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## Scantech-ID Scan Kiosk SK-100





## **Installation Manual**

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**Scantech-ID ScanKiosk SK-100**

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## **Limited Warranty**

Under all circumstances this manual should be read attentively, before installing and/or using the product. In no event shall Scantech-ID BV be liable for any direct, indirect, special, consequential or incidental damages arising out of the use or inability to use this documentation or product, even if advised of the possibility of such damages. In particular, Scantech-ID BV shall not be liable for any hardware, software, or data that is stored or used with the product, including the cost of repairing, replacing or recovering the above. Scantech-ID BV reserves the right to change parts of the device at any time without preceding or direct announcement to the client.

Scantech-ID BV reserves the right to revise this manual, and to make changes in the contents without obligation to notify any person or entity of the revision or change. A serial number appears on the product. Make sure that this official registration number has not been removed. It should be used whenever servicing by Scantech-ID BV or an authorized Scantech dealer is necessary.

## **Important**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to EN55022, and with the limits for a class A digital device, pursuant to part 15 of the 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 user's manual, may cause harmful interference to radio communications. Operation of the equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Any unauthorised changes or modifications to this equipment could void the user's authority to operate this equipment.

This device is in conformity with the CE standards. Please note that a Scantech CE-marked power supply unit should be used to conform to these standards.

## **Radio and television interference**

Operation of this equipment in a residential area can cause interference with radio or television reception. This can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orientate the receiving antenna
- Relocate the devices with respect to the receiver
- Move the device away from the receiver
- Plug the device into a different outlet in order to have the device and receiver on different branch circuits

If necessary, the user should consult the manufacturer, an authorized Scantech dealer or experienced radio/television technician for additional suggestions. The booklet "How to Identify and Resolve Radio-TV Interference Problems", prepared by the Federal Communications Commission, can be of help. It can be obtained from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004000003454.

Due to Scantech's continuing product improvement programs, product features, the information and specifications in this manual are subject to change without prior notice.

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## About this Manual

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This manual provides information for installing and operating the Scantech-ID ScanKiosk SK-100. Read this manual before operating the device and keep it in a safe place for future reference.

The complete set of SK-100 User Documentation consists of:

- This Installation Manual
- The Configuration Manual
- The Integration Manual

### CHAPTER DESCRIPTIONS

- Chapter 1: Product Overview introduces the SK-100 and describes its features and unpacking procedure.
- Chapter 2: Installation describes mounting procedures and connecting devices to the SK-100.
- Chapter 3 describes the initial steps to configure the SK-100
- Appendix A: Technical Specifications provides technical information about the SK-100.

### USED CONVENTIONS

This manual contains the following conventions:

#### **NOTE**

Gives a tip, an instruction or a point of attention.

#### **IMPORTANT**

Warns for possible damage to the device or other objects when the instruction is not followed.

#### **DANGER!**

Warns for possible harm to persons when the instruction is not followed.

# DECLARATION OF CONFORMITY



The SK-100 will comply with the following product specifications:

Electrical safety LVD-EN60950-1

EMC EN5022 CLASS :2010/AC:2011	CE	RED EN300328(1.9.1) RED EN301489-1/EN301489-17 EN301893 RF-WLAN UNII BAND 1(ac) EN301893 a WLAN
EN61000-3-2: 2014		
EN61000-3-3: 2013		
EN55024:2010		
IEC 61000-4-2:2008	FCC	FCC Part 15C FCC Part 15B RF-WLAN 802.11a (W52/W53) RF-WLAN 802.11ac (W56)
IEC 61000 3: 2006+A1:2007+A2: 2010		
IEC 61000-4-4:2012		
IEC 61000-4-5:2014		
IEC 61000-4-6:2013		
IEC 61000-4-8:2010		
IEC 61000-4-11:2004		

## RoHS2 Means of conformity:

We confirm to comply with the requirements set out in the Council Directive of the Laws of the Member States relating to Electromagnetic Compatibility (2004/108/EC) and (2006/95/EC) for the evaluation regarding the electromagnetic compatibility. The SK-100 is in compliance with the (RoHS II) Directive 2011/65/EU by July 1, 2011.

