



**The 2-Door Access Control Solution
That Grows With Your Needs**



Introduction

NStar™ NS2 2-door Access Control System

The Northern NStar™ NS2 is a totally new access control system designed to provide a cost effective solution for entry level applications plus the ability to seamlessly expand and adapt to future growth needs. The NStar system is composed of the new NS2 control panel and NStar access control software. With the NStar NS2 you can start small and easily expand and upgrade your access control system as your needs change.

The NStar NS2 controller is ideal for the needs of a 2-Door application. It offers simplicity to satisfy basic application needs combined with state of the art technology, processing power and speed not usually found in an entry-level product. NStar's totally new architecture includes unprecedented scalability allowing for easy system expansions or future technology updates via a unique XPort expansion port. Whether you need to add doors or system functions, the NS2 gives you a clear path to future growth.

NStar software is a comprehensive access control application designed for use with the NS2 controller. NStar provides fast installation and setup with quick start configuration wizards and simple operation via user-defined control and viewing of system status and an event viewer for real-time monitoring of system activities. If you want to go beyond the basics, an option package that includes video badging, alarm pop ups, digital video integration and networking is available to meet future needs.

No matter how small you start or how large you grow, NStar offers seamless integration of existing systems and future technology to provide you with a superbly compatible access control solution.



NStar™ NS2 Features

- Windows 2000 Professional and XP Professional compatible
- Microsoft Data Engine (MSDE)
- 2 Access Points, expandable to 128
- 2,000 users, expandable to 10,000
- 10,000 events, expandable to 100,000
- 8 supervised input points
- 4 relays, SPDT 12A @ 28VDC
- 32-bit processor
- Communications: RS-232 standard or RS-485 optional
- Optional TCP/IP interface
- Real-time clock
- XPort expansion port
- Removable terminal blocks
- NStar access control software



NStar Software Solutions:

Database:

- Microsoft Data Engine (MSDE)

Access Control:

- Maximum 10,000 cardholder capacity Host Grant
- 32 holidays with multiple holiday types
- Supports up to 128 readers VIA tcp/ip 124 VIA RS-232
- Anti-passback, hard or soft, defined by reader

Operational Functionality:

- System tree for monitoring and control
- Event viewer
- Scheduling for dial-up locations
- Card locate
- Batch card add and card delete
- Card activation/deactivation by day/month/year
- Assign multiple cards to a cardholder
- 40 definable cardholder note fields & note field templates
- Monitoring of database file size and hard disk space
- Database backup scheduler
- Play .wav audio files based on events

Reporting:

History Reports:

- Time and date and from archived history
- Reader(s)
- Cardholder
- Descriptive cardholder field
- Transaction type
- Alarm point state

Operator Actions:

- Time and date



Operator

- Actions performed by operator
- Device(s) operated

Database Reports:

- Cardholders
- Access levels
- Time zones
- Schedules

Other:

- Up to 64 IP connections (using optional networking hardware)
- Two serial ports
- Context sensitive help via F1 key provides help on any selected function

Recommended Minimum Computer Configuration

- Pentium II-400Mhz CPU
- 256 megabytes of RAM
- 2.1 gigabyte hard disk
- 2 serial communication ports
- Tape backup drive
- 1 parallel port (badging to be done on workstation)
- 15" SVGA color monitor (1024 x 768, 256 color)
- Supported operating systems:
 - Microsoft® Windows XP Professional
 - Windows 2000 Professional

Software Capabilities:

Quick Start Wizards

Quick Start Wizards guide you through installation and provide fast and simple setup of NStar software.



Control Map

Easy to understand control maps with color coded status icons give you a complete picture of your system and the condition of each device.

Event Viewer

The Event View window displays current system activity in real time.





NStar Software Option Package:

NStar offers an upgrade Option Package for users with needs for greater functionality. This package offers the ability to add Photo-ID Badging, Alarm/Event Monitoring, Digital Video Integration and the ability to network multiple PC's together. The option package can be activated immediately upon registration of software.

