Most Electronic Access Control Systems use the same basic elements to provide control and monitoring of doors, regardless of system size. The quality, features and support of the hardware and software sets the systems apart.

1. Card Reader
2. Door Locking Hardware (output)
3. Door Position Hardware (input / detection)
4. Exit Button (exit Input only)
5. Control Wiring
6. Control Panel
7. Panel-to-host Communications
8. Host Computer (for programming & monitoring)
Basic Hardware-Readers

- Mounted the Un-security area
- Provides an interface to access request
- Interprets identify data and passes to controller
- Does not make decisions (Optional)
### Readers & Cards Standards

<table>
<thead>
<tr>
<th>ID Card Standards</th>
<th>IC Card Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>No international standards</td>
<td>13.56MHz</td>
</tr>
<tr>
<td>Vendors’ Private Standards</td>
<td>Inbuilt Memory</td>
</tr>
<tr>
<td>125 KHz/145KHz</td>
<td>ISO/IEC 14443 (Mifare)</td>
</tr>
<tr>
<td>EM Cards, HID Cards and other cards</td>
<td>●Type A</td>
</tr>
<tr>
<td>No Memory in Cards</td>
<td>●Type B</td>
</tr>
<tr>
<td>ISO/IEC 15693 (iClass)</td>
<td></td>
</tr>
</tbody>
</table>

**RFID (Radio Frequency Identification System)**

RFID transfers data by radio frequency signals. So authorized cards can read and write data without contacting the card reader.
## Compatibility Table

<table>
<thead>
<tr>
<th>Reader Technology</th>
<th>Card Technology</th>
<th>EM</th>
<th>HID Proximity</th>
<th>Mifare</th>
<th>Iclass</th>
<th>Multiclass</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EM</strong></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>HID Proximity</strong></td>
<td></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Mifare</strong></td>
<td></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Iclass</strong></td>
<td></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Multiclass</strong></td>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Reader Portfolio

Proximity Readers
- OP10HONS
- OP30HONR
- OP90HONR

Mifare Reader
- JT-MCR30-32
- JT-MCR45-32
- JT-MCR55-32

iClass Reader
- OM30BHOND
- OM40BHONCS
- OM55BHONCS

Biometric Reader (HONFIN)
- HON-FIN4000EMK-10K / HON-FIN4000MIK-10K
- HON-FIN4000EM-10K / HON-FIN4000MI-10K / HON-FIN4000HID-10K / HON-FIN4000IC-10K
- HON-FIN4000EMK-20K / HON-FIN4000MIK-20K / HON-FIN4000HIDK-20K

Honeywell

5
Basic Hardware – Outputs

- Access Control “Output” Devices…

- Control Panel
- Door Lock
- Siren
Access Control System Outputs

- Outputs (part of control panel)
  - Typically an Electric Door Lock
    - Electric Strike - installed on door frame
    - Rim strikes - used for doors with crash bars
    - Magnetic lock - surface mounted
  - Considerations
    - Intermittent vs. Continuous
    - Fail safe vs. Fail secure
  - Can Be Used to Control Other Devices
    - Parking Gates/Arms
    - Sirens/Strobes
    - Trip a Burglar Alarm zone
    - Activate a Camera
Locking Devices

- Electronic access control starts with a way to lock the door.

- The locking equipment may be:
  - solely electrically operated (magnetic)
  - a combination of mechanical and electrical operation (electro-mechanical)

- Terms
  - Fail Safe
    - Power applied constantly to lock
    - Immediate unlock on power failure
    - Safe with highest Priority
  - Fail Secure
    - Power sent to lock to unlock
    - Keep locking on power failure
    - Security with highest Priority
Typical Mag Lock Wiring

