30^\circ$.
 - Facial authentication speed is 100ms (field test result).
 - Palm authentication speed is 140ms (field test result).
 - Face authentication liveness detection includes infrared-visible light mode and infrared light mode.
 - Support Palm authentication liveness detection with infrared light mode.
 - Support face mask detection and support anti-spoofing live face detection.
 - Face and palm authentication mode comprises of 1:1 and 1:N.
 - The recommended installation height is at 55" (140cm) using the plate with tilt angle. When using the plate with horizontal angle, it is recommended to install at a height of 59"(150cm).
 - Transaction buffer supports 1,000,000 records.
- ii. Support Multi-card Types
 - Supports 125kHz and 13.56 MHz frequency credentials. Supports various card types including EM, IC Card, HID Prox, HID iCLASS, DESFire and FeliCa.
 - RFID capacity supports 50,000 (1:N) or 50,000 (1:1).

- RFID reading distance (13.56MHz & 125kHz): up to 1.96" (50mm) which depends on environment and transponder.
- Maximum RFID card number length is Wiegand In & Out (up to 64 bits).
- iii. A high-resolution 2.4" touchscreen with resolution 240*320, TFT touch screen.
- iv. Features an internal speaker with adjustable intensity which is configurable on UI. It also supports a microphone.
- v. Support standard SIP V2.0 for video intercom and video phone.
- vi. Equipped with a 1.2GHz Quad Core ARM Processor.
- vii. High performance: 2.4 TOPS NPU.
- viii. Offers a storage capacity of 8GB for flash memory and 1GB of RAM.
- ix. Equipped with a dual camera with face automatic exposure, palm automatic exposure, face tracking, palm detection. Also, the dual camera features 50Hz or 60Hz anti-flicker. The CMOS RGB camera offers a 2MP resolution and produce an output image with 720*960 pixels. Also, the global shutter CMOS IR camera with a 1.3MP resolution and outputting an image with 720*960 pixels.
- x. Ethernet network communication features 10 Base-T/ 100 Base-TX and Auto MDI/ MDIX.
- xi. Complies with TLS 1.2 for end-to end secure communication channel, to secure communication between standalone and terminal and server.
- xii. Adopts AES 128 encryption for data protection and to secure communication between standalone terminal, OSDP reader and access control panel.
- xiii. Number of Ports: 1 TCP/IP; 1 RS-485; Input:4ch TTL inputs; Output: 1ch TTL output and 3 relays.
- xiv. Inputs include Wiegand in, Button, Sensor in and Aux Input.

- xv. Outputs include 3 relays with dry contacts, Weigand Output, lock, alarm and bell.
- xvi. Normally open contact rating is 5A@30Vdc resistive.
- xvii. Normally closed contact rating is 5A@30Vdc resistive.
- xviii. Offers a magnetic tamper detection system through the tamper switch.
- xix. Provides 99 access group.
- xx. On-Board access-point control is 1 access point on board.
- xxi. On-Board Reader Support is 1 (OSDP over RS-485) or 1 (Wiegand Input).
- xxii. Compatible with variable input voltage, from 9V to 24V.
- xxiii. Reach IP66 protection rating, providing waterproof and dustproof, fully operate in extreme weather conditions, including cold winters, heavy rains and dry/hot summers.
- xxiv. Operating and storage temperature ranges from -20°C to 60°C/ -4°F - 140°F, with operating humidity at 10% to 95% RH (non-condensing).
- xxv. RFID and biometrics reader interface specified the input voltage at DC12V@3A (Equal to primary power input).
- xxvi. RFID and biometrics reader interface maximum input current is DC12V@3A (Equal to primary power input).
- xxvii. RS-485 protocol for the For the RFID and biometrics reader interface is OSDP Version 2.0/ 2.2* secure channel and adopts AES128 encryption.
- xxviii. Data inputs for RFID and biometrics reader interface includes TCP/IP, RS-485, OSDP and Wiegand standards. The maximum RS-485/ OSDP cable length is 1970ft. (600m) and the maximum Wiegand cable length is 164ft. (60m).
- xxix. For power and relays, the cable requirement is twisted pair, 18 to 16 AWG.
- xxx. The Ethernet cable requirement is CAT-5E, wire diameter (24AWG) with

maximum length of 330ft. (100m). 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 impedance, 22-18 AWG. The maximum cable length is 1970ft (600m).

