Explorer Series - EP20CQ / CKQ

All Weather Outdoor Multi-tech Smart Reader

- Designed for Advanced Security
- Supports Over 100 RFID Credential Types
- Touch Keypad / QR Code Scanner

Bluetooth OSDP NFC QR CODE

Compact RFID Reader with Touch Keypad

The EP20 reader series is one of the most compact multi-tech RFID readers in the market, which supports over 100 RFID card types and both mobile NFC and Bluetooth (Low Energy) and is suited for most installation environments. Embedded touch keypad enables passwords as an authentication option for users to best suit their needs.

Multi-tech RFID & Mobile Credential

RFID

Supports over 100 RFID card types in standard package with varies optional RFID modules that cover up to over 10 extra advanced secured RFID protocols, which almost cover most of the end-user requests, enabling high flexibility for multi-card types and mobile credentials situation.

Designed for Advanced Security

Secure communication: OSDP (v2.2 w/ Secure Channel) over RS485 communication between EP20 series readers and control panels. Complies with AES-128 standards to prevent against interleaving and replay attacks. Complies with AES256 encryption standards between mobile (NFC / Bluetooth) and reader communication.

Secured Data Storage: Certified EAL5+ encryption chips to enhance data protection performance to the finical grading security level.

IP68 Water & Dustproof Protection Level

Certified IP68 Water & Dustproof levels represent that the readers can withstand dust, dirt and sand, and are resistant to submersion up to a maximum depth of 3.3ft/ 1.5m underwater for up to thirty minutes.

IK10 Physical & Environmental Protection

Certified IK10 Vandal-proof rating enables protection from multiple attacks up to 20 joules.

Anti-SPA/ DPA/ EMA/ DEMA Attack

Effectively prevents external malicious attacks and protect all communication and client's data.

Safety Standard of UL746C (F1) and Housing Material Meets UL94-V0 Standard

Ability to work in both indoor & outdoor environments. Resistant to UV degradation. UL 94V-0 standard ensures burning combustion is not sustained for more than 10 seconds after applying controlled flame.

Advanced Security

The Armatura design team is dedicated to ensure the Explorer Series reaches the highest security expectations.

Explorer Series readers support 2 mobile identification modes when used with the Armatura ID mobile app.

Card Mode
Present your smartphone to the reader like an access card

Remote Mode
Verify on the reader by clicking a button in the Armatura ID app

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GET IT ON Google Play

Download on the App Store

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Key Features

Mobile Credential Capability

The Armatura ID mobile app offers a consistent user experience across iOS & Android platforms. Opening doors by presenting your smartphone to the reader or scanning a QR code. Use your phone's Face & TouchID functions for even more secure authentication. It supports both NFC and Bluetooth communication methods, extending mobile access functions to almost all smartphone users.

iOS & Android

ELATEC RFID Systems

Bluetooth

NFC

QR CODE

Compact Design with Touch keypad / QR code scanner as options

Compatible with single gang, European and Asian style boxes suit most interior designs. Optional touch keypad for password authentication. QR code scanner for static/dynamic QR code recognition.

Enhanced Security

Supporting Open Supervised Device Protocol (OSDP) guarantees secured communication between the control panels and readers. Advanced-Data protection using certified crypto chips with EAL5+ standard. AES128 end-to-end encryption between the control panel and reader, ensuring all communications are secure.

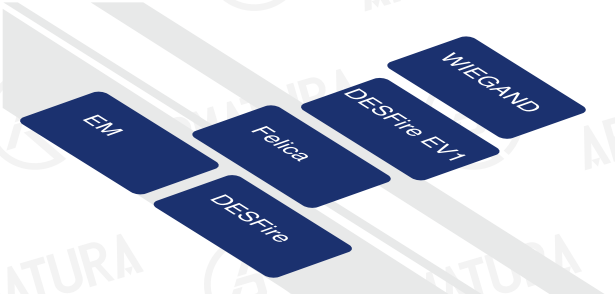
OSDP™

Ultimate Protection (IP68 & IK10 & UL94-V0)

IK10 Vandal-proof and IP68 Water & Dustproof protection levels enable operation under any installation environment. IK10 vandal-proof protection level enhances protection ability against malicious physical attacks. -30°C to 70°C / -22°F - 158°F operating temperature enables operation under extreme weather conditions. UL 94V-0 standards for flammability ensures burning combustion is not sustained for more than 10 seconds after applying a controlled flame.