**Relay Not Energized**
Door Locked

**Relay Energized**
Door Unlocked

Mag-Locks require power to LOCK

- Egress
- Mag Lock
- 12-24 VDC

- Common
- Normally Open
- Normally Closed

- Egress
- Mag Lock
- 12-24 VDC
Typical Door Strike Wiring

Fail Secure door strikes require power to UNLOCK

Relay Not Energized

Door Locked

Relay Energized

Door Unlocked

12-24 VDC

Common

Normally Open

Normally Closed

Common

Normally Open

Normally Closed

Door Strike

Door Strike
Electronic Door Strike

- Most common locking device for access control
- An electric release device
- Not necessary to turn door handle to unlock
- Release door latch bolt when strike “unlocked”
- Replaces latch plate in the door frame
- Fail Secure requires power to unlock
- Fail Safe requires power to lock
- Commonly 12-24VDC
Types of Locks

- Magnetic Locks
- Electrified Crash Bars
- Electrified Lock Sets
- Electrified Transfer Hinges
- Sheer Locks
Outputs – Locking Devices Summary

- Electrified Hinge
- Magnetic Lock
- Electronic Door Strike
- Electronic Crash Bar
- Electric Cylindrical Lockset
Access Control Inputs

- Devices that tell the panel to do something

Door Position Switch

Exit Button
Access Control Inputs (continued)

- Connect external sensing devices to control panel
- Can trigger output relays, start events
- Most often used to monitor door position
- Input points can be in one of three states:
  - Alarm
  - Normal
  - Trouble
Summary - Access Control Inputs

- **Inputs** *(part of control panel)*
  - Used to Tell Access System to do Something
    - Unlock a Door
    - Turn on a Siren
  - Typically an Egress Device
    - Request-to-Exit Button
    - Request-to-Exit Motion
    - Crash Bar
  - Can also be used to Monitor Status
    - Door Contact
    - Motion Sensor
    - Temperature Sensor
Putting it all Together

Door Lock

Door Unlocked

Reader

Panel

Protected Door

Present Card to Reader

Protected Door

Present Card to Reader

Computer
Overview

- The WIN-PAK SE/PE 4.3 project has two key requirements
  - Biometric Device (Finger print) integration with WIN-PAK without any control panel in between
  - “Honeywell Time & Attendance” application integration with WIN-PAK
# WIN-PAK Details

| WIN-PAK Version and Build Number | WIN-PAK SE/PE Release 4.3  
|                                 | Build 680.9.1  
|                                 | With Hot Patch 680.9.2  |

| Supported Operating Systems | Windows 2008 R2  
|                             | Windows 7  
|                             | Windows 8.1  
|                             | Windows Server 2012 R2  
|                             | Both 32 and 64 Bit are supported |

| Supported SQL Server | SQL 2008 R2 Express, Standard and Enterprise  
|                      | SQL Server 2012 R2(Express Bundled) Standard and Enterprise  
|                      | Time and Attendance supports only SQL Server 2012 |

| Browsers for Time and Attendance | Mozilla Firefox 35 and Above Google Chrome 40 and above  
|                                  | Internet Explorer not Supported |
Software Options Overview

- **WIN-PAK SE**
  - Single / Five User Concurrent License
  - One Communications Server
  - 128 Readers
  - Panel Support - PRO-3000, PRO-3200, NetAXS

- **WIN-PAK PE**
  - All the same features as WIN-SE plus:
    - Unrestricted Concurrent Users
    - Multiple Com Servers
    - Up to 50 User Accounts

- **WIN-PAK Pro Central Station**
  - Licensing restricted based on Com Servers, Users, and Accounts
  - Five Communications Servers maximum
  - Hardware is account-specific
WIN-PAK XE 4.0

- **WIN-PAK XE: WIN-PAK EXPRESS EDITION**
  - Single user
  - Access control only
  - Automatically restrict unauthorized personnel from entering a facility while controlling authorized personnel
  - Track: WHO can go, WHERE they can go and WHEN they can go
  - Prioritized Alarm View and Floor Plan links
  - Create and manage photo ID badges
  - Schedule/email reports
  - Email events
  - Change/deactivate card based on lack of use (use it or lose it)
  - Different card types: VIP, Supervisor,

