HID Aero™ X1100
Intelligent Control Up to 4 Readers, 7 Inputs, 4 Outputs

INTELLIGENT CONTROLLER SUPPORTING UP TO 2 DOORS LOCALLY AND 64 READERS IN TOTAL USING EXPANSION IO MODULES
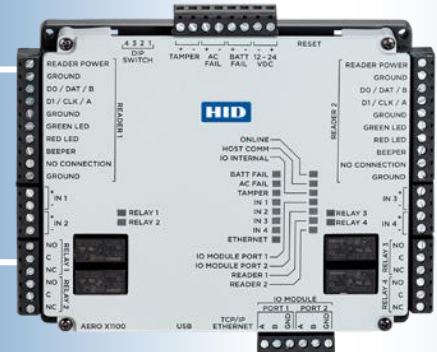
Key Features:

- **OSDP Reader Support** Increases security and functionality with secure channel and bi-directional communications

- **Robust Network Security** Supports mutual authentication using TLS 1.2 while running in a FIPS 140-2 approved operating environment on the intelligent controller

- **IO Module Encryption** Enhance security between intelligent controller and IO modules with AES encryption

- **Crypto Chips** Protect against malicious attacks to keep keys and passwords safe

- **Threat Levels** Define up to 7 different threat levels that are used to instantaneously adjust user access during lockdowns and lockouts

- **High Amp Relays** Ensure controller protection from power hungry locks and enables wider choice of egress hardware

- **Mounting** Physically mount to DIN rails using accessory (sold separately)

- **Open Architecture –** Work with a variety of software partners over time without any re-investment in hardware

- **Based on HID Mercury Technology –** Built on a tried and tested platform, operating in the most demanding access control enterprises for 25+ years

- **End-to-End Security –** TLS 1.2, AES-256, OSDP Secure Channel and 4-state supervised inputs ensures no weak technology link in the chain of security

- **VertX® Compatibility -** Installs in the same footprint as VertX and communicates with V100, V200 and V300 IO Modules

The HID Aero Controller product line provides a complete and fully functional hardware, firmware, software library and tool infrastructure for access control software providers. This product line is ideal for access control providers who do not want to incur the ongoing costs of designing, manufacturing and maintaining panel hardware along with the critical access control logic that commonly resides locally in access control panels. The HID Aero Controller product line is the successor to HID's VertX® and EDGE®, and is based on HID Mercury technology, a panel technology supporting 4 million+ panels installed globally since the early 1990s.

The HID Aero X1100 provides on-board IO support for up to two access points and two (Wiegand) or four (OSDP) readers. Four robust relays provide door lock and auxiliary output control while seven supervised inputs are used to monitor door status, REX, power supply, battery, tamper and general-purpose inputs status, all supporting analog-to-digital conversion.

Attach expansion IO modules (X100, X200 and X300) to expand the number of access points controlled. At maximum capacity, the X1100 can control up to 64 readers, 64 access points, 615 inputs or 388 outputs.

The X1100 serves as a form and fit replacement for both the VertX EVO V1000 and V2000 providing both on-board two-door support and downstream IO module communication in a single SKU. The X1100 communicates with HID Aero X100, X200 and X300 IO modules as well as VertX V100, V200 and V300 IO modules.

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INTELLIGENT CONTROLLER AND IO MODULE SYSTEM FEATURES

Highly Configurable

- Change reader modes based on time thresholds, pre-alarm signals, for the benefits of functionality like a global lockdown
- Enable access rights or alerts for specific groups of users
- Create unique situational emergency alerts using highly detailed transaction information and data correlation features

Sophisticated Threat Detection

- Duress signaled from keypad readers will notify the host for immediate action and quick response in emergency situations
- Offline protection against improper card usage via local anti-passback capability
- Ability to monitor supervised input wiring to help identify system faults or malicious attacks

Platform Security

- Encryption of data at rest provides privacy for data on the intelligent controller
- Monitor the health of the intelligent controller on the network by utilizing SNMPv3
- Ensure rogue devices cannot be plugged into the network by using 802.1X to implement port based network access control

Hardware Design

- The Aero X1100 combines the capability of the legacy V1000 and V2000 enabling a simpler approach to installation - one SKU covers both use cases!
- Market leading maximum operating temperature allows for installation in harsh environments

SPECIFICATIONS

Credential Capacity	250,000*
Credential Number Size	Up to 64-bits with 15-digit PIN MAX
Transaction Buffer	50,000
Access Levels	32 per credential (per reader schedule); plus custom credential override
On-Board Access Point Control	Up to 2 access points with on-board IO
On-Board Reader Support	Up to 4 (OSDP multi-drop) or 2 (Wiegand) with on-board IO
Maximum Access Points	64 (using X100 or V100 IO modules)
Maximum Readers	64 (OSDP or Wiegand, regardless of IO module configuration)
Maximum Inputs	615 (using X200 or V200 IO modules)
Maximum Outputs	388 (using X300 or V300 IO modules)
Number of IO Module Buses	2 (each dedicated to either Aero or VertX IO modules)
Maximum Aero IO Modules	32; each IO Module bus can support up to 32 Aero modules
Maximum VertX IO Modules	32; each IO Module bus can support up to 16 VertX modules
Input Voltage	12 to 24 Vdc +/- 10%
Maximum Input Current	1.9 A (550mA excluding readers and USB)
Micro USB Port	5 Vdc, 500 mA maximum (USB 2.0)
Memory and Clock Battery Backup	3 Volt Lithium, type CR2032
microSD Card	Format: microSD or microSDHC; 2 GB to 8 GB (RFU)
Ethernet Communication	10BaseT/100Base-TX
IO Module Communication	2-wire RS-485, 2400 to 115K BPS, asynchronous
Inputs	7 supervised/unsupervised, standard EOL: 1k/1kΩ 1%, 1/4 watt
Outputs	4 Relays, Form-C with dry contacts
Normally Open Contact Rating	5 A @ 30 Vdc resistive
Normally Closed Contact Rating	3 A @ 30 Vdc resistive
Reader Power	12 Vdc +/- 10% regulated, 500 mA maximum each reader
Data Input Power	TTL compatible or 2-wire RS-485
OSDP Mode	9,600 to 230,400 bps, asynchronous, half-duplex, max cable 2000 ft (609.6 m)
LED Output (Wiegand)	Open Collector, 12 Vdc open circuit maximum, 40 mA sink maximum
Beeper Output (Wiegand)	Open Collector, 12 Vdc open circuit maximum, 40 mA sink maximum
Operating Temperature	32 to 158º F (0 to 70º C)
Storage Temperature	-67 to 185°F (-55 to +85°C)
Humidity	5 to 85% RHNC
Dimension	6.46" x 5.51" x 1.02" (164 mm x 140 mm x 26 mm)
Weight	352 g
DIN Rail Mounting	Purchase accessory separately; Manufacturer: Phoenix Contact, Description: USA 10 Series Rail Adapter, Mfg Part No. 1201578
Certifications	Certification: FCC Part 15 Subpart B, CE, BSMI, IC, AS/NZS, TCVN, KCC Safety: UL-294, IEC 62368-1, CB Scheme Hazardous Substances: RoHS (2011/65/EU & 2015/863), EU REACH (1907/2006), California Proposition 65 Security: NIST Certified Encryption
HS Code	8537.10.9
ECCN	EAR99

* Credential capacity depends on memory configuration. 250,000 credential capacity possible using date/time activation/deactivation, 64-bit card numbers and 1 operating mode