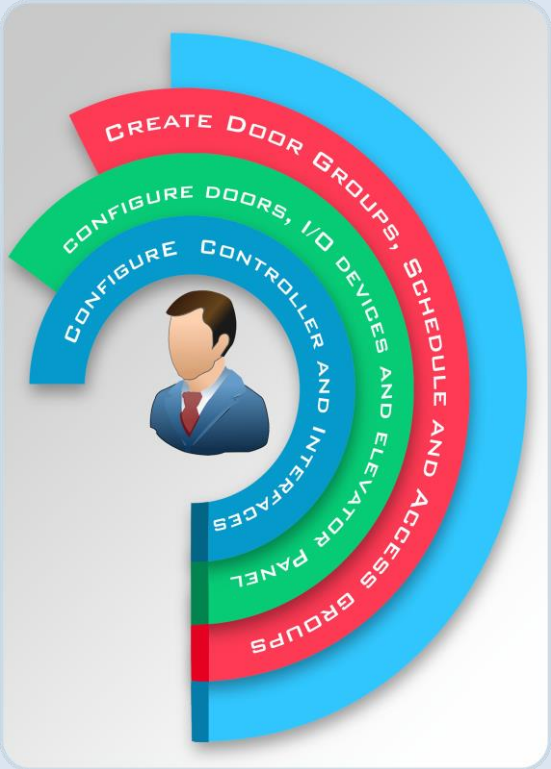
Access Control Management System

OBJECTIVE:

It exerts a computerized control that is well organized to access the resources (building, small area or room in building, assets in a building etc.). It acts as a medium between operator and Hardware (Controller). Its core functionality is to send the commands, instructions, requests and data to controller and receive the response/logs from controller and notify the same to operator.

AccessSoft is a comprehensive access control management system designed to provide a user friendly environment in order to configure the controller, readers, schedules and access levels, and several ACS features.

MODULES:



Master Module: It allows user to create company profile, personnel details and other relevant information such as department, designation, employee status etcetera.

System Module: It is used to create system users, assign user rights, department level access, database backup/restore and other configurations.

Device Management: It provides an easy interface to configure the controller, reader interfaces, readers and IO device interfaces.

Access Group Management: Access group is the core part of access control system which allows user to define the door groups and schedules where door group comprises of one or more doors. Permutation and combination of door groups and schedule will form the access group.

Card Management: As the name implies it is used to enroll the card credentials. It supports all type of HID card formats including standard 32-bit format (Mifare) and custom formats.

Alarms and Event Management: It notifies operator by displaying all the events and alarms occurred in real-time, it also displays card holder details along with photo for enrolled cards. It facilitates an interface to design the floor plan as well as to view the events in accordance with the floor plan.

KEY FEATURES:

- Card Formats: Supports all type of HID card formats including standard 32 bit format and custom formats. It also provides the following credential settings.
  - SET ESCORT ID (TO ESCORT VISITOR).
  - SET CARD EXPIRY DATE.
  - ACTIVATE/DE-ACTIVATE CARD.
  - SUPPORT OF VARIOUS CARD FORMATS (HID/CUSTOM).
- Door Management: Provides an interface to configure door details such as.
  - ACCESS GRANT TIME.
  - EXTENDED ACCESS GRANT TIME.
  - ANTI-PASSBACK SETTING.
  - CICO/CIFO SETTINGS (ONE DOOR AND 2 DOOR CONTROL).
  - DOOR FORCED ALARM.
  - DOOR HELD OPEN ALARM.
- Access Methods: Supports various access methods such as
  - CARD ONLY.
  - CARD OR PIN.
  - CARD AND PIN.
  - PIN ONLY.
- Access Methods: It provides a rich interface to alert operator about the events/alarms occurred in real time.
  - ACCESS GRANT OR DENY.
  - CARD OR PIN NOT FOUND.
  - ACCESS DENIED DOOR GROUP/SCHEDULE.
  - DOOR FORCED ALARM.
  - DOOR HELD OPEN.
  - CARD HOLDER DETAILS ALONG WITH PHOTO.
  - ANTIPASSBACK VIOLATION.
  - ACCESS GRANT OR DENY FOR MULTIMAN CARD.
- I/O Device Integration: Option to configure IO interfaces (V-200 & V-300) to integrate with IO devices, such as
  - ELEVATORS, HOOTERS, LIGHT INDICATORS AND OTHER OUTPUT DEVICES (V300).
  - AC FAIL MONITOR, BATTERY FAIL MONITOR, ENCLOSURE TAMPER, AND OTHER INPUT DEVICES (V200).
- Fire Alarm Integration: Option to Integrate with fire alarm panel to release the doors dedicated for fire exit.
- Multi Man Authentication: Doors can be enabled with multi man authentication, it requires two or more cards to be authenticated to grant access, and it is optional whether to follow the card sequence or not.