*WIN-PAK XE supports NetAXS-123, NetAXS-4, NS2 and NS2P only. WIN-PAK XE does not support N-1000, PRO2200, PRO3000*
WIN-PAK SE

- Concurrent license schema - single user / five user
- Software can be upgraded to WIN-PAK PE using CD-Key
- One Communications Server
- 1 Com Ports / 255 TCP/IP Connections
- Unrestricted limit on cardholders
- Quick Start Wizard / Quick-add for cardholders
- Command Files / Triggers & Procedures options
- Precision / Multiple Access Levels
- Export Card Holder Images
- Elevator control (With PRO-3200)
- Email events / reports
- Floor Plans
- Supported Panels:
  - PRO-3000, PRO-3200, NetAXS4, PRO-3200
- Supported OS
  - Windows 7&8, windows server 2008r2, Windows server 2012
- Supported Database Engine
  - SQL Express, SQL 2008, SQL 2012
WIN-PAK PE

Same features as WIN-PAK SE plus:

• Unrestricted concurrent user license schema
• WIN-PAK SE can be upgraded to WIN-PAK PE using CD-Key
• Unlimited Communications Servers
• 50 user accounts
• 255 Com Ports / 255 TCP/IP Connections
• Precision / Multiple Access Levels
• Unrestricted limit on cardholders and readers
• Supported Panels:
  – PRO-3000, PRO-3200, NetAXS
• Supported OS
  – Windows 7&8, windows server 2008r2, Windows server 2012
• Supported Database Engine
  – SQL Express, SQL 2008, SQL 2012
WIN-PAK Pro Central Station

- Same look and feel as WIN-PAK PE
- Single database partitioned by accounts
- Concurrent licensing schema per account, com server, workstation.
- Web interface (IIS6/IIS7)
- Master holiday list
- Digital video integration for CS operators
- Five Communications Servers max
- Hardware is account specific
- Card number can be duplicated in separate accounts
- Unrestricted limit on cardholders and readers
- Application log-in support for admin, operator, end users
- Supported Panels:
  - N1000/PW2000, NS2+, PRO-3200, PW5000, NS4 (as N1000-4X)
- Supported OS
  - Windows 7&8, windows server 2008r2, Windows server 2012
- Supported Database Engine
  - SQL Express, SQL 2008, SQL 2012
WIN-PAK FIN4000(BIOMETRIC) Integration

- End to End configuration for all the FIN4000 Panels viz., HON FIN4000-10K, HON FIN4000K-10K and HON FIN4000K-20K
- Download of all the configuration, Time zone, Access Levels, Holidays, Users/Fingerprint, Inputs and Outputs
- Supports Precision and Multiple Access Levels for the Users
- Supports multiple Operation Mode Configurations as per the Device Capabilities
- Enrollment of the Fingerprint for the Card Holder through FIN4000 ENROLL and HON FIN4000K-20K, HON FIN4000K-10K, HON FIN4000-10K
- Auto Download of the Access Levels and Users/Fingerprints on the Access Level Changes
- All the FIN4000 Panels to support the External Readers as the secondary Readers
- License to support various number of FIN4000 Panels viz., 32, 64, 96, 255(for SE alone), 264(for PE alone), 600(for PE alone)
## FIN4000 Biometric Devices

