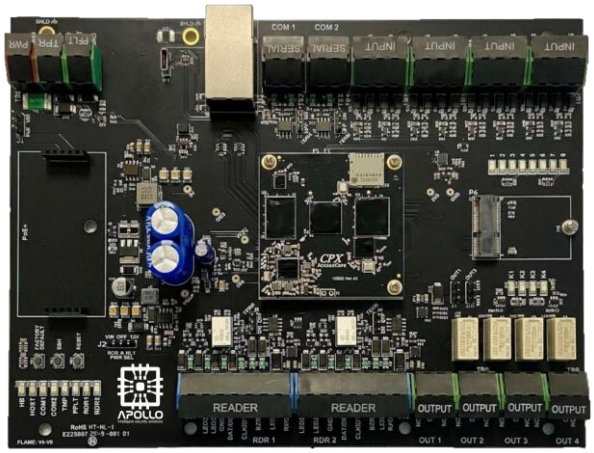
ASP-CP2

2 Reader Ports, 8 Inputs, & 4 Outputs

2-Door, Security-Hardened Controller Platform

The **Apollo Security ASP-CP2** is a next-generation, Linux-native access controller engineered for high-scale, security-critical deployments. Designed as a two-door controller, it delivers onboard interfaces to secure two access points while supporting expansion to manage up to 256 readers/doors per controller or cluster. Its server-grade compute architecture and dedicated real-time processing enable consistent, deterministic performance. Built as an open platform, ASP-CP2 supports running multiple embedded applications in parallel, cloud-native integrations, and controller clustering, allowing OEMs to rapidly deliver differentiated solutions and advanced workflows that go beyond legacy controller limitations. Its flexible topology and cost-efficient expansion simplify installation and scaling, bringing enterprise-grade protection to SMB sites and large multi-site deployments alike.



ASP-CP2

Secure-By-Design, Applications Without Limits

ACCESS CONTROL FEATURES

- Anti-Passback
- Programmable Threat Levels
- Credential Use Limits
- Lockdowns
- No-Man Rule
- Visitor & Escort Temporary Access
- Elevator Control Up to 256 Floors
- Host-Controlled Access Request
- Duress Code
- Flexible Keypad PIN Lengths
- Strike Follower

COMPETITIVE EDGE

- Purpose-Built Embedded Linux OS
- Zero-downtime Firmware Updates
- Firmware rollback (“System Restore”)
- Cloud-Native with IoT
- Enhanced Embedded App Environment
- Scripting & Logic Macros
- Superior Performance
- Backwards compatibility via SDK integration
- Wireless Connectivity
- True Offline Operation/Survivability
- Twice as many downstream boards as ASP-IC2 Intelligent Controller

BUILT-IN SECURITY FRAMEWORK

- Secure Boot
- Encryption at Rest
- Host-To-Reader Encryption
- OpenSSL
- TLSv1.3 with Certificate Validation
- AES-256 / SHA-256 Encryption
- OSDP Secure Channel
- FIPS 201 Compliant
- HSM-signed firmware and certificates
- Internal Network Firewall

TECHNICAL HIGHLIGHTS

- Open Architecture with Customization Layers
- Run multiple embedded apps in parallel
- Supports proprietary protocols
- Custom-mappable hardware interfaces
- Guaranteed Real-Time Operation
- High-Speed Downloads (20K cards/sec)
- Indefinite Event & RTC Backup During Power Failure
- Battery-Less Design
- Wet Relays
- PoE+
- WiFi 6
- Onboard Biometric Template Storage

