



KANTECH™
Access Control Systems
VOLUME 3



Welcome

TO THE KANTECH PRODUCT GUIDE

Kantech™ offers a full suite of access control products that are reliable, easy to install and easily scalable.

Why Access Control?

Nothing is more vital to the health of an organization than making sure that its people, material assets and operations are safe and secure. Access control addresses the full scope of risks that might arise, including risks that other security systems such as burglar alarms and intrusion detection simply are not designed to handle.



By preventing people from entering places where they do not belong, access control protects against theft as well as liability and disruption to your operations. Access control can also integrate with other security and operational systems to give you a comprehensive, cohesive management tool.

Tracking Access

One of the biggest advantages that our access control systems offer is the ability to determine quickly who may have gained access to critical areas before and after an incident. Even our smallest, single door applications have reporting available that shows an audit trail of door access activity, while our mid-range and large-scale systems can provide in-depth, user-defined documentation.





Improved Security

Access control enhances security by eliminating the need for keys, which are easily lost or duplicated and disappear when terminated employees fail to return them. By using our access control badges instead, you can quickly and conveniently adjust or delete privileges any time an employee's status changes. If you install our access control software on a networked system, you can even perform these tasks from a remote location. Avoiding the annual expense of re-keying a facility is just one of the many financial benefits you will accrue from investing in an access control system from Kantech.



Visual Verification

Our access control systems let you assign different color badges to identify varying levels of access for visitors, temporary employees, contractors, and regular full-time employees. You can also incorporate photo IDs on badges as an additional measure for confirming that the person using a card is the same person to whom it was issued.



Logistics

Profitability at warehouses and distribution centers depends on efficiency and security: making sure the right people are in the right place at the right time, and keeping out those who should not be there. Our access control systems help you do this, controlling access to improve employee productivity and punctuality.



Workplace Safety

Certain work environments can be hazardous, especially where there is heavy equipment or intense activity. Access control systems from Kantech help you ensure that only authorized individuals enter these areas.

Risk Management

By restricting who gains entry to your property, our access control systems limit your exposure to liability for “slip and fall” cases while also reducing the risk of workplace violence and more. With litigation and work-related assaults costing businesses billions of dollars each year, organizations simply no longer can afford to do without this kind of protection.

Reliability and Service

At Kantech, we understand the importance of quality products and customer service, and we are dedicated to providing both. Explore our product line and you will discover the easiest to use and easiest to install



access control systems in the industry. Call our state-of-the-art Technology Center and receive advanced technical support. Visit our member center on our website and you will find innovative online tools to help locate the product information you need to expedite purchasing decisions.

We will continue to focus on what matters most to you. Count on us for responsive customer service and reliable access control solutions that are as scalable and easy to install as they are easy to use.



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Guidelines

FOR THE PRODUCT GUIDE

Each chapter introduces a family of products available from Kantech and includes useful information for placing your order. You will find listings of key features, model numbers, and comparison charts that provide a fast and easy overview of each product line. Please refer to the legend below for additional help in understanding the model numbers. The product dimensions are represented as **height x width x depth**, or **height x width x length** or **diameter**. See the index in the back of this Guide for an alphabetical listing of model numbers and the corresponding pages.

COMMON ABBREVIATIONS			
mm = millimeters	kg = kilograms		
in or " = inches	lbs = pounds		
km = kilometers	mi = miles		
MB = megabytes	MHz = megahertz		
GB = gigabytes	KHz = kilohertz		

HELPFUL TIPS ON MODEL NUMBERS:

The following characters at the end of a model number signify:

EN = English

SP = Spanish

FR = French

KSF = Kantech's Secure Format

XSF = Kantech's eXtended Secure Format

W26 = 26-bit Wiegand Format

PLATE = Backplate

KP = Keypad

EXAMPLES:

E-COR-**EN-V4**

E-COR-**SP-V4**

E-COR-**FR-V4**

HID-C1336**KSF**

VPRX-IO-**XSF**

VPRX-IO-**W26**

T.REX-**PLATE**

KP-2500



EntraPass Security Software

With safety at work and in public spaces more important than ever before, taking a one-size-fits-all approach to security is no longer an option. Kantech's suite of EntraPass software includes an access control solution perfectly scaled to your organization's needs.

EntraPass is a suite of high performance software solutions that delivers reliable access control for facilities of every size. Available in Special, Corporate, and Global editions, EntraPass offers single and multiple workstation access control solutions and is compatible with Kantech's entire line of door controllers. It is also network-ready, providing the maximum flexibility for managing remote sites with connectivity via direct, dial-up modem, and TCP/IP using the Kantech IP-Link*. Standard features include context-sensitive help, elevator control, automatic backup of system data, and the ability to interface with external alarm systems and to define operator workspaces. Advanced features, such as EntraPass WebStation, account management for Managed Access Control, redundant servers, video integration, automated emails, and real-time interfacing with paging systems, reinforce your protection. Whether you have one or thousands of doors, EntraPass gives you the control you need to determine who gets in and who stays out.

EntraPass Special Edition:

EntraPass Special Edition lets you control up to 128 readers and accommodates an unlimited number of cardholders from one workstation. Express Setup automatically configures system components, testing hardware and wiring beforehand to prevent errors. Vocabulary Editor allows you to translate EntraPass into any language, two of which you can install on your workstation for bilingual operation. Visual diagnostics and interactive floor plans show the status of system components and enable you to manually operate them in real time. EntraPass Special Edition also provides elevator control for up to 64 floors, supports an unlimited number of site codes, and includes integrated badging and email reporting.

EntraPass Corporate Edition:

EntraPass Corporate Edition provides expanded functionality with the ability to control thousands of doors from up to 20 workstations. In addition to all the features included with EntraPass Special Edition, Corporate Edition gives you advanced security options. These include EntraPass WebStation to allow remote management of card holders, a Redundancy Server with mirror database for operational backup

protection, SmartLink for customizing integration with third party software and other devices, Card Gateway for sharing data directly with Oracle and MS-SQL human resources programs, video integration with American Dynamics™ Intellex® Digital Video Management Systems** and EDVR†, plus EntraPass Video Vault for importing and managing video clips.

EntraPass Global Edition:

EntraPass Global Edition offers the same feature set as EntraPass Corporate Edition plus support for up to 128 workstations, alarm partitioning, virtual alarm systems, guard tours, and anti-passback with global functionality. It also provides muster reports in emergency situations, allowing you to print or email lists of personnel in critical areas. Virtual alarm systems give you several advantages over physical alarm systems, including greater detail about each alarm and the ability to set parameters for scheduling and access levels. Additionally, virtual alarms systems allow you to configure the system via the user interface instead of hard-wiring all of the components to a separate alarm panel. Global functionality extends anti-passback, guard tours, and virtual alarm systems across multiple door controllers and can encompass every door that is connected to your access control system.

* Refer to p. 67

** Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT; visit www.americandynamics.net for more detailed information about Intellex

† EDVR v1.53 or higher



CHOOSE THE ACCESS CONTROL SOFTWARE THAT IS RIGHT FOR YOU

ENTRAPASS COMPARISON TABLE

	 EntraPass Special Edition	 EntraPass Corporate Edition	 EntraPass Global Edition
Operator Workstations	1	2 + 1 (up to 20+1)	4 + 1 (up to 128+1)
# of Gateways	1 on System	1 (up to 41)	1 (up to 128)
# of Cards	Unlimited Database*	Unlimited Database*	Unlimited Database*
Maximum # Readers/Keypads	128 per System	34,816 per Gateway	2,048 per Global Gateway 256 per KT-NCC 34,816 per Corporate Gateway
Maximum # Controllers	64 per System	17,408 per Gateway	1,024 per Global Gateway 128 per KT-NCC 17,408 per Corporate Gateway
Sites (loops) per Gateway	64 (Serial, RS-485, TCP/IP & Dial-up)	32 Local (Serial, RS-485, TCP/IP) & 512 Remote (Dial-up or Kantech IP Link)	32 Local (Serial, RS-485, TCP/IP) & 512 Remote (Dial-up or Kantech IP Link) per Corporate Gateway required
EntraPass WebStation	No	Yes, 3 Concurrent Connections	Yes, 20 Concurrent Connections
Muster Reports	No	No	Yes
Video Integration	No	Yes, Intellex** & EDVR†	Yes, Intellex** & EDVR†
Integrated Badging	Yes	Yes	Yes
Maximum # Remote Dial-up Sites	64	512 per Gateway	512
Maximum # Online Remote Sites	32	512 per Gateway	32 per Global Gateway, 512 per Corporate Gateway, 4 per KT-NCC
Elevator Floors per Car	64	64	64
Access Levels per Site	250	250	250
Schedules of 4 Time Zones (each)	Unlimited System Schedules	Unlimited System Schedules 100 Component Schedules	Unlimited System Schedules 100 Component Schedules
System Operator Passwords	Unlimited	Unlimited	Unlimited
Operator Security Levels	Unlimited, Pre-defined (3)	Unlimited, Pre-defined (3)	Unlimited, Pre-defined (3)
Concurrent Operator Languages per System	2	2	2
# of Report & Badging Printers	1 per System	1 per Workstation	1 per Workstation
Areas Management	No	No	Yes, 100 per Global Gateway & KT-NCC
Anti-Passback	Yes	Yes	Yes
Global Anti-Passback	No	No	Yes
Relay Activation: * and # via keypad	Yes	Yes	Yes
Export reports (ASCII CVS, Paradox, Dbase IV)	Yes	Yes	Yes
Operating System	Windows® XP, 2000, 2003 & Windows Vista®	Windows XP, 2000, 2003 & Windows Vista†	Windows XP, 2000, 2003 & Windows Vista†
Virtual Alarm Systems	No	No	Yes, 100 per Global Gateway & KT-NCC
Arm/Disarm External Alarms (KT-100 or KT-300)	Yes	Yes	Yes, using Corporate Gateway
Schedule Data Backup	Yes	Yes	Yes
# of Guard Tours	No	No	100, per Global Gateway & KT-NCC
SmartLink & SmartLink Network Interface	No	Yes	Yes
Video Archive via EntraPass Video Vault	No	Yes‡	Yes‡
Redundancy Server	No	Yes‡	Yes‡
Card Gateway	No	Yes‡	Yes‡
Reference Page Numbers	4-6	8-10, 20-23	12-14, 16-17, 20-23

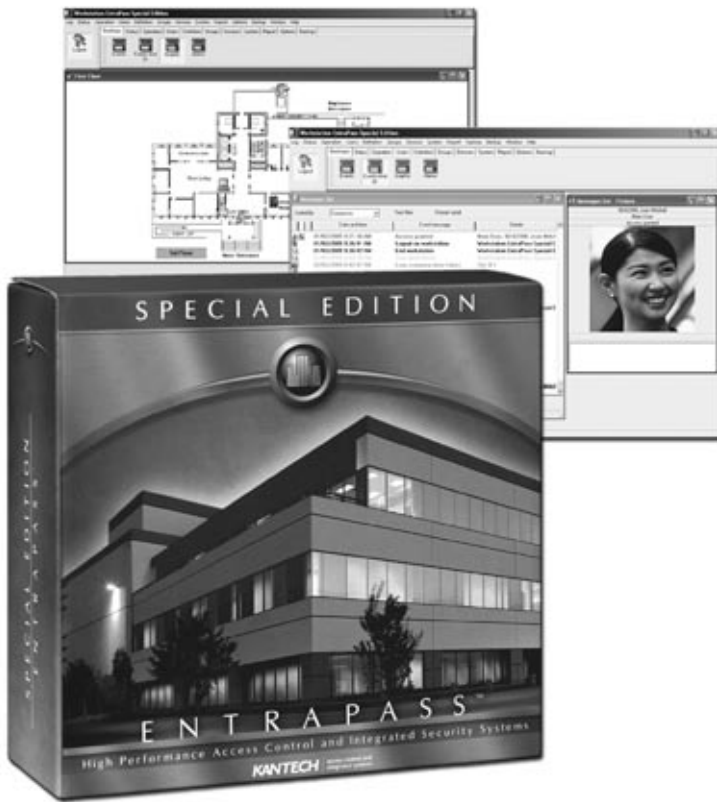
* In stand-alone mode: 6,144 (KT-100); 8,000 (KT-300/128k); 56,000 (KT-300/512k)

** Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT; visit www.americandynamics.net for more detailed information about Intellex

† EDVR v1.53 or higher

‡ Video integration is not supported with Windows Vista

§ Optional, sold separately



INTEGRATED BADGING

With integrated badging, you can design and print badges using EntraPass software. Photos and signatures can be imported or captured and printed on access cards using single or double-sided printing (with capable printer).

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Controls up to 128 doors
- Supports an unlimited number of users
- Emailing reports capability
- Encrypted site communication
- Express setup automatically configures system components
- EntraPass workspaces let you control what operators can see based on user privileges
- Two concurrent languages per operation
- Elevator control for up to 64 floors
- Integrated badging solution
- Network-ready architecture lets you easily manage sites remotely
- Integrates easily with external alarm systems
- Visual diagnostics show status of system components
- Time and attendance reporting
- Context-sensitive help

RECOMMENDED COMPUTER REQUIREMENTS*:

- Processor: Pentium® IV, 1.8 GHz
- RAM: 512 MB
- Free hard disk space required for software: 10 GB
- Screen resolution: 1024 x 768
- Graphics adapter card: 32 MB
- DVD/CD-ROM drive: 48x
- Network interface card: 10/100Base-T
- Operating system compatibility: Windows 2000, XP, 2003 Standard or Enterprise server, Windows Vista

* Actual requirements may vary based on your operating system and configuration

2 SELECT A MODEL

PACKAGE INCLUDES:

License for EntraPass Special Edition software and CBLK-10 cable kit.

E-SPE-**EN-V4**: Includes above with English manual

E-SPE-**SP-V4**: Includes above with Spanish manual

E-SPE-**FR-V4**: Includes above with French manual

UPGRADE:

E-SPE-**UPG-V4**: Upgrade from EntraPass Special Edition v3.x to v4.0

MANUALS ONLY:

E-SPE-**MAN-EN**: English

E-SPE-**MAN-SP**: Spanish

E-SPE-**MAN-FR**: French



EntraPass Special

EDITION

WHAT ARE ENTRAPASS WORKSPACES?

EntraPass workspaces simplify and improve system management by providing customized views of the EntraPass system based on an operator's access privileges. Once a security level is defined for an operator, the system administrator configures his/her workspace to identify what areas of the EntraPass system the operator can access and view, such as desktop display, card fields, etc. Each workspace is created and defined in terms of devices—gateways, sites, doors, relays, etc.

Workspaces are extremely useful because they allow you to create different views of the EntraPass system that can be saved and applied to any user. This feature also enables an operator to further create and refine his/her own views to filter out additional components that are not necessary for day-to-day operations. The operator can create, save, and reuse temporary workspaces. This feature is useful whenever a recurring operation is needed on the system, such as creating reports. Workspaces can also be applied to desktops to specify which events and messages can be displayed on a particular PC. An installer can use such a workspace in addition to his/her operator workspace to filter messages during a customer installation.



The advanced features of EntraPass protect patients' privacy by preventing unauthorized access to sensitive areas, inoculating hospitals against security lapses.

DIAL-UP

Kantech's EntraPass systems support modems that can simultaneously transmit and receive data from remote sites. No modem is dedicated to a specific site, becoming available on a first come, first served basis. The first site that calls in gains access to the first modem and so on.

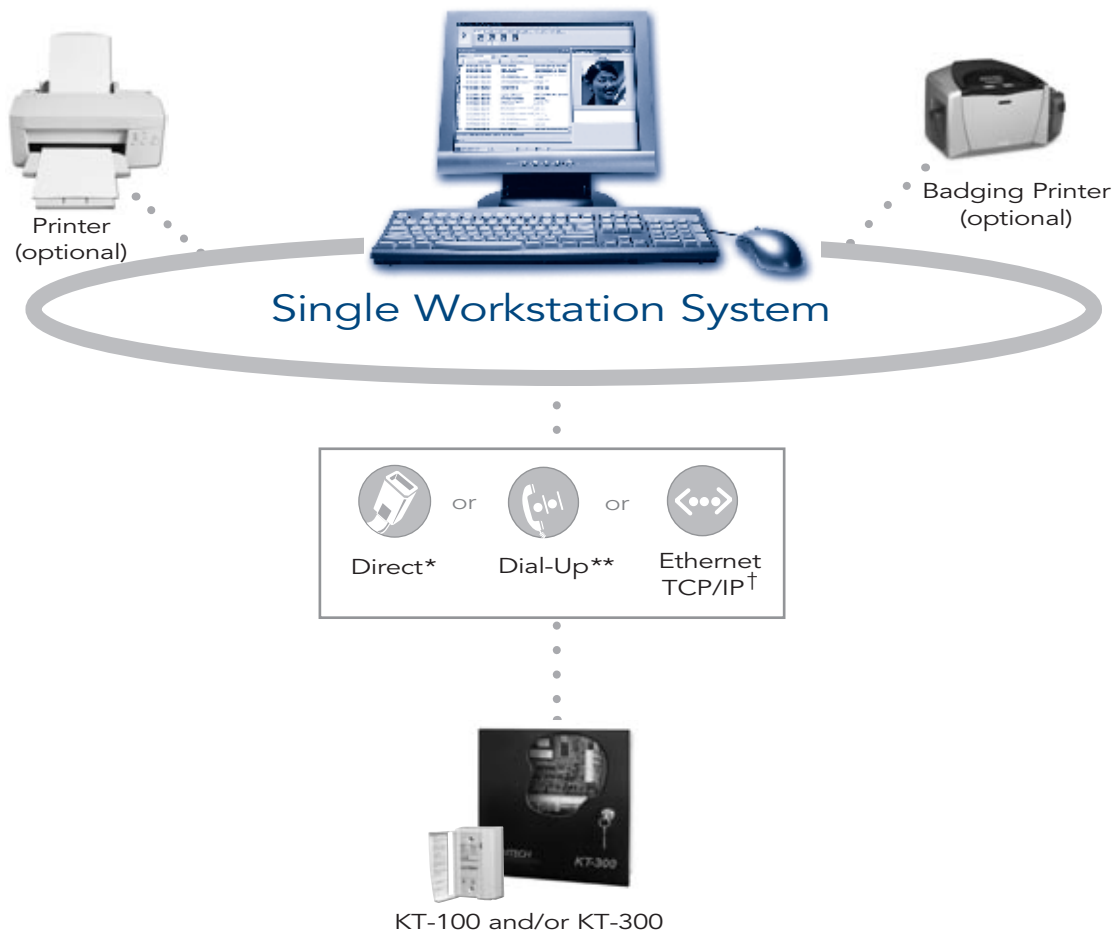
You can configure the communication parameters so that door controllers at remote sites automatically feed information to the host computer (or vice versa) to:

- update system data at scheduled intervals
- provide alerts of alarm events, such as a "Door Forced Open"
- announce when the door controllers' buffer memory reaches whatever capacity you pre-designate for notification, such as 70% full

Door controllers at remote sites retain all the necessary data for controlling the doors that they supervise. In case of communication failure, the door controller will still continue to normally execute all of its functions.