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>HON-FIN4000K-20K</td>
<td>Available in MiFARE/DESFire and HID Proximity format</td>
</tr>
<tr>
<td>(FW:v1.92_130222)</td>
<td>Fingerprint database of 400,000 templates (i.e. 200,000 users, with 2 fingerprints per user)</td>
</tr>
<tr>
<td></td>
<td>Log capacity of 1,000,000 events.</td>
</tr>
<tr>
<td></td>
<td>1:3000 fingerprint Identification in 1 second</td>
</tr>
<tr>
<td>HON-FIN4000K-10K</td>
<td>Available in MiFARE/DESFire format</td>
</tr>
<tr>
<td>(FW:v1.31_130318)</td>
<td>Outdoor Installations</td>
</tr>
<tr>
<td></td>
<td>Fingerprint database of 10,000 templates (i.e. 5,000 users, with 2 fingerprints per user)</td>
</tr>
<tr>
<td></td>
<td>Log capacity of 50,000 events.</td>
</tr>
<tr>
<td></td>
<td>1:2000 fingerprint identification in 1 second</td>
</tr>
<tr>
<td>HON-FIN4000-10K</td>
<td>Available in HID Proximity, iClass formats</td>
</tr>
<tr>
<td>(FW:v1.51_130318)</td>
<td>Outdoor Installation</td>
</tr>
<tr>
<td></td>
<td>Fingerprint database of 10,000 templates (i.e. 5,000 users, with 2 fingerprints per user)</td>
</tr>
<tr>
<td></td>
<td>Log capacity of 50,000 events.</td>
</tr>
<tr>
<td></td>
<td>1:2000 fingerprint identification in 1 second</td>
</tr>
<tr>
<td>HON-FIN4000 ENROLL</td>
<td>USB Based Enrollment Device</td>
</tr>
<tr>
<td></td>
<td>High quality optical sensor that can capture fingerprints at resolution of 500dpi</td>
</tr>
<tr>
<td></td>
<td>Protection against dust and water to ensure high performance</td>
</tr>
</tbody>
</table>
WIN-PAK Time and Attendance

- **What is Time and Attendance**
  The Time and Attendance is a web based application. It will provide the employee attendance status to their supervisors based on the access data from WIN-PAK.

- **HTML5 based Web Based Module to support all the Modern Browsers**
- **Ability to assign roles for the Employees**
  - Admin
  - Supervisor
  - User
- **Dashboard for easier representation of Attendance Status of each employees**
- **Supports various configuration**
  - Employee
  - Location
  - Department
  - Designation
  - Holidays
  - Types of Leave
  - Shifts (Same Day Shifts and Day cross Shifts)
  - Shift Rotation or Shift Roaster
WIN-PAK Time and Attendance (contd.,)

- Supports the Request and Approval (for Supervisors and Admins) of
  - On Duty
  - Leave
  - Attendance Correction
- Mail notifications for Employee Information Changes, Request and Approvals
- Ability to generate/show/export various reports across multiple formats
- Supports Scheduled reports, delivered through Mail
- Ability to assign Shifts for the Entire location
- Ability to change the supervisor for bulk of Employees
- Automatic Shift Rotation
- Automatic Leave carry forwarding
PRO3000 Intelligent Controller
PRO3000 ALL-in-ONE IP-enabled 2-door controller is an advanced access control panel capable of providing solutions for medium to large applications. It provides IT friendly connection, Flexible expansion, Simple installation and system deploy, and support large scale user database and access transactions.

PRO3000 is designed to operate off-line, making access control decisions independently from a PC or other controlling device. It works with WIN-PAK access control system to provide a comprehensive integrated security solution with control and management of video surveillance and Intrusion alarm system.
How PRO3000 works?

Compatible with WIN-PAK Access Control Software (WinPak SE/PE), Honeywell’s cost-effective, easy-to-manage and full-scale solution.

Unlimited communication server supported

Support up to 255 IP address per communication server
Why we introduce PRO3000?

PRO3000 – New hardware platform target to replace PRO3200 and N1000 access control panels because it provides…..