Photo-ID Badging

NStar's badging option enables you to create your own custom photo-id's. With the easy to use interface you can add pictures, company logos, colorful text and background. Once the badging option is enabled you now have the ability of using the Auto Card Pop-Up feature. This will allow you to verify a cardholder by their picture stored in the database.

Alarm View / System Events

The Alarm View allows you to monitor your entire system in real-time. With the Alarm View alarms and events will "pop-up" on the screen so you can see events and alarms as they happen. Alarm View allows you to respond quickly to emergencies or threats to your employees or building.

Digital Video Integration

Save time reviewing video tapes by using NStar's integrated digital video system that allows you to retrieve stored video from an ADEMCO Video Rapid Eye Digital Video Recorder (DVR). Control live cameras while monitoring others from the digital video pop up window. Complete PTZ control including 8 presets and up to 16 cameras can be viewed in one pop up window.



Optional Upgrades

The following optional features are available with the NSOPT1 software upgrade:

- Networking – Up to five concurrent users
- Prioritized alarms – 1 to 99 priorities
- Alarm messages and operator notes
- Integrated digital video (Rapid Eye) PTZ control
- Alarm and video pop up
- System events viewer
- Photo ID badging
- Magnetic stripe encoding
- Duplex printing – two sided badge printing



Easy to Install

- Removable terminal blocks allow fast connections and simplified wiring.
- RJ45 serial connection from the panel to the PC allows for quick installation
- No jumpers or reset switches make installation error free

Expandable & Upgradeable

- XPort expansion port allows for future expansion with devices including memory expansion
- FLASH memory means never having to replace a firmware chip to take advantage of system upgrades or new features.

Scalable

- 2 Access Points, Expandable to 128 allows you to grow with NStar NS2
- 2,000 Users, Expandable to 10,000
- 10,000 Events, Expandable to 100,000

Powerful 32-bit Processor

- 32-bit processor provides power for fast downloads of events and users and uninterrupted card activity.
- Ample processing power to support future system growth
- Optional Ethernet connection
- Co-Box connector provides Ethernet to Serial interface using existing Ethernet devices.

SuperCap Battery

- Maintenance-free backup of panel programming and data storage – never have to replace battery.
- SuperCap Battery will provide for system backup for 1 week without any system power.

Real-time clock

- The real-time clock gives you complete system time accuracy
- Automatic day-light savings time and leap year make the NStar NS2 the right system



Flexible mounting

- Tile or rack mountable in standard 19" high-density enclosure. Up to 8 NS2 panels in a single 19" rack.

Backwards Compatible

- Use with existing WIN-PAK 1.x and WIN-PAK 2.x Systems

Dimensions:

- Board: 9" Length x 5.5" Wide x 1" High
- Enclosure: 12.5" Wide x 14.5" High x 3.5" Deep

Environmental:

- Temperature: 35-110° F operational
- Humidity: 0 – 85% RHNC



Software Benefits:

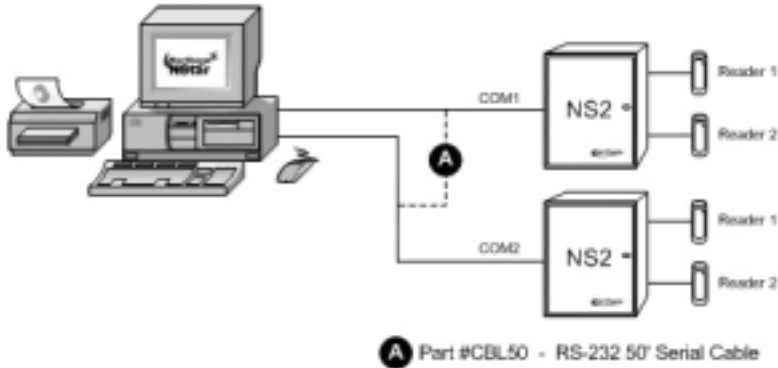
- Quick Start Configuration Wizard saves time in setup and programming
- Supports TCP/IP connection with optional NSLAN1 to make use of existing network infrastructure.
- 40 user-defined cardholder note fields provide more information for system operators.
- Database & hard drive limit and capacity prompts notify user when maintenance is required.
- Scheduler backup utility automatically maintains a recent NStar database.
- Easy viewing of device status by color, shape and pop-up text as arranged on a tree structure
- Standard viewer allows seeing the system activities color-coded in real time

