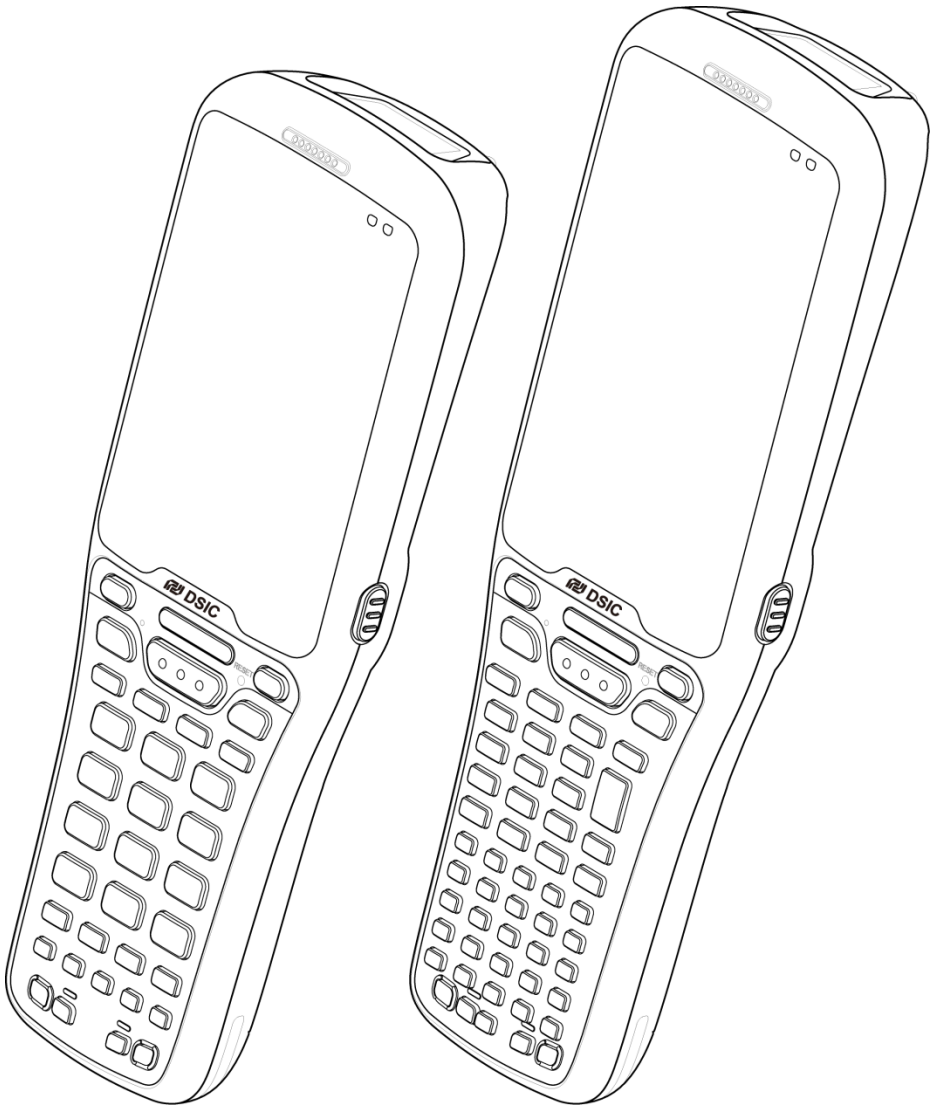
DS5 Series

User Manual

Windows CE6.0 and Windows Embedded Handheld 6.5 (Classic & Professional)

May 20, 2014



ISO 9001 Certified

Quality Management System

DSIC

Notice

While reasonable efforts were made to ensure that the information in this document was complete and accurate at the time of printing, DSIC Co., Ltd. can assume to no liability for any errors. Changes and corrections to the information in this document might be incorporated in future release.