EntraPass Special

SYSTEM DIAGRAM



EntraPass Special Edition system architecture supports connections to remote sites using TCP/IP with Kantech IP Link and dial-up modems. The software controls up to 128 readers and easily expands to accommodate an unlimited number of users. EntraPass Special Edition is compatible with Kantech's complete line of door controllers, which can be configured with up to 32 controllers per loop and a maximum of 64 controllers per system.

* Direct: KT-300, via RS-232 or RS-485 with USB-485 or VC-485 converter; KT-100, via RS-485 with USB-485 or VC-485 converter

** Dial-up: KT-300 only, using RS-232 serial modem at remote site (KT-100 needs to be connected to a KT-300)

† Ethernet TCP/IP: using Kantech IP Link (KT-100 also requires VC-485 converter)





Warehouse managers around the globe rely on EntraPass for both efficient operations and security. EntraPass helps improve productivity by tracking employees' attendance while keeping anyone without authorization away from valuable inventory as well as heavy machinery that can pose a liability.



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Supports up to 20 workstations and controls thousands of doors
- Integrates with American Dynamics Intellex digital video management systems* and EDVR†
- Supports Kantech IP Link which provides a secure IP solution to operate your access control system more efficiently and securely over a network
- EntraPass workspaces let you control what operators can see based on user privileges
- Update card records quickly and securely with the new EntraPass WebStation
- Display live video, play back recorded video, dispatch, log and locally save recorded event video
- Eight operator-configurable desktops with unlimited interactive floor plans provide a highly customized experience for each workstation
- Interface with paging systems, HVAC systems and more with innovative SmartLink feature
- Integrated badging solution
- Elevator control for up to 64 doors
- Network-ready architecture lets you easily manage sites remotely
- Supports remote management from central monitoring stations (Managed Access Control)
- Redundancy server and Card Gateway (Oracle/MS SQL HR interface) ensure that critical data is secure even in the event of communication failure (optional)

RECOMMENDED COMPUTER REQUIREMENTS FOR ENTRAPASS SERVER‡:

- Processor: Pentium IV, 1.8 GHz
- RAM: 1 GB
- Free hard disk space required for software: 20 GB
- Screen resolution: 1024 x 768
- Graphics adapter card: 32 MB
- Color depth: 24-bit (16 million colors), required for video integration only
- DVD/CD-ROM drive: 48x
- Network interface card: 10/100Base-T
- Operating system compatibility: Windows 2000, XP, 2003 Standard or Enterprise server, Windows Vista

2 SELECT A MODEL

PACKAGE INCLUDES:

License for EntraPass Corporate Edition software which enables one server workstation and two additional workstations, plus a Corporate Gateway and CBLK-10 cable kit.

E-COR-EN-V4: Includes above with English manual

E-COR-SP-V4: Includes above with Spanish manual

E-COR-FR-V4: Includes above with French manual

UPGRADE:

E-COR-UPG-EN-V4: Upgrade from EntraPass Corporate Edition v3.x to v4.0 with English manual

MANUALS ONLY:

E-COR-MAN-EN: English

E-COR-MAN-SP: Spanish

E-COR-MAN-FR: French

* Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT; visit www.americandynamics.net for more detailed information about Intellex

† EDVR v1.53 or higher

‡ Actual requirements may vary based on your operating system and configuration



EntraPass Corporate

EDITION

3 SELECT YOUR OPTIONS

ACCESSORIES

All accessories on this page are compatible with EntraPass Corporate Edition v4.0 unless otherwise specified.

E-COR-**MAC**: Account Management (Managed Access Control) license

E-COR-**WEB-1**: One concurrent EntraPass WebStation connection license

E-COR-**WEB-3**: Three concurrent EntraPass WebStation connection licenses

E-COR-**WS6**: Six additional workstation licenses for EntraPass Corporate Edition v3.0 or higher

E-COR-**COM**: 40 additional Corporate Gateway licenses for EntraPass Corporate Edition v3.0 or higher

E-COR-**VVM**: Video Vault license for EntraPass Corporate Edition v3.0 or higher

E-COR-**RDN**: Redundancy Server license for one EntraPass Corporate Edition v3.0 or higher

E-COR-**SQL**: Card Gateway license for EntraPass Corporate Edition v3.0 or higher (Oracle/MS-SQL HR interface)

E-COR-**KTK-1**: One Kantech token for EntraPass Corporate Edition

E-COR-**KTK-2**: Two Kantech tokens for EntraPass Corporate Edition

E-COR-**KTK-3**: Three Kantech tokens for EntraPass Corporate Edition

E-COR-**KTK-5**: Five Kantech tokens for EntraPass Corporate Edition

E-COR-**KTK-10**: 10 Kantech tokens for EntraPass Corporate Edition



Easily manage cardholders over the web using the EntraPass WebStation. The optional web interface provides remote access to manage cards without installing and maintaining additional workstations.

WHAT IS A GATEWAY AND WHY CHOOSE MULTIPLE GATEWAYS?

A gateway is part of the EntraPass software installed on your server or workstation that functions as a link—via a direct, dial-up, or TCP/IP network connection—between the server and the door controllers on your access control system. The gateway essentially communicates any changes in the server database to the door controllers and also regularly polls each door controller for its status, reporting all activity back to the server.



EntraPass Corporate & Global

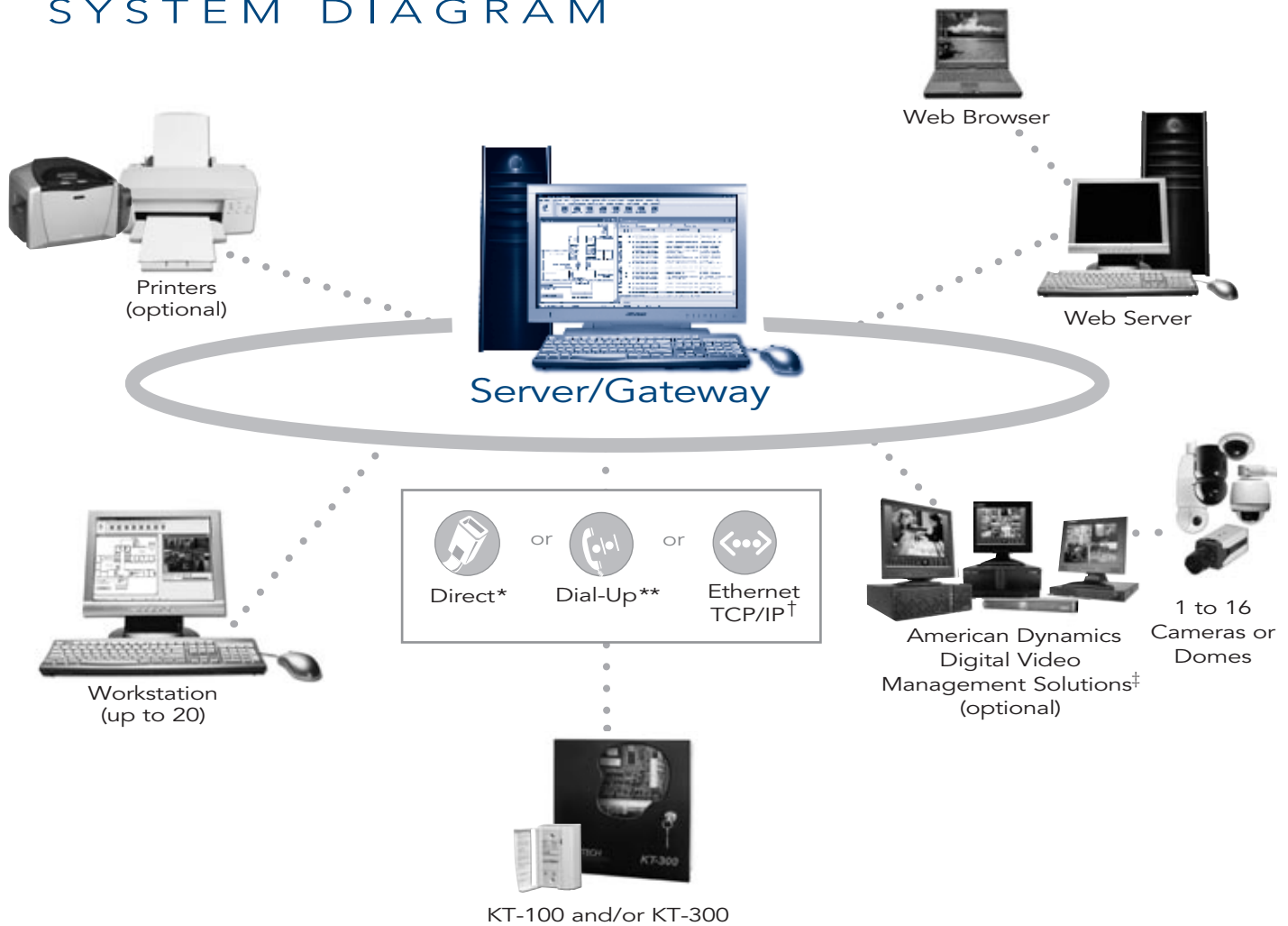
The connection between a gateway and its door controllers can be a busy one because of this constant exchange of information. If your access control system is on a local area network (LAN), this exchange tends to have little impact on the rest of the network or its available bandwidth because the gateway will be relatively close to the door controllers and the information flow between them remains localized.

Once the gateway is further removed from the physical location of your door controllers, however, the situation changes. This holds especially true when you expand into additional buildings or locations that are separated geographically and use a WAN (wide area network) instead of a LAN. Now the data has to travel a greater distance over the network.

EntraPass Corporate and Global editions provide multiple gateways to help prevent traffic congestion and reduce the bandwidth consumption that can result with such a scenario. By installing a gateway near the door controllers at each building or site, you keep the information flow between them localized and prevent it from flooding the rest of the network. Gateways continue to exchange information with the EntraPass server at your original site over the network. However, the communication between them occurs much less frequently than that between the gateways and the door controllers placing much less demand on your network bandwidth.

EntraPass Corporate

SYSTEM DIAGRAM



EntraPass Corporate Edition is a comprehensive, multiple workstation solution for access control installations from one door to thousands of doors. This proven platform supports up to 544 sites per gateway (32 local and 512 remote) and provides the ultimate balance between power and affordability in a network environment. EntraPass Corporate Edition is compatible with Kantech's complete line of door controllers, which can be configured with up to 32 controllers per loop and 17,408 controllers per gateway.

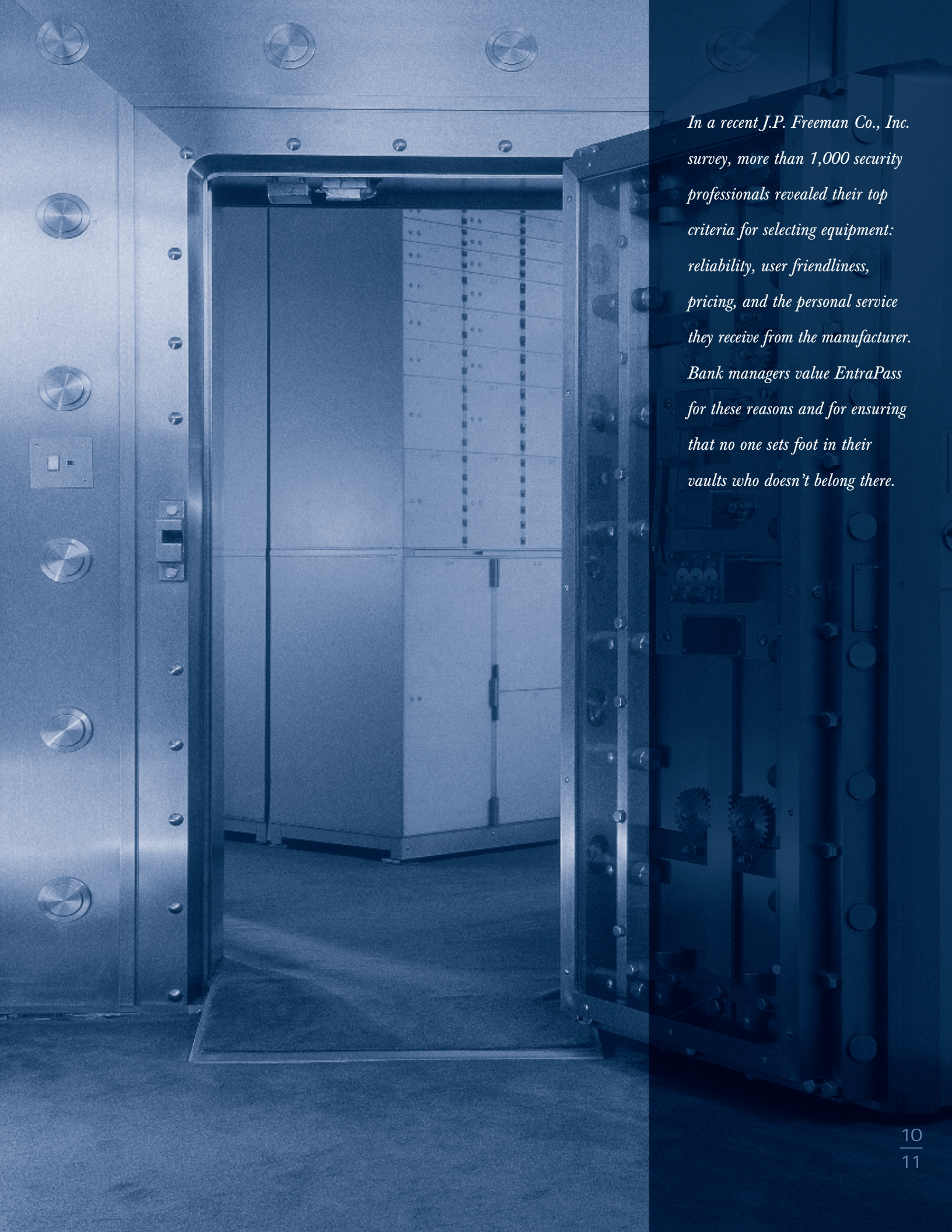
* Direct: KT-300, via RS-232 or RS-485 with USB-485 or VC-485 converter; KT-100, via RS-485 with USB-485 or VC-485 converter

** Dial-up: KT-300 only, using RS-232 serial modem at remote site (KT-100 needs to be connected to a KT-300)

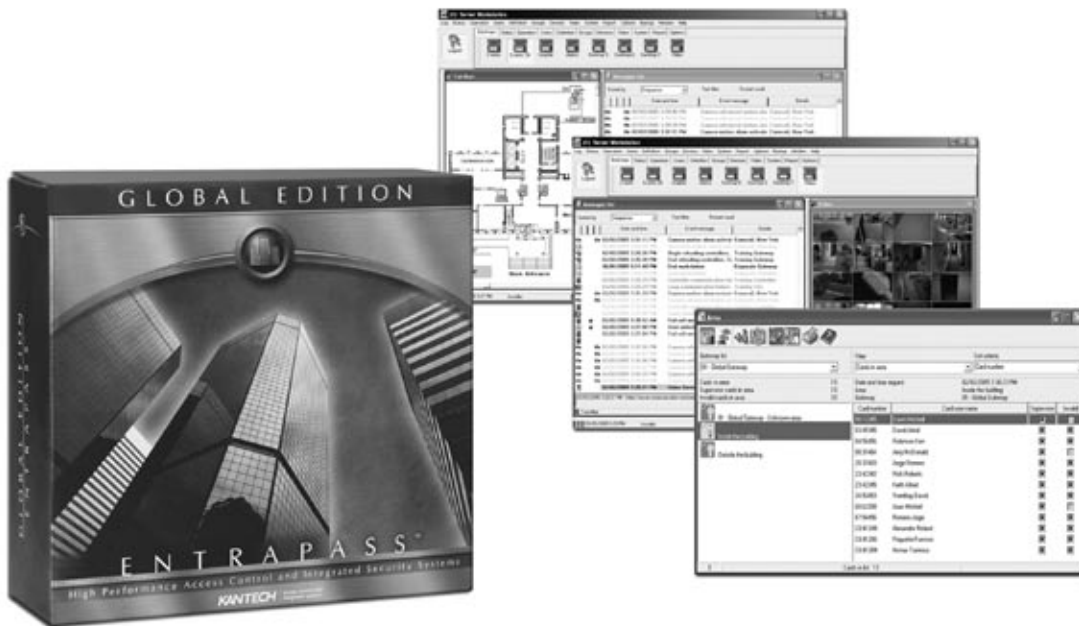
† Ethernet TCP/IP: using Kantech IP Link (KT-100 also requires VC-485 converter)

‡ Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT and v1.53 or higher for EDVR, visit www.americandynamics.net for more detailed information about Intellex and EDVR





In a recent J.P. Freeman Co., Inc. survey, more than 1,000 security professionals revealed their top criteria for selecting equipment: reliability, user friendliness, pricing, and the personal service they receive from the manufacturer. Bank managers value EntraPass for these reasons and for ensuring that no one sets foot in their vaults who doesn't belong there.