QA Director, March 2018      [*SIGNATURE A. Wang pending*]

## SERVICE INFORMATION

If you might encounter any problem with the product, contact Scantech-ID customer-support in your region, specifying the following information:

- Model and Part number
- Serial number
- The Firmware level as shown on the display after power-up.



# **Chapter 1 Product Overview**

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## **1.1 INTRODUCTION**

The SK-100 is a powerful Scan Kiosk that combines the conventional Price Checker with the functionality of a 2D imager topped with multimedia capabilities supporting audio and video streaming.

The SK-100 features our latest technology in terminal System design. Interfacing is done either through wired Ethernet or Wireless RF. The big full color display can be used to play slideshows or product promotion videos.

Because of its compact design and size, the SK-100 can be mounted anywhere in a store. This flexibility of installation is enhanced by the optional WiFi connection or Power-over-Ethernet.

### **General Information**

The Scan Kiosk SK-100 is the latest product developed by Scantech-ID, the company which has more than 23 years of experience in the field of Customer Information Terminals.

### **Quality and Durability**

The SK-100 comes with the same top quality as all other Scantech-ID products. With SK-100, you get the same quality and performance of more expensive products but at a very competitive price. Due to the high MTBF times of every component a long and service free operation time is ensured.

### **Flexibility**

The SK-100 can be easy and safe installed using the attached VESA 75mm bracket. The touch screen display and high quality stereo audio make it easy to read prices and product information or playback promotional music and videos.

### **Integration**

The SK-100 comes with a Web-based Configuration Management Tool for easy customization. Scantech supplies software sample source code (HTML and more) to get the SK-100 easily connected to the store's database. The Protocol specification for easy integration is available on demand.

## 1.2 GENERAL PRODUCT FEATURES

- Self-service SCAN KIOSK with touch screen and media display function
- Multimedia support with High Quality speakers
- Color-screen Price Verifier
- Compact dimension to easy deploy anywhere in the store
- Map out digital promotion image/video media
- 2D Imager
- Standard Ethernet LAN 10/100 Mb/s
- WiFi IEEE 802.11 ac a/b/g/n 2.4 and 5 GHz Optional
- Power over Ethernet support Optional
- Camera
- Microphone
- Compliant with VESA 75mm
- Built-in Web Server for easy configuration access to remotely configure, diagnose, monitor and troubleshoot the device
- Developer SDK Software Suite support with example Source Code
- Entry/Exit-Gate control function support (option)
- Expandable — can easily build on by adding third-party USB peripherals, including printers, magnetic stripe readers, keyboards and more.



## 1.3 UNPACKING

1. Remove the device from the box and inspect it for damage.
2. Remove other items from the box and check if all accessories are complete.  
The following items should be present:
  - Power adapter
  - Installation Manual
  - VESA mounting bracket
3. Keep the packaging material in a safe place.  
The packaging box may be needed in the future for transport.

### NOTE

If anything is missing or appears damaged,  
please contact your dealer immediately.

