VersaKey™

Standard & Compact Series

POS Keyboard

Quickstart Manual

ID TECH
Value through Innovation

CE

FCC WARNING STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following conditions: this device may not cause harmful interference and this device must accept any interference received, including interference that may cause undesired operation.

CANADIAN DOC STATEMENT

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Cana-dian Department of Communications.
Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de las classe B prescrites dans le Réglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

CE STANDARDS

Testing for compliance to CE requirements was performed by an independent laboratory. The unit under test was found compliant to B

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Section 1
INTRODUCTION

ID TECH VersaKey POS Keyboards provide data entry primary for POS and security applications. Two sires are available, compact and full size. The VersaKey Compact is in compact 14" x 7" form factor, full-function keyboard with 103 key layout. The full-size keyboard is a standard 18.5" x 8" form factor. The VersaKey has Typematic keyboard operation with a good tactual feel. Included is a reader for MagStripe cards. There are four LEDs to indicate keyboard function status. Many country specific keyboard layouts are available.

VersaKey product with a PS/2 communication cable always sends keyboard and MagStripe data in scan code format. VersaKey product with a USB communication cable always sends keyboard data in scan codes format. More-over, many VersaKey USB models send MagStripe data in scan code format (as though the data came from keystrokes); however, there is a second option where some VersaKey models communicate MagStripe data in ASCII characters through the USB cable.

In this second option, MagStripe data is sent as USB-HID or USB-CDC device class interface (not in USB-keyboard scan code format). The purpose of this second option is separation of MagStripe data from keyboard data. This allows the VersaKey to serve separate & different keyboard and Mag-Stripe applications in the same PC. The VersaKey Model number defines the communication variations. See ID TECH User Manual 80074503-001 for additional information using separate USB interfaces.

The VersaKey magnetic card reader has full data editing capabilities. The reader is fully programmable using a Configuration Utility Software available at the ID TECH website (http://www.idtechproducts.com). The data can be formatted with preamble & postamble (a.k.a. prefix and suffix). Terminator characters can be added to match the format expected by the host application. In addition, complex data editing routines can be stored in the reader that further arranges the data before it is output to the host.

The VersaKey provides a USB (keyboard) or PS/2 communication output. This output is conveniently shared between the keyboard and the MagStripe reader. The VersaKey Standard full sized comes two-port USB hub that can be used for scanners or PIN pads. VersaKey Keyboard is compatible with Windows 98, 2000, XP, & Vista operating systems

Both the keyboard and the reader are industry proven. The keyboard pro-vides more than 20,000,000 key operations; the reader has an operational life greater than 1,000,000 swipes. The VersaKey meets FCC Class B & CE regulatory requirements. ESD immunity is greater than 15KV with no dam-age to the circuits

Section 2
INSTALLATION & OPERATION

The VersaKey keyboard always has a single communication cable equipped with either a USB or a PS/2 cable connection. Both the keyboard scan codes and reader data are always transmitted through this single communication cable. Computers typically have only one PS/2 (standard keyboard connection); this connection must be used for the PS/2 configured VersaKey. The computer may have several USB connection ports; any of these ports can be used to connect the USB keyboard.

To install the VersaKey, close any open applications and Shut Down the computer. Determine the VersaKey connection type and locate the appropriate connection receptacle on the computer. Securely install the cable connector into the computer receptacle. Re-start the computer.

When the VersaKey is powered, it performs a self test and initiation sequence with the computer. During the self test the MagStripe reader will beep. The keyboard power LED will light to indicate power is applied. The LEDs will show the status of the Scroll Lock, Num Lock, & Caps Lock functions. Test the keyboard with normal use in a text editor like Word

Also, test the reader. For readers with a PS/2 or USB-Keyboard type communication interface, MagStripe data is transmitted such that the card data appears to be coming directly from the keyboard. This makes the reader a pseudo-keyboard data source and transparent to the keyboard PC application software.

For VersaKey keyboards with a USB interface, the reader may not use a USB-keyboard type interface. In this case, MagStripe data is sent to the PC's MagStripe application in an ASCII character format instead of in keyboard scan code format. (See the Introduction Section for more information on the reader communications types.)