- xxxvi. The cable requirement for Wiegand port is 20AWG shielded and a length of 164ft (60m).
- xxxvii. The weight of the device is 11.53oz (327g).
- xxxviii. The device is 2.3" in width, 0.77" in depth and 7.3" in height, which is equivalent to 58.47mm in width, 19.5mm in length and 184.97mm in height.
- xxxix. Suitable for mullion-mount door installations or any flat surface mounting. Supports rots-02 bracket.
- xl. The housing material includes aluminum alloy and tempered glass.
- xli. Complies with CE, FCC, MIC and RoHS standards.
- xlii. The operating humidity of operating environment is 0 - 90% RH (Non-condensing).
- xliiii. The operating temperature of operating environment is 14°F -113°F (-10°C to 45°C).
- xliiiii. The storage temperature of operating environment is -4°F -140°F (-20°C to 60°C).
- xl. Compatible with Armatura One Security system.
- xli. To establish a connection to the software interface in TCP/IP mode, requires configuring the network settings via 10 Base-T/100 Base-TX with Auto MDI/MDIX.
- xlii. To establish a connection to the software interface in TCP/IP Protocol, requires configuring via VLAN, SSH, HTTP, IPv4 and DNS.
- xliiii. Complied up to TLS1.2 end to end secure communication channel for TCP/IP encryption in the software interface.

- xliv. Adopt Push protocol over HTTP, HTTPS for the TCP/IP communication.

2. Technical Specifications

Dimensions



General Information	
Primary Power	DC 12V@3A-24V@1.5A, Power Max. 10W
RS-485 connection	RS-485 standard / OSDP V2.0/ 2.2*
CPU	1.2 GHz Quad Core ARM Processor
NPU	2.4 TOPs NPU
Memory	1GB RAM + 8GB Flash
Camera	Face Automatic Exposure Palm Automatic Exposure Face Tracking Palm Detection 50Hz/60Hz Anti-Flicker Dual Camera RGB Camera: CMOS, 2 MP resolution (Output image 720*960pixels) IR Camera: Global shutter CMOS, 1.3 MP resolution (Output image 720*960pixels)
Ethernet network connection	10 Base-T/ 100 Base-TX, 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 4ch TTL Inputs 1ch TTL Output 3 relays
Inputs	Wiegand, Button, Sensor, Aux
Outputs	Wiegand, 3 relays with dry contacts (Lock, Alarm, Bell)
Normally Open Contact Rating	5A @30Vdc resistive
Normally Closed Contact Rating	5A @30Vdc resistive

*Subject to firmware version

Operating Frequency/ Standard	125KHz 13.56MHz: ISO14443 types A&B, ISO 15693 2.4GHz Bluetooth
Tamper Switch	Magnetic tamper detection system
On-Board Monitor	Size: 2.4", Resolution: 240*320 , Touch Screen, TFT
Audio Indicator	Internal speaker with adjustable intensity (Configurable on UI)
MIC	Supported
Video Phone	Support Standard SIP V2.0
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 1.98"/ 50 mm (depending on environment and transponder)
Face Authentication Distance	15.7" - 55.1" (40cm - 140cm)
Face Authentication Posture Adaptability	Yaw $\leq 30^\circ$, Pitch $\leq 30^\circ$, Roll $\leq 45^\circ$
Face Authentication Accuracy	True Accept Rate (TAR)=99%@, False Accept Rate(FAR)=0.01%
Face Authentication Mode	1:1, 1:N
Face Authentication Speed	< 100ms (Field Test Result)
Face Authentication Liveness Detection	Yes (Infrared-visible light mode, Infrared Light Mode)
Face Mask Detection	Yes
Palm Authentication Distance	7" - 15.7" (18cm - 40cm)
Palm Authentication Posture Adaptability	Yaw $\leq 45^\circ$, Pitch $\leq 30^\circ$, Roll $\leq 90^\circ$, Bend $\leq 30^\circ$
Palm Authentication Accuracy	True Accept Rate(TAR)=98.7%@, False Accept Rate(FAR)=0.01%
Palm Authentication Mode	1:1, 1:N
Palm Authentication Speed	< 140ms (Field Test Result)
Palm Authentication 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

*Subject to firmware version

RFID / Biometrics Reader Interface	
Input Voltage	DC12V@3A (Equal to primary power input)
Maximum Input Current	DC12V@3A (Equal to primary power input)
RS-485 Protocol	OSDP V2.0/ 2.2* Secure Channel, AES-128
OSDP Mode	9600-115200 bps, OSDP V2.0/ 2.2*, 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: 1970ft (600m) Maximum Wiegand cable length: 164ft (60m)

*Subject to firmware version

Cable Requirement	
Power & Relays	Twisted pair, 18 to 16 AWG
Ethernet	CAT-5E, Wire diameter (24AWG), maximum 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 impedance, 22-18 AWG, Maximum cable length: 1970ft (600m)
Wiegand Port	20 AWG shielded, 164ft (60m)