## 1.4 DEVICE PARTS

### 1.4.1 Front View

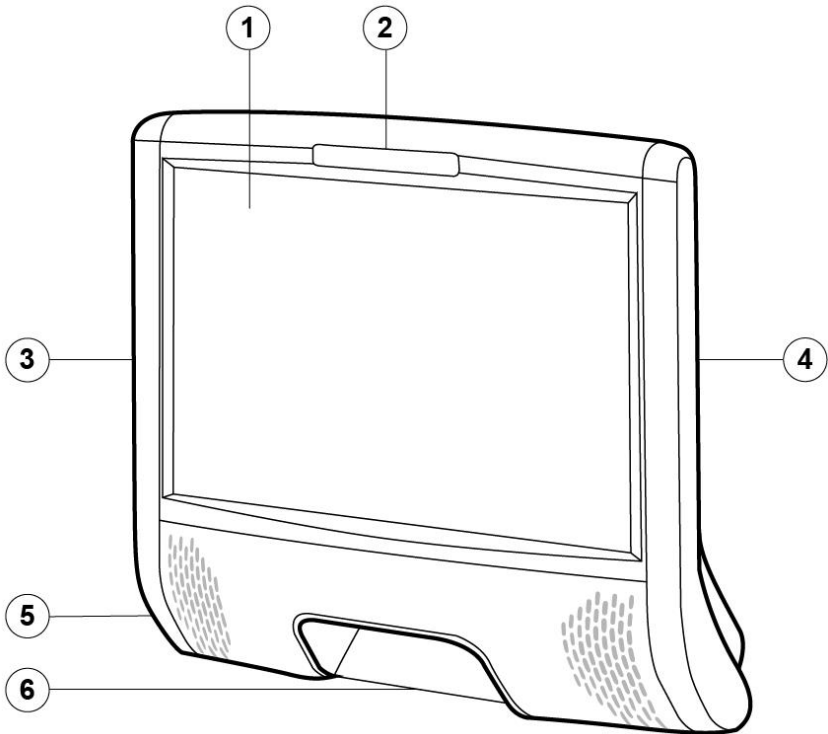


Figure 1 The SK-100

Item		Description
1	Display	Displays product and price information on the 10.1" full-color screen
	Touch panel	Capacitive, multi-touch
2	Camera + microphone	
3	SD card compartment	Contains the optional SD card or USB flash drive
4	Data I/O compartment	See table on the next page
5	Speakers	High quality speakers for superior audio experience
6	Bar Code Scanner RF-ID reader	To identify articles with the 2D Imager or RF-ID reader

## NOTE

Items may vary depending on the device model.

## 1.4.2 Back View

All Data I/O connectors are protected by the back compartment cover. To access the connectors, remove the back compartment cover by pressing the tab and pulling the compartment cover.

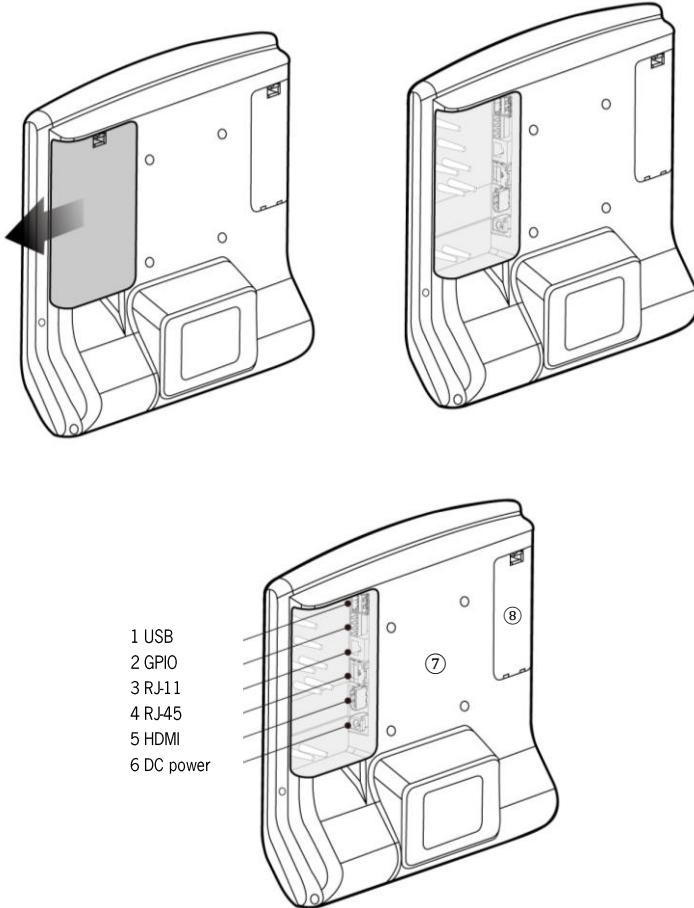


Figure 2: Back View

### NOTE

The connectors may vary depending on the device model.  
 Some connectors shown above may not be on your device.



### 1.4.3 DATA I/O Compartment

Item		Description
1	USB port	Connects USB devices such as a handheld scanner or a printer The SK-100 has two USB ports only in this location
2	General Purpose Input/output (GPIO) connector	Entry/Exit-Gate control support (optional)
3	RS-232 connector	Console port for internal Champstek/Scantech-ID use only
4	LAN port	Connects the device to the network using an Ethernet cable (RJ-45).
5	HDMI	For external display
6	Power jack	Connects the DC power adapter
7	VESA mount slots	Used to fix the VESA mount to the back housing.
8	SD card compartment	Contains the SD card slot

## 1.5 SCANNING WITH THE SK-100

To scan barcodes (or RF-ID tags), move the item towards the SK-100. The device beeps to indicate a successful scan.