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Supports up to 128 workstations and controls thousands of doors
 - Integrates with American Dynamics Intellex Digital Video Management Systems* and EDVR†
 - Supports KT-NCC for extremely reliable global functionality
 - Supports Kantech IP Link which provides a secure IP solution to operate your access control system more efficiently and securely over a network
 - EntraPass workspaces let you control what operators can see based on user privileges
 - Update card records quickly and securely with the new EntraPass WebStation
 - Eight operator-configurable desktops with unlimited interactive floor plans provide a highly customized experience for each workstation
 - Network-ready architecture lets you easily manage sites remotely
 - Supports remote management from central monitoring stations (Managed Access Control)
 - Display live video, play back recorded video, dispatch, log and locally save recorded video
 - Interface with paging systems, HVAC systems and more with innovative SmartLink feature
 - Integrated badging and daypass for temporary visitors
 - Global functionality supports:
 - Area and parking management
 - Muster reports
 - Secondary access levels
 - Interaction between door controllers
 - Global anti-passback
 - Virtual alarm system
 - Guard tours
 - Redundancy server and Card Gateway (Oracle/MS SQL HR interface) ensure that critical data is secure even in the event of communication failure (optional)
 - EntraPass Video Vault provides powerful, first-of-its-kind video archiving within the access control system (optional)
- RECOMMENDED COMPUTER REQUIREMENTS FOR ENTRAPASS SERVER[§]
- Processor: Pentium IV, 1.8 GHz
 - RAM: 1 GB
 - Free hard disk space required for software: 20 GB
 - Screen resolution: 1024 x 768
 - Graphics adapter card: 32 MB
 - Color depth: 24-bit (16 million colors), required for video integration only
 - DVD/CD-ROM drive: 48x
 - Network interface card: 10/100Base-T
- Operating system compatibility: Windows 2000, XP, 2003 Standard or Enterprise server, Windows Vista

2 SELECT A MODEL

PACKAGE INCLUDES:
License for EntraPass Global Edition software which enables one server workstation and four additional workstations, plus a Global Gateway (Windows NCC) and CBLK-10 cable kit.

E-GLO-EN-V4: Includes above with English manual

E-GLO-FR-V4: Includes above with French manual

MANUALS ONLY:

E-GLO-MAN-EN: English

E-GLO-MAN-FR: French

* Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT; visit www.americandynamics.net for more detailed information about Intellex

† EDVR v1.53 or higher

‡ Windows NCC Gateway compatible

§ Actual requirements may vary based on your operating system and configuration



3 SELECT YOUR OPTIONS

ACCESSORIES

All accessories on this page are compatible with EntraPass Global Edition v4.0 unless otherwise specified.

E-GLO-**MAC**: Account Management (Managed Access Control) license

E-GLO-**WEB-1**: One concurrent EntraPass WebStation connection license

E-GLO-**WEB-3**: Three concurrent EntraPass WebStation connection licenses

E-GLO-**WS1**: One additional workstation license for EntraPass Global Edition v3.0 or higher

E-GLO-**WS8**: Eight additional workstation licenses for EntraPass Global Edition v3.0 or higher

E-GLO-**CORCOM**: 40 Corporate Gateway licenses for EntraPass Global Edition v3.0 or higher

E-GLO-**COM-WIN**: 16 additional Global Gateway licenses (Windows NCC) for EntraPass Global Edition v3.0 or higher

E-GLO-**VVM**: Video Vault license for EntraPass Global Edition v3.0 or higher

E-GLO-**RDN**: Redundancy Server license for one EntraPass Global Edition v3.0 or higher

E-GLO-**SQL**: Card Gateway license for EntraPass Global Edition v3.0 or higher (Oracle/MS-SQL HR interface)

E-GLO-**KTK-1**: One Kantech token for EntraPass Global Edition

E-GLO-**KTK-2**: Two Kantech tokens for EntraPass Global Edition

E-GLO-**KTK-3**: Three Kantech tokens for EntraPass Global Edition

E-GLO-**KTK-5**: Five Kantech tokens for EntraPass Global Edition

E-GLO-**KTK-10**: 10 Kantech tokens for EntraPass Global Edition

E-GLO-**KTK-20**: 20 Kantech tokens for EntraPass Global Edition

4 SELECT YOUR UPGRADE

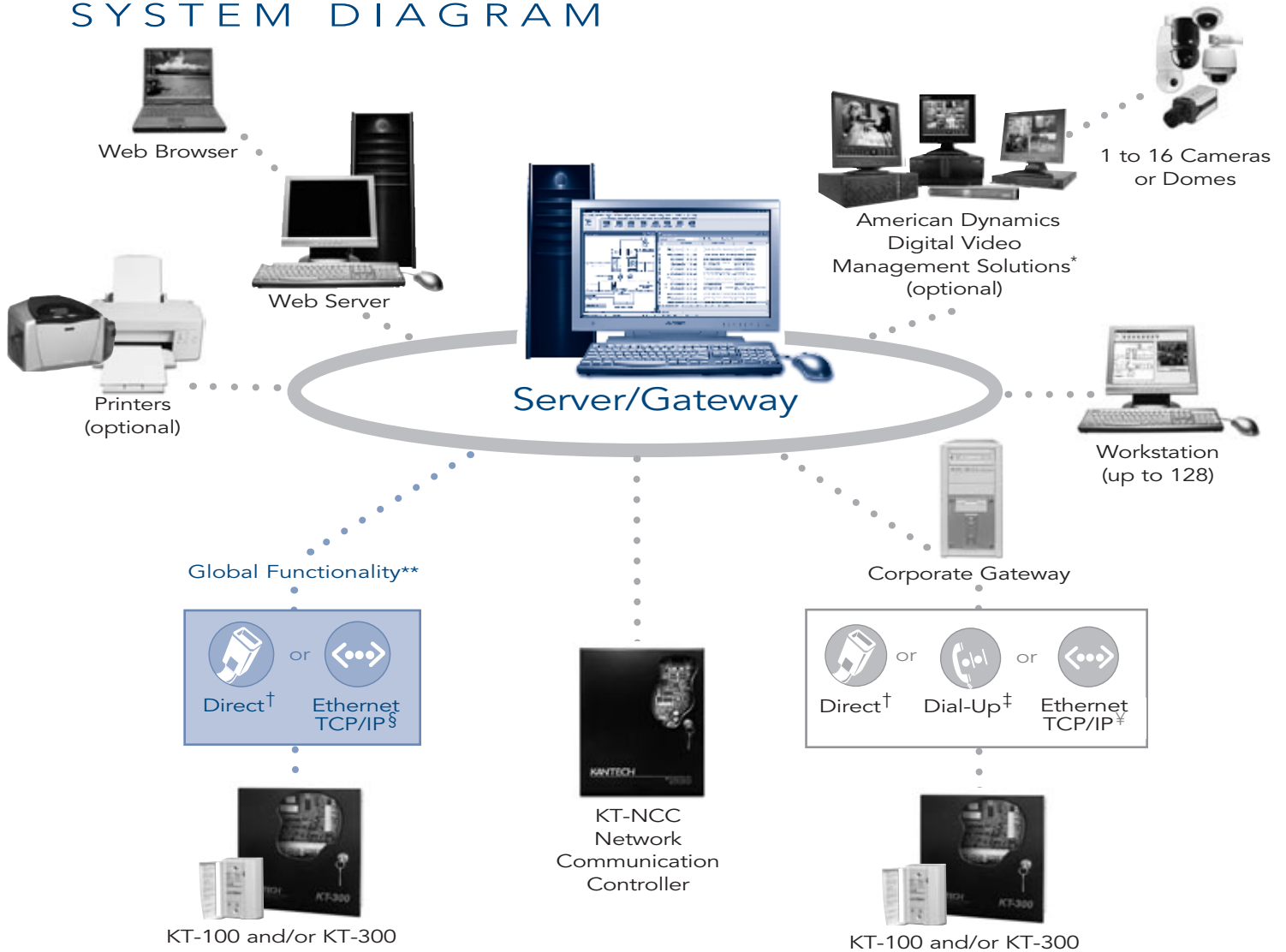
E-GLO-**UPG-EN-V4**: Upgrade from EntraPass Global Edition v3.x to v4.0 with English manual



With the activation of EntraPass Global Edition's anti-passback feature, you can use the areas menu to find out exactly who and how many people occupy a given area of a facility. Made even more powerful with the reliable KT-NCC, anti-passback helps you track people who enter the property and prevents them from abusing card privileges by refusing re-entry when anyone presents a card for which no corresponding exit has been registered.

EntraPass Global

SYSTEM DIAGRAM



EntraPass Global Edition system architecture supports connections to remote sites using TCP/IP (with Kantech IP Link) and dial-up modems (using Corporate gateway). It is a multi-workstation solution that accommodates an unlimited number of users, controls up to 2,048 card readers per Global gateway and 256 card readers per KT-NCC, and allows operators to simultaneously access the system from up to 128 workstations connected to the network. EntraPass Global Edition is compatible with Kantech's complete line of door controllers, which can be configured with up to 32 controllers per loop, 1,024 controllers per Global gateway, and 128 controllers per KT-NCC.

* Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT and v1.53 or higher for EDVR, visit www.americandynamics.net for more detailed information about Intellex and EDVR

** Windows NCC Gateway compatible

† Direct: KT-300, via RS-232 or RS-485 with USB-485 or VC-485 converter; KT-100, via RS-485 with USB-485 or VC-485 converter

‡ Dial-up: KT-300 only, using RS-232 serial modem at remote site (KT-100 needs to be connected to a KT-300)

§ Ethernet TCP/IP (Global Functionality): using Lantronix Universal Device (KT-100 also requires VC-485 converter)

¥ Ethernet TCP/IP (via Corporate Gateway): using Kantech IP Link (KT-100 also requires VC-485 converter)



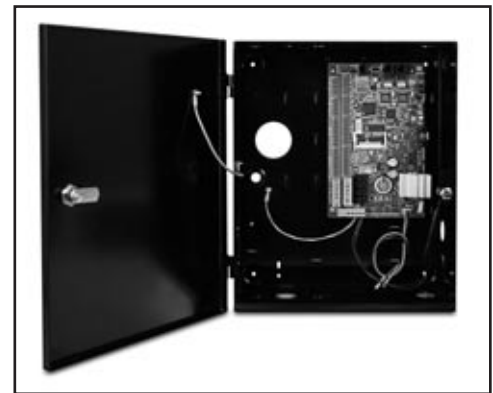


By restricting access to power utility facilities, EntraPass safeguards not only those who work there but the communities that depend on the essential services they provide.



ADVANCED FEATURES

The advanced features of the KT-NCC provide powerful panel architecture which removes a layer of PCs to improve reliability.



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Powerful panel architecture removes a layer of PCs to improve reliability
- Onboard TCP/IP eliminates the external network communication device
- Supports any combination of up to 128 controllers (KT-300, KT-200, or KT-100)
- Seven LED modes provide quick assessment of system status
- Flashable firmware enables fast, convenient and automatic updates
- Embedded redundancy ensures your critical data is always protected
- Battery backup eliminates the Universal Power Supply (UPS) to ensure continual operation
- Global functionality like anti-passback, guard tours, and alarm systems is easier than ever to implement and manage

2 SELECT A MODEL

KT-NCC: Embedded network communication controller (NCC). Includes: black metal cabinet (KT-NCC-CAB), accessory kit (KT-NCC-ACC) and tamper switch (KT-TAMPER) w/lock (KT-LOCK), compatible w/EntraPass Global Edition v3.17 or higher

KT-NCC-PCB: Embedded network communication controller (NCC) PCB only. Includes: accessory kit (KT-NCC-ACC), battery and ground cables, hardware to affix the ground cable and the PCB



3 SELECT YOUR OPTIONS

ACCESSORIES

KT-NCC-CAB: Embedded network communication controller (NCC) accessory, black metal cabinet w/KT-LOCK and ground cable

KT-TAMPER: Tamper switch for KT-300CAB, KT-4051CAB and KT-NCC-CAB metal cabinets

KT-LOCK: KT-300 and KT-NCC key lock for KT-300 CAB, KT-4051CAB and KT-NCC-CAB metal cabinets; includes 2 keys

KT-NCC-ACC: Embedded network communication controller (NCC) accessory kit. Includes: four 120 ohms end-of-line resistors, RS-232 to VC-485 flat cable w/RJ-12 male connectors, and screw-driver



KT-NCC is perfect for customers looking for a better way to manage access control for a widely-dispersed environment without running into reliability issues common with most PCs.

WHAT IS THE KT-NCC AND HOW IS IT USED?

Kantech KT-NCC, just like the Windows-based NCC, manages communication from EntraPass access control software to the controllers as well as controls global features such as areas and anti-passback, alarm systems, guard tours, and secondary access levels. Unlike the Windows-based NCC, however, the KT-NCC takes this powerful functionality away from the PC, and now provides a new panel architecture that is more reliable and upgradable. All events from the controllers are stored in the KT-NCC for additional security in the event of a communication failure between the controllers and the server. An IT-friendly solution, the KT-NCC virtually eliminates recurring computer maintenance costs related to security, saving companies significant amounts of money each year.

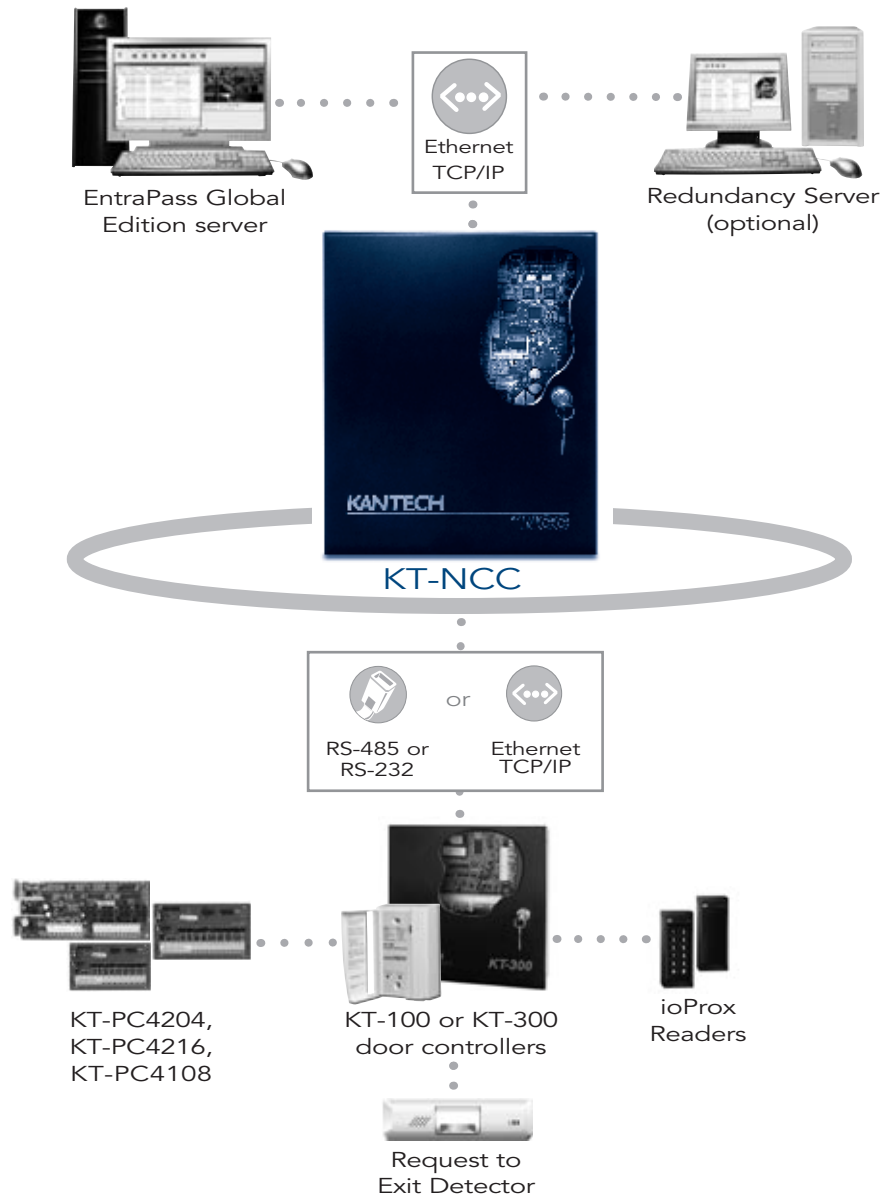
KT-NCC and EntraPass Global Edition combine for extremely reliable global security:

- Improved enforcement of global anti-passback
- More effective system alarm management with up to 100 partitions
- Control clearances globally to ensure accurate expiration of secondary access levels
- Ensure the consistency of critical guard tours

KT-NCC eliminates the possibility of lost functionality due to PC failure.

KT-NCC

SYSTEM DIAGRAM



KT-NCC supports any combination of up to 128 controllers* (KT-300, KT-200, or KT-100).

KT-NCC easily communicates with any of the controllers in Kantech's portfolio, making it a very powerful way to expand an EntraPass Global Edition system.

* KT-NCC supports 128 controllers in the following ways: one RS-232 loop with up to 32 controllers, two RS-485 loops with up to 32 controllers each (total 64), and four IP loops using a Lantronix universal device server with up to 8 controllers per loop (total 32).