Document disclaimer

DSIC Co., Ltd. Is not responsible for any modifications, additions, or deletions to the original published version of this documentation unless Customer and/or End User agree to indemnity and hold harmless DSIC, DSIC's agents, servants, and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation to the extent made by the Customer or End User.

Link disclaimer

DSIC Co., Ltd. is not responsible for the contents or reliability of any linked Web sites referenced elsewhere within this documentation, and DSIC does not necessarily endorse the products, services, or information described or offered within them. We cannot guarantee that these links will work all the time and we have no control over the availability of the linked pages.

Warranty

DSIC Co., Ltd. provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, DSIC's standard warranty language, as well as information regarding support for this product, while under warranty, is available through the DSIC Support Web site: http://www.mobilebase.co.kr

Copyright

Except where expressly stated otherwise, the Product is protected by copyright and other laws respecting proprietary rights. Unauthorized reproduction, transfer, and or use can be a criminal, as well as a civil offense under the applicable law.

Third-party components

Certain software programs or portions thereof included in the Product may contain software distributed under third party agreements ("Third Party Components"), which may contain terms that expand or limit rights to use certain portions of the Product ("Third Party Terms").

Trademarks

All other trademarks are the property of their respective owners.

Downloading documents

For the most current versions of documentation, see DSIC support Web site:
http://www.mobilebase.co.kr

Contact DSIC Support

DSIC Co., Ltd. provides a technical support email account for you to report problems or to ask questions about your product. The support account is support_pda@dsic.co.kr For additional support, See the DSIC Web site: http://www.mobilebase.co.kr

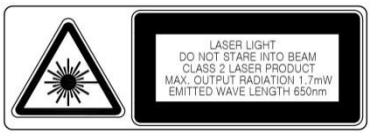
Contents

Safety Instruction

Read this instruction carefully to keep yourself safe and to avoid loss of property.

- Make sure that battery terminals (metal part) should not contact with any conductive materials like a necklace or coin. Also make sure that batteries should not be damaged by teeth or a nail. Impact may cause an explosion of batteries
- Use dedicated batteries only and do not use the batteries for any other purpose than operating this product. Using an inauthentic battery may reduce life of the product, or cause an explosion.
- Make sure to use the adapter or the standard charger supplied with this product. Using an inauthentic charger may reduce life of batteries or cause an explosion.

Caution in relation with Laser Scanner



 Do not flashing scanner light in human and animal's eyes. It could cause the damage of retina and amblyopia.

Caution in relation with Batteries

- Batteries may explode when damaged, impacted, heated, flooded or taken apart with a gimlet. Make sure to keep the batteries out of reach of children or pets.
- Do not use the Product in the area with the risk of explosion.

Safety information

- This Product is compliant with EMC. For safety and health, use the authentic parts supplied by the manufacturer. Any inauthentic parts may affect safety.
- Do not press the power button when the product is wet. Touching the adapter, or power cord with wet hands may cause an electric shock.
- Do not modify, disassemble or repair the product at your discretion. Also make sure to follow the safety instructions.
- Record the data in the Product and keep it in a separate place. Data stored in the product may be deleted during repairing or upgrading the product. So, make sure to back up important data.
- Do not use this Product in a hot or humid place. Using the product under a hot/humid temperature such as rain or sauna may cause a trouble.
- Keep this Product away from magnetic products such as credit card, telephone card, bank book and traffic ticket. The magnetic field of the terminal may affect the data.

- When storing a battery for a long period of time, recharge it and keep it at a room temperature. Even a fully charged battery will suffer reduced life due to the characteristics of the battery.