- **IT-friendly connection**
  - Onboard Ethernet port allows seamless connection to TCP/IP networks

- **Easy and Flexible system expansion**
  - Support STAR/Remote & BUS connection Topology

- **Large scale user & transaction database**
  - Cardholder capacity of 55,000 and transaction storage of 45,000

- **Simple Installation and System Deploy**
  - ALL-in-ONE IP-enabled Integrated hardware structural design (2-4-8 ROI)

- **More Secure**
  - Distributed architecture makes risk of failure highly dispersed
PRO3000 Hardware Features

- Two reader controller, expandable to 62 readers per Gateway controller
- True 32-bit CPU microprocessor
- Onboard I/O (2-4-8 ROI)
  - 2 Readers, 4 relay Outputs, and 8 supervised Inputs
- On-board Flash Memory
  - Card capacity up to 55,000 card holders
  - Support a maximum of 45,000 events
- Communication Ports
  - Ethernet port to Host software
  - RS485 multi-drop to downstream panels
- Embedded Web Server to configure network attributes
- Flash Upgradeable Firmware
- CE/FCC Certification
**PRO3000 Control Panel Layout**

- **TB9**
  - T1 Ethernet Connector

- **TB8**
  - Terminal Block 1
  - -12V Power Supply
  - Terminal Blocks 3 & 4
  - -Relays 1-4, SPDT
  - -12A @ 28VDC resistive
  - -6A @ 28VDC inductive

- **TB7**
  - Reader 1 and 2
  - -Support Standard Wiegand
  - -12V Readers @ 300mA per

- **TB6**
  - Terminal Block 5 & 6
  - -Supervised Input Points
  - - (2) Request to Exit
  - - (2) Door Status

- **TB5**
  - Terminal Block 7
  - -Enclosure Tamper
  - -Auxiliary devices

- **TB4**
  - Terminal Block 8
  - -RS485 Communications
  - -Host
  - -Downstream
More Features...

- Access Codes: up to 128
- Holidays: 255 holidays
- Time Zone: 127
- Card reader formats: 128 Wiegand format support
- Credential facility codes: 8
- Operational modes:
  - Card only
  - Card and PIN
- Anti-Pass back support:
  - While preventing access (hard)
  - While allowing access (soft)
  - Forgiveness
- Real time clock:
  - Geographic time zone support
  - Leap year support
## PRO3000 Vs. PRO3200

<table>
<thead>
<tr>
<th>Spec.</th>
<th>PRO3200</th>
<th>PRO3000</th>
<th>PRO3000 Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onboard Ethernet Port</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>ALL-in-ONE architecture</td>
<td>NO</td>
<td>Yes</td>
<td>Simple installation &amp; system expansion</td>
</tr>
<tr>
<td>Max. reader per Controller</td>
<td>32</td>
<td>2</td>
<td>Flexible system design for diff. scale systems</td>
</tr>
<tr>
<td>Cardholder Capacity 100,000 standard</td>
<td>100,000</td>
<td>55,000</td>
<td>-</td>
</tr>
<tr>
<td>Transaction Buffer 50,000 standard</td>
<td>50,000</td>
<td>45,000</td>
<td>-</td>
</tr>
<tr>
<td>Card Format Supported</td>
<td>8</td>
<td>128</td>
<td>More flexible</td>
</tr>
<tr>
<td>Price per reader compare with N1000</td>
<td>Less 25%</td>
<td>Less 50%</td>
<td>Cost effective</td>
</tr>
</tbody>
</table>
Benefits

✓ TCP/IP-based distributed hardware architecture allows for economic system installation
✓ Large, local controller database allows access control decisions to be made by controller in real time without the need to communicate to the server
✓ True 32-bit microprocessor provides fast transaction processing for the most demanding network applications
✓ Flash memory allows new versions of firmware to be downloaded from the host computer to the controllers through the central network
✓ Integrated hardware architecture ensures design and expansion flexibility
System Configuration

STAR / REMOTE connection

ALL-in-ONE IP-enabled architecture support STAR / REMOTE connection, suitable for Remote - Office, Chain Store, Oil & Gas tower, Power station
System Configuration

BUS connection

On-board RS485 Downstream provides BUS connection, suitable for Office, Schools, Commercial, Stadium/Exhibition Centre, etc.
Mid to Large scale Access Control System

**WIN-PAK + PRO3000**

- Support 1 communication server supported
- Support up to 255 panels (IP-address) per communication server
- Support up to 30 RS485 downstream panels
**Integrated Security Solution**

WIN-PAK provides a platform to integrate with a wide range of Honeywell security systems.