Test the reader by swiping a magnetic stripe card through the reader slot. The magnetic stripe must be facing toward the front of the keyboard. A beep will also sound to indicate a good read on each magnetic track, as appropriate. If three tracks are available on the reader and all have been read successfully, the reader will beep three times. Readers with a non-keyboard type of communication interface must be tested using the PC's MagStripe application software; otherwise, for readers with a keyboard (scan code) output, the card data is seen on the text editor as when testing the keyboard

Section 3
READER CONFIGURATION

The magnetically encoded data on the MagStripe is decoded (read) by card reader. The stripe data has a fixed format defined by the ISO standards. The ISO fixed format is not always convenient or useful for card reading applications. The solution is for the card reader to decode the stripe data and then arrange the data into useful format and content.

The VersaKey Reader is an intelligent magnetic stripe reader that decodes, verifies, and transmits stripe data. The reader also provides a convenient formatting and content editing capability for transmitted data. The MagStripe data can be edited and arranged by the reader; characters can be added to the formatted data. The added characters form either a prefix or a suffix to the formatted MagStripe data. To support the reader's formatting capability, ID TECH provides an easy to use configuration utility, Magswipe Software. Configuration settings can also enable the reader to work with the host system communication port settings; data transmission intervals or data rates for example

Magswipe Software supports the Windows 98, Windows ME, Windows 2000, Windows XP, and Windows Vista operating systems.

When readers are configured appropriately to an application and computer, these configuration settings are stored in the reader's non-volatile memory (they are not affected by the cycling of power).

DEFAULT SETTINGS

The reader is shipped from the factory with the default settings already programmed. See Appendix A. The reader has been factory programmed with the least restricted settings, thus making the reader ready to read most standard format magnetic stripe cards

Section 4
SPECIFICATION KEYBOARD

MECHANCIAL

Keyswitch
   Total Travel   4.0 ± 0.5 mm
   Operating Force   50 ± 7g

Keyboard Housing
   Color   Black
   Size   Full Size:
                       469.9 mm (L) x 203.9 mm (W) x 42.8 mm (H)
                       18.5 inch (L) x 8.03 inch (W) x 1.69 inch (H)
                       Compact:
                       358.8mm (L) x 177.8mm (W) x 40.0mm (H)
                       14.1 inch (L) x 7.0 inch (W) x 1.6 inch (H)
   Material   ABS

Cable Information
   Jacket Material   PVC jacket with Aluminum Shielding
   Length   1.5 M (5ft.) Overall
   PC Connector   PS/2 or USB

Drop   610 mm (24") Drop: 1 corner, 2-sidelines, 3-sides

Vibration   60 Hz/sec 3 mm amplitude X,Y,Z each axis at 2 hours

Operating Temperature   0°C to 40°C (32°F to 104°F)

Storage Temperature   -20°C to 40°C (- 4°F to 104°F)

ELECTRICAL

Power Requirement   +5.0 VDC ±10%, 60ma Max

Industry Requirements   FCC class B and CE

RELIABILITY

Operating Life   20,000,000 keystrokes

ESD Immunity   0KV to 8 kV min, without data loss.
                       8KV to 15 kV min, will function after reset
MTBF   More than 60,000 power on hours

Section 5
SPECIFICATION READER

Number of tracks	Track 1 & 2 or Track 1, 2 & 3
Compatibility	ISO 7810 and 7811-1 through -6 cards. Reads AAMVA driver license cards
Communications	Decoded track data sent through Keyboard communication cable
Output data formatting	Default card data output format or customized data output format is programmable through PC configuration utility. See Appendix A for default settings
Operating Life	1,000,000 card swipes
Card speed range	3 to 60 IPS (Inches Per Second)
Audio beeper	Indicates error free card data reading

Section 6
TROUBLE SHOOTING

The data from the reader is not as expected.
The reader is shipped from the factory with the default settings already programmed. See Appendix A for the Default Settings. The default settings can be customer modified by using the MagSwipe Configuration Utility. See Section 3