- Elevator Integration: Option to integrate with elevator control panel to grant or deny accessing the elevator.
- Host Application: Access Soft is available in windows desktop version and web version. Modularized architecture eases implementation, maintenance and usage
- Reports: Reports module facilitates operator to generate sophisticated reports with various filter options. Following is the list of reports.
  - EMPLOYEE DETAILS.
  - CARD DETAILS.
  - READER DETAILS.
  - FIRE ROLL CALL IN (EVACUATION LIST).
  - FIRE ROLL CALL OUT (EVACUATED LIST).

SYSTEM SPECIFICATION AND LICENSING:

The host application is available in both windows desktop version and web version; both the versions use MS SQL as backend and C# .NET/C# ASP.NET as frontend respectively.

Host License: Standard Host application with 32 readers support
Extended license: Software Extended license to support additional readers, multiple of 32 readers for each extended license.

PREREQUISITES FOR WINDOWS APPLICATION

Prerequisites	Recommended	Minimum
Processor	2 GHZ	1 GHZ
RAM	4 GB	2 GB
OS	WIN-7 or Higher (32/64 bit)	WIN-XP-SP3
OS-Server	WIN- 2008 Higher (32/64 bit)	WIN-2008
Database	MS-SQL-2008 Higher (32/64 bit)	MS-SQL-2005
Disc space	500-GB	40-GB

PREREQUISITES FOR WEB APPLICATION

Prerequisites	Recommended	Minimum
Processor	2 GHZ	1 GHZ
RAM	8 GB	4 GB
OS	WIN-7 or Higher (32/64 bit)	WIN-7
OS-Server	WIN- 2008 Higher (32/64 bit)	WIN-2008
Database	MS-SQL-2008 Higher (32/64 bit)	MS-SQL-2005
Disc space	500-GB	40-GB
Web Server	IIS-7 or Higher	
Web Browser	IE-9 or Higher	

VertX EVO™ V1000 NETWORKED ACCESS CONTROLLER FOR INTERFACE WITH UP TO 32 DOOR CONTROLLERS

VertX Evo V1000 is a multi-door access control panel that reduces the burden on corporate LANs by connecting up to 32 door controllers using only one IP address. VertX EVO V1000 handles all online door decisions, input monitoring and output control for all connected interface modules. The solution has two on-board inputs and outputs for local input point monitoring and auxiliary output control, and is powered by a local power supply (12 or 24 VDC). VertX EVO V1000 works with standard VertX V100 door interface, V200 input monitor and V300 output control interface modules.

Cable Specifications

Ethernet:
- 300ft (100m), CAT-5
- ALPHA 9504C, ALPHA 9405F

RS-485 (for Vx00 connection):
- 4000ft (1219m), 2-twisted pair shielded 100Ω cable (two independent RS-485 networks)
- 22AWG Belden 3105

Input Circuits:
- 500ft (150m), 2-conductor shielded
- 22AWG ALPHA 1292C
- 18AWG ALPHA 2421C

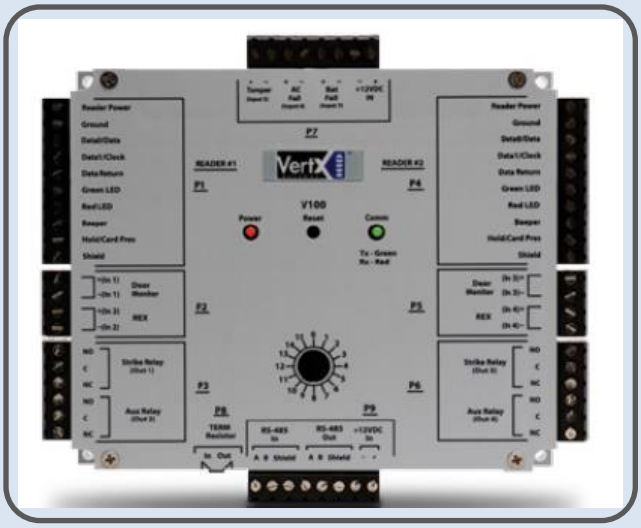
Output Circuits:
- 500ft (150m), 2-conductor shielded
- 22AWG ALPHA 1172C
- 18AWG ALPHA 1897C