**Access Control**
- PRO3000 (basic controls)
- PRO3200 (complicated control, e.g., lift control, N-man rules, etc)

**CCTV**
- HUS-ADV (IP Video surveillance)
- Fusion (Hybrid Video Recording)
- Matrix/VideoBlox (Analogue Video Switching)

**Intrusion**
- VISTA-128 (Combo Fire/Burglary Alarm Control)
NO DVR, NO NVR, NO Recording Software

Access Control and Video Integration
1 Door

1 DOOR
Typical PoE Configuration
Compact Plastic Enclosure

PoE Switch
LAN/WAN Internet
CAT5 or CAT6 Cable
Web Browser Interface

Typical Connections
Reader
Strike
Exit Device
Contact
Reader

Honeywell
2 Doors

2 DOORS
1 Door Standard Metal Enclosure shown with 1-Door Add-on Board
3 Doors

3 DOORS
1 Door Standard Metal Enclosure shown with 2-Door Add-on Board

- Ethernet Connectivity
- LAN/WAN Internet
- Web Browser Interface
- 4 A, 12 VDC Power Supply
- Battery
- Typical Connections
- Exit Device
- Contact
- Strike
- Reader

Honeywell
>3 DOORS
Scalable Architecture

Ethernet Connectivity
LAN/WAN Internet

Web Browser Interface

4 A, 12 VDC Power Supply
Battery

NetAXS-123
1, 2 or 3 doors

RS485 multi-drcp (up to 30 panels)

NetAXS-123 or NetAXS-4

NetAXS-123 or NetAXS-4

NetAXS-123 or NetAXS-4

Honeywell
More Then 3 Doors
## ORDERING

<table>
<thead>
<tr>
<th>WIN-PAK SE 4.3</th>
<th>WIN-PAK SE 4.3 with FIN4000 32 RDR licenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPS4F01</td>
<td>WIN-PAK SE 4.3 with FIN4000 32 RDR licenses</td>
</tr>
<tr>
<td>WPS4FTA01</td>
<td>WIN-PAK SE 4.3 Five Users with FIN4000 32 RDR</td>
</tr>
<tr>
<td>WPS4U5F01</td>
<td>WIN-PAK SE 4.3 Five Users with FIN4000 32 RDR</td>
</tr>
<tr>
<td>WPS4U5FTA01</td>
<td>WIN-PAK SE 4.3 Five Users with FIN4000 32 RDR</td>
</tr>
<tr>
<td>WIN-PAK SE 4.3 Upgrades</td>
<td>WIN-PAK SE 4.3 with FIN4000 32 RDR licenses</td>
</tr>
<tr>
<td>US4S4F01</td>
<td>UPG SE 4.0 to SE 4.3</td>
</tr>
<tr>
<td>US4S4F02</td>
<td>UPG SE 4.3 RDR 32 to 64</td>
</tr>
<tr>
<td>US4S4F03</td>
<td>UPG SE 4.3 RDR 64 to 96</td>
</tr>
<tr>
<td>US4S4F04</td>
<td>UPG SE 4.3 RDR 96 to 255</td>
</tr>
<tr>
<td>US4S4FTA01</td>
<td>UPG SE 4.0 to SE 4.3 with T&amp;A</td>
</tr>
<tr>
<td>US4S4FTA02</td>
<td>UPG SE 4.3 RDR 32 to 64 with T&amp;A</td>
</tr>
<tr>
<td>US4S4FTA03</td>
<td>UPG SE 4.3 RDR 64 to 96 with T&amp;A</td>
</tr>
<tr>
<td>US4S4FTA04</td>
<td>UPG SE 4.3 RDR 96 to 255 with T&amp;A</td>
</tr>
<tr>
<td>US4S4U5F01</td>
<td>UPG SE 4.0 5 User to SE 4.3 5 User</td>
</tr>
<tr>
<td>US4S4U5F02</td>
<td>UPG SE 4.3 5 User RDR 32 to 64</td>
</tr>
<tr>
<td>US4S4U5F03</td>
<td>UPG SE 4.3 5 User RDR 64 to 96</td>
</tr>
<tr>
<td>US4S4U5F04</td>
<td>UPG SE 4.3 5 User RDR 96 to 255</td>
</tr>
<tr>
<td>US4S4U5FTA01</td>
<td>UPG SE 4.0 5 User to SE 4.3 5 User with T&amp;A</td>
</tr>
<tr>
<td>US4S4U5FTA02</td>
<td>UPG SE 4.3 5 User RDR 32 to 64 with T&amp;A</td>
</tr>
<tr>
<td>US4S4U5FTA03</td>
<td>UPG SE 4.3 5 User RDR 64 to 96 with T&amp;A</td>
</tr>
<tr>
<td>US4S4U5FTA04</td>
<td>UPG SE 4.3 5 User RDR 96 to 255 with T&amp;A</td>
</tr>
</tbody>
</table>

