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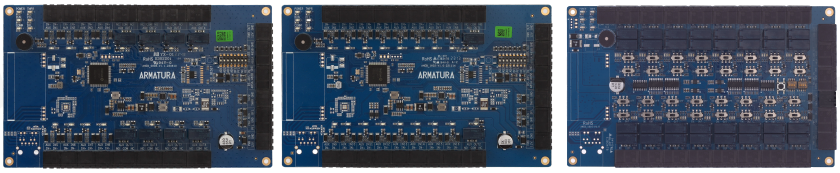
AHEB Series

I/O Expansion Board

- Scalable
- Supervised Inputs
- Advanced Elevator Control Functions
- 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.

Elevator Control Mode

The AHEB series of expansion boards enhances building control systems with configurable relay ports that can be adapted as inputs or outputs to meet diverse operational needs. While all boards in the series ensure seamless and secure integration via OSDP over RS-485, the AHEB-1616 model distinctively supports advanced elevator control functions. This includes automatic floor selection and Floor Selection History Logging, capabilities exclusive to the AHEB-1616, making it ideal for complex, multi-story elevator management in larger buildings.

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.

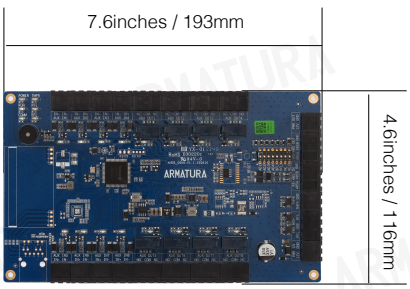
Universal Voltage

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

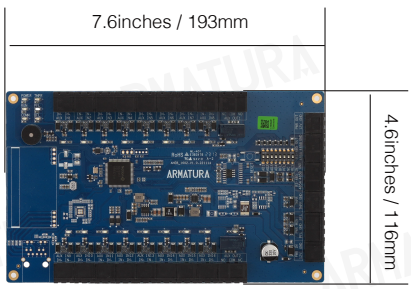
Programmable Input States with Time Zone Management

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.

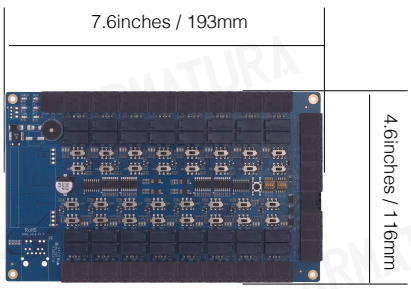
Dimensions of Expansion Board



AHEB-0808



AHEB-1602



AHEB-1616

General Information

	AHEB-0808	AHEB-1602	AHEB-1616 (coming soon)
Primary Power	12 - 24 VDC ± 20%, 550 mA maximum		
On-Board Firmware	Dual Function Firmware for Access Control Mode & Elevator Control Mode (Automatic Operation Mode Swapping According to AHSC-1000 / AHDU Series Controller Settings)		
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)	1*RS-485 16*configurable I/O ports (AUX IN/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*Reset BUTTON
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	Max.16 inputs (Configurable) 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	Max.16 relays (Configurable) 16* Form-C with dry contacts"

AHSC/ AHDU Interface (Access Control Mode and Elevator Control Mode)

	AHEB-0808	AHEB-1602	AHEB-1616 (coming soon)
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.		
Max. Supported Floor (Elevator Control Mode)	Max.128 floors Management, Upon Combination Suggested Configuration: 1pcs of AHDU-1260 Controller with 8pcs*AHEB-1616 (direct connection through Armatura RS-485 connection) Note: All the Relay Ports (exclude the Fire Alarm Port) of AHSC-1000 & AHDU Series Controller Can be Utilized for Floor Management		
Advanced Elevator Control Functions	N/A	N/A	YES Support: Automatic Floor Selection, Floor Selection History Logging
General Elevator Control Functions	YES		
Data Inputs	OSDP standards supported. Maximum cable length: 3937ft. (1200m)		

Cable Requirement			
	AHEB-0808	AHEB-1602	AHEB-1616 (coming soon)
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	AHEB-1616 (coming soon)
Dimensions	7.6” W x 4.6” L x 0.7” H (193 x 116 x 17.5mm)		
Weight	162g (5.71oz)	130.5g (4.6oz)	224.5g (7.9oz)
Mounting	Wall Mount		