Hardware Benefits:

- Powerful 32-bit processor provides uninterrupted card activity and fast downloads of users and events.
- XPort expansion port provides flexibility for future growth.
- Flash memory allows convenient upgrades & technology updates.
- Real-time clock ensures accuracy of system times and schedules.
- Flexible Mounting -Fits in existing wall- mount enclosure or in a optional 19" rack.
- Cost-effective access control solution.

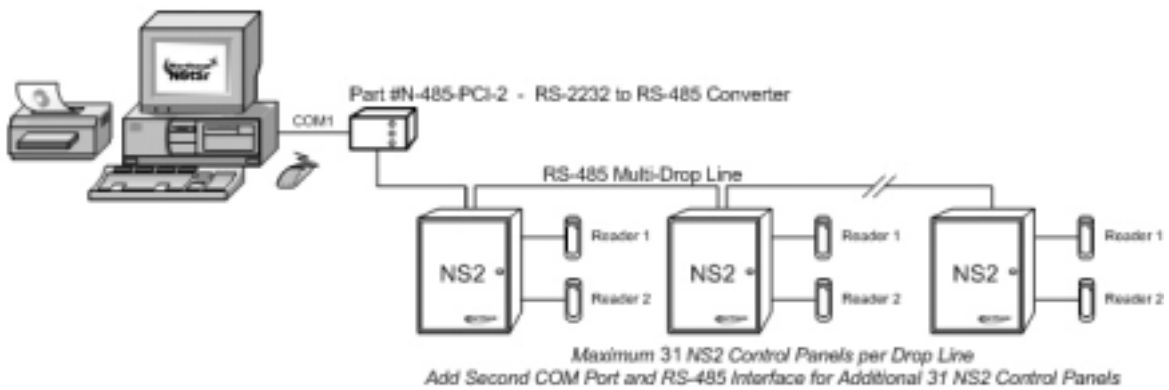
Serial Communication

Standard Configuration use 2 Communication Ports
Control 1 NS2 Control Panel per Communication Port



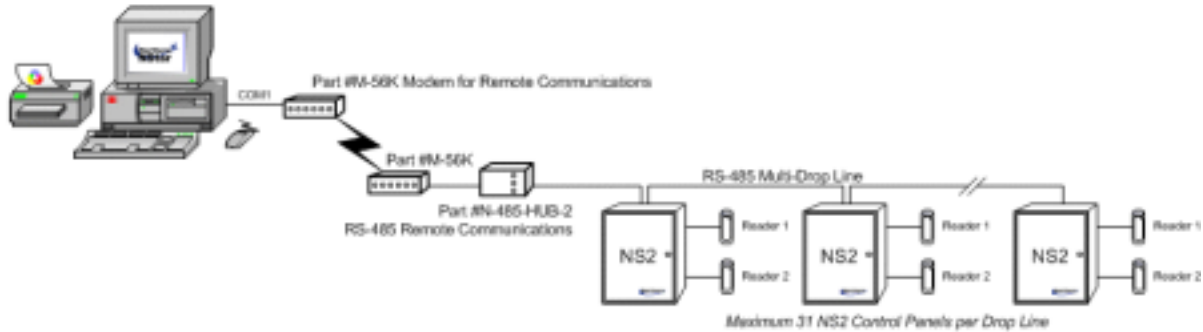
RS-485 Communication

Standard Configuration use 2 Communication Ports for 2 Loops
Control 31 NS2 Control Panels per Loop, 62 NS2 Panels Total



