VersaKey™ Compact Programmable Keyboard

Quick Start Manual

IDTECH®

Value through Innovation

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 Canadian 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 les 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 Compact Programmable Keyboard is a card-reader-enabled data-entry solution designed for POS and security applications. The VersaKey Compact is a full-function programmable keyboard with a space-saving 14" x 8" form factor, and an integrated MagStripe reader. It is available with Smart Card, touchpad or trackball options. Additionally, country-specific keyboard layouts in various languages are available.

The VersaKey Compact's programmable keys are easily configured with ID TECH KeyUtility software, which is supplied with the product or can be downloaded from the ID TECH website. For multi-step procedures, macros can be programmed into the keyboard to simplify data-entry process. Each programmable key accepts up to 16 key codes. Once the key assignment is finalized, the code settings can be downloaded into the keyboard's non-volatile memory.

The VersaKey magnetic card reader offers full data-editing capabilities. It is fully programmable using MagSwipe Configuration Utility available on the ID TECH website (http://www.idtechproducts.com). Data can be formatted with user defined preamble, postamble (a.k.a. prefix and suffix), and terminator characters to match with the format used in specific applications.

VersaKey Programmable Keyboard is available with USB- keyboard and USB-HID interfaces. VersaKey product with a USB-keyboard configuration always sends keyboard and MagStripe data in scan codes format so that the MagStripe data appears as if they were from a keyboard. For USB-HID device, VersaKey communicates MagStripe data in ASCII characters through the USB cable, allowing the VersaKey to serve separate keyboard and Magstripe reader functions via a single device. For additional information on USB-HID interface communication, please refer to 80074503-001 ID TECH VersaKey USB-HID interface reference manual.

Both the keyboard and the reader are industry proven solutions. Together, they deliver a space-saving, efficient and reliable POS solution. The keyboard provides 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 damage to the circuits. VersaKey Keyboard is compatible with Windows 98, 2000, XP, & Vista operating systems

Section 2
INSTALLATION AND OPERATION

To install the VersaKey, connect the keyboard to the PC/host device with the USB cable. When the VersaKey is powered up, 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 illuminate to indicate power is applied.

Test the keyboard with normal use in a text editor like Word. The non-programmed keys are not pre-programmed with key codes and will not have output. 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 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 MagStripe application software. But for readers with a keyboard (scan code) output, the card data is seen on the text editor just as it does when testing the keyboard.

The MagStripe data can be edited and formatted using ID TECH MagSwipe configuration utility. Configuration settings can also enable the reader to work with the host system communication port settings, data transmission intervals, or data rates for example.

To program the keys, the keyboard needs be connected to a PC that has the ID TECH KeyUtility software installed. Select the key from the key selection window and enter the key codes to be programmed either from the screen or on the physical keyboard. Each programmable key can be assigned with up to 16 key codes. The Test Key button provides a window to test the programmed keys once the change has been sent to the keyboard. The key code is programmed into the keyboard's non-volatile memory and can be saved to a file for use on other VersaKey Compact Programmable keyboards.

For detailed information on how to use the KeyUtility, please download the full user's manual available on the ID Tech website.

Section 3
SPECIFICATION

VersaKey Keyboard

Mechanical

Keyswitch

Total Travel	4.0 + 0.5 mm
Operating Force	50 + 7g

Keyboard

Color	Black
Size	469.9 mm (L) x 203.9 mm (W) x 42.8 mm (H)
Material	High Impact PS, Meets flammability spec. UL94HB

Cable Information

Jacket Material	PVC jacket with Aluminum Shielding
Length	1.5 M (5ft.) Overall
PC Connector	USB
Drop	610 mm (24") Drop: 1 corner, 2-sidelines, 3-sides
Vibration	60 Hz/sec 3 mm amplitude X, Y and Z each axis at two 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 hours

MagStripe Reader

Number of tracks	Tracks 1 & 2 or Tracks 2 & 3 or Tracks 1, 2 & 3
Compatibility	ISO 7810 and 7811-1 through -6 cards.
Communications	Decoded data sent through Keyboard communications cable.
Output data formatting	Default or customized data output format; programmable through PC configuration utility. See Appendix for defaults
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 or not

Smart Card Reader (Optional)

Smart card types   Microprocessor type, T=0 & T=1

Compatibility   ISO 7816-1thru 6 cards. EMVCo Compliant

Operating Life   1,000,000 card swipes

LED (green)   There is a card seated LED next to the smart card slot;
                              the LED is on when the card is seated and powered.

Touchpad (Optional)

Max Tracking Speed   250 mm/s

Resolution   Dynamic resolution, 100-300 dpi

Operating Life   1,000,000 tapping/abrasion cycles

Trackball (Optional)

Max Tracking Speed   300 rpm

Resolution   800 +/- 30 counts per ball revolution

Section 4
TROUBLESHOOTING

Troubleshooting assistance for common VersaKey keyboard problems:

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

- **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 properly connected. Check the connections as well as the computer power. If the power LED is on but the keyboard is not functioning,, 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 MagStripe Reader Default Settings

The Reader is shipped from the factory with the following magnetic stripe default settings.

Default Functional Settings

Function	Default Value
Terminal Type	PC/AT (Auto Selects)
Beep Volume	High
Character Delay	2 ms
Track Selection	Any Track
Data Output Format	ID TECH Format
Track Separator	See Section 7.3
MSR Reading	Enable
Decoding Method	Decoding in Both Directions
Terminator ID	ENTER (Keyboard)

Magnetic Stripe Data Output Format
Magnetic Track Basic Data Output Format
Track 1: <SS1><T_1 Data><ES><TS>
Track 2: <SS2><T_2 Data><ES><TS>
Track 3: <SS3><T_3 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 or CR
Terminator = <ENTER> key or CR

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.)