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 Temperature	14°F -113°F (-10°C to 45°C)
Storage Temperature	-4°F -140°F (-20°C to 80°C)
Operating Humidity	0 - 90% RH (Non-condensing)
Certification(s)	CE, FCC, MIC, RoHS

Software Interface	
TCP/IP Mode	10 Base-T/ 100 Base-TX, Auto MDI/ MDIX
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

3. Armatura Card Module Supporting List

ARMATURA		ARMATURA RFID Card Module Supporting List											ArmaSec-06202024
Frequency	Classification	Card Module Abbreviation	[DF]	[SFMH]	[NO]	[NP]	[NI]	[NPL]	[NIH]	[RNP]	[RNI]	[RNB]	[RNPB]
	Competible Readers	EP10C/ EP20C/ EP20CK/ EP20CKQ/ EP20ENC/ EP30 Series	EP10C/ EP20C/ EP20CK/ EP20CKQ/ EP20ENC/ EP30 Series/ V010CKQ2	EP10C/ EP20ENC	EP10C/ EP20ENC	EP10C/ EP20CK/ EP20CKQ/ EP20ENC	EP10C	EP10C	OmniAC20/ OmniAC30/ EP20CKQ2/ V010CKQ2	OmniAC20/ OmniAC30/ EP20CKQ2/ V010CKQ2	OmniAC20/ OmniAC30	OmniAC20/ OmniAC30	
13.56MHz	ISO14443A	LEGIC Advent		✓	✓(1)	✓(1)	✓(1)		✓(1)				
		MIFARE Classic, Mini S50, S70	✓(4)	✓	✓	✓	✓		✓	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE Classic EV1	✓(4)	✓(2)	✓(2)	✓(2)	✓(2)		✓(2)	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE DESFire Light		✓(8)	✓(8)	✓(8)	✓(8)		✓(8)	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE DESFire EV1	✓(4)	✓	✓	✓	✓		✓	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE DESFire EV2/ EV3	✓(4)	✓(13)	✓(13)	✓(13)	✓(13)		✓(13)	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE Plus S, X		✓	✓	✓	✓		✓	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE Smart MX		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE Ultralight		✓	✓	✓	✓		✓	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE Ultralight C		✓	✓	✓	✓		✓	✓(4)	✓(4)	✓(4)	✓(4)
		MIFARE Ultralight EV1		✓(2)	✓(2)	✓(2)	✓(2)		✓(2)	✓(4)	✓(4)	✓(4)	✓(4)
		NFC (NTAG2xx)	✓		✓	✓	✓		✓				
		SLE44R35		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
		SLE66Rxx (my-d move)		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
	Topaz			✓	✓	✓		✓					
	HID iCLASS SEOS								✓(20)		✓(20)	✓(20)	✓(20)
	NFC(HCE & NTAG2xx)			✓	✓	✓		✓					
	ISO14443B	Calypso		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
		Calypso Innovatron protocol		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
		CEPAS		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
		CTS			✓	✓	✓		✓(10)				
		Pico Pass			✓(1)	✓(4)	✓(4)	✓(4)	✓(4)				
		SRI4K, SRIX4K			✓	✓	✓	✓	✓				
	ISO18092/ ECMA-340	SRI512, SRT512			✓	✓	✓	✓	✓				
		Sony FelIca		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)	✓(1)	✓(1)	✓(1)	✓(1)
	ISO15693	EM4x33		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
		EM4x36		✓(5)	✓(5)	✓(5)	✓(5)		✓(5)				
		HID iCLASS		✓(1)	✓(1)	✓(1)	✓(1)	✓(10)	✓(10)	✓(1)	✓(10)	✓(10)	✓(1)
		HID iCLASS SE/ SR/ Elite		✓(1)	✓(1)	✓(1)	✓(1)	✓(10)	✓(10)	✓(1)	✓(10)	✓(10)	✓(1)
		iCODE SLI		✓	✓	✓	✓	✓					
LEGIC Advent			✓(1)	✓(1)	✓(1)	✓(1)	✓(1)	✓(1)					
M24LR16V4			✓	✓	✓	✓	✓						
MB88R11B/119				✓	✓	✓	✓	✓					
SRF55xx (my-d vicinity)			✓(5)	✓(5)	✓(5)	✓(5)	✓(5)	✓(5)					
Tag-it			✓	✓	✓	✓	✓	✓					
Pico Pass			✓(1)	✓(4)	✓(4)	✓(4)	✓(4)	✓(4)					
LEGIC Prime				✓									
CPU Card													

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Date: 1 Aug 2024
 Version Number: Version 1.2

