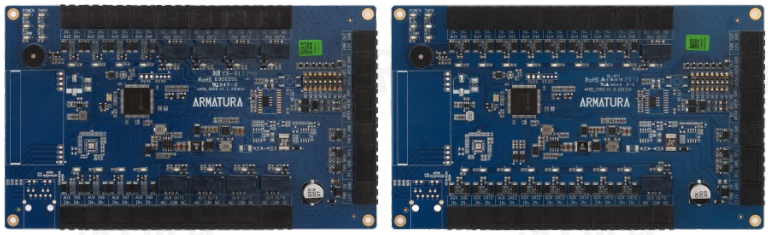
AHEB Series

I/O Expansion Board

- Scalable
- Supervised Inputs
- 3rd Party Integration
- Certified OSDP Communication



Key Features

Advanced Security

AHEB I/O expansion boards can communicate with AHSC-1000 or AHDU series controllers through OSDP V2.2 over RS-485. The communication is secured with AES128 encryption. Enhanced encryption levels are provided by an additional crypto chip (Certified EAL6+ standard), offering dedicated storage and cryptographic functionality for all Armatura controllers and expansion boards.

Innovative System Management Hierarchy

The AHEB series I/O expansion board can be monitored and updated through encrypted RS-485 communication by the AHSC-1000 and AHDU controller series onboard webserver. It supports communication with the Armatura One security system and will soon support Cielo365 as well, using the AHSC-1000 and AHDU Series controller.

Scalability

The AHEB series supports up to 388 inputs or 196 outputs when used with a single AHDU controller. In a combination of AHSC-1000 and AHDU series controllers, it can ultimately handle up to 12,801 inputs or outputs. All communications are securely protected by AES128 encryption.

Supervised Inputs

The AHEB I/O expansion board series is equipped with 4 state-supervised inputs, designed to mitigate short-circuit attacks effectively. These inputs can detect abnormal changes, even as low as 5% Ohms in the circuits, and efficiently filter out all potential attacks. Isolated microchips independently manage REX inputs and dedicated fire alarm inputs, ensuring their uninterrupted functionality even under extreme situations.

3rd Party Integration

The AHEB series supports various inputs and outputs, making it suitable for a wide range of security devices. The Armatura One system offers a RESTful API for seamless integration with 3rd Party Software.

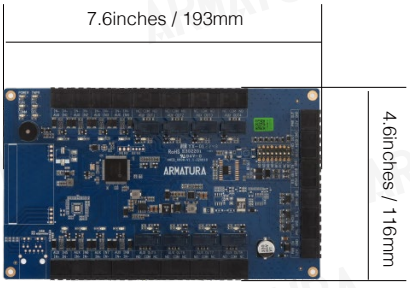
Universal Voltage

Supports 12 to 24Vdc inputs making it the ideal choice for universal deployment, eliminating the need for additional power adaptors.

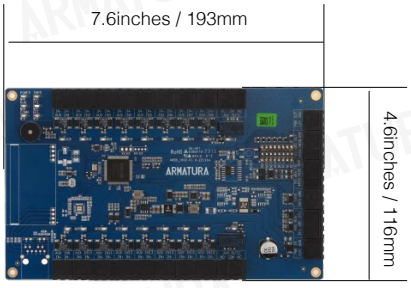
Programmable Input States with Time Zone Management

The AHEB series offers supervised and programmable input states, including In-Active, Active, Short, and Open. Users can easily configure these input states and input time through the Armatura One security platform.

Dimensions of Expansion Board



AHEB-0808



AHEB-1602

General Information		
	AHEB-0808	AHEB-1602
Primary Power	12 - 24 VDC ± 20%, 550 mA maximum	
RS-485 Connectivity	Input: RS-485 standard / OSDP V2.2 (Dedicated for AHSC-1000/ AHDU series controller communication) Output: RS-485 standard / OSDP V2.2 (Dedicated for AHEB series I/O expansion board communication)	
Number of Ports	1*RS-485 8*supervised input (AUX IN) 8*relay output (AUX OUT) 1* power Input (PWR IN) 1*power output (PWR OUT) 1*power detection (AC Fail) 1* backup battery detection (BAT Fail) 1*tamper input (TMPR)	1*RS-485 16*supervised input (AUX IN) 2*relay output (AUX OUT) 1* power Input (PWR IN) 1*power output (PWR OUT) 1*power detection (AC Fail) 1* backup battery detection (BAT Fail) 1*tamper input (TMPR)
Inputs	8 inputs 4 state supervision, resistor values (5% tolerance), Normally open contact: use 1.2k, 2.2k. 4.7k or 10k Normally closed contact: use 1.2k, 2.2k. 4.7k or 10k	16 inputs 4 state supervision, resistor values (5% tolerance), Normally open contact: use 1.2k, 2.2k. 4.7k or 10k Normally closed contact: use 1.2k, 2.2k. 4.7k or 10k
Outputs	8 relays 8* Form-C with dry contacts	2 relays 2* Form-C with dry contacts

