V1000 Network Controller

Access Control Processing and Host Interface for up to 32 Door/Reader Interface, Input Monitor, or Output Control Units. • 71000

HID

ACCESS opportunity.

The HID VertX™ products provide a complete and fully featured hardware/firmware infrastructure for OEM access control software host systems, communicating via industry standard TCP/IP protocol, over 10/100 Mbps Ethernet or the Internet. The V1000 boasts a 32-bit RISC processor running the Linux Operating System. On-board flash memory allows program updates to be downloaded via the network. The V1000 connects up to 32 Door/Reader, Input Monitor, or Output Control Interfaces via two independent RS-485 networks, each network having two sets of input connections for optimum system topology. 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.

Features

◗ Stores a complete access control and configuration database for up to 32 Reader Interfaces (up to 64 doors) and 44,000 cardholders with expansion capability up to 250,000 cardholders.

◗ The access control system interfaces with combinations of devices with a maximum of:
  • 32 Door/Reader interfaces (up to 64 doors/readers) or
  • 32 input monitor interfaces 9 (up to 512 monitor points) or
  • 32 output control interfaces (up to 384 control relays)

◗ Reports supervised inputs/alarms with 255 priorities.

◗ Includes an HTTP API, Windows® DLL API, and direct communication API.

◗ Allows local connection of a laptop computer for diagnostics and configuration.

◗ Connects to the host and other devices on a TCP/IP network.

◗ Receives and processes real time commands from the host software application.

◗ Reports all activity to the host.

◗ Controls and communicates with all connected devices.

◗ Buffers offline transactions and uploads to the host when communication is restored.

◗ Allows fallback communications via dialup or RF modem if TCP/IP network communication is lost.

◗ UL 294 and UL 1076 recognized component.

Features

Configuration
Attractive polycarbonate enclosure protects components from damage, and all connections and indicators are fully identified by silk-screened nomenclature on the cover.

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 with:
• DC supply with battery back-up
• Enclosure tamper switch
• All connections made through conduit
The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet, or on a wall above a suspended ceiling.

Visual Indicators
Power LED indicates that sufficient DC voltage is being provided to the unit. RS-485 Communications LED: solid green indicates successful communications to downstream devices, red flash indicates a failed communications attempt, solid red indicates no communications.

Easily Interfaced
• RJ-45 connector for Ethernet TCP/IP
• Quick-disconnect screw terminal connectors:
  • Four RS-485 connections to interfaces
  • 2 supervised analog inputs for general purpose applications
  • 2 non-latching output relays for local alarm annunciation (rated 2A @ 30 VDC)
  • DC Power input
  • Tamper input*
  • AC Power Fail input*
  • Battery Fail input*
*Can be configured as a general purpose input

Power Distribution
The user should supply 12 VDC to connected interfaces. Separate supervised DC supplies with battery back-up are recommended for door locking or relay activated devices, HID MaxiProx® readers, and larger systems.

Hardware
• 32-bit RISC CPU, 100 MHz

Memory
• 8 MB onboard Flash memory
• 16 MB / 32 MB memory expansions available
• 32 MB SDRAM
• 256k SRAM

Warranty
Warranted against defects in materials and workmanship for 18 months. (See complete warranty policy for details.)

Part Number
Base Part Number: 71000

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
140 mA @ 12-18 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.

Operating Environment
Indoors, or customer-supplied NEMA-4 Enclosure

Temperature
32° to 122° F (0° to 50° C)

Humidity
5% to 95% relative, non-condensing

Communication Ports
RS-485 – two wire.
TCP-IP – one port, 10 or 100 Mbps

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 per network (two independent RS-485 networks) using Belden 3105 (22AWG) 2-twisted pair, shielded 100Ω cable
TCP/IP – 300 feet (100 m) to next device, using Category 5 cable, Alpha 9504C or 9504F
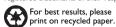Input Circuits – 500 feet (150 m), 2-conductor, shielded, using ALPHA 1292C (22AWG) or Alpha 2421C (18AWG)
Output Circuits – 500 feet (150 m), 2-conductor, using ALPHA 1172C (22AWG) or Alpha 1897C (18AWG)
Minimum wire gauge depends on cable length and current requirements.

ACCESS experience.

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