ARMATURA													ARMATURA RFID Card Module Supporting List			ArmaGeo-06/20/2024	
Frequency	Classification	Card Module Abbreviation	[DF]	[SPMH]	[NO]	[NF]	[NI]	[NPL]	[NIH]	[RNP]	[RNI]	[RNIB]	[RNPS]				
			Compatible Readers	EP10C/ EP20C/ EP20CK/ EP20CKQ/ EP20CKQ2/ EP20ENC/ EP30 Series	EP10C/ EP20C/ EP20CK/ EP20CKQ/ EP20CKQ2/ EP20ENC/ EP30 Series/ VG10CKQ2*	EP10C/ EP20ENC	EP10C/ EP20ENC	EP10C/ EP20CK/ EP20CKQ/ EP20CKQ2/ EP20ENC	EP10C	EP10C	OmniAC20/ OmniAC30/ EP20CKQ/ EP20CKQ2/ VG10CKQ2*	OmniAC20/ OmniAC30/ EP20CKQ/ EP20CKQ2/ VG10CKQ2*	OmniAC20/ OmniAC30	OmniAC20/ OmniAC30			
125KHz		AWID			√	√	√	√									
		Cardex			√	√	√	√									
		CASI-BUSCO			√6	√6	√6	√6			√	√	√	√			
		Delster			√6	√6	√6	√6									
		EM4100, 4102, 4200	√		√7	√7	√7	√7			√	√	√	√			
		EM4050, 4150, 4450, 4550			√	√	√	√									
		EM4305			√	√	√	√									
		Ultra Prox			√	√	√	√									
		G-Prox				√6	√6	√6	√6								
		HID DuoProx II (1336)				√	√	√	√		√1)	√1)	√1)	√1)			
		HID ISO Prox II (1366)				√	√	√	√		√1)	√1)	√1)	√1)			
		HID Micro Prox II (1391)				√	√	√	√		√1)	√1)	√1)	√1)			
		HID Prox III (1346)				√	√	√	√		√1)	√1)	√1)	√1)			
		HID Prox				√	√	√	√		√1)	√1)	√1)	√1)			
		HID Prox II (1326)				√	√	√	√		√1)	√1)	√1)	√1)			
		HITAG 1, 2, S				√9)	√9)	√9)	√9)								
		ICT				√8)	√8)	√8)	√8)								
		IDTECK				√	√	√	√								
		Indata				√	√	√	√								
		IoProx				√	√	√	√								
		ISONAS				√	√	√	√								
		Kart				√	√	√	√								
		Miro				√	√	√	√								
		Nedap				√6)	√6)	√6)	√6)								
		Nixowatch				√	√	√	√								
		Pyramid				√	√	√	√								
		Q5				√	√	√	√								
		T5557, T5567, T5577				√	√	√	√								
TITAN (EM4050)				√	√	√	√										
UNIQUE				√	√	√	√										
ZODIAC				√	√	√	√										
2.4GHz		BLE						Y	Y	Y	Y	Y*	Y*				
	Availability	Globally Available 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 (customization) enhanced security features on request
 3) Read/ write (customization) in direct chip command mode
 4) UID only, read/ write (customization) on request
 5) UID + read/ write (customization) 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(customization) 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 (customization) on request

*The RNIB/ RNPS version is for devices that don't have built-in Bluetooth support. If the device already has Bluetooth Low Energy (BLE) built-in, then you don't need to use the RNIB/RNPS version.

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.

4. Maintenance and Support

The OmniAC20 all-weather outdoor multi-tech smart standalone terminal shall be supported by a comprehensive support program, which shall include the following:

- Regular software updates and security patches.
- Technical support via phone and email.
- Spare parts availability.
- Training for system administrators and end-users.

5. Documentation

The supplier shall provide the following documentation for the OmniAC20 all-weather outdoor multi-tech smart standalone terminal:

- User manual
- Installation guide
- Technical specifications
- Software release notes
- Warranty terms and conditions

6. Warranty and Support

The OmniAC20 all-weather outdoor multi-tech smart standalone terminal shall be covered by a minimum of 36 month manufacturer's warranty that covers defects in materials and workmanship. The manufacturer shall provide remote technical support and assistance to the installer and end-user during the installation and operation of the controller.

7. Training and Documentation

The manufacturer shall provide the following training and documentation for the OmniAC20 all-weather outdoor multi-tech smart standalone terminal:

- User manuals and technical documentation for installation, configuration, and operation of the controller.
- Online training courses and videos for system administrators and operators.
- On-site or remote training sessions for system integrators and installers.
- Technical support and assistance for system integrators, installers, and end-users.

*Note Certifications may vary by region and country. Please consult the manufacturer for specific certifications applicable to your location.