---

## WIN-PAK PE 4.3

<table>
<thead>
<tr>
<th>WIN-PAK PE 4.3</th>
<th>WIN-PAK PE 4.3 with FIN4000 32 RDR licenses with T&amp;A</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPP4F01</td>
<td>WIN-PAK PE 4.3 with FIN4000 32 RDR licenses with T&amp;A</td>
</tr>
<tr>
<td>WPP4FTA01</td>
<td>WIN-PAK PE 4.3 with FIN4000 32 RDR licenses with T&amp;A</td>
</tr>
</tbody>
</table>

## WIN-PAK PE 4.3 Upgrades

| US4P4F01          | UPG PE 4.0 to PE 4.3                                  |
| US4P4F02          | UPG PE 4.3 RDR 32 to 64                               |
| US4P4F03          | UPG PE 4.3 RDR 64 to 96                               |
| US4P4F04          | UPG PE 4.3 RDR 96 to 264                              |
| US4P4F05          | UPG PE 4.3 RDR 264 to 600                             |
| US4P4FTA01        | UPG PE 4.0 to PE 4.3 with T&A                          |
| US4P4FTA02        | UPG PE 4.3 RDR 32 to 64 with T&A                      |
| US4P4FTA03        | UPG PE 4.3 RDR 64 to 96 with T&A                      |
| US4P4FTA04        | UPG PE 4.3 RDR 96 to 264 with T&A                     |
| US4P4FTA05        | UPG PE 4.3 RDR 264 to 600 with T&A                    |

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Honeywell
<table>
<thead>
<tr>
<th>Order #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRO3000</td>
<td>PRO3000 2-door intelligent Controller</td>
</tr>
<tr>
<td>JT-ENC1P</td>
<td>SINGLE PANEL ENCLOSURE FOR IP-AK2 &amp; PRO3000</td>
</tr>
<tr>
<td>JT-PWDUEL</td>
<td>POWER SUPPLY-SWITCHING TYPE 110V/220V FOR IP-AK2 &amp; PRO3000</td>
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</tbody>
</table>
## ORDERING

### 1 Door Solutions
- **NX1P**: NetAXS-123: One door, compact (plastic) enclosure – PoE or externally powered
- **NX1MPS**: NetAXS-123: One door, standard (metal) enclosure with tamper switch and terminal block. Includes 4 A, 12 VDC output/100-240 VAC input power supply and 12V, 7 AH battery.