SPECIFICATIONS

Mounting	Mount to any wall surface, using four screws. For UL compliance, one or more gateways can be mounted inside a locking customer supplied NEMA-4 rated enclosure.
Dimensions	“5.8” W x 4.825” H x 1.275” D (147.32 mm x 122.55 mm x 32.38 mm)”
Weight	12.4 oz. (.35 kg)
Housing Material	UL94 polycarbonate
Audio / Visual	Power LED and RS-485 Communications LED
Operating Temperature	32° to 122° F (0° to 50° C)
Operating Humidity	5% to 95% relative, non-condensing.
Communication Ports	Ethernet (10/100), RS485 (half duplex)
Certifications	UL294 (US) Listed Component, CSA 205 (Canada), FCC Class A (US), ICES-003 Class A (Canada), CE Mark EN 301 489-3 EN 55022 EN 50130-4 (EU), C-Tick AS/NZS CISPR 22 (Australia, New Zealand) & Korea (KCC)
Warranty	Warrantied against defects in materials and workmanship for 18 months (See complete warranty policy for details).
Input Power	
Operating Current (MAX) @ 12-24VDC	1000mA
Operating Current (AVG) @ 12VDC	210mA
Supervised Inputs Power (MAX)	0.025W (5mA sink, 5V nominal) 0 to +5VCD Ref
Relay Rating	
Relay Contact Rating (Dry Output)	2A @ 30VDC (MAX Amperage that is UL Certified) 5A @ 30VDC

VertX™ V100 TWO READERS/ TWO DOORS INTERFACE

The v100 Door/ Reader monitor interface connects two access control card readers via wiegand or clock- and Data interface, controlling either one or two doors. The v1000 features on - board flash memory, enabling program updates to be downloaded via the network The V100 connects to the V1000 through a high speed RS-485 network. The V1000, in turn, communicates with the system host via industry-standard TCP/IP protocol over 10/100 Mbps Ethernet or the Internet. This architecture minimizes the impact on corporate LANs by using only one TCP/IP address for every 32 interfaces and by handling low-level transactions on the RS-485 network.



Visual Indicators

- **Communications LED flashes green for "transmit to host" and red for "receive from host." Power LED indicates that sufficient DC voltage is being provided to the unit.**

Easily interfaced

- **Quick-disconnect screw terminal connectors**
- **Rotary address switch (0–15)**
- **Inputs for:**
  - **2 Readers**
  - **2 door monitor switches,**
  - **2 Request-to-Exit switches**
  - **AC Fail Monitor***
  - **Battery Fail Monitor**
  - **Enclosure Tamper**

NON-LATCHING RELAY OUTPUTS (RATED 2A @ 30 VDC):

- **2 door strikes (configurable)**
- **2 auxiliary devices: door held/forced alarm, alarm shunt, host off-line (comms down), or general purpose**

SPECIFICATIONS

Dimensions	5.8" W x 4.825" H x 1.275" D (147.32 mm x 122.55 mm x 32.38 mm)
Weight	12.4 oz (.35 kg)
Enclosure Material	UL94 Polycarbonate
Power Supply Requirements	60 mA @ 9–18 VDC (with no readers connected). Recommended: Supervised linear power supply with battery backup, input surge protection, and AC fail and battery low contact outputs. When VertX™ is supplying power to readers, the requirements are 600 mA @ 9–18 VDC. The V100 can supply 500 mA to two readers. Separate supervised DC supplies with battery back-up recommended for door locking or relay-activated devices, or for HID MaxiProx® readers.
Operating Environment	Indoors, or customer-supplied NEMA-4 rated enclosure
Operating Temperature	32° to 122° F (0° to 50° C)
Operating Humidity	5% to 95% relative, non-condensing
Communications Ports	RS-485 — two wire. Two SIA standard Wiegand/Clock-and-Data ports
Certifications	UL® 294 and UL® 1076 Recognized Component for the US, CSA 205 for Canada, FCC Class A Verification, EMC for Canada, EU (CE Mark), Australia (C-Tick Mark), New Zealand, Japan, EN 50130-4 Access Control Systems Immunity for the EU (CE Mark)
Cable Distance	RS-485 — 4000 feet (1220 m) to host using Belden 3105A, 22 AWG twisted pair, shielded 100Ω cable; Wiegand — 500 feet (150 m) to reader using ALPHA 1299C 22 AWG, 9-conductor, stranded, overall shield (fewer conductors needed if all control lines are not used); Input Circuits — 500 feet (150 m), 2-conductor, shielded, using ALPHA 1292C (22 AWG) or Alpha 2421C (18 AWG); Output Circuits — 500 feet (150 m), 2-conductor, using ALPHA 1172C (22 AWG) or Alpha 1897C (18 AWG); minimum wire gauge depends on cable length and current requirements.