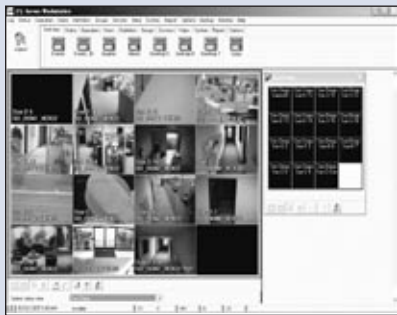


*Whether your business has
twenty doors or hundreds,
KT-NCC maintains the database
of events, system configuration
information, and ensures optimal
performance at all times.*

You get fully scalable access control plus a whole lot more with EntraPass Corporate and Global editions. Advanced security features address the most demanding situations that exist with redundant servers to safeguard your system and provide the capability to integrate surveillance video along with third party software for human resources, student registration, and much more. Learn about EntraPass WebStation, Managed Access Control, Video Vault, Mirror Database, Card Gateway, SmartLink, and real-time video monitoring with Intellex Digital Video Management Systems and EDVR from American Dynamics on the following pages.



THE BENEFITS OF VIDEO INTEGRATION



Link an event to a video segment as well as retrieve and display all such video segments.



Dispatch and log events, and save the associated video to your local hard drive for later playback.

When you integrate EntraPass Corporate and Global editions with Intellex* or EDVR**, you can:

- Link video to access control events
- View live and recorded video from a total of 16 cameras or Intellex units simultaneously
- Assign a preset view to any type of alarm
- Record video from up to 16 cameras simultaneously per alarm
- Use password protection for exported files
- Identify video clips by attaching each with its most significant frame
- Receive notification with automatic display of the corresponding video every time an alarm is triggered on the Intellex system
- Add camera and dome icons to your interactive floor plans
- Drag and drop icons for readers, door contacts, and more directly onto live camera views

You can also export video clips in several different file formats, such as Kantech Video Intellex (.KVI) and Kantech Video Archive (.KVA), Audio Video Interleaved (.AVI) and Network Client's video format (.IMG). The .KVI and .KVA formats display .IMG and .AVI video clips; plus they can also be password-protected within an EntraPass frame.

* Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT; visit www.americandynamics.net for more detailed information about Intellex

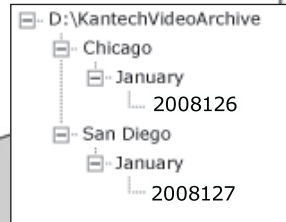
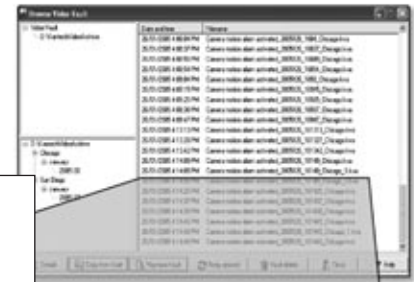
** EDVR v1.53 or higher



Advanced Security Features

EntraPass Video Vault:

Get automated archiving for your video clips with EntraPass Video Vault. Installed on your system network, EntraPass Video Vault offers an alternative to manually saving each video clip one by one. Simply pre-define groups for your video clips (such as Door Forced, Rejected Card) and EntraPass Video Vault will save all video to the appropriate group based on whatever schedule you choose. You can also pre-designate which file type you want video clips saved as—.KVI, .KVA, .IMG, or .AVI—and whether these files, if .KVI or .KVA, are assigned password-protection. You can also organize your video clips using thumbnail .BMP images in lieu of icons. Select the first frame (taken from the onset of pre-alarm footage), the event frame (which coincides with the precise moment of the alarm), or any other frame within the clip that you prefer. EntraPass Video Vault can connect to as many Intellex units as you choose to integrate with your EntraPass system and can archive the video that you import from them to as many as 24 digital storage devices.



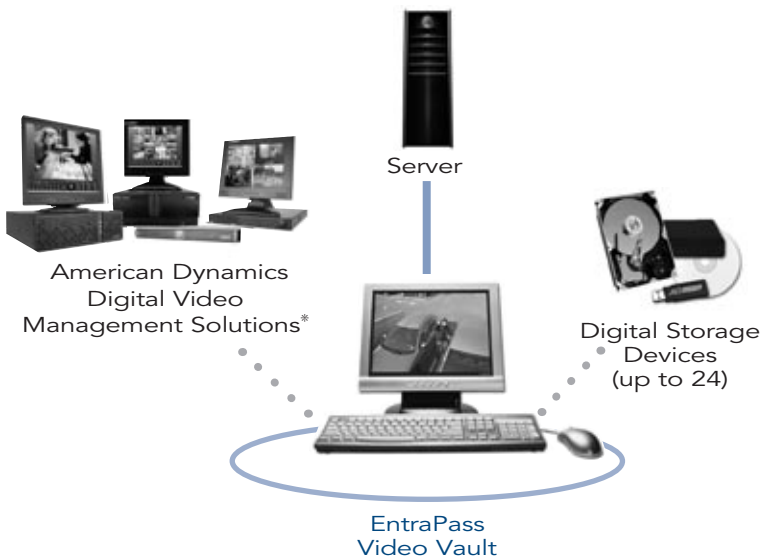
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Crimes occur most frequently after-hours when no witnesses are around. EntraPass Video Vault compensates for the absence of live surveillance by providing storage and quick retrieval of video evidence that aids the investigation and prosecution of wrongdoing.

E-COR-VVM: License for one EntraPass Corporate Video Vault

E-GLO-VVM: License for one EntraPass Global Video Vault



* Requires v3.1 or higher for Intellex Ultra, DVMS, IP, and v2.6 or higher for Intellex LT; EDVR v1.53 or higher visit www.americandynamics.net for more detailed information about Intellex and EDVR

Managed Access Control:

With the addition of powerful web functionality and support for IP Link, EntraPass now provides a high-performing managed access control solution ideal for Central Stations seeking a cost-effective option to offer to their commercial customers.

With the full range of advanced solutions that central monitoring stations offer, including access control, video surveillance, intrusion detection, and security management (guard tours, remote video management, video/alarm verification), the Kantech solution offers tremendous performance and value to both monitoring stations and their customers.

E-COR-MAC: Account Management (Managed Access Control) license (Corporate Edition)

E-GLO-MAC: Account Management (Managed Access Control) license (Global Edition)

THE BENEFITS OF ENTRAPASS WEBSTATION

Update card records quickly and securely with the new EntraPass Webstation. EntraPass Global and Corporate Edition customers can now create, modify, and delete card records from remote locations. Rather than modifying cards at each company location, a user can change card records directly from a web browser using EntraPass WebStation. The card management web interface requires EntraPass v4.0 and is deployed on a new or existing Microsoft IIS server (Windows 2003, XP, or Windows Vista).

Available as an option, EntraPass WebStation is enabled with concurrent connection licenses that can be purchased for EntraPass Corporate and Global Editions:

E-COR-WEB-1: One concurrent EntraPass WebStation connection license for EntraPass Corporate Edition

E-COR-WEB-3: Three concurrent EntraPass WebStation connection licenses for EntraPass Corporate Edition

E-GLO-WEB-1: One concurrent EntraPass WebStation connection license for EntraPass Global Edition

E-GLO-WEB-3: Three concurrent EntraPass WebStation connection licenses for EntraPass Global Edition

Redundancy Server:

A natural disaster, power failure, or even something as simple as a server going offline can bring your organization to a halt—which is why the ability to recover data and system applications quickly is so vital to a successful operation.

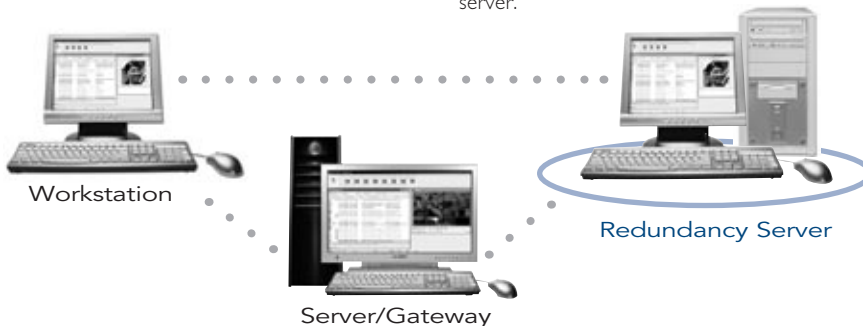
Kantech offers an optional Redundancy Server with a mirror database as part of EntraPass Corporate and Global editions.

The mirror database monitors all data activity on your primary EntraPass server, creating a real-time copy of the system database on the Redundancy Server. By regularly polling it for information, the mirror database ensures that the primary server is working properly; if it isn't, the mirror database launches the Redundancy Server, which supports all the features and functionality of the primary server.

Once the primary server returns online, it initiates the process of merging all archives and/or copying the entire database from the Redundancy Server, either automatically or manually depending on how you choose to pre-program this function.

E-COR-RDN: License for one Redundancy Server (Corporate Edition)

E-GLO-RDN: License for one Redundancy Server (Global Edition)



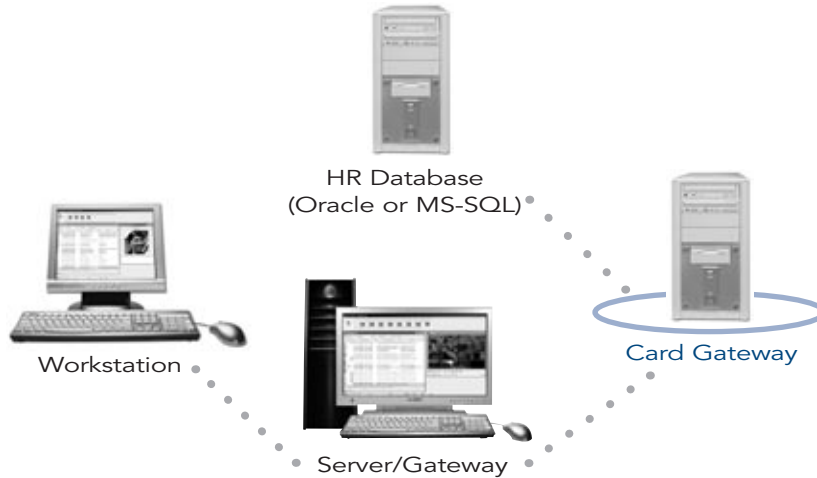
Advanced Security Features

Card Gateway:

Card Gateway is an Oracle/MS-SQL HR interface that creates a real-time, mirror copy of the EntraPass card databases (card, card group, card type and badge tables) in the Oracle or MS-SQL database. In addition, it

allows operators to interact with the system card database from their Oracle or MS-SQL programs. Operators can add, modify, and delete cards or obtain card-related information from the EntraPass card database. The card

information is updated in all databases, regardless of which program is used to modify them. Card Gateway ensures that these modifications are conveyed to the server and then sent to the workstations.



E-COR-SQL: License for one Card Gateway (Corporate Edition)

E-GLO-SQL: License for one Card Gateway (Global Edition)

SmartLink:

SmartLink is an application within EntraPass that enables any third party application or database to automatically interact with the EntraPass system. SmartLink uses built-in macros to help you design the most commonly requested integrated applications.

Ethernet—TCP/IP:

Users can have customized emails or cellular messages (if available through a telephone service provider) automatically sent from the EntraPass system in response to certain events. Messages can be customized per event with the component's name, date, time, user name, and so on.

SmartLink also enables users to automatically create files using selected events. Any related information from events can be added to the files including: name of the door, entry and exit, name of the individual and more. This provides users with a custom log file for access, alarms, or potential problems.

Direct and/or Dial-up:

Users can also configure SmartLink to open a serial or USB port to send ASCII commands or messages. For instance, users can connect a CCTV matrix switcher and select specific dome presets when EntraPass alarms or events occur; or they can connect to a

reader's LCD to alert them when people enter a particular door. By selecting the bi-directional option, users can connect an application via a serial port to any EntraPass operation, such as unlocking doors or activating relays. Using a serial connection via a modem, users can send a message to a pager with a unique number per event.

DLL (through SmartLink):

Users can build their own application, link to a database, and enable interaction between multiple door controllers.

25¢

PREMIERE SLOTS

Door Controllers

In busy environments like casinos, Kantech door controllers help to prevent the public from wandering into restricted areas where they don't belong. You can make security and building operations even more effective by integrating our door controllers with alarm panels, HVAC systems, and CCTV systems, such as those from American Dynamics.



Even the most powerful access control system is only as effective as its door controllers. The Kantech line of door controllers meets the highest standards in the industry and addresses a wide range of security needs. You can link up to thousands of doors or keep it simple with a single stand-alone door controller. Choose the KT-300 Door Controller, KT-100 Mini Door Controller, or ioPass Stand-Alone Door Controller for the versatility and durability you need to secure everything from a single, gated parking lot to a large campus of multi-story buildings.

KT-300 Door Controller:

The KT-300 Door Controller supports up to two readers, which you can install either on a single door to monitor both entry and exit or on two separate doors. It provides connections for all peripheral devices necessary for a complete access control system and can link with other door controllers to give you control over thousands of doors.

Stand-alone mode protects against power or system failures with the capacity to store cardholder and event data, which automatically transmits back to the EntraPass system once the network connection is restored. Flash memory lets you update firmware from your EntraPass workstation in just a few minutes.

You don't have to set dip switches or jumpers because KT-300 detects the system's communication speed and assigns the controller's address. KT-300 also provides trouble reporting, constantly supervising locking devices for short and open circuits to detect lock failures and monitoring battery condition to alert the system of low battery/no battery status. All power outputs are individually protected and self-resetting against short circuits and surges.

Built-in combus expansion means you can add relay, input, and output modules to connect HVAC systems, elevators, motion detectors, and more. You can also add an LCD monitor to view time and date information. KT-300 can also interface with external alarm systems so that an authorized individual can arm or disarm them simply by presenting his/her access control card to a reader.

For the ultimate in convenience, we offer Multi-Door Controller and Expansion Kits which allow you to install up to up to eight KT-300 controllers in one streamlined enclosure. For more information on these Kits, please turn to pg. 59.

KT-100 Mini Door Controller:

The KT-100 Mini Door Controller supports up to two readers on one door. Its compact, space-saving design lets you surface mount it near the door, reducing the length—and cost—of cable required for installation. KT-100 incorporates features and components found in much larger controllers, such as the KT-300, including stand-alone mode with distributed databases, flash memory for updating firmware, trouble reporting for power supply and locking devices, and a self-resetting PTC to protect the power output against short circuits and surges. Also, like KT-300, KT-100 interfaces with external alarm systems, links to networks with thousands of doors, and has no dip switches or jumpers to set.

ioPass Stand-Alone Door Controller:

The ioPass Stand-Alone Door Controller permits entry using proximity technology, a keypad with PIN, or both for up to 5,000 people. Compact and surface-mounted, it is programmed directly from the keypad; visual confirmation appears on a 16 character, 2 line LCD screen as you perform each operation.

To prevent anyone from gaining unauthorized password entry by trial and error, ioPass will activate an alarm, delete the card number, or both after five failed attempts. A relay module that is separate from the ioPass unit further enhances security by allowing you to conceal it inside a wall or ceiling to prevent tampering.

Choose from an indoor model with an integrated proximity reader or an outdoor model with an external proximity reader designed to protect against weather and vandalism.



2 MEMORY CAPACITIES

KT-300 is available with a choice of two memory capacities, 128K or 512K. Choose KT-300/128K for an 8,000 cardholder record capacity and KT-300/512K for a 56,000 cardholder record capacity.

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Controls two doors and easily links to a network
- Update the firmware directly from the system workstation
- Fast communication speed, up to 115,200 baud
- Ready to go, no dip switches or jumpers to set
- 5V and 12V reader power
- Interfaces with an external alarm system
- Supervises battery conditions and reports low battery/no battery status to the system
- Automated trouble reporting
- All power outputs are individually protected against short circuits and surges by a self-resetting PTC
- Built-in combus allows you to add expansion modules for additional inputs, outputs, and an LCD for time and date information

2 SELECT A MODEL

KT-300/128K: Door controller for 2 readers with 128KB memory, includes metal cabinet, KT-300-ACC and KT-LOCK

KT-300/512K: Door controller for 2 readers with 512KB memory, includes metal cabinet, KT-300-ACC and KT-LOCK

KT-300PCB/128: Door controller with 128KB memory (PCB only) and accessory kit KT-300-ACC

KT-300PCB/512: Door controller with 512KB memory (PCB only) and accessory kit KT-300-ACC



3 SELECT YOUR OPTIONS

KT-300-ACC: KT-300 Accessory kit including: 1.0K ohm (2), 5.6K ohms (10), 120 ohms (2), PCB standoff, lock hole cover, ground wire and screwdriver

KT-RM1: External isolation relay SPDT for KT-300 output (RL1/RL2)

KT-300CAB: KT-300 black metal cabinet including KT-LOCK

KT-LOCK: Key lock for KT-300 CAB, KT-4051CAB and KT-NCC-CAB metal cabinets; includes 2 keys

KT-TAMPER: Tamper switch for KT-300CAB, KT-4051CAB and KT-NCC-CAB metal cabinets

KT-4051CAB: Standard black metal cabinet for KT-PC4204, KT-PC4216 and KT-PC4108 modules (order key lock separately)

TR1637W/CSA: AC transformer, wire-in, 110V/16V (37VA) CSA

TR1640P/CSA: AC transformer, plug-in, 110V/16V (40VA) CSA

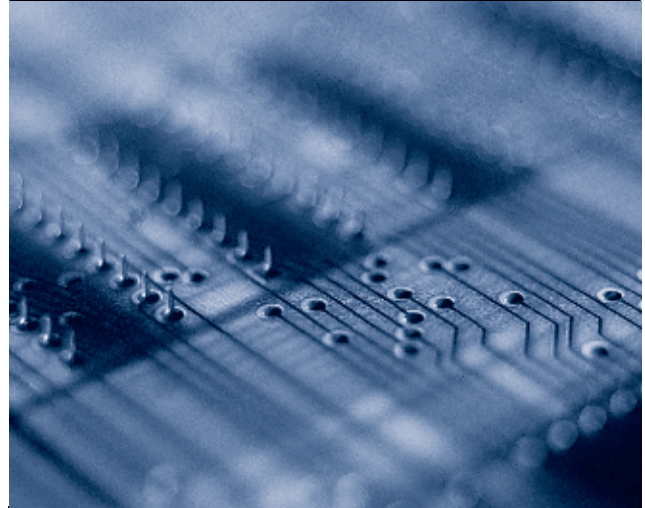
TR1640P/UL: AC transformer, plug-in, 110V/16V (40VA) UL

TR1640W-220: AC transformer, wire-in, 220V/16V (37VA) CE

USB-485: USB to RS-485 communication interface

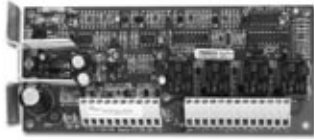
VC-485: RS-232 to RS-485 communication interface

WHAT IS A COMBUS?