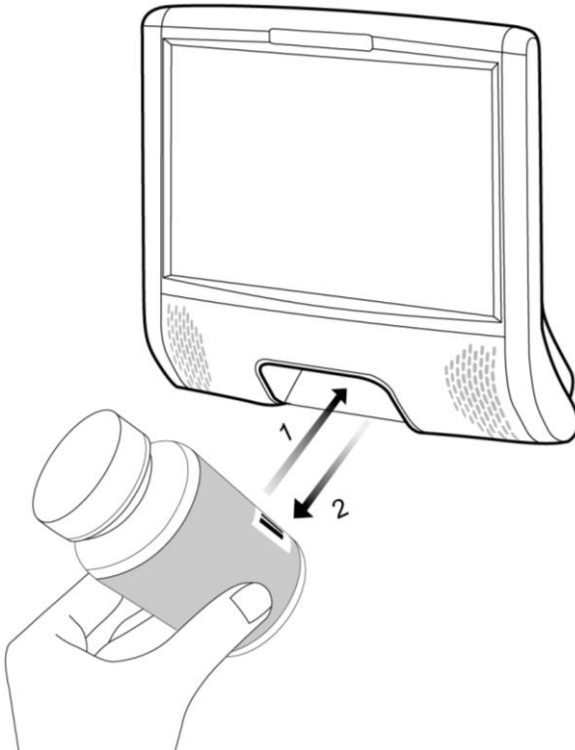


Figure 3. Scanning with the SK-100

## **CHAPTER 2    INSTALLATION**

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## 2.1 MOUNTING THE DEVICE

### Recommendations



Before mounting the device, consider these points carefully to ensure optimum and safe installation:

#### 1. **Visibility** of the Terminal

Place the Terminal on a location which is easily visible for the consumer and which is free accessible.

#### 2. **Communication to the consumer**

We strongly recommend to put signage around the SK-100 making clear:

- What the purpose and advantage of the device is:  
"CHECK YOUR ADVANTAGE AND DISCOUNT HERE ON-LINE"
- How to use the SK-100, i.e. How to Scan the Article.

There are many examples of this signage available at Scantech from various projects and applications all over the globe. Feel free to ask!

#### 3. **Mechanical Exposure**

Avoid placing the Terminal in a narrow passage / crossing point, where it could be damaged/tear easily by passing shopping carts, roll cages and fork-lift trucks.

#### 4. **WiFi Network coverage**

Make sure that the installation location is well covered by the existing WiFi network.

#### 5. **Mounting height**

The ideal height is about 130cm - 150 cm. The mounting height must be comfortable enough so that every user can easily scan the article and read the display.

#### 6. **Wall**

Make sure the wall is solid enough to support the product.

#### 7. **Power Outlet**

Place the power-outlet used for the SK-100 PSU on sufficient height, inaccessible to customers to prevent power disconnection.

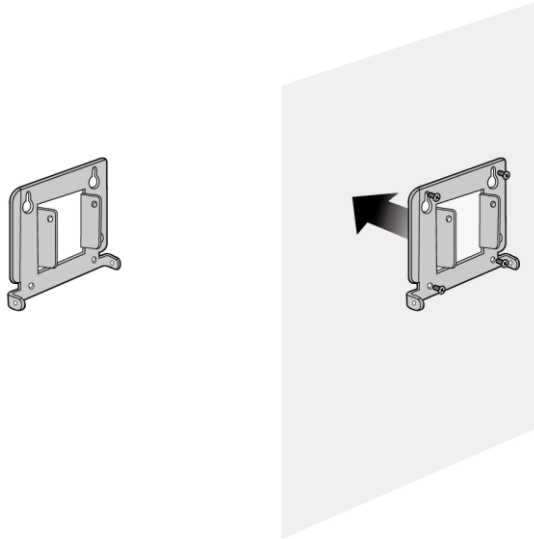
Alternatively you may consider the use of Power Over Ethernet, saving mains socket installation cost.