AHSC/ AHDU Interface		
	AHEB-0808	AHEB-1602
RS-485 Protocol	AES-128, OSDP V2 Secure Channel	
OSDP Mode	9600-115200 bps, OSDP V2.2, asynchronous, half-duplex, 1 start bit, 8 data bits, and1 stop bit. Maximum cable length: 2,000 ft. (609.6m)	
Data Inputs	OSDP supported. Maximum cable length: 500 ft. (152m)	

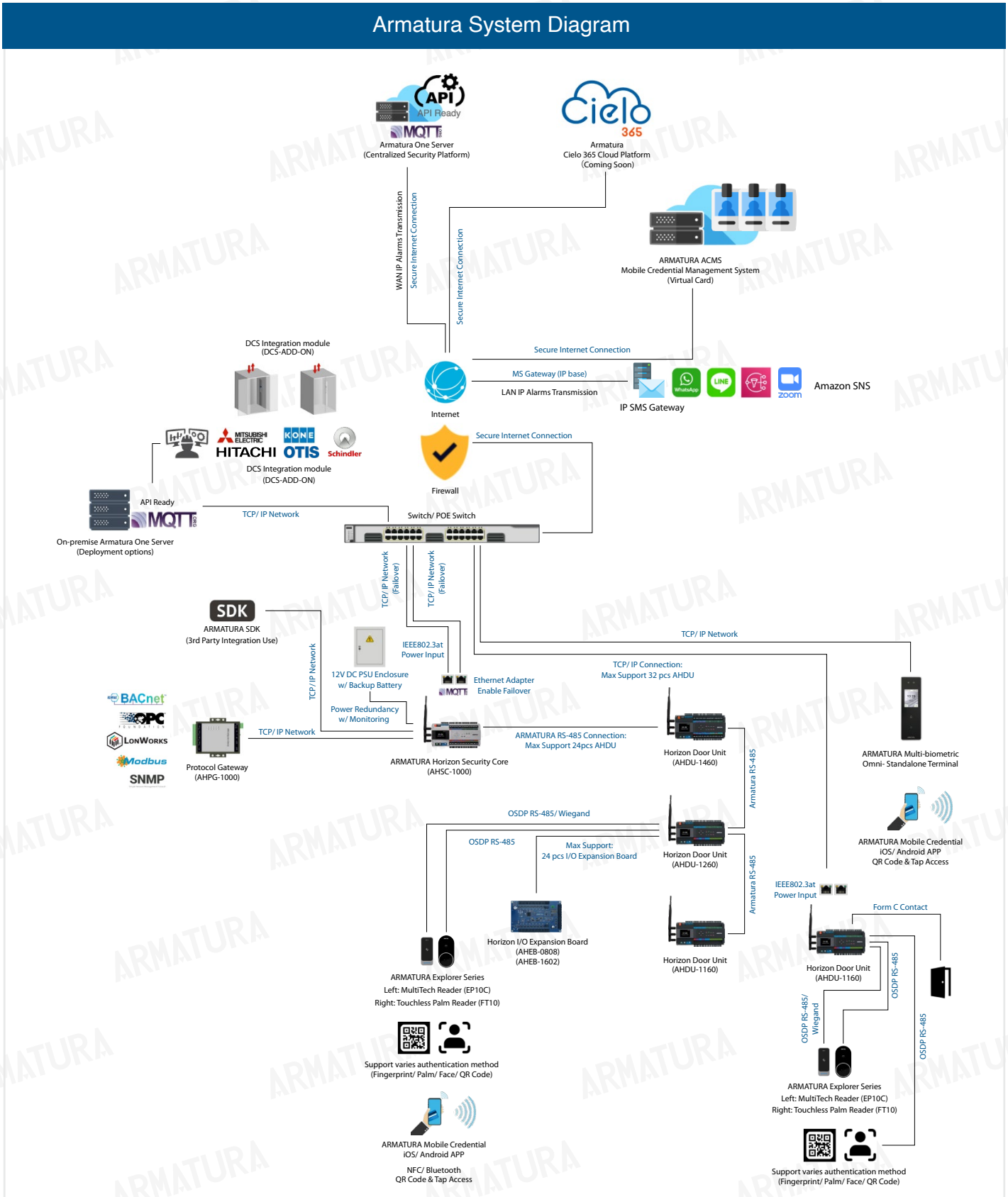
Cable Requirement		
	AHEB-0808	AHEB-1602
Power & Relays	12 - 24 VDC ± 20%, 550 mA maximum	
RS-485 Port	One twisted pair with drain wire and shield, 120 ohm resistance, 22-18 AWG, Maximum cable length: 3937ft (1200m)	

Mechanical		
	AHEB-0808	AHEB-1602
Dimensions	7.6” W x 4.6” L x 0.7” H (193 x 116 x 17.5mm)	
Weight	5.8oz (165.3g)	
Mounting	Wall Mount	

Environmental		
	AHEB-0808	AHEB-1602
Temperature	–4°F~131°F (-20°C~55°C), Operating & Storage	
Humidity	0-95% RHNC	
Certification(s)	CE, FCC, RoHS, UL294	
Security Rating	Data Storage Encrypted with Certified EAL6+ Crypto Chipset	

Software Interface		
	AHEB-0808	AHEB-1602
Supported Software	Armatura One Security System, Cielo365 (coming soon)	

Armatura System Diagram



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