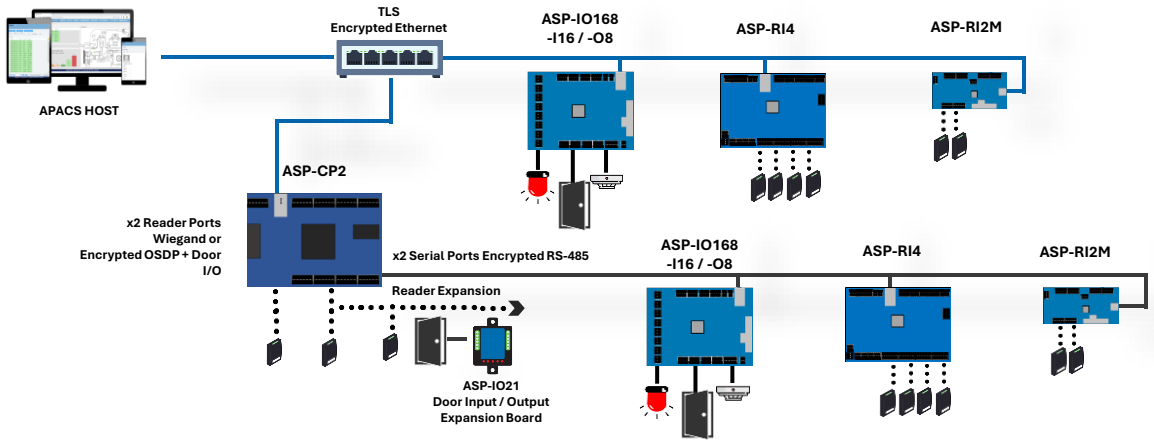
SUPPORTED READER TYPES

- Wiegand / Clock & Data
- OSDP
- SSCPv2
- Mobile Credentials
- PIV, CAC, & TWIC (FIPS 201 Compliant Credentials)
- Biometrics

ASP-CP2

Two-Door Controller Platform

ASP-CP2 SYSTEM DIAGRAM



ONBOARD HARDWARE INTERFACES

- **2 Downstream, RS485 Serial Com Ports**
  - Multi-drop up to 32 serial, downstream IO and/or Reader Interfaces boards total between both ports.
  - 9,600 to 230,400 baud
  - 2-wire interface; half-duplex
- **2 Reader Ports supporting TTL & RS485 readers**
  - One Wiegand reader or two RS485 readers per port
  - Supports up to 16 OSDP readers connected directly to the controller's RS485 Com port with a reader expansion license.
  - One open-collector Buzzer output
  - Three open-collector LED outputs
- **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 / 0.5 @ 120VAC MAX
- **2 Unsupervised Inputs for Cabinet Tamper & Power Failure**
- **2 Network Ports**
  - 1 dedicated 1000Mbps (Gigabit) Ethernet Port
  - 2nd Ethernet port via USB-to-Ethernet adapter
  - Expand system with up to 64 Networked I/O or Reader Interface Boards
- **USB 2.0**
- **Plug-in Wi-Fi 6 Module**
  - WiFi up to 6000Mbps (IT environment permitting)

POWER

- **Input Power (VIN):**
  - 12-24 VDC @ 310 mA max (typical)
  - PoE+ option available
- **Reader Port Output Power (overcurrent protected):**
  - Reader power can be cycled with software
  - VIN passthrough with 800mA MAX per port
  - 12VDC regulated with 800mA MAX per port (1.2A combined)
- **Wet Relays (fuse-protected)**
  - VIN Passthrough 1.5A combined MAX both relays
  - Relays are Jumper-selectable dry or wet
  - 12 VDC regulated with 1.5 A combined MAX both relays
- **USB: 5 VDC; 500 mA MAX current**
- **Wireless (Wi-Fi); 110 mA @ VIN 12VDC**
- **Onboard power supervision with backup power**
  - Events and RTC maintained through power failure

MEMORY & CAPACITY

- Up to 3M cardholders/credentials
- Manage up to 256 readers/doors per controller or Cluster
- Configurable 3M Event buffer
- 1,000 Access Levels per controller
- 100 Access Levels per cardholder/credential
- 256 Card Formats
- 256 bits Max Card Number Size
- 2TB micro-SD Card storage

NETWORK AND HOST

- Onboard Web-Server for board configuration
- Host-initiated or controller-initiated connections
- Up to 5 concurrent Host connections
- Certificate and IP-based connection authentication
- IPv4 / IPv6 (Static or DHCP)
- SNMP

REGULATORY COMPLIANCE

- In process

INTUITIVE SOFTWARE INTERFACING

- Backwards compatible with existing SDK integrations
- Server, Cloud, and Embedded Integration options
- Multi-lingual SDK; C/C++, dotNET, Java, Python
- Sample Host application provided
- Available tutorials, code snippets, & open-source example applications to accelerate integration

GENERAL INFORMATION

- **Operating temperature:**
  - (0°C to +70°C)
- **Dimensions:**
  - 8in (203.2mm) x 6in (152.4mm) x 0.88in (22.35mm)
- **Weight:**
  - 0.54 lbs. (245g)
- **SKU: 801350** (additional options: -P / -W / -PW)
  - P for PoE+ module installed
  - W for Wi-Fi module installed
  - PW for both PoE+ and Wi-Fi modules installed