### 2.1.1 Mounting the SK-100 with the VESA bracket

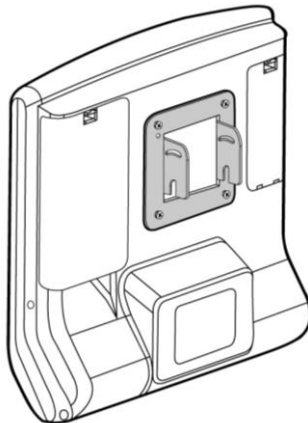
The SK-100 includes a 75 mm VESA bracket for safe and solid mounting. The bracket consists of two parts: • the back plate and • the wall plate.

#### Mounting Sequence

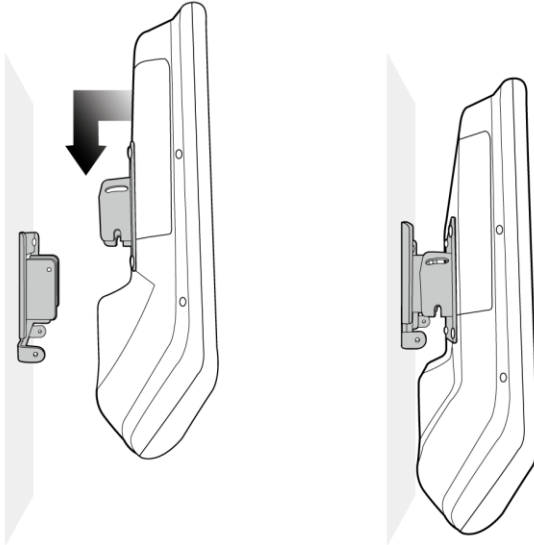
- Mount the wall plate to wall



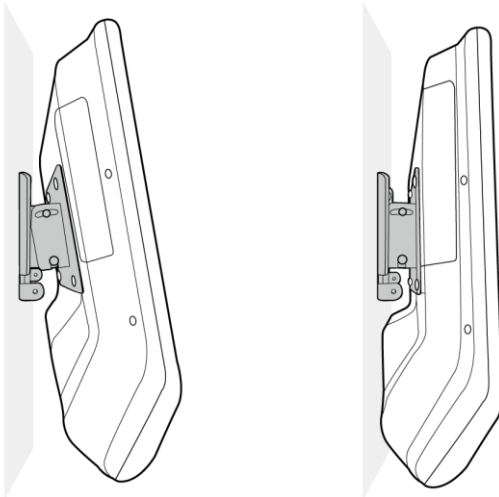
- The back plate is from factory mounted on the back of the SK-100



- Connect the cables as explained in Chapter 2.3.
- Mount the SK-100 onto the wall-plate



- Choose the optimum viewing angle



- Tighten the 2 screws on the side to fasten the device.

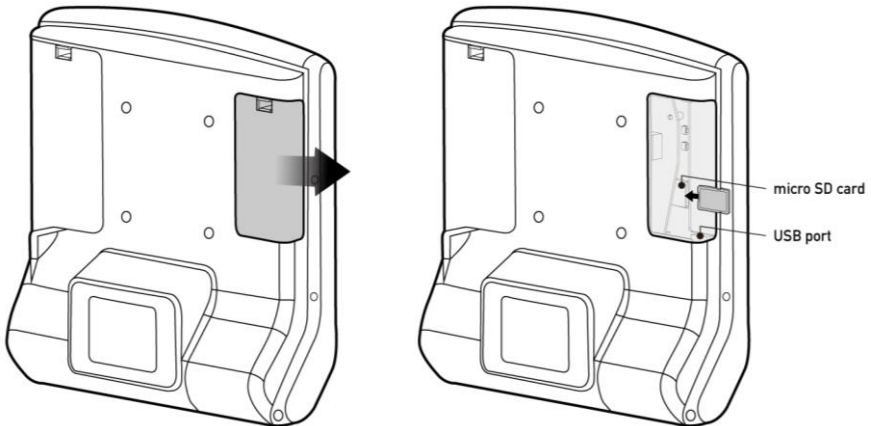
## 2.2 EXPANDING THE MEMORY

The SK-100 has standard a built-in flash memory of 4 GB.

The flash memory is non-volatile and contains the system firmware, user applications, data, promotion and media files. If necessary the flash memory can be expanded in two ways: use an SD card or a USB flash drive.