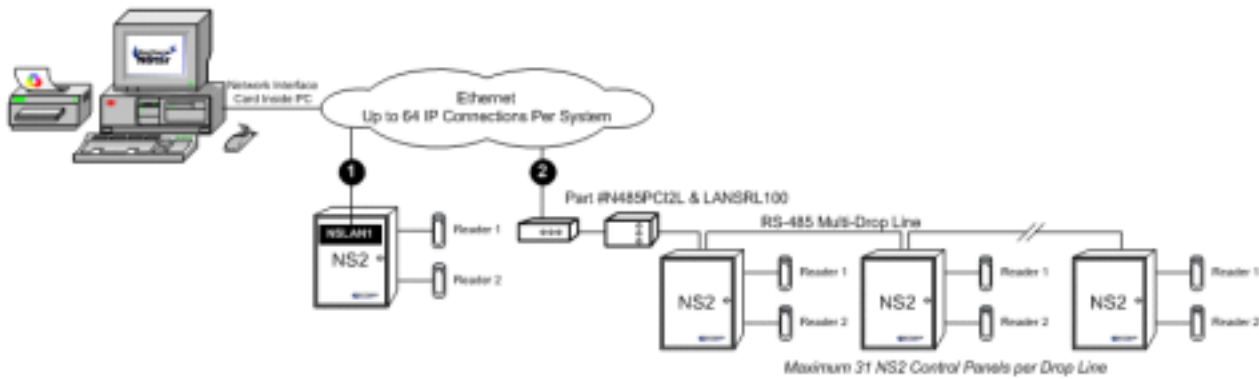
Dial-Up Communication

Dial-Up Communication requiring (2) M-56K Modems per COM Port
Control 31 NS2 Control Panels per Loop, 62 NS2 Panels Total



Ethernet Communication

- 1 Communicate to NS2 via Optional On-Board Ethernet interface (Part #NSLAN1)
- 2 Communicate to Multiple NS2 Panels using RS-485 Communications (Part #N485PC12L and LANSRL100)





Markets Served:

The NStar NS2 System is targeted at the entry-level market for small system applications. The majority of these systems are in a range from 2 to 16 doors and these represent approximately 75% of the available market for electronic access control.

More specifically, these entry-level applications include:

- Small systems (2-16 Doors)
- Single door applications
- Remote Gate/Parking Control
- Storage/Security Closet
- Vestibule/Remote Building

Applications of this nature are found primarily in commercial facilities and institutional settings. Typical examples by business type include:

- Small businesses
- Small office buildings
- Retail establishments
- Medical/Professional practices
- Daycare centers

Target Markets



Frequently Asked Questions... And Answers

Q. Can I use the NS2 panel on my existing Northern Computers system?

The NS2 panel will speak to existing Northern WIN-PAK 1.x and WIN-PAK 2.x systems via RS-485 communications only. When configuring the software the user must select the N-1000-III panel type. Additionally, the NS2 panel only has inputs 1-8, but the software will show all 16 inputs. Do not use inputs 9-16. Default interlocks should be changed to match the NS2 configuration. In the future, WIN-PAK 2.0 Release 5 will be able to communicate directly to the NS2 panel. WIN-PAK PRO, PassPoint and the N-750 will not support the NS2 panel at this time.

Q. How many access points can I control with the NStar access control system?

NStar software will support up to 128 access points. System expansion is via RS-485 or TCP/IP.

Q. How does NStar support RS-485 communications?

NStar supports RS-485 using the existing Northern Computers N-485-PCI-2.

Q. Can I upgrade my NStar software to WIN-PAK 2.0?

Not at this time. This capability will be available with WIN-PAK 2.0 Release 5 in mid 2003.