The reader does not output data.
The reader will beep when power is applied to the VersaKey. The reader will also beep for each track correctly read from a magnetic stripe. Use a known good credit card to test the reader operation. Insure that a text input application (such as Windows Notepad) is open and selected during the test

The keyboard does not function with the computer
If the power indicator LED is off, the keyboard may not be fully connected to the computer. Check the connections. Check that the computer power is on If the power indicator LED is on and the VersaKey is a USB type, the driver may not be loaded properly on the computer. Check the Device Manager in Hardware Properties of the computer. The driver is a standard windows driver for operating systems Windows 98SE and later

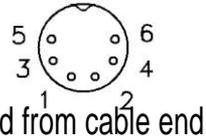# Appendix A
MAGNETIC STRIPE DEFAULT SETTINGS

Function	Default Value
Beep Volume	High
Inter-Character Delay	2 ms
Track Selection	Any Track
Data Output Format	ID TECH Format (See Appendix C)
Track Separator	See Appendix C
MSR Reading	Enable
Decoding Method	Decoding in Both Directions
Terminator ID	ENTER
Polling Interval	1 ms (USB)

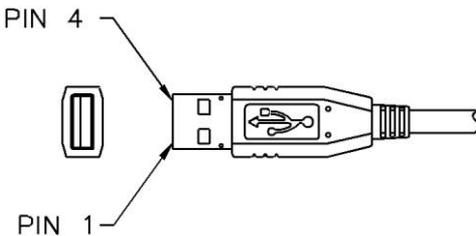# Appendix B
CONNECTOR PIN ASSIGNMENTS

PS/2 Connector, 6 pin DIN

Connector Pin	Signal
2	Not Used
4	+5 V
6	Not Used
1	Data
3	Ground
5	Clock

Viewed from cable end

USB, 4 pin USB plug

Connector Pin	Signal
1	+5 V
2	- Data
3	+ Data
4	Ground

PIN 4

PIN 1

Appendix C
MAGNETIC STRIPE DATA OUTPUT FORMAT

The Reader is shipped from the factory with the following magnetic stripe default settings already programmed:

Magnetic Track Basic Data Output Format
Track 1: <SS1><T1 Data><ES><TS>
Track 2: <SS2><T2 Data><ES><TS>
Track 3: <SS3><T3 Data><ES><Terminator>

where: SS1(start sentinel track 1) =
% SS2(start sentinel track 2) = ;
SS3(start sentinel track 3) = ; for
ISO, % for AAMVA
ES(end sentinel all tracks)
= ? <TS> = <ENTER> key
Terminator = <ENTER> key

Start or End Sentinel: Characters in encoding format which come before the first data character (start) and after the last data character (end), indicating the beginning and end, respectively, of data.

Track Separator: A designated character that separates data tracks.

Terminator: A designated character that comes at the end of the last track of data in order to separate card reads.
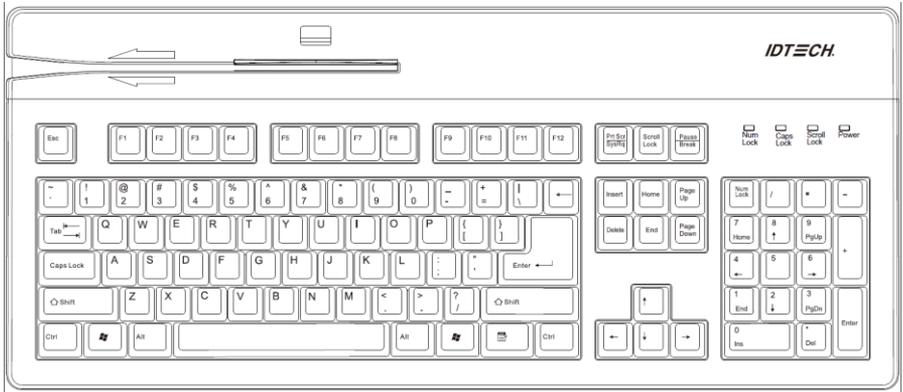
LRC: Check character, following end sentinel. (The reader will verify it when decoding, but this will not be sent as part of the data.)

Appendix D
KEYBOARD LAYOUTS

North American Typical Format

Standard Size

Compact Size