VertX™ V200 INPUT MONITOR INTERFACE FOR UP TO 16 ZONES

The v200 input monitor interface connects up to 16 supervised input circuits. Each input point monitors and reports normal, off-normal and alarm states. The v200 feature on board flash memory, enabling program updates to be downloaded through the network. The V200 connects to the V1000 via a high-speed RS-485 network. The V1000, in turn, communicates with the system host via industry standard TCP/IP protocol, over 10/100 Mbps Ethernet, or the Internet. This architecture minimizes the impact on corporate LANs, by using only one TCP/IP address for every 32 interfaces, and by handling low-level transactions on the RS-485 network.

Visual Indicators

- **Communications LED flashes green for "transmit to host" and red for "receive from host." Power LED indicates that sufficient DC voltage is being provided to the unit.**

Easily interfaced

- **Quick-disconnect screw terminal connectors**
- **Rotary address switch (0–15)**
- **Inputs for:**
  - **16 Input Circuits**
  - **AC Fail Monitor***
  - **Battery Fail Monitor**
  - **Enclosure Tamper**

NON-LATCHING RELAY OUTPUTS (RATED 2A @ 30 VDC):

- **2 door strikes (configurable)**
- **2 auxiliary devices: door held/forced alarm, alarm shunt, host off-line (comms down), or general purpose**

SPECIFICATIONS

Dimensions	5.8" W x 4.825" H x 1.275" D (147.32 mm x 122.55 mm x 32.38 mm
Weight	12.4 oz (.35 kg)
Enclosure Material	UL94 Polycarbonate
Power Supply Requirements	50 mA @ 9–18 VDC. Recommended: Supervised linear power supply with battery back-up, input surge protection, and AC fail and battery low contact outputs. Separate supervised DC supply with battery back-up recommended for relay-activated devices.
Operating Environment	Indoors, or customer-supplied NEMA-4 rated enclosure
Operating Temperature	32° to 122° F (0° to 50° C)
Operating Humidity	5% to 95% relative, non-condensing
Communications Ports	RS-485 — two wire
Certifications	UL® 294 and UL® 1076 Recognized Component for the US, CSA 205 for Canada, FCC Class A Verification, EMC for Canada, EU (CE Mark), Australia (C-Tick Mark), New Zealand, Japan EN 50130-4 Access Control Systems Immunity for the EU (CE Mark) and current requirements.

VertX™ V300 OUTPUT CONTROL INTERFACE FOR UP TO 12 DEVICES

The V300 output control interface contains 12 latching Form-C relays, which can connect up to 12 devices controllable by simple contact closures, such as logic inputs for process equipment, HVAC and elevator control panels, CCTV switchers, etc. Loads exceeding 2A @ 30 VDC should be controlled via interposing relays. The V300 features on-board flash memory, enabling program updates to be downloaded via the network. The V300 connects to the V1000 through a high speed RS-485 network.

Visual Indicators

- **Communications LED flashes green for "transmit to host" and red for "receive from host." Power LED indicates that sufficient DC voltage is being provided to the unit.**

Easily interfaced

- **Quick-disconnect screw terminal connectors**
- **Rotary address switch (0–15)**
- **Inputs for:**
  - **12 Auxiliary Input Circuits**
  - **AC Fail Monitor***
  - **Battery Fail Monitor**
  - **Enclosure Tamper**

Local processing:

- **Basic input/output linking for outputs 1 and 2, and auxiliary inputs 1 and 2**

SPECIFICATIONS

Dimensions	5.8" W x 4.825" H x 1.275" D (147.32 mm x 122.55 mm x 32.38 mm)
Weight	13.6 oz (.38 kg)
Enclosure Material	UL94 Polycarbonate
Power Supply Requirements	60 mA @ 9–18 VDC; Recommended: supervised linear power supply with battery backup, input surge protection, and AC Fail and battery low contact outputs. Separate supervised, DC supply with battery back-up recommended for relay activated devices.
Relay Rating	2A @ 30 VDC maximum load
Operating Environment	Indoors, or customer-supplied NEMA-4 rated enclosure
Operating Temperature	32° to 122° F (0° to 50° C)
Operating Humidity	5% to 95% relative, non-condensing
Communications Ports	RS-485: two wire.
Certifications	UL® 294 and UL® 1076 Recognized Component for the US CSA 205 for Canada, FCC Class A Verification, EMC for Canada, EU (CE Mark), Australia (C-Tick Mark), New Zealand, Japan EN 50130- 4 Access Control Systems Immunity for the EU (CE Mark)

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