A combus is a communications protocol that is integral to the KT-300. It uses a four conductor cable bus to which several expansion modules can be connected in parallel, either in straight run, daisy-chain, T-tapped, or a combination of these configurations. The KT-300 combus supports a maximum total cable length of 1,200 m (4,000 ft) for connecting all modules. The maximum distance between any module and KT-300 is 300 m (1,000 ft).

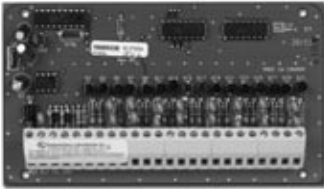
4-Relay Module:



- 4-relay and combus additional power supply module for KT-300
- Current draw: 30mA (from Combus)
- Maximum 12V 7Ah battery required
- Tamper contact input
- 40VA 16-18 VAC transformer required
- 4 programmable relay form C contacts rated 2A
- UL, CE, FCC compliant

KT-PC4204

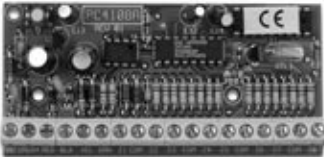
16-Output Module:



- 16-output expansion module for KT-300
- Current draw: 15mA (from Combus)
- 12 VDC, 50mA maximum each, power drawn from Combus
- Tamper contact input
- UL, CE, FCC compliant

KT-PC4216

8-Zone Input Module:



- 8-zone input expansion module for KT-300
- Current draw: 30mA (from Combus)
- Tamper contact input
- Auxiliary power 12 VDC, 250mA maximum, power drawn from Combus
- UL, CE, FCC compliant

KT-PC4108

LCD Time and Date Display:



- LCD time/date display for KT-300
- Current draw: 50mA (from Combus)
- UL, CE, FCC compliant

KT3-LCD



Expansion Modules



EntraPass allows installers to program up to 64 floors per elevator cab using expansion devices such as KT-PC4216 with KT-300. This allows facility managers to restrict specific floor access to authorized cardholders before, during, and after business hours.

EXTERNAL ALARM SYSTEM INTEGRATION



Adding an access control system with a KT-300 or KT-100 door controller to an existing burglar alarm system means no one can arm or

disarm it without first gaining access via an authorized key card. This enables the administrator to see who is performing the action.

KT-300 and KT-100 interface with any external alarm system that can provide it with arm and disarm status (through programmable output) and an arming request.

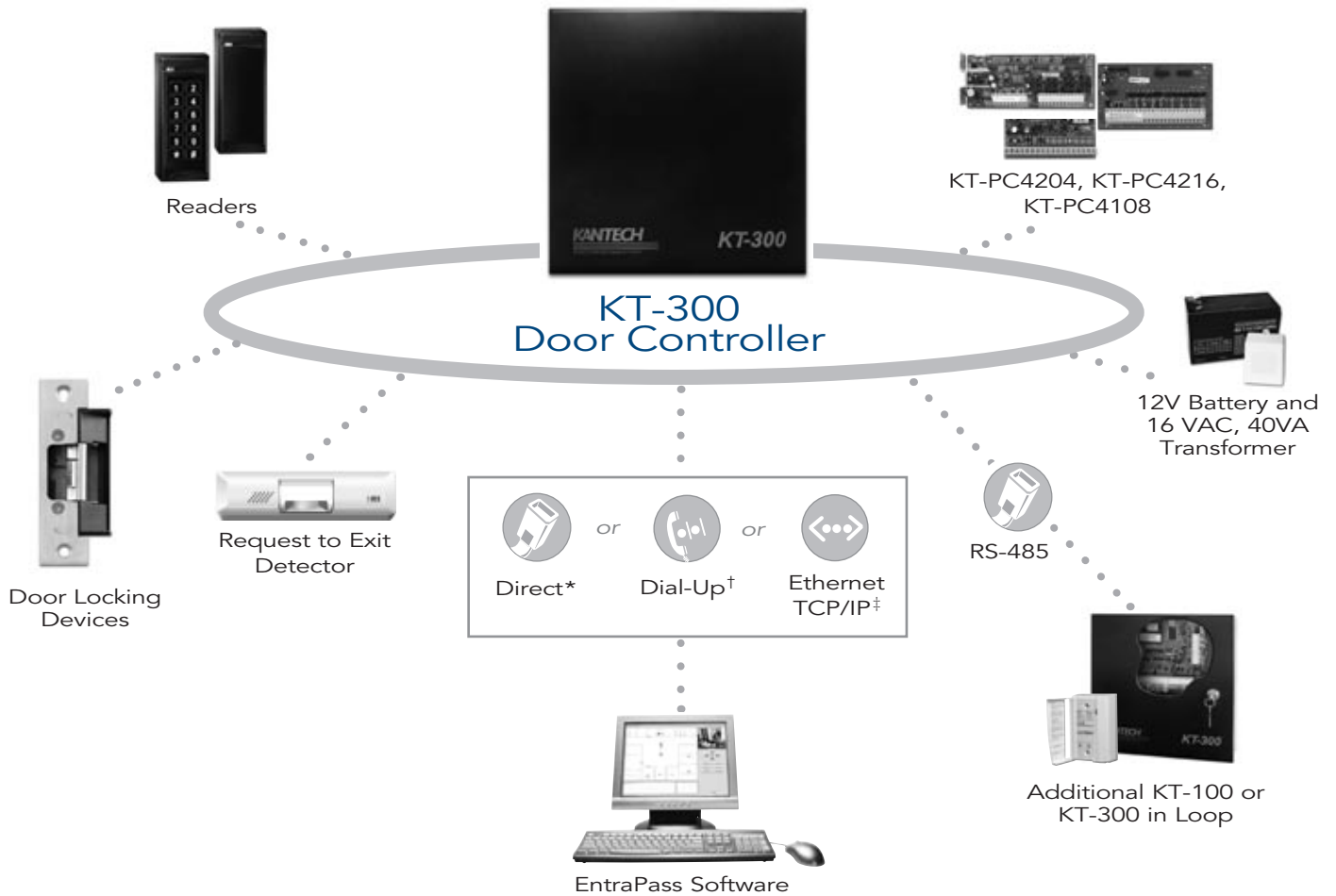
The rights to arm and disarm an alarm system are configured using the EntraPass system. Cardholders who do not have permission to disarm a panel will not be able to badge in until an authorized person presents his or her card. This integration is easily implemented with only five wires between the two panels and definition changes within the software.

It does not require any additional modules or options.



KT-300

SYSTEM DIAGRAM



One KT-300 controller supports up to two readers, installed on two separate doors or on a single door controlling both entry and exit. Each controller can be linked to the others in the system to control thousands of doors depending on the software you choose.

* Direct: via RS-232 or RS-485 with USB-485 or VC-485 converters

† Dial-up: using RS-232 serial modem at remote site

‡ Ethernet TCP/IP: using Lantronix Universal Device Server





Security professionals count on the scalability of KT-300 to handle their ever-changing needs. From a small, single-door business, to a bustling multi-tenant facility, KT-300 is easily expandable.





KT-100 provides a compact, easy to install solution for anyone needing to know who is inside an area at any given time. Choose it for installations near a door, within a ceiling, involving turnstiles and parking gates, or anywhere that requires less than 3.28 m (10 ft) of wiring.

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Single door controller
- Flash memory programming
- Fast communication speed, up to 115,200 baud
- Automated trouble reporting
- Quick and easy installation
- Interfaces with an external alarm system
- Update firmware directly from the workstation

2 SELECT A MODEL

KT-100: Mini door controller for 2 readers, 1 door

MUSB-1WHT: Surface mounting box to use with KT-100 (white)

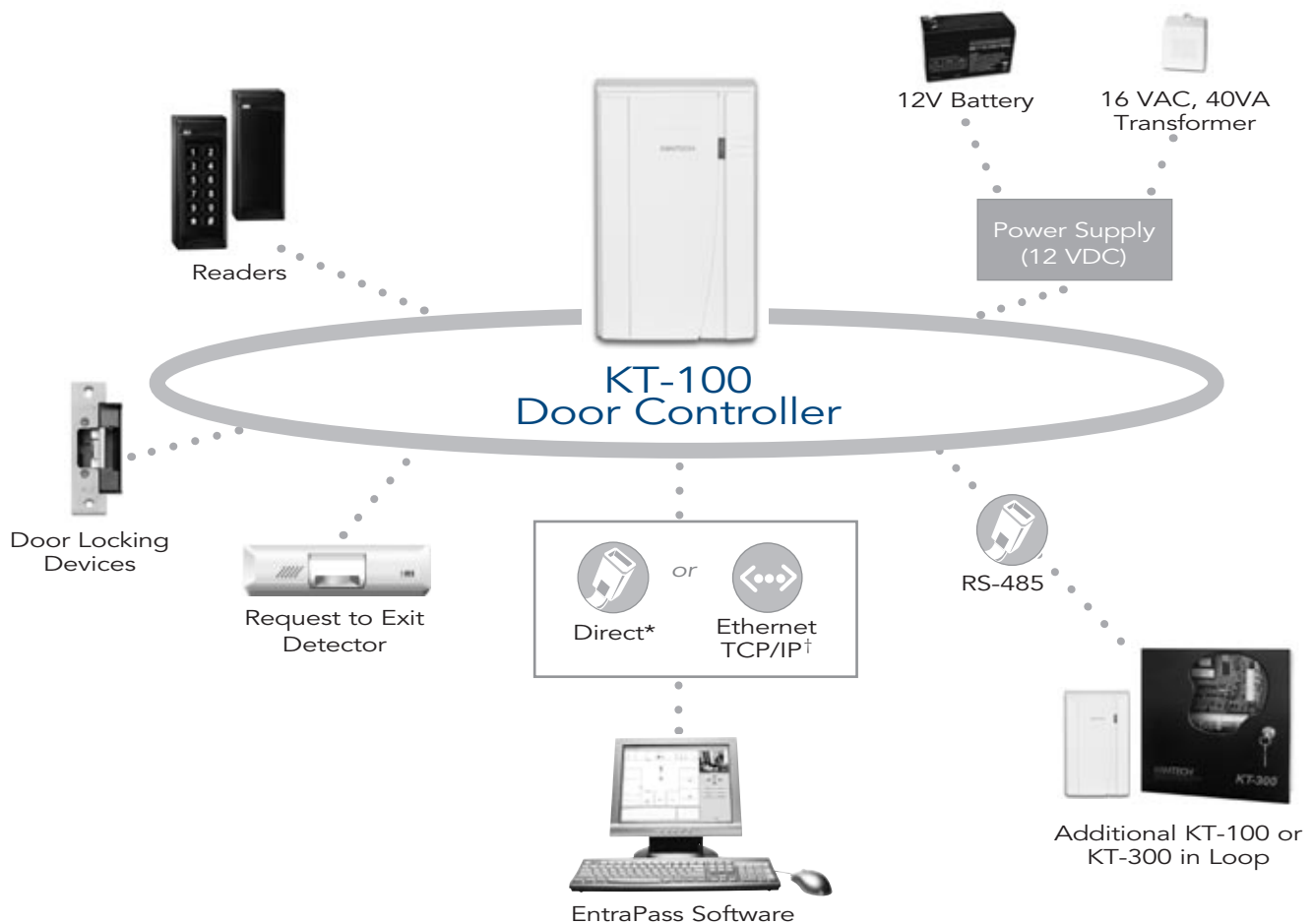
VC-485: RS-232 to RS-485 multi-function communication interface

USB-485: USB to RS-485 communication interface



KT-100

MINI DOOR CONTROLLER



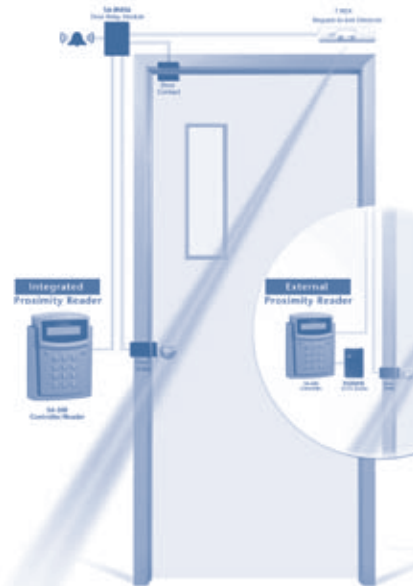
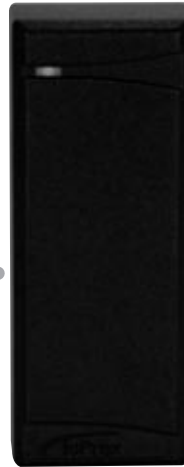
With no dip switches or jumpers to set, KT-100 decreases installation time. Included in the unit are connections for two card readers (entry/exit), a lock device, a door contact, and a request to exit. KT-100 can be mounted on the secure side of a door, reducing the length of cable required for installations. It can also be placed on a single gang box (flush mount) or on a specially designed surface back box.

* Direct: Using USB-485 or VC-485 converter with first controller in loop

† Ethernet TCP/IP: Using VC-485 and Lantronix Universal Device Server

ioPass

STAND-ALONE DOOR CONTROLLER



Ideal for small applications, the SA-500 model includes a reader hidden behind the keypad while the SA-600, designed for outside applications, includes an external reader that may be wired up to 150 m (500 ft) from the ioPass controller.

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Up to 5,000 card users
- Use integrated reader, keypad, or both
- Integrated or external ioProx proximity reader
- Read range of up to 10 cm (4 in)
- Easy programming from the keypad
- Five languages, programmable from keypad
- Higher security provided by a concealed door relay module
- Auxiliary relay to arm/disarm an external alarm system
- Audit trail on the unit
- Duress function available
- Invalid password lockout

2 SELECT A MODEL

SA-500 PACKAGES INCLUDE:
Stand-alone door controller with integrated ioProx proximity reader (5000 users), and ten P40KEY proximity keytags.

SA-500-EN: Includes above with English manual

SA-500-SP: Includes above with Spanish manual

SA-500-FR: Includes above with French manual

SA-RM56: Additional relay module

SA-600 PACKAGES INCLUDE:
Stand-alone door controller with external ioProx proximity reader (5000 users), and ten P40KEY proximity keytags.

SA-600-EN: Includes above with English manual

SA-600-SP: Includes above with Spanish manual

SA-600-FR: Includes above with French manual

ioPass is compatible with the complete line of ioProx cards, keytags and tags, refer to p. 41



Readers, Keypads & Cards

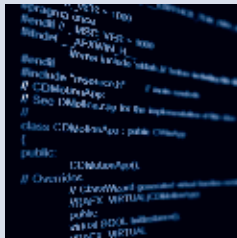
Business owners have enough to think about without the operation of elaborate security equipment. Easy to install, easy to learn, and easy to use, ioProx readers make access control reliable and simple at the same time.



Kantech provides a full selection of readers and cards representing the most advanced and popular technologies available today. Proximity, biometrics, magnetic stripe, bar code, Wiegand, and multiple technology offer a host of security options with cost, durability, reliability, versatility, and the level of security varying from one to the next. To find out which type of reader is right for you, learn more about the features and capabilities of each in the section below and on the next page.

COMMUNICATION PROTOCOLS

The following are just some of the communication protocols between readers and door controllers:



26-bit Wiegand

Most proximity, biometric and wireless readers are Wiegand compatible and work with most access control panels on the market. Wiegand cannot prevent card duplication and is considered to be a low security format. The standard format for Wiegand is 26 bits.

Kantech's Secure Formats

A high security proprietary format created to prevent card duplication. There are two Kantech Secure formats:

- 39-bit XSF (eXtended Secure Format)
Available only with ioProx readers
- 34-bit KSF (Kantech Secure Format)
Available only with ShadowProx readers and cards and HID readers

BCD Output

Certain keypads will send data to the controller in a BCD format (Binary Code Decimal).

American Bank Association (ABA) Format

Barcode and magnetic stripe readers are usually sending data to the controller in a format called Clock and Data (*also called ABA*).

Proximity:

The fastest growing technology for access control applications, proximity readers continuously transmit a low-level fixed radio frequency (RF) signal that provides energy to the card. When the card is held at a certain distance from the reader, the RF signal is absorbed by a small coil inside the card that powers up the card's microchip which contains a unique identification code. Once powered, the card transmits the code to the reader. The whole process is completed in microseconds. The big advantage of proximity over other technologies lies in its simplicity. There are no moving parts, no mechanical wear, no slots, and no read heads to maintain. The reader can be concealed inside walls or special enclosures and poses even fewer problems when surface-mounted because it has no opening with which to jam or tamper. The proximity card is extremely secure and practically impossible to duplicate. Proximity cards are less prone to physical damage or loss, saving you money in reduced card replacement costs. Read ranges depend primarily on the reader. The larger the read range, the larger the reader's concealed antenna and, hence, the size of the reader. A reader's read range is always specified using standard cards. If the card's coil is smaller, as in thin photo ID cards, keytag or keytag type cards, it may reduce the read range by up to 40%. There is a great variety of proximity readers designed for different environments including vandal resistant mullion mounts, smaller decor styles, and integrated keypad/reader units.