Q. Does NStar support the Northern AEP-3 relay output boards?

NStar does not support the AEP-3, but it does include four 12AMP @ 28VDC relays. NStar is intended to be an entry-level product designed for basic application needs.

Q. What is the XPort and how can I use it to expand my NStar system?

The XPort is a unique expansion capability port that is designed to allow the NS2 control panel maximum flexibility in expansion using plug-in modules. Future plans for XPort device interfaces include:

- Memory expansion
- Web interface
- Echelon LonWorks



Q. What are the minimum PC requirements to run the NStar software?

- Pentium II 400 MHz CPU
- 256 Megabytes of RAM
- 2.1 gigabyte hard drive
- 2 serial communication ports
- Tape backup drive
- Microsoft Windows XP; Windows 2000 Professional, Server, Advanced Server with Service Pack 2; Windows NT 4.0 with Service Pack 6a

Q. What is the maximum distance I can run the RS-232 connection?

RS-232 is limited to 50 feet. By using the N-485-PCI-2 you can increase the maximum distance up to 4000 feet.

Q. Can the NS2 mount into a customer's existing 19" rack to save on installation space?

Yes, the NS2 panel is designed to fit into a 19" rack mount enclosure.

Q. What localized language support does NStar offer?

The initial release of NStar will be available only in English. Future plans are to release Spanish, Portuguese and French localized versions.

Q. Can the NS2 run on a LAN/WAN?

Yes, the NS2 panel can be fitted with an interface board to allow TCP/IP connection.

Q. Does the NStar software support photo-id badging?

Badging is not included in the standard NStar software, however, there will be an upgrade option that includes additional software enhancements including badging. The additional software features available in the NStar option package include:

- Photo ID Badging
- Alarm View and System View (acknowledge, clear, video retrieval)
- Integrated ADEMCO Rapid Eye Digital Video support
- 5 User Networking



Q. What pre-packaged NStar kits are available?

Northern has made NStar available in pre-packaged kits to make ordering easier. Pre-packaged kits come in both starter and expansion varieties. There are two starter kits for new installations that include software and are available with and without proximity readers. There are also two expansion kits that make it easy to add on to an existing installation. These kits do not include software. One expansion kit includes two proximity readers and the other kit does not.

| Part # | Kit Description | Contents |
|--------|----------------------------|---|
| NSSKR | Starter Kit With Readers | Software, Panel, 2 Readers, Accessories |
| NSSK | Starter Kit | Software, Panel, Accessories |
| NSEKR | Expansion Kit With Readers | Panel, 2 Readers, Accessories |
| NSEK | Expansion Kit | Panel, Accessories |

Q. What is the initial license period for the NStar software?

The initial license period for the software is 30 days. The software must be registered within 30 days or it becomes disabled. To register, please visit Northern’s website at www.nciaccessworld.com and click on “Register Products”.

Q. What is the most cost effective way to control 4 doors from one NStar System?

By using two communication ports with 2 low cost RS232 serial cables (Part # CBL50) you can eliminate the need for a more expensive 485-PCI interface.



NStar Kit Contents

NStar is available in convenient pre-packaged kits that provide everything needed to start or expand a system.

Part # NSSKR - Starter Kit With Readers

Complete 2-Door Access Control Solution for New Installations Kit Contents:

- NSTAR - Access Control Software
- NS2 - 2-Door Control Panel
- X-4 - Plug-in 16.5 VAC Transformer
- 2x OMNI-10 – Two Mini-Mullion Proximity Readers
- 2x S-4 – Two Surge Suppressors
- CBL50 - Serial Communication Cable 50'

Part # NSSK - Starter Kit

2-Door Starter Kit for New or Existing Installations with Existing Readers

- NSTAR - Access Control Software
- NS2 - 2-Door Control Panel
- X-4 - Plug-in 16.5 VAC Transformer
- 2x S-4 - Two Surge Suppressors
- CBL50 - Serial Communication Cable 50'

