

Explorer Series - EP10C

All Weather Outdoor Multi-tech Smart Reader

- Advanced Security Architecture
- Supports Over 100 RFID Credential Types



Multi-tech RFID & Mobile Credential

The EP10C mullion 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 mullion-mount door installations or any flat surface mounting. Optional single-gang & Asian / European / Single-gang box spacing are available for all kinds of installation environments.



Supports Multi-card Types

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.



Advanced Secure Communication Design

Secure communication: OSDP (v2.2 w/ Secure channel) over RS485 communication between EP10C reader and control panel. 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 highest security level.



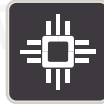
IP68 Water & Dustproof Protection Level

Certified IP68 Water & Dustproof levels represent that the readers can withstand dust, dirt, 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 protects all communications & data.



Safety Standard of UL746C (F1) and Housing Material Meets UL 94V-0 Standard

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

Key Features

Mobile Credential Capability

The Armatura ID mobile app offers a consistent user experience across iOS & Android platforms. Opening doors by simply presenting your smartphone to the reader. Supports both NFC and Bluetooth communication methods, extending mobile access functions to almost all smartphone users.



Compact Mullion Mount Design with Optional Gang Box

Mullion mount design suits most architectural and interior designs. Optional gang box covers all installation environments.



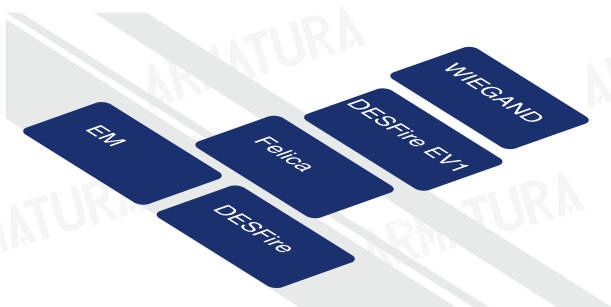
Enhanced Cybersecurity

Open Supervised Device Protocol (OSDP) supports communication between control panel and reader. Guarantees advanced data protection using certified crypto chips with EAL5+ standards. Supports AES128 end-to-end encryption between control panel and reader, ensuring all communications are under secure.



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.



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.



Dimensions of Mullion and Single-Gang box cover



Specifications

| | |
|-----------------------------------|---|
| Internal Number | EP10C |
| Operating Frequency / Standards | 125 kHz 13.56 MHz: ISO14443A types A & B, ISO15693 2.4 GHz Bluetooth® |
| Functions | RFID and Bluetooth® |
| 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 | Standard Cover: 1.89" W x 4.52" H x 0.97" D (48 x 114.8 x 24.7mm) Gangbox Cover: 3.00" W x 4.84" H x 0.97" D (76.2 x 123.0 x 24.7 mm) |
| Tamper Switch | Magnetic tamper detection system |
| Certifications | CE, FCC, RoHs3.0, WEEE, UL294 |
| Mounting | Suited for mullion-mount door installations or any flat surface mounting Optional Asian / European / single-gang-box back-box spacing |
| Protection / Resistance | Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK10 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/>)

| Frequency | Classification | Card Module Abbreviation | [DF] | [SFMH] | [NO] | [NP] | [NI] | [NOL] | [NPL] | [NOH] | [NIH] | |
|--------------------------|-----------------------------|----------------------------------|---|---|--|--|--|-------|---------------------------|--|--|-------|
| | | Compatible Readers | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ | EP10C | EP10C/ EP20CQ/ EP20CKQ | EP10C/ EP20CQ/ EP20CKQ | EP10C | EP10C/ EP20CQ/ EP20CKQ | EP10C | EP10C/ EP20CQ/ EP20CKQ | |
| 13.56MHZ | ISO14443A | LEGIC Advant | | √ | √(1) | √(1) | √(1) | | | √(1) | √(1) | |
| | | MIFARE Classic, Mini S50,S70,S50 | √(4) | √ | √ | √ | √ | | | √ | √ | |
| | | MIFARE Classic EV1 | √(4) | √(2) | √(2) | √(2) | √(2) | √(2) | | | √(2) | √(2) |
| | | MIFARE DESFire Light | | √(11) | √(11) | √(11) | √(11) | √(11) | | | √(11) | √(11) |
| | | MIFARE DESFire EV1 | √(4) | | √ | √ | √ | √ | | | √ | √ |
| | | MIFARE DESFire EV2 | | √(11) | √(11) | √(11) | √(11) | √(11) | | | √(11) | √(11) |
| | | MIFARE Plus S, X | | √ | √ | √ | √ | √ | | | √ | √ |
| | | MIFARE Pro X | | | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) |
| | | MIFARE Smart MX | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) |
| | | MIFARE Ultralight | | √ | √ | √ | √ | √ | | | √ | √ |
| | | MIFARE Ultralight C | | √ | √ | √ | √ | √ | | | √ | √ |
| | | MIFARE Ultralight EV1 | | √(2) | √(2) | √(2) | √(2) | √(2) | | | √(2) | √(2) |
| | | NTAG2xx | | | √ | √ | √ | √ | | | √ | √ |
| | | PayPass | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) |
| | | SLE44R35 | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) |
| | | SLE66Rxx (my-d move) | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) |
| | | Topaz | | | | √ | √ | √ | | | √ | √ |
| | HID iCLASS SEOS | | | | | | √(20) | | | | √(20) | |
| | NFC | | √ | √ | √ | √ | √ | | | √ | √ | |
| | Calypso | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) | |
| | Calypso Innovatron protocol | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) | |
| | CEPAS | | √(3) | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) | |
| | HID iCLASS | | √ | √(1) | √(1) | √(1) | √(10) | | | √(1) | √(10) | |
| | ISO14443B | CTS | | √ | √ | √ | √ | | | √ | √(10) | |
| | | Moneo | | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(10) | |
| | | Pico Pass | | √(4) | √(4) | √(4) | √(4) | | | √(4) | √(4) | |
| | | SRI4K, SRIX4K | | √ | √ | √ | √ | | | √ | √ | |
| | | SRI512, SRT512 | | √ | √ | √ | √ | | | √ | √ | |
| | ISO18092/ ECMA-340 | Sony FeliCa | | √(5) | √(5) | √(5) | √(5) | | | √(5) | √(5) | |
| | ISO15693 | EM4x33 | | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) | |
| | | EM4x35 | | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) | |
| | | HID iCLASS | | √ | √(1) | √(1) | √(10) | | | √(1) | √(10) | |
| | | HID iCLASS SE/ SR/ Elite | | √ | √(1) | √(1) | √(10) | | | √(1) | √(10) | |
| iCODE SLI | | | √ | √ | √ | √ | | | √ | √(10) | | |
| LEGIC Advant | | | √(1) | √(1) | √(1) | √(1) | | | √(1) | √(1) | | |
| M24LR16/64 | | | | √ | √ | √ | | | √ | √ | | |
| MB89R118/119 | | | | | MT2, MT3, Nano, Palon, Wall, Panel | MT2, MT3, Nano, Palon, Wall, Panel | MT2, MT3, Nano, Palon, Wall, Panel | | | MT2, MT3, Nano, Palon, Wall, Panel | MT2, MT3, Nano, Palon, Wall, Panel | |
| SRF55Vxx (my-d vicinity) | | | √(3) | √(3) | √(3) | √(3) | | | √(3) | √(3) | | |
| Tag-it | | | √ | √ | √ | √ | | | √ | √ | | |
| Pico Pass | | | | √(4) | √(4) | √(4) | | | √(4) | √(4) | | |
| LEGIC Prime | | √ | | | | | | | | | | |
| CPU Card | | | | | | | | | | | | |