Biometrics:

Biometric technologies include fingerprint, hand geometry, voice recognition, retinal scan, and any other method of identification based on unique personal characteristics. Biometric solutions consist of a reader that compares a user-selected template against the measured features of the actual person. Templates may be called up in a system manually by entering a PIN number or automatically by using bar code, magnetic stripe, smart card or proximity identification technologies.



Which Technology?

Magnetic Stripe:

The typical magnetic stripe card accommodates three tracks or areas for storing data. Banking and credit card operations rely on this technology,



most frequently using Track 2 (sometimes referred to ABA-2 or ISO-2) to store their data. The card must be swiped or inserted into the reader so that the read head can pick up the card's encoded data. This contact

operation creates wear on both the card and the read head. With new high-density magnetic stripes, however, loss of data due to reasons other than physical damage is now uncommon. This technology provides a medium level of security because it is possible, with the right equipment and proper knowledge, to duplicate cards. Yet, lower cost for both readers and cards makes it an attractive choice for many users.

Bar Code:

Bar code technology is very common in non-security applications but it is seldom the technology of choice for security. The card is swiped so that the cell inside the reader can read the bar code through a lens. Visible bar code technology has obvious security drawbacks. For example, cards can be duplicated with a photocopier or by faxing. Although it is possible to mask the bar code with a filter that makes duplication more difficult, most buyers prefer more



secure technologies. The cards have an average life of 18 to 30 months. The reader lens requires cleaning once a year on average, or more if installed in dusty environments such as parking lots.

Wiegand:

This technology was originally created to provide a permanently encoded card when magnetic stripe cards were too sensitive to magnetic fields. The Wiegand card contains a stream of "Wiegand effect" wire inside. As the card is swiped through an electromagnetic field inside the reader, the bits of wire create a data stream that is used to identify the user. Wiegand was the most common technology in high security applications before the advent of lower cost proximity technology.



Multi-Technology:

Multi-technology cards are most often used on sites where a system, such as one that measures time and attendance, is already in place and uses magnetic stripe or bar code cards. If the customer wants higher security proximity cards for the access control system, the existing cards can be replaced by dual-technology cards which combine proximity and a second technology, such as bar code or magnetic stripe or even smart card. This is a more convenient alternative than asking employees to carry two cards. It is also less expensive and less time consuming than switching out all of the cards.



KEY QUESTIONS TO ASK YOURSELF WHEN CHOOSING A READER TECHNOLOGY

WHAT LEVEL OF SECURITY DO YOU NEED?

Different access control technologies provide different levels of security. Combining proximity technology with biometrics yields the highest level of security by adding an extra layer of ID verification. You can also use either of these independently or opt for other types of readers that offer a less expensive yet viable alternative for medium and low level security.

WHERE WILL THE READER BE USED?

Heavy traffic requires a technology that can process authorization data quickly. A proximity reader takes less than half a second whereas a biometric reader requires up to two seconds and is better suited to less busy situations. Environmental factors can also affect readers. Proximity readers are the most impervious to the elements; biometric readers, being the most sensitive, should be used exclusively indoors.

WILL THE READER GROW WITH YOUR ORGANIZATION?

You may find it more efficient and cost effective to continue using your current technology throughout your operation as it grows. Multi-technology cards offer the option of combining old with new, letting you retain existing bar code, Wiegand, or mag stripe functions while adopting another type of access control like proximity technology.

CHOOSE THE READER AND CARD THAT IS RIGHT FOR YOU

READER COMPARISON TABLE							
Model	Description and Read Range	Dimensions	Power Use	Outdoor	Compatible Cards	Security Level	Compliance
Proximity							
ioProx Readers P225XSF/W26	Mullion Mount, Read Range up to 16.5 cm (6.5 in)	11.43 x 4.45 x 2.13 cm (4.5 x 1.75 x 0.84 in)	Controller 4.5-14 VDC	Yes	ioProx	High	UL, FCC, & CE
P325XSF/W26	Single Gang Box Size, Read Range up to 20.5 cm (8 in)	11.56 x 7.11 x 2.13 cm (4.55 x 2.8 x 0.84 in)	Controller 4.5-14 VDC	Yes	ioProx	High	UL, FCC, & CE
P225KPXSF/W26	Mullion Mount with Integrated Keypad, Read Range up to 16.5 cm (6.5 in)	11.43 x 4.45 x 2.13 cm (4.5 x 1.75 x 0.84 in)	Controller 4.5-14 VDC	Yes	ioProx	High	UL, FCC, & CE
P325KPXSF/W26	Single Gang Box Size with Integrated Keypad, Read Range up to 20.5 cm (8 in)	11.56 x 7.11 x 2.13 cm (4.55 x 2.8 x 0.84 in)	Controller 4.5-14 VDC	Yes	ioProx	High	UL, FCC, & CE
P600	Typical Read Range up to 73 cm (29 in)	285 x 285 x 31.5 cm (11.25 x 11.25 x 1.25 in)	External 12-28 VDC	Yes	ioProx	High	UL, FCC, & CE
HID Readers							
HID-PP6005B	Mullion Mount, Read Range up to 9.5 cm (3.75 in)	7.9 x 4.4 x 1.7 cm (3.1 x 1.7 x 0.66 in)	Controller 5-16 VDC	Yes	HID	High	UL, FCC, & CE
HID-MP5365	Mullion Mount, Read Range up to 14 cm (5.5 in)	15.2 x 4.4 x 2.54 cm (6 x 1.7 x 1 in)	Controller 5-16 VDC	Yes	HID	High	UL, FCC, & CE
HID-PR5355	Single Gang Box Size, Read Range up to 23 cm (9 in)	12.7 x 12.7 x 2.54 cm (5 x 5 x 1 in)	Controller 12-24 VDC	Yes	HID	High	UL, FCC, & CE
HID-PR5355KP	With Integrated Keypad Read Range up to 23 cm (9 in)	12.7 x 12.7 x 2.54 cm (5 x 5 x 1 in)	Controller 12-24 VDC	Yes	HID	High	UL, FCC, & CE
HID-TL5395	Single Gang Box Size Read Range up to 14 cm (5.5 in)	11.9 x 7.6 x 1.7 cm (4.7 x 3 x 0.68 in)	Controller 5-16 VDC	Yes	HID	High	UL, FCC, & CE
HID-MX5375	Read Range up to 61 cm (24 in)	30 x 30 x 2.54 cm (11.8 x 11.8 x 1 in)	External 14 or 28 VDC linear power supply	Yes	HID	High	UL, FCC, & CE
ShadowProx Readers							
SH-Y1	Mullion Mount, Read Range up to 12.7 cm (5 in)	11.4 x 4.3 x 2 cm (4.5 x 1.7 x 0.8 in)	Controller 5-16 VDC	Yes	ShadowProx	High	UL, FCC, & CE
SH-Y2	Single Gang Box Size Read Range up to 12.7 cm (5 in)	11.4 x 7.6 x 2 cm (4.5 x 3 x 0.8 in)	Controller 5- 16 VDC	Yes	ShadowProx	High	UL, FCC, & CE
SH-Y4	Single/Double Gang Box Size Read Range up to 30.5 cm (12 in)	13 x 15.5 x 2.8 cm (5.1 x 6.1 x 1.1 in)	Controller 5-16 VDC	Yes	ShadowProx	High	UL, FCC, & CE
SH-X5	Read Range up to 71 cm (28 in)	28.4 x 28.4 x 4.6 cm (11.2 x 11.2 x 1.8 in)	External 12-24 VDC	Yes	ShadowProx	High	UL, FCC, & CE
SH-2KP	With Integrated Keypad Read Range up to 10 cm (4 in)	11.6 x 7.6 x 1.7 cm (4.5 x 3 x 0.7 in)	Controller 5-16 VDC	Yes	ShadowProx	High	UL, FCC, & CE
Receiver							
ioProx Receiver P700WLS	Read Range up to 25 m (80 ft) with Power Dipole Antenna	19.21 x 13.02 x 4.14 cm (7.56 x 5.13 x 1.63 in)	Controller 12 or 24 VDC	Yes	ioProx Transmitters	Medium/ High	FCC
Mag Stripe							
Polaris Readers POL-2	Reader Only	15.86 x 4.45 x 3.76 cm (6.24 x 1.75 x 1.48 in)	Controller 5 VDC	Yes	Polaris	Medium	FCC & CE
POL-2KP	With Integrated Keypad	15.86 x 4.45 x 3.76 cm (6.24 x 1.75 x 1.48 in)	Controller 5 VDC	Yes	Polaris	Medium	FCC & CE
Bar Code							
BC-301	Heavy Duty Construction	4.32 x 12.83 x 3.9 cm (1.7 x 5.05 x 1.54 in)	Controller 5 VDC	Yes	Various	Low	FCC & CE
Wiegand							
Wiegand Readers WEI-R20	Swipe Model	5.8 x 13.5 x 4.3 cm (2.3 x 5.3 x 1.7 in)	Controller 5-12 VDC	Yes	Wiegand	Low/ Medium	UL & CE
WEI-R30	Insertion Model	3 x 8.1 x 7.6 cm (1.18 x 3.18 x 3 in)	Controller 5-12 VDC	Yes	Wiegand	Low/ Medium	UL & CE

Note: Photo ID and thin cards have a shorter lifetime, and proximity read range is reduced with keytags and thin cards.



Readers & Cards

CARD COMPARISON TABLE						
Compatible Readers	Model Number	Product Type	Dimensions	Direct Image Printing	Slot Punch	Additional Reader Compatibility
Proximity						
ioProx Readers P225, P225KP, P325, P325KP and P600	P10SHL	Standard Card	8.57 x 5.4 x 0.18 cm (3.375 x 2.126 x 0.070 in)	with PVC Overlay	Vertical	None
	P20DYE	Thin Card	8.57 x 5.4 x 0.079 cm (3.375 x 2.126 x 0.031 in)	Yes (both sides)	No	BC-301**
	P30DMG*	Thin Card with Mag Stripe	8.57 x 5.4 x 0.079 cm (3.375 x 2.126 x 0.031 in)	Yes (both sides)	No	BC-301**/ POL-2/POL-2KP
	P40KEY	Keytag	5.0 x 2.0 x 0.5 cm (1.96 x 0.79 x 0.19 in)	No	Key Ring Hole	None
	P50TAG	Adhesive Tag	2.5 cm diameter (0.98 in diameter)	No	No	None
HID Readers HID-MX5375, HID-PP6005B, HID-PR5355KP, HID-PR5355, HID-MP5365, and HID-TL5395	HID-C1326KSF	Standard Card	8.57 x 5.4 x 0.18 cm (3.375 x 2.126 x 0.070 in)	with PVC Overlay	Vertical	None
	HID-C1336KSF* HID-C1336K/G*	Thin Card with Mag Stripe	8.57 x 5.4 x 0.079cm (3.375 x 2.126 x 0.031 in)	Yes (front side) Yes (both sides)	No	BC-301**/ POL-2/POL-2KP
	HID-C1346KSF	Keytag	4.83 x 2.29 x 0.41 cm (1.90 x 0.90 x 0.16 in)	No	Key Ring Hole	None
	HID-C1386KSF HID-C1386K/G	Thin Card	8.57 x 5.4 x 0.079cm (3.375 x 2.126 x 0.031 in)	Yes (front side) Yes (both sides)	No	BC-301**
ShadowProx Readers SH-Y1, SH-Y2, SH-Y4, and SH-X5	SH-C1	Standard Card	8.57 x 5.4 x 0.18 cm (3.375 x 2.126 x 0.065 in)	with PVC Overlay	Vertical	None
	SH-CMG3/GG	Thin Card	8.57 x 5.4 x 0.076 cm (3.375 x 2.126 x 0.03 in)	Yes (both sides)	No	BC-301**
	SH-CMG4/GG*	Thin Card with Mag Stripe	8.57 x 5.4 x 0.076 cm (3.375 x 2.126 x 0.03 in)	Yes (both sides)	No	BC-301**/ POL-2/POL-2KP
	SH-K1	Keytag	4.38 x 3.04 x 0.546 cm (1.725 x 1.197 x 0.215 in)	No	Key Ring Hole	None
Receiver						
ioProx Receiver P700WLS	P72WLS	2-button Transmitter	7.3 x 3.81 x 1.59 cm (2.88 x 1.5 x 0.63 in)	No	Key Ring Hole	None
	P72WLS-TAG	2-button Transmitter with ioProx Tag	7.3 x 3.81 x 1.59 cm (2.88 x 1.5 x 0.63 in)	No	Key Ring Hole	ioProx
	P74WLS	4-button Transmitter	7.3 x 3.81 x 1.59 cm (2.88 x 1.5 x 0.63 in)	No	Key Ring Hole	None
	P74WLS-TAG	4-button Transmitter with ioProx Tag	7.3 x 3.81 x 1.59 cm (2.88 x 1.5 x 0.63 in)	No	Key Ring Hole	ioProx
Mag Stripe						
Polaris Readers POL-2, POL-2KP and POL-2ATM	POL-C1CN	Thin Card with Mag Stripe and Bar Code	8.57 x 5.4 x 0.08 cm (3.375 x 2.125 x 0.030 in)	No	No	BC-301
	POL-C5CN	Thin Card with Mag Stripe and Bar Code	8.57 x 5.4 x 0.08 cm (3.375 x 2.125 x 0.030 in)	Yes (front side)	No	BC-301
	POL-C6CN	Thin Card with Mag Stripe	8.57 x 5.4 x 0.08 cm (3.375 x 2.125 x 0.030 in)	Yes (both sides)	No	BC-301**
Wiegand						
Wiegand Readers WEI-R20 and WEI-R30	WEI-C11SN	Thin Card	8.57 x 5.4 x 0.094 cm (3.375 x 2.125 x 0.037 in)	No	No	None

* Mag stripe, requires user programming

** Bar code can be printed



P600



P325KPXSF

P325XSF

P225KPXSF

P225XSF

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Choose from Kantech XSF (eXtended Secure Format) or 26-bit Wiegand formats
- Works up to 300 m (1000 ft) from the controller, unshielded cable significantly reduces installation costs
- Digital signal processing (DSP) for enhanced security
- Weatherproof design for indoor and outdoor applications
- Integrated piezo & bi-color LED
- Integrated tamper switch on P600 (optional on other models)
- The use of quick connect terminal blocks (P225 and P325 series) allows for easy wiring and saves you time and money
- Integrated keypad models are ADA-compliant and based on the 8-bit burst industry standard
- Use the keypad's * and # buttons in conjunction with EntraPass software to arm and disarm external alarm panels
- Kantech XSF readers are compatible only with Kantech software, with access to over 4 billion unique codes that provide increased security and an absolute guarantee against card duplication
- Extended range makes the P600 long range reader ideal for parking lots and applications where special consideration is needed to facilitate access
- Up to 73 cm (29 in) read range (P600)

2 SELECT A MODEL

P225XSF: Mullion ioProx proximity reader, XSF format

P225KPXSF: Mullion ioProx proximity reader with integrated keypad, XSF format

P325XSF: Single gang ioProx proximity reader, XSF format

P325KPXSF: Single gang ioProx proximity reader with integrated keypad, XSF format

P600: ioProx proximity long range reader, XSF or 26-bit Wiegand formats (selectable)

P225W26: Mullion ioProx proximity reader, 26-bit Wiegand format

P225KPW26: Mullion ioProx proximity reader with integrated keypad, 26-bit Wiegand format

P325W26: Single gang ioProx proximity reader, 26-bit Wiegand format

P325KPW26: Single gang ioProx proximity reader with integrated keypad, 26-bit Wiegand format

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PROXIMITY READERS & CARDS

Standard Shell Card:



- Can be used with a strap and clip
- Strong, flexible, and resistant to cracking and breaking
- Compatible with ioProx readers

- Dual-encoded XSF and 26-bit Wiegand formats

P10SHL

Dye-Sub Card:



- Print directly to both sides of the card with a direct image or thermal transfer printer
- As thin and compact as a credit card
- Marks for vertical and horizontal slot punch
- Compatible with ioProx readers

- Dual-encoded XSF and 26-bit Wiegand formats

P20DYE

Dye-Sub Card with Mag Stripe:



- Print directly to the front surface of the card with a direct image or thermal transfer printer
- Back surface includes a magnetic stripe (not encoded)
- As thin and compact as a credit card
- Marks for vertical and horizontal slot punch

- Compatible with ioProx readers
- Dual-encoded XSF and 26-bit Wiegand formats

P30DMG

Keytag:



Enlarged to show detail

- Small enough to fit on your key chain
- Resistant to cracking and breaking
- Compatible with ioProx readers
- Dual-encoded XSF and 26-bit Wiegand formats

P40KEY

Self-Adhesive Tag:



Enlarged to show detail

- Disk shape, less than 2.5 cm (1 in) diameter
- Adheres to any nonmetallic device
- Ideal for upgrading from Wiegand or magnetic stripe technologies
- Apply this disk to any badge to turn it into an ioProx proximity card

- Compatible with ioProx readers
- Dual-encoded XSF and 26-bit Wiegand formats

P50TAG

ioProx

RECEIVER & TRANSMITTERS



P700WLS



P74WLS-TAG



P72WLS-TAG



P-WLS-A2

LONGER READ RANGE & VERSATILITY

Get 24.38 m (80 ft) read range with a power dipole antenna or 12.19 m (40 ft) read range with a standard antenna. An integrated ioProx proximity tag makes the ioProx transmitter equally suited for garage doors and building entrances.