### Add-on Boards (for 2 and 3 door solutions)
- **N XD1**: NetAXS-123: One door add-on board (adds 1 door to your existing 1-door system = 2 doors)
- **N XD2**: NetAXS-123: Two door add-on board (adds 2 doors to your existing 1-door system = 3 doors)

### Video Add-on Kit
- **NX123VID**: NetAXS-123 Video Add-on Kit
  - Contains the following:
    - Honeywell 64 GB USB memory stick, adapter cable and product CD
    - Languages: English, Spanish and French

- **NX123VIDE**: NetAXS-123 Video Add-on Kit – Global
  - Contains the following:
    - Honeywell 64 GB USB memory stick, adapter cable and product CD
    - Languages: English, Spanish, French, Italian, Dutch, Czech, Chinese, Arabic, Russian and Portuguese

### Performance Series IP Cameras
- **HD44IP**: Indoor, H.264, Day/Night, NTSC - VGA
- **HD54IP**: Indoor/Outdoor, H.264, Day/Night, NTSC - VGA
- **HD56IP**: Indoor/Outdoor HD 720p (1280x720), H.264, Day/Night, NTSC
- **HD48IP**: Indoor HD 720p (1280x720), H.264, Day/Night, NTSC

### equiP IP Cameras
- **HD3MDIH**: Indoor HD 720p, H.264, 3.3-12 mm VFAI, True Day/Night, 24 VAC or PoE IEEE 802.3af, NTSC
- **HD4MDIH**: Indoor/Outdoor HD 720p, H.264, 3.3-12 mm VFAI, True Day/Night, 24 VAC or PoE IEEE 802.3af, NTSC
- **HCD5MICH**: Box, HD 720p, H.264, True Day/Night, 24 VAC or PoE IEEE 802.3af, NTSC
- **HD3MWH**: Indoor, Wide Dynamic 720p, H.264, 3.3-12 mm VFAI, True Day/Night, 24 VAC or PoE IEEE 802.3af, NTSC
- **HD4MWH**: Indoor/Outdoor, Wide Dynamic 720p, H.264, 3.3-12 mm VFAI, True Day/Night, 24 VAC or PoE IEEE 802.3af, NTSC
- **HCD5MWIH**: Box, Wide Dynamic 720p, H.264, True Day/Night, 24 VAC or PoE IEEE 802.3af, NTSC

Note: All of the above cameras are also available in PAL format. To order, add “X” to end of part number.
### COMPUTER REQUIREMENTS

The following are the hardware and software requirements to install WIN-PAK on your computer:

- **Minimum**: Stand-alone computer that supports 1 to 10 readers, 250 cards (access only – no video integration)
- **Recommended Server**: Computer that supports 1 to 100 readers, 5,000 cards, OS licensed per the number of workstations needed and communication ports per your application
- **Performance**: Supports more than 100 readers, 50,000+ cards, 150,000 events per day

<table>
<thead>
<tr>
<th></th>
<th>Minimum (No video integration)</th>
<th>Minimum/Workstation</th>
<th>Recommended</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Database</strong></td>
<td>SQL Server 2012 Express (included)</td>
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<td>SQL Server 2012 Express (included)</td>
<td>SQL Server 2012 with processor license recommended</td>
</tr>
<tr>
<td><strong>Processor</strong></td>
<td>Intel® Core i3-3220 Processor</td>
<td>Intel® Core™ i5 2400</td>
<td>Intel® Xeon® E5600 series</td>
<td>Intel® Xeon® X5600 series</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>2 GHz</td>
<td>3.1 GHz</td>
<td>2.4 GHz</td>
<td>2.8 GHz</td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>4 GB</td>
<td>4 GB</td>
<td>8 GB</td>
<td>16 GB</td>
</tr>
<tr>
<td><strong>Hard Disk</strong></td>
<td>80 GB STATA with minimum 5 GB free</td>
<td>80 GB STATA with minimum 5 GB free</td>
<td>250 GB STATA or SCSI</td>
<td>1 TB 7.2k RPM or better drives configured as: OS on RAID1; DB RAID 1+0 (4-disk)</td>
</tr>
<tr>
<td><strong>Video Card</strong></td>
<td>No video integration – Standard video card</td>
<td>1x512 MB PCIe x16**</td>
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</tr>
</tbody>
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Thank You