ARMATURA

ARMATURA RFID Card Module Supporting List

| Frequency | Classification | Card Module Abbreviation | [DF] | [SFMH] | [NO] | [NP] | [NI] | [NOL] | [NPL] | [NOH] | [NIH] | | |
|-----------|----------------|---|---|---|-------|---------------------------|---------------------------|-------|---------------------------|-------|---------------------------|--|--|
| | | Compatible Readers | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ | EP10C | EP10C/ EP20CQ/ EP20CKQ | EP10C/ EP20CQ/ EP20CKQ | EP10C | EP10C/ EP20CQ/ EP20CKQ | EP10C | EP10C/ EP20CQ/ EP20CKQ | | |
| 125KHZ | | AWID | | | √ | √ | √ | √ | √ | | | | |
| | | Cardax | | | √ | √ | √ | √ | √ | | | | |
| | | CASI-RUSCO | | | √ | √ | √ | √ | √ | | | | |
| | | Cotag | | | | | | | | | | | |
| | | Deister | | | √6) | √6) | √6) | √6) | √6) | √6) | | | |
| | | EM4100, 4102, 4200 | | √ | √7) | √7) | √7) | √7) | √7) | √7) | | | |
| | | EM4050, 4150, 4450, 4550 | | | √ | √ | √ | √ | √ | √ | | | |
| | | EM4305 | | | √14) | √14) | √14) | √14) | √14) | √14) | | | |
| | | FDX-B, EM4105 | | | √15) | √15) | √15) | √15) | √15) | √15) | | | |
| | | Ultra Prox | | | √15) | √15) | √15) | √15) | √15) | √15) | | | |
| | | G-Prox | | | | √6) | √6) | √6) | √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) | √9) | √9) | √9) | √9) | | | |
| | | ICT | | | √8) | √8) | √8) | √8) | √8) | √8) | | | |
| | | IDTECK | | | √ | √ | √ | √ | √ | √ | | | |
| | | Indaia | | | | | | | | | | | |
| | | ioProx | | | | | | | | | | | |
| | | ISONAS | | | | | √ | √ | √ | √ | √ | | |
| | | Keri | | | | | √ | √ | √ | √ | √ | | |
| | | Miro | | | | | √ | √ | √ | √ | √ | | |
| | | Nedap | | | | | √6) | √6) | √6) | √6) | √6) | | |
| | | Nexwatch | | | | | | √ | √ | √ | √ | | |
| | | PAC | | | | | √8) | √8) | √8) | √8) | √8) | | |
| | | Pyramid | | | | | √ | √ | √ | √ | √ | | |
| | | Q5 | | | | | √ | √ | √ | √ | √ | | |
| | | T5557, T5567, T5577 | | | | | √ | √ | √ | √ | √ | | |
| | | TITAN (EM4050) | | | | | √ | √ | √ | √ | √ | | |
| | | UNIQUE | | | | | √ | √ | √ | √ | √ | | |
| ZODIAC | | | | | √ | √ | √ | √ | √ | | | | |
| | | Globally Available | | √ | | | | √ | √ | √ | √ | | |
| | 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

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.

***To be released**

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