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Assign a particular button on the multi-button key tag transmitter to communicate with the receiver
- XSF or 26-bit Wiegand formats (selectable)
- 2 or 4 button transmitter available with or without an ioProx tag
- Weatherproof design for indoor and outdoor applications
- Encrypted code to ensure the highest level of security
- Ideal for 2-way gate, parking, and garage entrances
- Read range of up to 25 m (80 ft)
- Designed to interface with the access control system using standard 26-bit Wiegand format (P700WLS)

2 SELECT A MODEL

P700WLS: ioProx 4-channel receiver, XSF or 26-bit Wiegand formats (selectable); includes standard antenna

P72WLS-TAG: ioProx 2-button transmitter with integrated ioProx tag

P72WLS: ioProx 2-button transmitter

P74WLS-TAG: ioProx 4-button transmitter with integrated ioProx tag

P74WLS: ioProx 4-button transmitter

ACCESSORIES

P-WLS-A1: Standard whip antenna for P700WLS

P-WLS-A2: Power dipole antenna for P700WLS





Locations like parking lots demand special considerations when access control is required. With extended read range and remote keytag transmitters, ioProx receivers provide such areas with the same level of security as an indoor installation.



HID-PR5355

HID-MX5375



HID-PR5355KP

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Recognizes over 16.7 million unique codes using cards which provide complete security and an absolute guarantee against card duplication
- Weatherproof design for either indoor or outdoor applications
- 26-bit Wiegand protocol, compatible with all standard access control systems
- Integrated piezo and bi-color LED
- Architecturally attractive
- Up to 61 cm (24 in) read range (HID-MX5375)

2 SELECT A MODEL

HID-PR5355**KP**: ProxPro with integrated keypad (gray)

HID-PR5355: ProxPro (gray)

HID-MP5365: MiniProx (gray)

HID-PP6005B: ProxPoint Plus (gray)

HID-MX5375: MaxiProx (gray)

HID-TL5395**BL**: ThinLine II (black)

HID-TL5395**WH**: ThinLine II (white)

HID-TL5395**BE**: ThinLine II (beige)
photo not available

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PROXIMITY READERS & CARDS

ProxCard II Card:



- Strong, flexible, and resistant to cracking
- Can be used with a strap and clip
- KSF format

HID-C1326KSF

ISOProx II Card:



- Glossy front surface; printable on one side (HID-C1386KSF)
- Glossy front and back surfaces; printable on both sides (HID-C1386K/G)
- As thin and compact as a credit card
- KSF format

HID-C1386KSF

HID-C1386K/G

DuoProx II Card with Mag Stripe:



- Ready to encode magnetic stripe
- Glossy front surface; printable on one side (HID-C1336KSF)
- Glossy front and back surfaces; printable on both sides (HID-C1336K/G)
- As thin and compact as a credit card
- KSF format

HID-C1336KSF

HID-C1336K/G

ProxKey II Keytag:



- Small enough to fit on your key chain
- Resistant to cracking and breaking
- KSF format

HID-C1346KSF



SH-Y1BLK



SH-Y2BLK



SH-2KPBLK



SH-2KP



SH-X5



SH-Y4BLK

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Recognizes over 16.7 million unique codes using KSF cards which provide complete security and an absolute guarantee against card duplication
- Compatible with all Kantech systems
- Weatherproof design for either indoor or outdoor applications
- Integrated piezo and bi-color LED
- Architecturally attractive
- Up to 71 cm (28 in) read range (SH-X5)

2 SELECT A MODEL

SH-Y1BLK: ShadowProx Slim (black)

SH-Y1BEI: ShadowProx Slim (beige)

SH-Y2BLK: ShadowProx Wallswitch (black)

SH-Y2BEI: ShadowProx Wallswitch (beige)

SH-Y4BLK: ShadowProx MidRange (black)

SH-X5: ShadowProx PowerProx (black)

SH-2KPBLK: ShadowProx reader with integrated keypad (black)

SH-2KP: ShadowProx reader with integrated keypad (beige)

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ShadowProx

PROXIMITY READERS & CARDS

Standard Shell Card:



- Can be used with a strap and clip
- Strong, flexible, and resistant to cracking and breaking
- KSF format

SH-C1

Thin ShadowProx Card:



- Glossy front and back surfaces
- Ideal for badging, both sides are printable
- As thin and compact as a credit card
- KSF format

SH-CMG3/GG

Thin ShadowProx Card with Mag Stripe:



- Ready to encode magnetic stripe
- Glossy front and back surfaces
- Ideal for badging, both sides are printable
- As thin and compact as a credit card
- KSF format

SH-CMG4/GG

ShadowProx Keytag:



- Small enough to fit on your key chain
- Resistant to cracking and breaking
- KSF format

SH-K1



VPRX-IO-XSF



DETAIL (TOP VIEW)

FINGERPRINTS

The human fingerprint is so unique—with no two alike in every billion—that it has become the most trusted and widely used source for biometric identification. The false acceptance rate for fingerprint technology is less than 0.005% and the false rejection rate is less than 3%.

Bioscrypt FingerPrint Reader with Integrated ioProx:

- Provides enhanced security and eliminates security breaches caused by lost or stolen cards
- Requires that the fingerprint of the person requesting entry match the credentials stored in the reader
- Combines a self-contained fingerprint verification package with an embedded ioProx proximity card reader
- Housed in a modern case that conforms to a mullion mount standard
- Stores up to 4,000 templates per unit
- Performs verification and provides standard reader connection in XSF or 26-bit Wiegand formats
- Indoor use

VPRX-IO-**XSF**: XSF format
VPRX-IO-**W26**: 26-bit Wiegand format



Biometric Readers

HandKey II (Hand Geometry Reader):



HK-2

The Hand Geometry Reader analyzes the features of a person's hand, including its width and height as well as the length and width of its fingers. With tens of thousands of Hand Geometry Readers in use at places as varied as health clubs and computer rooms, laboratories and nuclear power plants, it has become the biometric standard for the access control industry.

- Uses field-proven hand geometry technology
- Maps and verifies the size and shape of a person's hand in less than one second
- Reliable and easy to use

- Indoor use
- Remarkable performance
- Perfect for one door or an entire facility
- Requires 16 VAC/DC, 40VA transformer

HK-2: Stand-alone hand recognition HandKey II system, 26-bit Wiegand format, (512 users)

HK-CR: Hand recognition reader HandKey CR, 26-bit Wiegand format, (512 users)



OTHER BIOMETRIC TECHNOLOGIES

FACE RECOGNITION systems work by identifying facial patterns such as eye, nose, and mouth width and height, as well as the position of cheekbones and the shape of a face. Developing computer models for face recognition is very complex since the system must not be affected by hairstyle, glasses, beard, expression changes, and lighting conditions.

RETINAL SCAN technology is used to scan the capillary pattern of the retina of the eye, and represents one of the most reliable biometric technologies on the market. The false acceptance rate is 0% and an authorized user is very rarely rejected. It is typically used in very high security applications with a small number of users.

VOICE VERIFICATION is accomplished by comparing a spoken statement to the person's digitally encoded voiceprint. This is used more typically in telephone transactions, but may be set up with dedicated hardware and software at an access point.



POL-2KP

POL-2

FLEXIBILITY

Configurable outputs provide flexibility for the installer and make the Polaris-2 series compatible with most access control systems on the market. 26-bit and 34-bit Wiegand, ABA clock and data and ABA-Wiegand outputs can easily be programmed in the field without special programming cards or tools.

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Integrated membrane keypad (POL-2KP)
- Bi-directional, standard, and nonstandard ABA-track magnetic card reading
- Four easily configurable output modes
- Built-in tamper switch, piezo buzzer, and bi-color LED
- Weatherproof design for either indoor or outdoor applications
- High endurance head assembly provides over one million reads
- Tough polycarbonate case
- UV protectant prevents discoloring

2 SELECT A MODEL

POL-2: Polaris-2 mag stripe reader

POL-25M: Polaris-2 mag stripe reader with 5 m (16 in) cable

POL-2KP: Polaris-2 mag stripe reader with integrated keypad

POL-2KP-5M: Polaris-2 mag stripe reader with integrated keypad, with 5 m (16 in) cable

POL-2ATM: ATM card reader kit includes POL-2 reader and programmable timer (not CE approved)



MAGNETIC STRIPE READERS & CARDS

Polaris-2 Magnetic Card (Preprinted Front):



- Preprogrammed magnetic stripe card; card number imprinted on back
- Includes pre-printed bar code

POL-C1CN

Polaris-2 Magnetic Card (Blank Front):



- Glossy front for custom Dye-Sub printing
- Preprogrammed magnetic stripe card; card number imprinted on back
- Includes pre-printed bar code

POL-C5CN

Polaris-2 Magnetic Card (Without Bar Code):



- Glossy front and back for custom Dye-Sub printing
- Preprogrammed magnetic stripe card; card number imprinted on back

POL-C6CN

For access control accessories, see p. 66.

Bar Code, Wiegand & Keypad

Bar Code Reader:



- Weatherproof design for either indoor or outdoor applications
- Tough shell made of carbon-filled polycarbonate for extra durability
- Reads most common bar code formats, including Code 39, Interleaved 2 of 5, UPC/EAN and Codabar (use POL-C1CN cards or others)

BC-301: Bar code reader

BC-MPL: Adapter mounting plate for BC-301 (US and Canada standard electric box)



Wiegand Readers:



- High impact, vandal and weather resistant reader
- Bi-color status LED
- Immune to external magnetic fields and RF signals

WEI-R20: Swipe reader

WEI-R30: Insertion reader

WEI-C11SN: 26-bit Wiegand card

Including a keypad with your reader boosts the level of security, requiring anyone who wants entry to type in a PIN (Personal Identification Number) code in addition to showing their card.

If potential traffic obstruction is a concern, you can schedule the PIN code requirement to activate only before and after peak business hours.

Keypads:



- Touch keypad, contains no moving parts
- Reliable performance in even the most demanding environments
- One-piece design is rugged, compact and vandal resistant
- Ideal for high traffic indoor and outdoor use
- Maximum flexibility with two user programmable LEDs (red and green) and an annunciator that beeps with each key press

KP-2500: BCD Output

ES-KTP/103SN: 26-bit Wiegand format





Employee turnover is a business reality, and one that can create security—and budget—headaches when access cards must constantly be replaced. Magnetic stripe cards provide the most economical solution for security-conscious companies faced with the constant flux of personnel changes.



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Show customers how EntraPass works in real-time
- Generate and display live events, such as a "Door Forced Open"
- Demonstrate read ranges for the ioProx readers plus how to program and use ioProx cards
- Use to train technicians and installers

KANTECH DEMO KIT INCLUDES:

- KT-300 door controller
- ioProx P225KPXS and P325XS readers
- USB-485 converter with USB cable
- P40KEY (5)
- ioProx P10SHL cards (3)
- Plug-in transformer and push buttons

PELICAN CASE: (OPTIONAL)

- Black case, insulated with foam for extra protection
- Pelican case dimensions:
53.34 x 45.72 x 20.32 cm
(21 x 18 x 8 in)

DU3-120V: Demo Kit without case

DU3-120V-PLC: Demo Kit with Pelican case



Kantech Demo Kit



Kantech's all-inclusive Demo Kit provides an easy, portable solution for anyone on the go. This self-contained unit lets you give a professional presentation with minimal set-up time.

WHAT IS A SITE CODE?

Site codes were originally created to produce a larger number of 26-bit cards by duplicating cards rather than increasing the available number of user codes. Cards were ordered for a specific site and the manufacturers kept track of what had been shipped where. When a new site was installed, it was assigned a site code that had never been shipped to that specific geographical area. All of the cards on a specific site shared the same site code so the control equipment did not have to store the site code in each user code, reducing memory requirements in the hardware.

As the access control market exploded, it became almost impossible to maintain such a strategy. Although some manufacturers still work this way, the trend is to provide cards with a greater number of bits, making obsolete the notion of site codes. This new method also means faster delivery of cards, even for add-ons to existing sites, right out of the manufacturer's or the distributor's regular stock. As long as the card number is unique, just as with serial numbers on currency bills, security is maintained. Manufacturers should provide a written statement certifying that their cards are unique and will never be duplicated.



Access Control Kits

Choosing an access control system doesn't have to require hours spent sorting through hundreds of software, hardware, and reader offerings. Kantech's Access Control Kits include all of the components you need to get up and running quickly and easily.



Starter Kit



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Everything needed to install a complete access control system
 - A comprehensive solution for small to medium size businesses
 - Easy to use
 - Highly reliable access control system
- STARTER KIT INCLUDES:
- EntraPass Special Edition software (CD-ROM)
 - KT-300/I28K door controller
 - ioProx P225XSF readers (2)
 - USB-485 converter
 - 16 VAC, 40VA transformer
 - 12V, 7 amp battery
 - ioProx P40KEY keytags (5)
 - Form C relays (2)

2 SELECT A MODEL

SK-SE302: Starter Kit with UL transformer (US only)

SK-SE302CDN: Starter Kit with CSA transformer (Canada only)

Expansion Kit



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Everything you need to expand your system
- Available in 2-door increments
- Helps you keep up with even the fastest growing business
- Easy to use
- Easy to install
- Compatible with all Kantech software, including EntraPass Special Edition, Corporate Edition and Global Edition (with Windows® Global Gateway)

2-DOOR EXPANSION KIT INCLUDES:

- KT-300/I28K Door Controller
- ioProx P225XSF readers (2)
- 16 VAC, 40VA transformer
- 12V, 7 amp battery
- Form C relays (2)

2 SELECT A MODEL

EK-302: Expansion Kit with a UL transformer (US only)

EK-302CDN: Expansion Kit with a CSA transformer (Canada only)



Multi-Door Controller Kits



42-inch Multi-Door Controller kit shipped with 2 KT-300 controllers. Image shown fully configured.



EK-4RDR-ADD

EK-4RDR-12

EK-4RDR-8

28-inch Multi-Door Controller Kit shipped with 2 KT-300 controllers. Image shown fully configured.

IDEAL FOR LARGE APPLICATIONS

Multi-Door Controller Kits enable you to mount multiple KT-300 controllers inside a single enclosure saving space, time and budget. By grouping multiple controllers in one enclosure, installers can work more quickly and efficiently, saving installation time and expense.

1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

- Controls up to 8 or 12 doors from one enclosure (depending on model size enclosure)
 - Cost-effectively consolidate multiple KT-300 controllers in a single enclosure to provide a streamlined installation
 - Supports all Kantech software including EntraPass Special Edition, EntraPass Corporate Edition and EntraPass Global Edition
 - Order one model number to ensure you receive all hardware components at the same time
 - Expand your system in 4-door increments using the Multi-Door Controller Expansion Kit
- MULTI-DOOR CONTROLLER KITS INCLUDE:
- KT-MP300 mounting plates (2)
 - KT-BB100/BB101 battery brackets (2)
 - KT-300PCB128 controller - PCBs only (2)
 - KT-300-ACC accessory kits (2)
- ioProx P225XSF readers (4)
 - TRI 640P/UL transformers (2)
 - KT-BATT-12 rechargeable batteries (2)
 - KT-RM1 relays (4)
 - ioProx P40KEY keytags (25)
 - KT-TAMPER tamper switch (1)
 - KT-LOCK lock and keys (1)
- MULTI-DOOR CONTROLLER EXPANSION KIT INCLUDES:
- KT-MP300 mounting plates (2)
 - KT-BB100/BB101 battery brackets (2)
 - KT-300PCB128 controller - PCBs only (2)
 - KT-300-ACC accessory kits (2)
 - ioProx P225XSF readers (4)
 - TRI 640P/UL transformers (2)
 - KT-BATT-12 rechargeable batteries (2)
 - KT-RM1 relays (4)

2 SELECT A MODEL

- EK-4RDR-8: 4-door kit (28-inch enclosure with door cover)
- EK-4RDR-12: 4-door kit (42-inch enclosure with door cover)
- EK-4RDR-ADD: Expansion kit

For Canadian customers, add suffix "CDN" to model number to receive the CSA-compliant transformer. (EK4RDR-8CDN, EK-4RDR-12CDN or EK-4RDR-ADDCDN)

ACCESSORIES

- KT-CAB3000LDR: 28-inch enclosure with door
- KT-CAB4000LDR: 42-inch enclosure with door cover
- KT-MP300: Mounting plates for KT-300PCB and KT-PC4204 module.
- KT-MP200: Mounting plates for KT-PC4108 and KT-PC4216 modules.
- KT-BB101: Battery bracket (left side)
- KT-BB100: Battery bracket (right side)

Exit Control Devices, Electric Strikes & Locks

Access control seems simple enough; you present a card and the door opens. But there is a lot more to it than meets the eye, and exit control devices play an important part.



Exit control devices give you both security and convenience at locations that require hands-free exit. Operations run smoothly but remain secure because only the outgoing traffic can pass freely without pausing to show ID. Anyone wanting entry must first display the required form of authorization. Kantech offers two door-mounted options: the T.Rex Request to Exit Detector and the PB-EXIT control button.

T.Rex Request to Exit Detector:

The T.Rex Request to Exit Detector provides a complete solution for exit detection and door surveillance in access control applications. Innovative features such as X-Y Targeting and Digital Signal Processing (DSP) implementation make it the fastest and most reliable exit detector on the market.

X-Y Targeting uses vertical detection targeting with two adjustable louvers located in the detection chamber, allowing you to zero in on specific areas.

Additionally, T.Rex utilizes infrared detection coupled with DSP sampling specifically designed for access control applications. DSP allows T.Rex to detect the extremely fast movement of a hand (the target) about to push the door or turn the door handle. This fine-tuned precision eliminates false reads.

PB-EXIT Control Button:

The PB-EXIT control button is a spring-loaded exit button mounted on a stainless steel plate. The contacts, which are UL-listed with 10 amp capacity, switch when the button is depressed and return when it is released. This button can be used for momentary release of fail-safe or fail-secure electric locks. It may also be used to input an exit signal to the access control system. In some areas, local building or fire safety regulations may limit the use of exit buttons. Always consult or get approval from local authorities prior to installing exit buttons.

