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 fully leverages the embedded Linux™ OS to offer groundbreaking features like 3rd party application support. Communication is encrypted end-to-end (from host down to reader), firmware is encrypted, and user certificates are supported.

Notable Features

◗ **FULLY CONFIGURABLE HARDWARE INTERFACES**
> Onboard interfaces support 2 doors using TTL or RS485 (OSDP) readers, or up to 4 doors using RS485 readers with expanded licenses

◗ **HOST-TO-READER ENCRYPTION**
> All communications between any two points in the Apollo hardware topology can be encrypted, whether network or serial

◗ **RAPID DOWNLOAD SPEEDS**
> Performance of up to 10K cards per second

◗ **EMBEDDED LINUX™ OS**

◗ **BIOMETRIC TEMPLATES STORED ONBOARD**

◗ **READER PORTS SUPPORT BOTH WIEGAND/CLOCK&DATA AND OSDP READERS**

Competitive Edge

◗ **NETWORK CLUSTERING**
> Unparalleled system redundancy by clustering up to 32 controllers together

◗ **OEM / 3rd-PARTY DEVELOPED & INSTALLED APPS**
> Applications can be easily developed & installed without involving the manufacturer to run in an onboard, containerized environment

◗ **ASYNCHRONOUS COMMUNICATIONS**
> Events are sent to the host in real time, without polling

◗ **SCRIPTING**
> Without modifying firmware, user-created scripts can be run locally to modify logic, create conditional actions, manage events, and manipulate interfaces

◗ **UPGRADABLE**
> Connect up to 16 OSDP readers with reader expansion licenses
> 1GHz CPU module with upgradable memory options

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

Access Control Features

◗ 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

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 or 12VDC regulated
> ‣ 500mA MAX current each port or 600mA MAX current between both ports
‣ USB 5VDC; 500mA MAX current
‣ Onboard power supervision with backup power
> ‣ Memory and RTC maintained through power failure

ONBOARD HARDWARE INTERFACES

‣ 2 Reader Ports supporting up to 2 TTL readers or up to 4 RS485 readers
> ‣ Open-collector Buzzer output
> ‣ Single-wire, tri-state LED control or two-wire LED control
‣ 8 Supervised/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 Supply Fault
‣ 2 Network Ports
> ‣ 1 dedicated 10/100 Ethernet port
> ‣ 2nd Ethernet port possible with USB-to-Ethernet adapter
‣ 2 Downstream, RS485 Serial Com Ports
> ‣ Multidrop up to 32 IO and/or Reader Interfaces per port
> ‣ 9,600 to 115,200 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 250,000 cards
‣ Up to 128 readers with standard configuration
‣ 100K Event buffer
‣ 300 Access Levels per controller
‣ 50 Access Levels per cardholder
‣ 127 Magnetic stripe card formats
‣ 127 Wiegand card formats

NETWORK AND HOST

‣ Locally hosted web server for configuration and event reporting
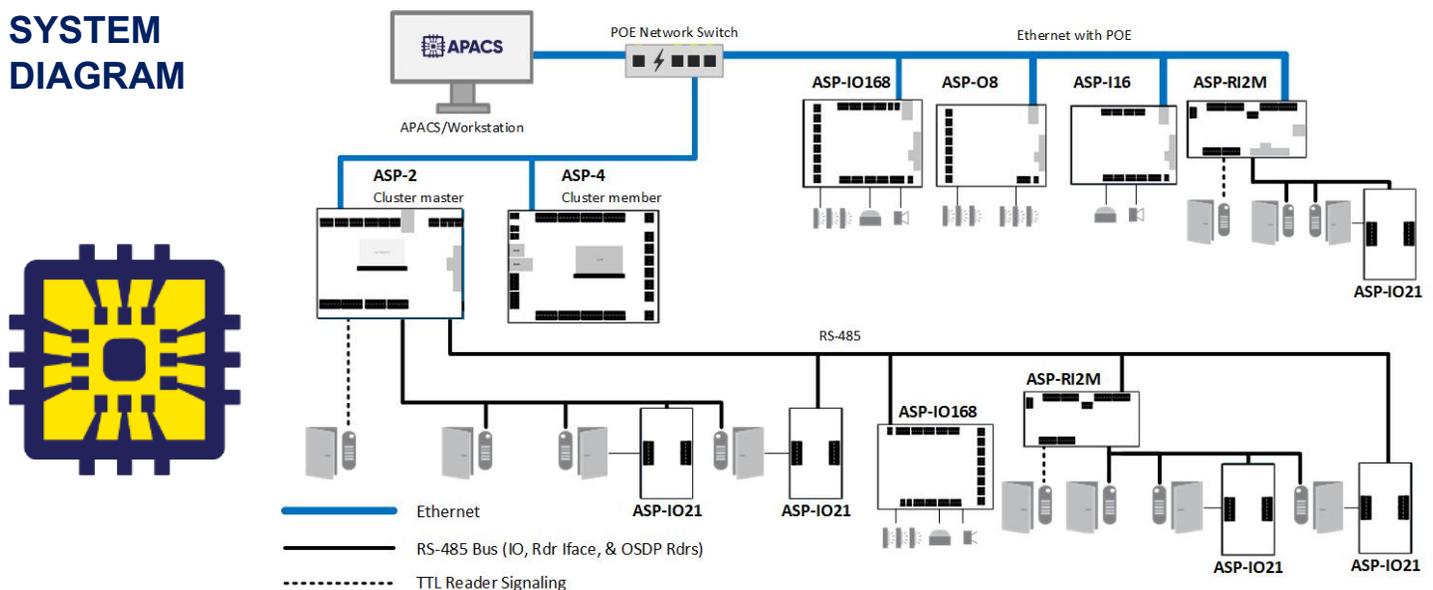‣ Up to 5 concurrent host connections with authorized-host list
‣ IPv4 / IPv6
‣ SNMP

REGULATORY COMPLIANCE

‣ UL 294, UL294B, UL1076, UL2610
‣ ULC / ORD C1076
‣ CE Compliant
‣ 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