### 2.2.1 Installing an SD Card

1. Remove the SD card compartment cover.
2. Insert the SD card.
3. Remount the cover



### 2.2.2 Insert a Flash USB Drive into the available USB port.

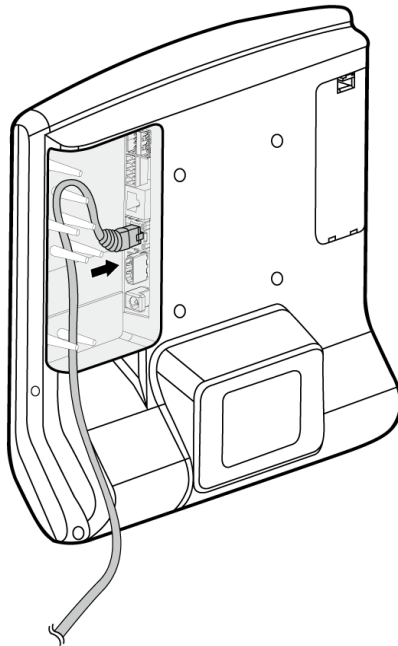
## 2.3 CONNECTING THE SK-100

Remove the back cover from the I/O compartment.

### 2.3.1 CONNECT TO THE LOCAL NETWORK

#### Wired Ethernet

Connect the Ethernet cable to the LAN port in the Data I/O compartment for network access. Wrap the cable around the strain relief pins.



#### NOTE

The LAN port contains two network LEDs indicating;  
Green = LAN network connection  
Orange = Data communication



## Wireless connection

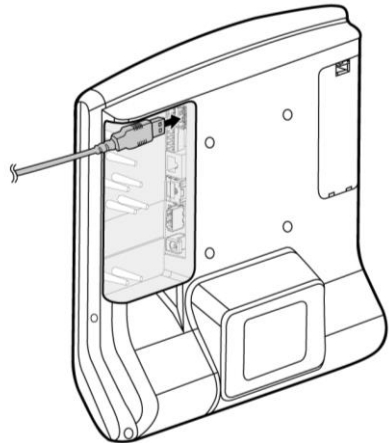
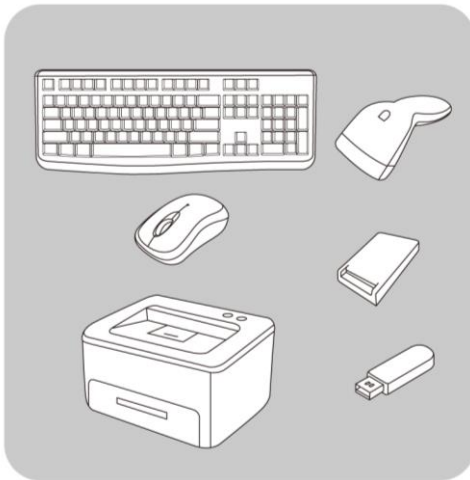
The SK-100 WiFi version is supplied from the factory with the WiFi module on the motherboard of the SK-100.

### NOTE

WiFi is an optional feature

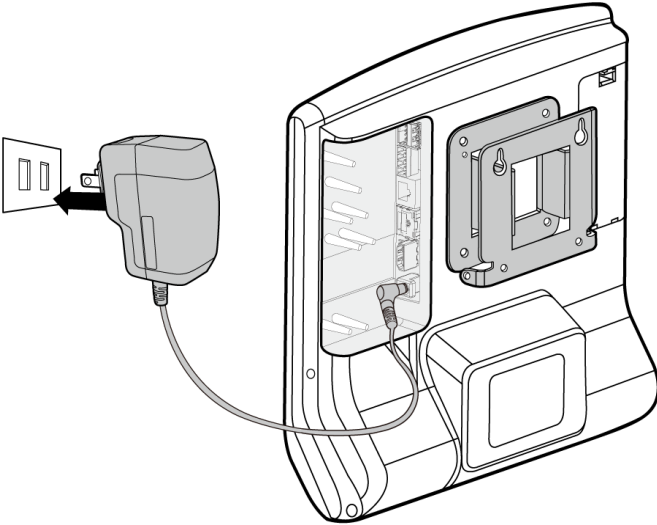
### 2.3.2 Connect peripherals through USB (if applicable)

Connect peripheral devices such as a handheld scanner to the USB ports on the back of the device.



### 2.3.5 Connecting the power

Connect the power adapter to the power jack on the back of the device. Wrap the cable around the strain relief pins.