Supports Multi-tech Reading

Supports 125 kHz, 13.56 MHz and 2.4GHz frequency credentials. Supports 100+ card types, covering most of the common card formats in the market.



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Dimensions

EP20CQ EP20CKQ

Specifications

Internal Number	EP20CQ	EP20CKQ
Operating Frequency / Standards	125 kHz 13.56 MHz: ISO14443A types A & B, ISO15693 2.4 GHz Bluetooth®	
Functions	RFID, Bluetooth® and QR code	
Keypad	N/A	Touch Keypad
QR Code Scanner	Supported	
QR Code Scaning Pattern	Area image (648*488 pixel array)	
QR Code Scan Angle	Horizontal: 66°/ Vertical: 50°	
QR Code Scanning Print Contrast	Print Contrast: 25% minimum reflectance difference Rotation, Pitch, Skew: 360°, +/-40°, +/-60°	
QR Code Capability	One-Dimensional Code: UPC-A , UPC-E, UPC-E1, EAN-8, EAN-13,EAN-14, EAN-128, UCC128, ISBN/ISSN, CODE11, CODE32, CODE39, CODE39 Full ASCII, CODE93, CODE128, Interleaved 2 of 5 code, Industrial 2 of 5 code,Matrix 2 of 5 code, Toshiba code, UK/Plessey, GS1 Two-Dimensional Code: QR code, PDF417, Data matrix, MicroPDF417, Aztec	
QR Code Scanning Performance*	Narrow Width 6.0 mil (Code128) 9.0 mil (Code128) 15.0 mil (Code128) 20.0 mil (Code128) 6.0 mil (QR) 9.0 mil (QR) 15.0 mil (QR) 20.0 mil (QR)	Depth of Field 2.0"-3.1" (5cm-8cm) 2.0"-4.7" (5cm-12cm) 2.3"-7.7" (6cm-19.5cm) 2.3"-9.8" (6cm-25cm) 2.0"-2.3" (5cm-6cm) 2.0"-3.5" (5cm-9cm) 2.0"-6.3" (5cm-16cm) 2.3"-7.9" (6cm-20cm)

Internal Number	EP20CQ	EP20CKQ
Communications & Panel Connection	Wiegand (Up to 128bits SCP Secure Communication) OSDP (v2.2) via RS485	
Reading Distance	13.56MHz & 125kHz: Up to 2.3"/60 mm (depending on environment and transponder) Up to 393.7"/ 10m with a Bluetooth Smartphone (configurable distances on each reader)	
Data Protection	AES128 (Secured Communication between Reader & Controller) Secure Data Storage in EAL 5+ Certified Crypto Chip	
Visual Indicator	RGB LEDs (Configurable By 'Armatura Connect' Mobile APP)	
Audio Indicator	Internal buzzer with adjustable intensity (Configurable By 'Armatura Connect' Mobile APP)	
Power Requirement / Power Supply	9 VDC to 24 VDC	
Operating Temperature	-22°F - 158°F /-30°C to 70°C	
Dimensions	3.54" W x 4.24" H x 0.93" D (89.8 x 107.8 x 23.6mm)	
Tamper Switch	Magnetic tamper detection system	
Certifications	CE, FCC, RoHs3.0, WEEE, UL294	
Mounting	Suited for Asian / European / single-gang installations or any flat surface mounting	
Protection / Resistance	Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK10 certified	Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK07 certified
UV Stability	Nil structural degradation for the life of the reader in 3 years	
Housing Material	Polycarbonate UL94-V0 & UL746C (F1)	

