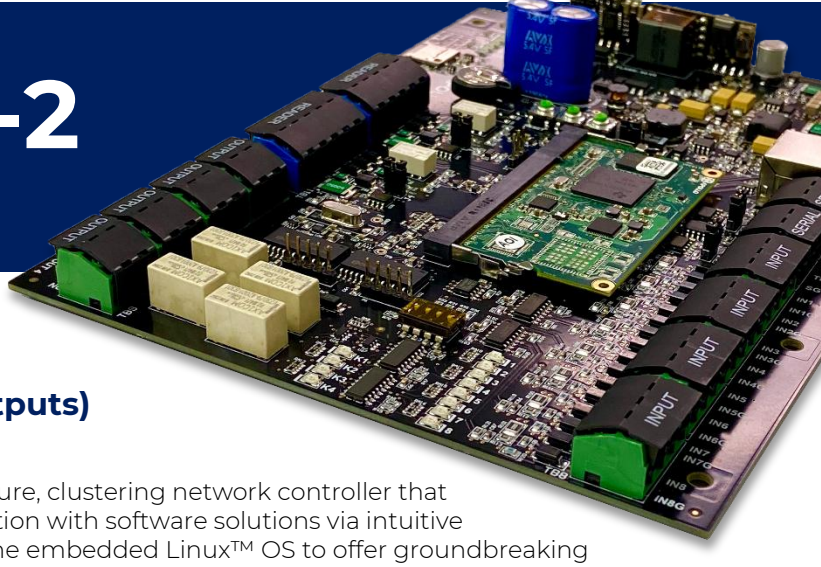
ASP-2



Apollo ASP-2
High-Speed, 2-Reader Network Controller (2 Reader Ports, 8 Supervised Inputs, 4 Outputs)

The high-performance ASP-2 is an open-hardware architecture, clustering network controller that fully supports up to two doors. The ASP-2 is open for integration with software solutions via intuitive SDKs across multiple languages. The ASP-2 fully leverages the embedded Linux™ OS to offer groundbreaking features like 3rd party application support. Communications are encrypted end-to-end (Host to reader), the firmware is encrypted, and user certificates are supported.

Notable Features

- **OPEN HARDWARE PLATFORM**
  - > SDK allows for hardware integration into any cloud or on-site Host software
- **EMBEDDED LINUX™ OS**
- **FULLY CONFIGURABLE HARDWARE INTERFACES**
  - > Onboard interfaces support 4 doors using TTL or RS485 (OSDP) readers, or up to 8 doors using OSDP readers with extra licenses
- **HOST-TO-READER ENCRYPTION**
  - > All serial and network communications can be encrypted
- **RAPID DOWNLOAD SPEEDS**
  - > Performance of up to 10K cards per second
- **BIOMETRIC TEMPLATES STORED ONBOARD**
- **READER PORTS SUPPORT BOTH WIEGAND & OSDP READERS**

Competitive Edge

- **NETWORK CLUSTERING**
  - > Controller-to-controller communications for features like shared anti-passback and improved Host connection performance
- **OEM / 3rd-PARTY DEVELOPED & INSTALLED APPS**
  - > User-developed, user-deployed, and user-maintained applications that run on the controller in a safe, containerized environment
- **ASYNCHRONOUS COMMUNICATIONS**
  - > Events are sent to the host in real time, without polling
- **SCRIPTING & INTERNAL VARIABLES**
  - > Without modifying firmware, users can create custom logic to meet specific system function requirements
- **COST-EFFECTIVE EXPANSION**
  - > Connect up to 16 OSDP readers with reader expansion licenses while reducing hardware costs
- **INDUSTRIAL OPERATING TEMPERATURE (-40°C to +85°C)**
- **PoE+ OPTION**
  - > PoE+ coupled with the auxiliary output power port enables fully securing a door without needing a DC power supply

Security

- OpenSSL
- TLSv1.3 with TLS Server/Peer certificate checking
- AES256-SHA256
- OSDP Secure Channel
- SSCPv2; Meets ANSSI encryption requirements
- FIPS 201-2
- CAC
- TWIC
- Firmware upgrades are signed and encrypted

Access Control

- Anti-Passback
- Threat levels
- Use Limits
- N man rule
- Occupancy Management
- Visitors and Escorts
- Elevator Control (Up to 128 floors)
- Host-Controlled Access Request
- Duress Code
- Keypad with flexible pin lengths
- Supported reader types:
  - > OSDP
  - > Wiegand
  - > Clock & Data
  - > SSCPv2
  - > FIPS 201 PKI-based card and legacy types
  - > Biometric