## 2.4 POWER OVER ETHERNET

The low power consumption of SK series enables us to offer the ScanKiosks Powered-over-Ethernet (POE). This is the alternative for powering the SK-100 through an external PSU adapter. In this way the device gets its DC power directly from the powered (IEEE 802.3af compliant) Ethernet. There is no need to install a (230/110VAC) mains socket in the middle of the store. This SK-100 feature reduces the total installation costs.

This SK-100-POE version complies with the official standard: IEEE 802.3af.

The standard CAT5 network cable (8 pin, fully wired) can be used, with the regular maximum length of 100 meter.

Towards the host-side this means that a hub/router is required, supporting the Power-Over-Ethernet (PoE) feature, complying with the official standard for this: IEEE 802.3af. To avoid any miscommunication in this area: Scantech does not supply network components like power injectors, network cabling or powered hubs.

### NOTE

POE is an optional feature

## **Chapter 3 Configuration Quick Start Guide**

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In this Installation Manual, just quick start guidance is given on the configuration of the SK-100. The SK-100 Configuration Guide provides all configuration information in the most extensive way.

### **3.1 Making First Connection and Login**

The SK-100 has an internal web server for configuration purposes.

Just start your web browser Chrome, Firefox or Internet Explorer and enter the IP-address of the SK-100.

Note: Use for Internet Explorer version 11 or higher.

The SK-100 comes with installed Factory Default Settings and at startup it will try to connect to a LAN network with enabled DHCP service.

When there is no DHCP service active, the SK-100 will use 192.168.1.200 as default IP-address for the LAN interface.

The unit's IP address is shortly visible on the launcher screen after power-up, both Ethernet and WiFi.

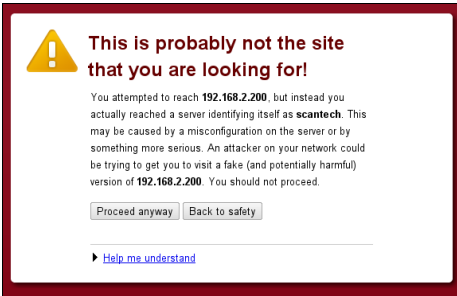
Make sure your computer is in the same IP subnet as the SK-100 you're going to configure.

E.g.: The SK-100 has IP address 192.168.1.200 and your computer has address 192.168.1.250.

The physical connection with the SK-100 is made using an Ethernet cross-cable or alternatively through your local network:

## Login Page

To manage SK-100 settings, it runs a web server in https mode for exchanging queries and responses with a modern browser (Chrome, Firefox or IE). Enter the SK-100 IP address in the address bar of your browser to open the login page. Prior to accessing the login page, you will receive an SSL warning from your browser which you can ignore by clicking « Proceed anyway »



The login page appears and you can login with:



user name            **skadmin**  
 default password   **skadmin**

Navigate through the configuration web pages to achieve the required setting for your application. See the SK-100 Configuration Manual for further details.

## **Chapter 4 Maintaining the SK-100**

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## CLEANING

The SK-100 requires little maintenance. Only occasional cleaning of the display window is necessary to remove dirt and fingerprints. Cleaning can be performed during operation with a non-abrasive glass spray cleaner and a soft lint-free cloth.

Clean the cover and window of the SK-100 every now and then.

Take care of the following:

- Use a mild glass spray cleaner;
- Spray the cleaner on a soft, lint-free cloth;
- Wipe the SK-100 clean.

### **IMPORTANT**

The exterior of the SK-100 should NOT be cleaned with cleaners containing:

- Aromatic hydrocarbons
- Chloride
- Acids, oxidizing agents
- Abrasives
- Other aggressive cleaners

## **Appendix A. Technical Specifications SK-100**

Items may vary depending on the device model.