Environmental			
	AHEB-0808	AHEB-1602	AHEB-1616 (coming soon)
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	AHEB-1616 (coming soon)
Supported Software	Armatura One Security System		

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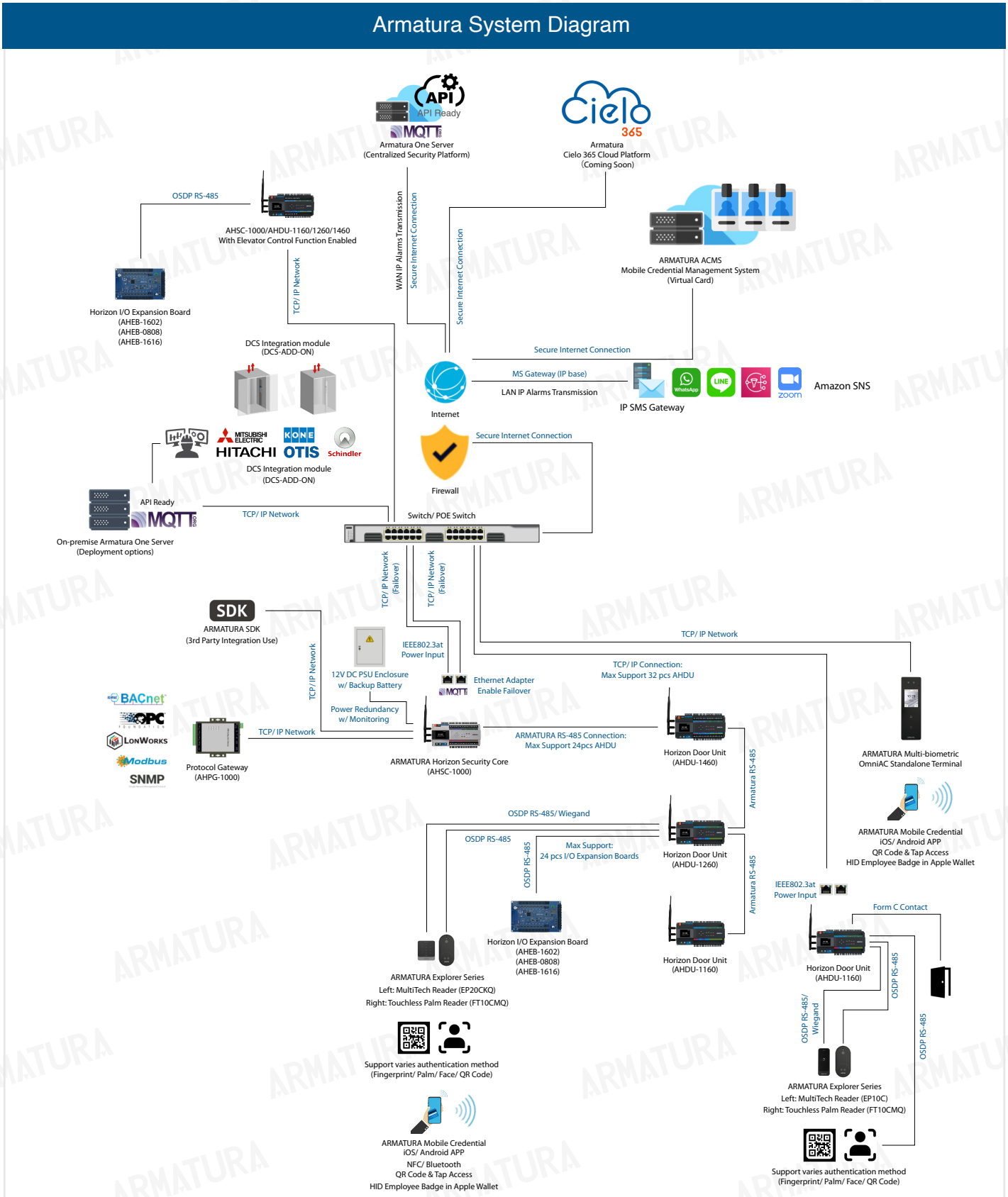
Armatura System Diagram



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