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Apollo ASP-2

POWER

- Input Power (VIN):
  - 12-24VDC; 350mA typical MAX current
  - PoE+
- Auxiliary Output Power: VIN passthrough; 1A MAX current
- Reader Port output power:
  - VIN passthrough with 500mA MAX per port
  - 12VDC regulated with 500mA MAX per port or 600mA MAX combined
- USB 5VDC; 500mA MAX current
- Onboard power supervision with backup power
  - Events and RTC maintained through power failure

ONBOARD HARDWARE INTERFACES

- 2 Reader Ports supporting up to 2 TTL readers or up to 8 RS485 readers
  - Open-collector Buzzer output
  - Supports single-wire and two-wire reader LED control when using the Buzzer output for LED control
- 8 Supervised or Unsupervised Inputs
  - Configurable supervision values (12 pre-defined)
  - High-speed input scanning with filtering/noise suppression to eliminate false alarms
  - High-precision analog ICs for stability in noisy environments
- 4 Form-C Relay Outputs
  - 2A @ 30VDC MAX rating
- 2 Unsupervised Inputs for Cabinet Tamper & Power Failure
- 2 Network Ports
  - 1 dedicated 10/100 Ethernet port
  - 2nd Ethernet port possible with USB-to-Ethernet adapter
  - Connect up to 32 network downstream boards
- 2 Downstream, RS485 Serial Com Ports
  - Multidrop up to 16 IO and/or Reader Interfaces per port
  - 9,600 to 230,400 baud
  - 2-wire interface; half-duplex
  - Each port can be configured for a different RS485 protocol
- Micro SD card
- Micro USB 2.0 with OTG support

MEMORY CAPACITY

- Minimum Memory Specs: 512MB Flash & 256MB RAM
- Up to 1,000,000 cards
- Up to 128 readers with standard configuration
- Configurable 1,000,000 Event buffer
- 300 Access Levels per controller
- 50 Access Levels per cardholder
- 127 Magnetic stripe card formats
- 127 Wiegand card formats

NETWORK AND HOST

- Onboard web server for board configuration
- Host-initiated or controller-initiated connections
- Up to 5 concurrent Host connections with authorized-host list
- IPv4 / IPv6 (Static or DHCP)
- SNMP

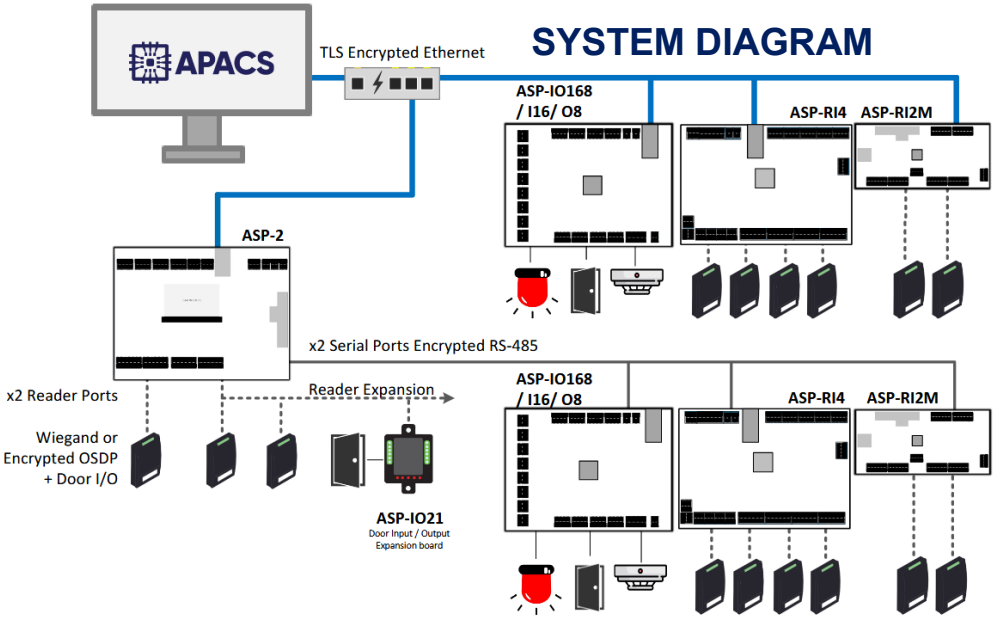
REGULATORY COMPLIANCE

- CE Compliant
- UL 294, UL294B, UL1076, UL2610
- ULC / ORD C1076 & 60839-11-1
- FCC Part 15 Class A
- RoHS / Pb (Lead) Free

GENERAL INFORMATION

- Industrial operation and storage temperature (-40°C to +85°C)
- 5% to 95% humidity
- Dimensions: 8in (203.2mm) x 5.5in (139.7mm) x 0.88in (22.35mm)
- Weight: 0.6 pounds (272 grams)
- SKU:**431600-431603** ASP-2 with PoE option
  431604-431607 ASP-2 without PoE option

SYSTEM DIAGRAM



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