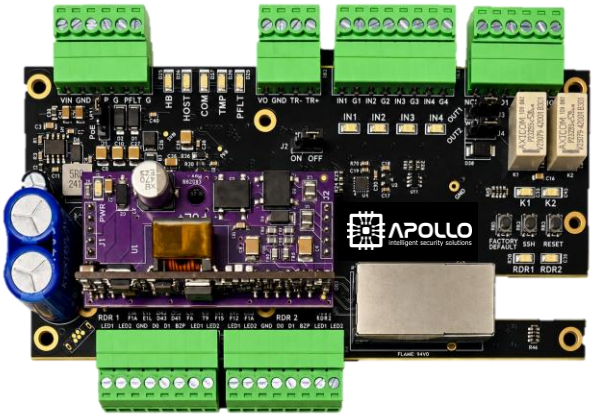
ASP-CP1

2 Reader Ports, 4 Inputs, & 2 Outputs

Single-Door, Security-Hardened Controller Platform

The **Apollo Security ASP-CP1** is a next generation, Linux-native Controller Platform built for security-critical deployments that demand modern cybersecurity, high-performance edge-processing, and real scale. Designed as a single-door controller, it provides the onboard interfaces to secure one access point while delivering enterprise-class capacity and reliability through a high-performance architecture capable of running multiple embedded applications at once without disruptions to functionality. ASP-CP1 is an open-architecture platform that enables OEMs and solution partners to deploy embedded applications, integrate via cloud-native APIs, and scale using controller-clustering, accelerating custom solutions beyond the constraints of legacy access systems. Flexible expansion options reduce deployment complexity and cost, bringing enterprise-grade protection to both SMB and large multi-site environments.



ASP-CP1

High-Performance with Maximum Security, at the Edge

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
- Backward compatibility via SDK Integrations
- Wireless Connectivity
- True Offline Operation/Survivability

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)
- Event & RTC Backup During Power Failure
- Battery-Less Design
- Wet Relays
- WiFi 6 and Bluetooth 5
- Onboard Biometric Template Storage

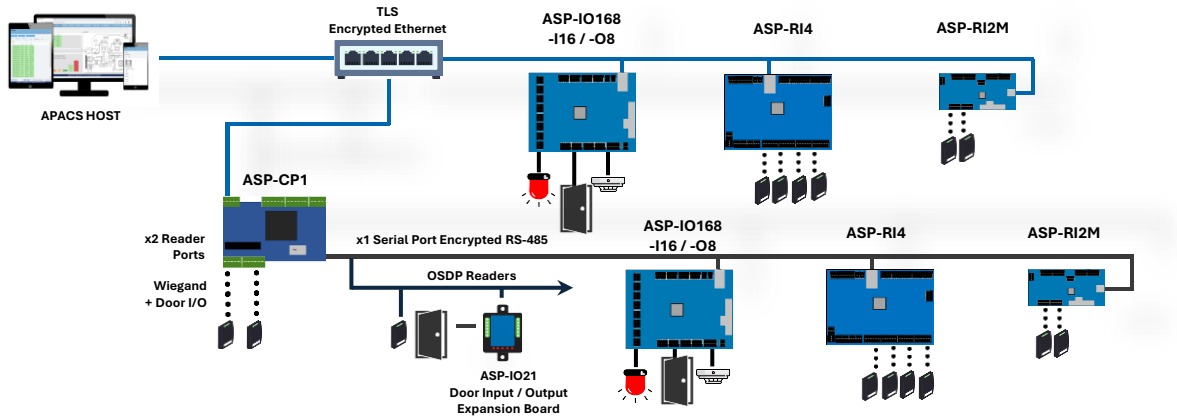
SUPPORTED READER TYPES

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

ASP-CP1

Single-Door Controller Platform

ASP-CP1 SYSTEM DIAGRAM



ONBOARD HARDWARE INTERFACES

- **1 Downstream, RS485 Serial Com Port**
  - Multi-drop up to 16 serial connected downstream IO and/or Reader Interfaces boards total.
  - Multi-drop 2 OSDP readers per door for a paired setup
  - Up to 16 OSDP readers total with reader expansion license
  - 9,600 to 230,400 baud
  - 2-wire interface; half-duplex
- **2 TTL Reader Ports**
  - One Wiegand reader per port
  - One open-collector Buzzer output
  - Three open-collector LED outputs
  - 4 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
- **2 Form-C Relay Outputs**
  - 2A @ 30VDC MAX rating
- **2 Unsupervised Inputs for Cabinet Tamper & Power Failure**
- **2 Network Ports**
  - 1 dedicated 1000 Mbps (Gigabit) Ethernet port
  - 2nd Ethernet port via USB-to-Ethernet adapter
  - Expand system w/ up to 64 Networked I/O Boards & RI Boards
- **USB 2.0**
- **Plug-in Wi-Fi 6 + Bluetooth Module (Optional)**
  - Wi-Fi6 up to 6000Mbps & Bluetooth up to 3Mbps

POWER

- **Input Power (VIN):**
  - 12-24 VDC:@ 250 mA max (typical)
  - PoE+ option available
- **Reader & Serial Port "VO" Output Power (overcurrent protected):**
  - Reader power can be cycled with software
  - VIN passthrough with 800mA MAX combined all ports
- **Wet Relays (fuse-protected)**
  - VIN passthrough; 1.5 A MAX combined across both relays
- **USB 5 VDC; 500 mA MAX current**
- **Wireless (Wi-Fi + Bluetooth); 145 mA @ VIN 12VDC**
- **Onboard power supervision with backup power**
  - Events and RTC maintained through power failure

MEMORY CAPACITY

- Up to 3M cardholders/credentials
- Configurable 3M Event Buffer
- Manage up to 128 readers per controller or Cluster
- 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:** 5.4in (137.16mm) x 2.75in (69.85mm) x 1.25in (31.75mm)
- **Weight:** 0.31 lbs. (140g)
- **SKU: 801360** (additional options: -P / -W / -PW)
- –P for PoE+ module installed
- –W for Wireless module installed
- –PW for both PoE+ and Wireless modules installed