Electric Door Strikes:

Always consider the following when ordering electric strikes:

- 1) You may need to obtain approval from your local fire department before installing a door strike on a fire-rated door to maintain its rating.
- 2) An electric door strike will lock the door when you remove power.
- 3) Electric strikes can be more difficult to install than electromagnetic locks and may require assistance from a professional locksmith.
- 4) You should install the door strike on the inactive door of a double door entryway, with the inactive door bolted down. A door cord or electric-conductive hinge will carry the power to the strike.
- 5) It may not be possible to install a door strike on special doors like full glass doors; in such instances, an electromagnetic lock may prove the only viable option.

Electromagnetic Locks:

Electromagnetic locks keep doors locked not only on the entry side but on the exit side, which does cause concern among safety regulators, and now stringent local regulations and site inspections are common. This shift has substantially increased the cost of using electromagnetic locks. Because of these extra costs, electromagnetic locks may be more appropriate in situations where they are the only alternative, such as locking a controlled exit door.



1 CHOOSE FEATURES THAT MAKE A DIFFERENCE

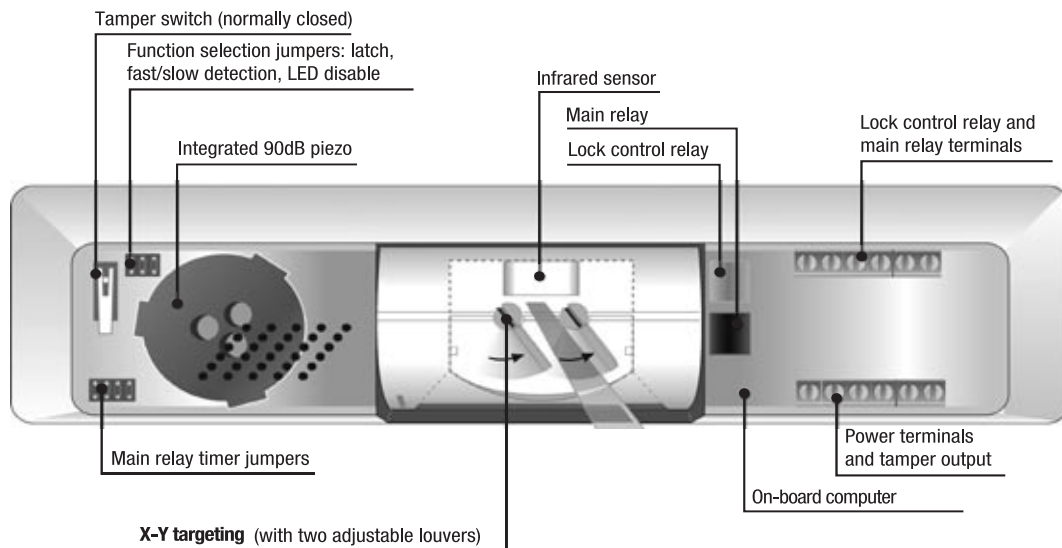
- Zone of detection is easily adjustable for pinpoint accuracy
- X-Y Targeting for specific areas of detection
- Unlocks or shunts door automatically
- Infrared detection coupled with DSP prevents false "Door Forced Open" alarms
- Hands free, no buttons to push
- Optional backplate allows T.Rex to be mounted on a single gang box
- Integrated 90dB local door alarm sounder independently controlled by access panel
- 4 models available

2 SELECT A MODEL

- T.REX-LT: Tamper and timer (white)
- TREX-LT2: Tamper, timer, and 2 relays (white)
- T.REX-XL: Tamper, piezo, and timer (white)
- T.REX-XLBLK: Tamper, piezo, timer, and 2 relays (black)
- TREX-XL2: Tamper, piezo, timer, and 2 relays (white)
- T.REX-XL2BLK: Tamper, piezo, and timer (black)
- T.REX-PLATE: T.Rex back plate (white)

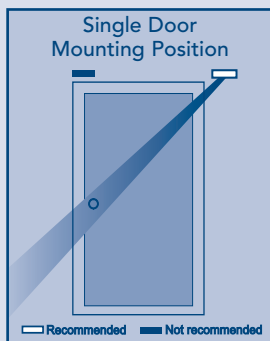


REQUEST TO EXIT DETECTOR



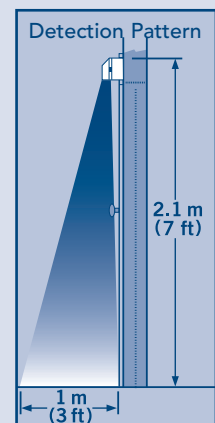
HOW TO ADJUST YOUR DOOR-MOUNTED T.REX REQUEST TO EXIT DETECTOR

Once T.Rex is installed, the span and target direction of the detection pattern can be set by turning the louver direction screws, located just below the detector lens on the barrel. Since the adjustment range is about 45°, installers must



take care to not turn the louvers too far; stop turning when resistance is felt. Slots on the louver adjusting screws indicate the position of the louver and serve as an adjustment guide. Adjust the detection zone toward or away from the door by simply rotating the detector barrel.

When T.Rex is mounted directly above the door, it is recommended that installers direct the detection area away from the door. Rotate the barrel slightly away from the door so that the lower edge of the detector lens is about 0.64 cm (1/4 in) above the edge of the case. Check the detection pattern by walk testing and watch the LED for position detection. When satisfied, remove the cover and tighten the barrel locking screw on the right side of the barrel, then replace the cover.



PB-EXIT Control Button

PB-EXIT Control Button:



- Highly visible, spring-loaded, square green button
- Stainless steel plate
- Surface mount
- Momentary release of fail-safe and fail-secure electric locks
- Exit signal dispatch to access control system
- Contacts are UL-listed with 10 amp capacity
- Mounts on single gang box

PB-EXIT



PB-EXIT is a perfect fit for businesses that have critical evacuation processes requiring quick release of fail-safe electric locks.

REQUEST TO EXIT DETECTOR, EXIT BUTTON, OR BOTH?

REQUEST TO EXIT DETECTOR

The purpose of a request to exit detector is to detect an individual's legitimate exit through a supervised door. The detector must capture the individual's hand movement toward the door handle (or panic bar) and, prior to the door's opening, warn the system of a pending exit. When the door opens, the system is able to discriminate between a valid exit and a forced entry. The exit detector can be used on both free exit and controlled exit doors. It provides automatic and hands-free operation.

EXIT BUTTON

The exit button can replace the request to exit detector on controlled exit doors. The user must press the exit button to unlock the door. Exit buttons cannot be used on free exit doors because if a user opens the door without pressing the button, a "Door Forced" alarm will be generated by the system.



Electric Strikes & Locks

Electric Strikes:



DS-4114-05

- Commercial and industrial rated door strikes can withstand the traffic involved with access control applications
- Tested to 500,000 cycles
- Fail-locked (fail-secure) for free exit applications
- Can be used with cylindrical, narrow line, and mortise locks with centerline latch entry
- Listed under UL10B (fire-rated), UL1034, ANSI/BHMA E09321 and New York City MEA 404-91-M
- Holding force: 680 kg (1,500 lbs) for fire rated models; 226.8 kg (500 lbs) for non-fire rated models

DS-4114-05: Electric strike, 12 VDC

DS-4114-08: Electric strike, 24 VDC

DS-4114F-05: Electric strike, 12 VDC, fire-rated

DS-4114F-08: Electric strike, 24 VDC, fire-rated

Electromagnetic Locks:



ML831C28



Mounting pieces (included)

- Solid construction provides years of maintenance-free operation
- Dual voltage (12-24 VDC) operation up to 680 kg (1,500 lbs) of holding force, fits most requirements
- Supervised option (SCS model only) provides lock status information (locked or unlocked)
- Detects reduced holding force due to the presence of materials between magnet and armature
- Detects power loss (SCS model only)
- Adjustable mounting bracket
- MOV surge protection
- Anodized clear aluminum finish
- No residual magnetism
- Easy access wiring cavity

ML831C28: Electromagnetic lock, 12-24 VDC

ML831SCSC28: Electromagnetic lock, 12-24 VDC, with supervisory switch

Access Control Accessories

Kantech offers network communication devices, modems, converters, cable kits, and more—everything you need to secure ingress and egress at your facilities.



IP Link:



- Powerful solution for connecting KT-100, KT-200, and KT-300 door controllers to existing network infrastructure
- Secure communication via 128-bit AES encryption
- Configured using either a static or dynamic IP address

- Up to 512 IP Links can be supported per Corporate Gateway, a cost-effective solution to managing multiple remote sites
- Communicates over the network only as required, keeping network traffic down to a minimum
- Plug and play setup makes it quick and easy to use with EntraPass Special, Corporate, and Global Edition software (with Corporate Gateway)
- Supports up to 32 door controllers
- UL294 certification; CE, RoHS, and WEEE compliant

KT-IP: IP Link module with wall mount metal enclosure and accessories (ground wire, plastic stand off, cable/connector)

KT-IP-PCB: IP Link module PCB only with accessories (ground wire, plastic stand off, cable/connector)

KT-IP-CAB: Metal cabinet for KT-IP-PCB

USB-485 Communication Interface:



- Converts USB to RS-485
- Supports up to 32 Kantech controllers
- Uses unshielded twisted pair (UTP) communication cable
- Supports Windows 98, ME, 2000, XP & Windows Vista

- Powered by USB port
- Extends communication up to 1,200 m (4,000 ft)

USB-485

VC-485 Multi-Function Communication Interface:



- Converts RS-232 to RS-485
- Supports up to 32 Kantech controllers
- Uses UTP cable
- Powered by 5 VDC or 12 VDC
- Extends communication up to 1,200 m (4,000 ft)
- Extends communication up to 5,486 m (18,000 ft) by connecting two together

- Two VC-485s may be connected back-to-back to extend the RS-485 communication bus

VC-485

Dial-up Modems:

HOST SITE MODEM

- Dial-up external modem for host site
- CBLK-12 cable kit/adaptor set included (RS-232 from PC to host modem)

REMOTE SITE MODEM

- Dial-up external modem for remote site
- CBLK-11 cable kit/adaptor set included (RS-232 from remote modem to controller)

DU-MODEM-HOS: Dial-up external modem for host site with CBLK-12 cable (North America only)

DU-MODEM-RS: Dial-up external modem for remote site with CBLK-11 cable (North America only)

Photos not available

Cables

CABLE TABLE				
Model	Max Length	Belden Ref. #	Alpha Ref. #	Description
Readers and Keypads				
ioProx Readers P225, P225KP, P325 & P325KP	300 m (1000 ft)	8742	1304C	3 twisted pairs, solid, #22AWG, unshielded
P600 ioProx Reader	150 m (500 ft)	5304UE	N/A	6 wire, stranded, #18AWG, unshielded
ioProx Receiver & Transmitters	150 m (500 ft)	9553	6428	3 twisted pairs, #18AWG, unshielded
Polaris-2 Readers	150 m (500 ft)	9554	6429	4 pairs, stranded, #18AWG, shielded (foil), drain wire
ShadowProx & Wiegand Readers	150 m (500 ft)	9553	6428	3 pairs, stranded, #18AWG, shielded (foil), drain wire
HID Readers	150 m (500 ft)	9553	6428	3 pairs, stranded, #18AWG, shielded (foil), drain wire
Bar Code Readers	150 m (500 ft)	9553	6428	3 pairs, stranded, #18AWG, shielded (foil), drain wire
KP-2500, ES-KTP/103SN	150 m (500 ft)	8466	1898/12C	12 conductors, stranded, #18AWG, unshielded
Auxiliary Devices				
KT-100 Inputs (zones 1-4) KT-200 Inputs (zones 1-16) KT-300 Inputs (zones 1-8) T.Rex Request to Exit Detector PB-EXIT Control Button	600 m (2000 ft)	9794	1204	4 conductors, solid, #22AWG, unshielded
Bus and Communications				
RS-485 Bus, from VC-485 or USB-485 to KT-100/200/300 to KT-100/200/300	1.1 km (4000 ft)	1227A	N/A	2 twisted pairs, #24AWG, unshielded, Ethernet Category 3 cable
RS-485 Bus, from KT-NCC to KT-100/200/300 to KT-100/200/300	1.1 km (4000 ft)	1227A	N/A	2 twisted pairs, #24AWG, unshielded, Ethernet Category 3 cable
RS-232 from EntraPass system to KT-200/300	30 m (100 ft)	N/A	N/A	6 conductors, #24AWG, stranded flat telephone cable
Power and Grounding				
AC Transformers to Kantech Products	8 m (25 ft)	9571	6501	2 conductors, solid, #18AWG, unshielded
Door Lock Power from KT-100/200/300	150 m (500 ft)	9571	6501	2 conductors, solid, #18AWG, unshielded
KT-100/200/300 & KT-NCC Grounding	8 m (25 ft)	N/A	N/A	1 conductor, solid, #18AWG



BC-301	52	E-GLO-WEB-3	13, 22	KT-IP	67	P-WLS-A2	42
BC-MPL	52	E-GLO-WS1	13	KT-IP-CAB	67	SA-500-EN	34
DS-4114-05	65	E-GLO-WS8	13	KT-IP-PCB	67	SA-500-FR	34
DS-4114-08	65	EK-302	58	KT-LOCK	27	SA-500-SP	34
DS-4114F-05	65	EK-302CDN	58	KT-MP200	59	SA-600-EN	34
DS-4114F-08	65	EK-4RDR-8	59	KT-MP300	59	SA-600-FR	34
DU3-120V	55	EK-4RDR-8CDN	59	KT-NCC	16	SA-600-SP	34
DU3-120V-PLC	55	EK-4RDR-12	59	KT-NCC-ACC	17	SA-RM56	34
DU-MODEM-HOS	67	EK-4RDR-12CDN	59	KT-NCC-CAB	17	SH-2KP	46
DU-MODEM-RS	67	EK-4RDR-ADD	59	KT-NCC-LOCK	17	SH-2KPBLK	46
E-COR-COM	9	EK-4RDR-ADDCDN	59	KT-NCC-PCB	16	SH-C1	47
E-COR-EN-V4	8	ES-KTP/103SN	52	KT-NCC-TAMPER	17	SH-CMG3/GG	47
E-COR-FR-V4	8	E-SPE-EN-V4	4	KT-PC4108	28	SH-CMG4/GG	47
E-COR-KTK-1	9	E-SPE-FR-V4	4	KT-PC4204	28	SH-K1	47
E-COR-KTK-2	9	E-SPE-MAN-EN	4	KT-PC4216	28	SH-X5	46
E-COR-KTK-3	9	E-SPE-MAN-FR	4	KT-RM1	27	SH-Y1BEI	46
E-COR-KTK-5	9	E-SPE-MAN-SP	4	KT-TAMPER	27	SH-Y1BLK	46
E-COR-KTK-10	9	E-SPE-SP-V4	4	ML831C28	65	SH-Y2BEI	46
E-COR-MAC	9, 22	E-SPE-UPG-V4	4	ML831SCSC28	65	SH-Y2BLK	46
E-COR-MAN-EN	8	HID-C1326KSF	45	MUSB-1WHT	33	SH-Y4BLK	46
E-COR-MAN-FR	8	HID-C1336K/G	45	P10SHL	41	SK-SE302	57
E-COR-MAN-SP	8	HID-C1336KSF	45	P20DYE	41	SK-SE302CDN	57
E-COR-RDN	9, 22	HID-C1346KSF	45	P225KPW26	40	T.REX-LT	62
E-COR-SP-V4	8	HID-C1386K/G	45	P225KPXS F	40	T.REX-PLATE	62
E-COR-SQL	9, 23	HID-C1386KSF	45	P225W26	40	T.REX-XL	62
E-COR-UPG-EN-V4	8	HID-MP5365	44	P225XS F	40	T.REX-XL2BLK	62
E-COR-WEB-1	9, 22	HID-MX5375	44	P30DMG	41	T.REX-XLBLK	62
E-COR-WEB-3	9, 22	HID-PP6005B	44	P325KPW26	40	TR1637W/CSA	27
E-COR-VVM	9, 21	HID-PR5355	44	P325KPXS F	40	TR1640P/CSA	27
E-COR-WS6	9	HID-PR5355KP	44	P325W26	40	TR1640P/UL	27
E-GLO-COM	13	HID-TL5395BE	44	P325XS F	40	TR1640W-220	27
E-GLO-COM-WIN	13	HID-TL5395BL	44	P40KEY	41	TREX-LT2	62
E-GLO-CORCOM	13	HID-TL5395WH	44	P50TAG	41	TREX-XL2	62
E-GLO-EN-V4	12	HK-2	49	P600	40	USB-485	27, 32, 67
E-GLO-FR-V4	12	HK-CR	49	P700WLS	42	VC-485	27, 32, 67
E-GLO-KTK-1	13	KP-2500	52	P72WLS	42	VPRX-IO-W26	48
E-GLO-KTK-2	13	KT-100	32	P72WLS-TAG	42	VPRX-IO-XS F	48
E-GLO-KTK-3	13	KT-CAB3000LDR	59	P74WLS	42	WEI-C11SN	52
E-GLO-KTK-5	13	KT-CAB4000LDR	59	P74WLS-TAG	42	WEI-R20	52
E-GLO-KTK-10	13	KT-300/128K	26	PB-EXIT	64	WEI-R30	52
E-GLO-KTK-20	13	KT-300/512K	26	POL-2	50		
E-GLO-MAC	13, 22	KT-300-ACC	27	POL-25M	50		
E-GLO-MAN-EN	12	KT-300CAB	27	POL-2ATM	50		
E-GLO-MAN-FR	12	KT-300PCB/128	26	POL-2KP	50		
E-GLO-RDN	13, 22	KT-300PCB/512	26	POL-2KP-5M	50		
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