Part # NSEKR - Expansion Kit With Readers

Complete 2-Door Expansion for new or existing installations

- NS2 - 2-Door Control Panel
- X-4 - Plug-in 16.5 VAC Transformer
- 2x OMNI-10 – Two Mini-Mullion Proximity Readers
- 2x S-4 – Two Surge Suppressors

Part # NSEK - Expansion Kit

2-Door Expansion for new or existing installations with existing readers

- NS2 - 2-Door Control Panel
- X-4 - Plug-in 16.5 VAC Transformer
- 2x S-4 – Two Surge Suppressors



| Description | Order Number | List Price |
|--|---------------|------------|
| NStar Starter Kits | | |
| Access Control Starter Kit With Readers (Includes Software, Control Panel, Enclosure, Transformer, 2 OMNI-10 Readers, Surge Suppressor, 50 ft. Serial Cable) | NSSKR | \$1,199.00 |
| Access Control Starter Kit (Includes Software, Control Panel, Enclosure, Transformer, Surge Suppressor, 50 ft. Serial Cable) | NSSK | \$1,019.00 |
| NStar Expansion Kits | | |
| 2-Door Expansion Kit With Readers (Includes Control Panel, Enclosure, Transformer, 2 OMNI-10 Readers, Surge Suppressor) | NSEKR | \$999.00 |
| 2-Door Expansion Kit (Includes Control Panel, Enclosure, Transformer, Surge Suppressor) | NSEK | \$799.00 |
| NS2 Panel | | |
| Panel Only | NS2 | \$725.00 |
| Software | | |
| NStar Access Control Software | NSTAR | \$199.00 |
| NStar Software Option Package | NSOPT1 | \$199.00 |
| Hardwired Communication Devices for the NS2 | | |
| 50' RS-232 Serial Communications Cable | CBL50 | \$55.00 |
| RS-232/RS-485 Communication Interface | N-485-PCI-2 | \$242.00 |
| Network Communication Devices for the NS2 | | |
| Optional Plug-in Ethernet Interface | NSLAN1 | \$858.42 |
| RS232 to LAN Converter | LANSRL100 | \$900.00 |
| RS485 LAN Interface | N485PCI2L | \$242.00 |
| Add-On Reader Options | | |
| OmniTek Small Proximity Reader | OMNI-10 | \$120.00 |
| OmniTek Mullion Proximity Reader | OMNI-30 | \$175.00 |
| OmniTek Wall Mount Proximity Reader | OMNI-40 | \$190.00 |
| OmniTek Vandal Resistant Reader | OMNI-90 | \$350.00 |
| HID Combination Proximity Reader and Keypad | PR-PROXPRO-K | \$896.00 |
| Miscellaneous | | |
| NS2 Accessory Pack (Includes lock, wires and tamper switch) | NS2ACC | \$40.00 |
| Surge Suppressor | S-4 | \$27.00 |
| 16.5V DC Transformer | X-4 | \$20.00 |
| Dial-Up RS-485 Communication Interface | N-485-HUB-2 | \$242.00 |
| Modem for Remote Communications | M56K | \$509.10 |
| Single Panel Enclosure | ENC10 | \$99.00 |
| Dual Panel Enclosure | ENC20 | \$308.15 |
| Rack Mount Enclosure | ENC30 | \$272.51 |
| Power Harness for ENC30 | ENC30PWR | \$109.09 |
| 12V Battery Backup | BAT-3 | \$24.00 |
| 500' Reader Cable 18awg/6cond. Shield | NC1861-BL-500 | \$199.00 |
| 1000' Input/Relay Cable 22awg/2cond. Shield | NC2221-BR | \$100.00 |
| 1000' RS485 Communications Cable | NC2021-GY-A | \$ 224.000 |