<b>SK-100</b>	
<b>System Architecture</b>	
Processor	ARM Cortex-A7 Dual-core CPU
Operating Platform	Linux 3.4 or Android 4.4
Memory Flash	4 GB
Memory RAM	1 GB
<b>Output Media</b>	
Display Size	10.1" diagonal
Brightness	500 nits
Resolution	1280 x 800 pixels (16 million colours)
Touch Screen	Capacitive, multi-touch
Graphics Supported	PNG, JPEG, GIF, BMP
Audio Supported	WAV, WMA, MP3
Video Supported	MPEG-4, H.264 MKV, TS, FLV, AVI, VOB, MPG, ASF, RM, MOV, 3GP, MP4, WMV
Audio	High Definition Stereo (16-bit PCM 44.1kHz)
Loudspeakers	High Quality loudspeakers for superior audio performance
<b>Data Ports</b>	
SD Card Slot	X 1
USB 2.0 ports	X 3
LAN port10/ 100 MB	X 1
RS-232 port	Console port For internal Champtek/ScantechHD use only
Power Over Ethernet feature	Optional
Entry/Exit Gate Control Function	Optional (2-pin connector)

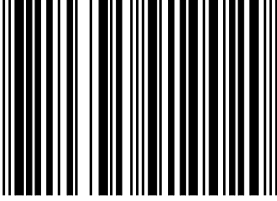


<b>Network Interface</b>	
Wired LAN	<ul style="list-style-type: none"> <li>• Ethernet: 100MB Base-TX/10MB Base-T (802.3) standard on board</li> <li>• Power over Ethernet IEEE 802.af optional</li> <li>• Two network LED indicators in the LAN connector</li> </ul>
Wireless LAN	Optional Ex-factory through WiFi module WiFi IEEE 802.11 ac a/b/g/n Supporting dual band 2.4 and 5 GHz frequency
WiFi Encryption Protocols	WPA PSK and WPA Enterprise security
<b>Data Input</b>	
Scanner Possibilities	2D Imager: Visible Red light 650nm Scan rate: 200scans/sec auto adaptive in linear mode, 56 images/sec auto adaptive 2D mode. Resolution: 752 Hor. X 480 Vert. pixels, 256 gray levels.
Symbologies Supported	1D Symbologies: EAN/UPC, Australian Post, Aztec, BPO, Canada Post, Dutch Post, EAN.UCC Composite, Interleaved 2 of 5, Japan Post, MSI Code, Planet, Plessey Code, Postnet, GS1 Databar, Standard 2 of 5, Telepen, TLC 39 2D Symbologies: Datamatrix, Matrix 2 of 5, Maxi 2 of 5, MicroPDF417, PDF417, Maxicode, QR code
RF-ID reader (optional)	Support 13.56 MHz RF-ID tags: <ul style="list-style-type: none"> <li>• ISO 14443A (incl Mifare)</li> <li>• ISO 14443B</li> <li>• ISO 15693</li> <li>• ISO IEC18092</li> <li>• Felica</li> <li>• NFC</li> </ul>
Camera	2 MP
Microphone	
<b>Power Requirements</b>	
Power Supply Voltage	+12 VDC $\pm$ 10%
Power Consumption	Nominal: 1.15A @ 12VDC (standard configuration)

<b>Physical</b>	
Dimensions (H x W x D)	238 x 253 x 72mm
Weight	1.2 kg
Mounting	VESA 75mm bracket mounting
<b>Environmental</b>	
Operating Temperature	0° ~ 40°C (32° ~ 104°F)
Storage Temperature	-20° ~ 60°C (-4° ~ 140°F)
Humidity	5% ~ 95% RH (non-condensing)
<b>Regulatory</b>	
	Electrical Safety: CE EN 60950-1 EMC/BMI/RFI: 2004/108/EC and 2006/95/EC

## Appendix B Control Bar Codes and Quick Demo Code

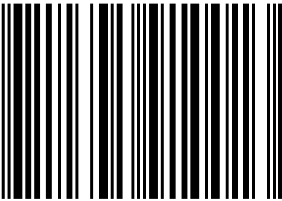
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002 Close the running application(s) and return the SK-100 to the DeskTop.



010 Reboot



001 Info Bar Code

### Quick Demo Price Checking

Select the Price Checker Application on the Desktop:



The SK will show  
Name+Fonts+Picture+Price

ScantechID BV  
Heliumweg 34 A  
3812 RE Amersfoort  
The Netherlands

Phone: +31 (0)33 469 84 00  
Fax: +31 (0)33 465 06 15  
E-mail: [info@scantechid.com](mailto:info@scantechid.com)  
Internet: [www.ScantechID.com](http://www.ScantechID.com)  
[www.Champtek.com](http://www.Champtek.com)

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