Remarks:
**Standard version provides “Read only” function. Customization is required for “Read & Write” function.
*This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)
QR scanning performance was resulted in a laboratory testing environment, the lumaince was recorded as 250 Lux

Supported ARMATURA RFID Card Modules

Frequency	Classification	Card Module Abbreviation	LHF	LF	HF
		Compatible Readers	EP10C/ EP20CQ/ EP20CKQ	EP10C/ EP20CQ/ EP20CKQ	EP10C/ EP20CQ/ EP20CKQ
13.56MHz	ISO14443A	LEGIC Advant	√1）		√1）
		MIFARE Classic, Mini S50,S70,S50	√		√
		MIFARE Classic EV1	√2）		√2）
		MIFARE DESFire Light	√11）		√11）
		MIFARE DESFire EV1	√		√
		MIFARE DESFire EV2	√11）		√11）
		MIFARE Plus S, X	√		√
		MIFARE Pro X	√3）		√3）
		MIFARE Smart MX	√3）		√3）
		MIFARE Ultralight	√		√
		MIFARE Ultralight C	√		√
		MIFARE Ultralight EV1	√2）		√2）
		NTAG2xx	√		√
		PayPass	√3）		√3）
		SLE44R35	√3）		√3）
		SLE66Rxx (my-d move)	√3）		√3）
		Topaz	√		√
	ISO14443B	HID iCLASS SEOS	√20）		√20）
		NFC	√		√
		Calypso	√3）		√3）
		Calypso Innovatron protocol	√3）		√3）
		CEPAS	√3）		√3）
		HID iCLASS	√10)		√10）
		CTS	√		√10）
		Moneo	√3）		√10）
		Pico Pass	√4）		√4）
	ISO18092/ ECMA-340	SRI4K, SRIX4K	√		√
	ISO15693	SRI512, SRT512	√		√
		Sony FeliCa	√5）		√5）
		EM4x33	√3）		√3）
		EM4x35	√3）		√3）
		HID iCLASS	√10)		√10）
		HID iCLASS SE/ SR/ Elite	√10)		√10）
		iCODE SLI	√		√10）
		LEGIC Advant	√1）		√1）
		M24LR16/64	√		√
		MB89R118/119	MT2, MT3, Nano, Palon, Wall, Panel		MT2, MT3, Nano, Palon, Wall, Panel
		SRF55Vxx (my-d vicinity)	√3）		√3）
		Tag-it	√		√
		Pico Pass	√4）		√4）
		LEGIC Prime			
		CPU Card			

Frequency	Classification	Card Module Abbreviation	LHF	LF	HF
125kHz		Compatible Readers	EP10C/ EP20CQ/ EP20CKQ	EP10C/ EP20CQ/ EP20CKQ	EP10C/ EP20CQ/ EP20CKQ
		AWID	√	√	
		Cardax	√	√	
		CASI-RUSCO	√	√	
		Cotag			
		Deister	√6）	√6）	
		EM4100, 4102, 4200	√7）	√7）	
		EM4050, 4150, 4450, 4550	√	√	
		EM4305	√14）	√14）	
		FDX-B, EM4105	√15)	√15)	
		Ultra Prox	√15)	√15)	
		G-Prox	√6)	√6)	
		HID DuoProx II (1336)	√	√	
		HID ISO Prox II (1386)	√	√	
		HID Micro Prox II (1391)	√	√	
		HID Prox III (1346)	√	√	
		HID Prox	√	√	
		HID Prox II (1326)	√	√	
		HITAG 1, 2, S	√9)	√9)	
		ICT	√8)	√8)	
		IDTECK	√	√	
		Indaia			
		ISONAS	√	√	
		Keri	√	√	
		Miro	√	√	
		Nedap	√6）	√6）	
		Nexwatch	√	√	
		PAC	√8)	√8)	
		Pyramid	√	√	
		Q5	√	√	
		T5557, T5567, T5577	√	√	
		TITAN (EM4050)	√	√	
		UNIQUE	√	√	
		ZODIAC	√	√	

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