Chapter 1: Introduction to the DS5 Series

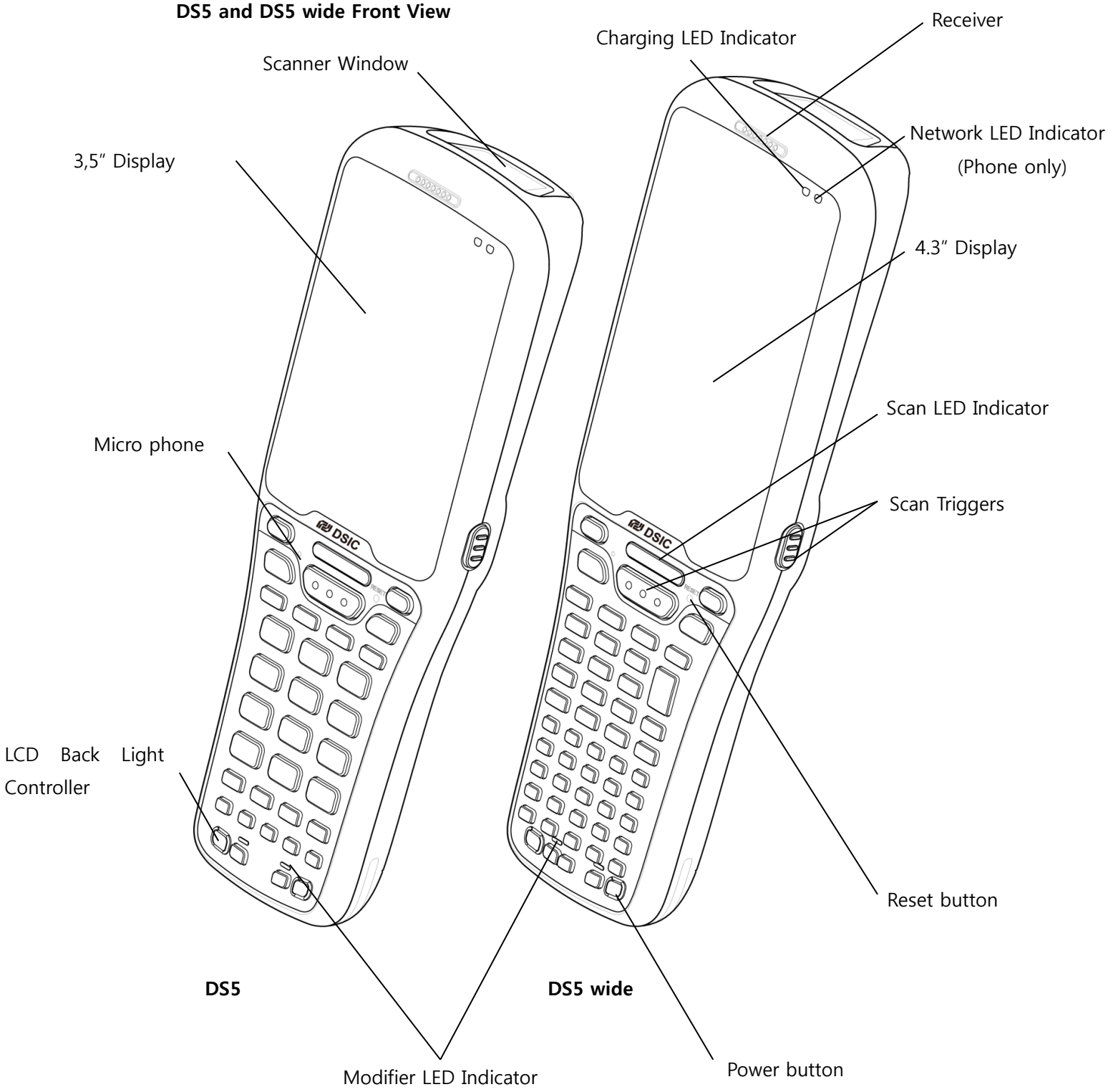
The DS5 series is rugged mobile computer for use data capture and automation in retail, warehouse and other field applications. The DS5 series puts convenient features and capabilities at your hand, including barcode scanning, RFID tag reading and writing, image capturing with built-in camera, and real-time mobile communications through WWAN and WLAN network.

This chapter will describe features of DS5 series by front, back views, battery and power adapters.

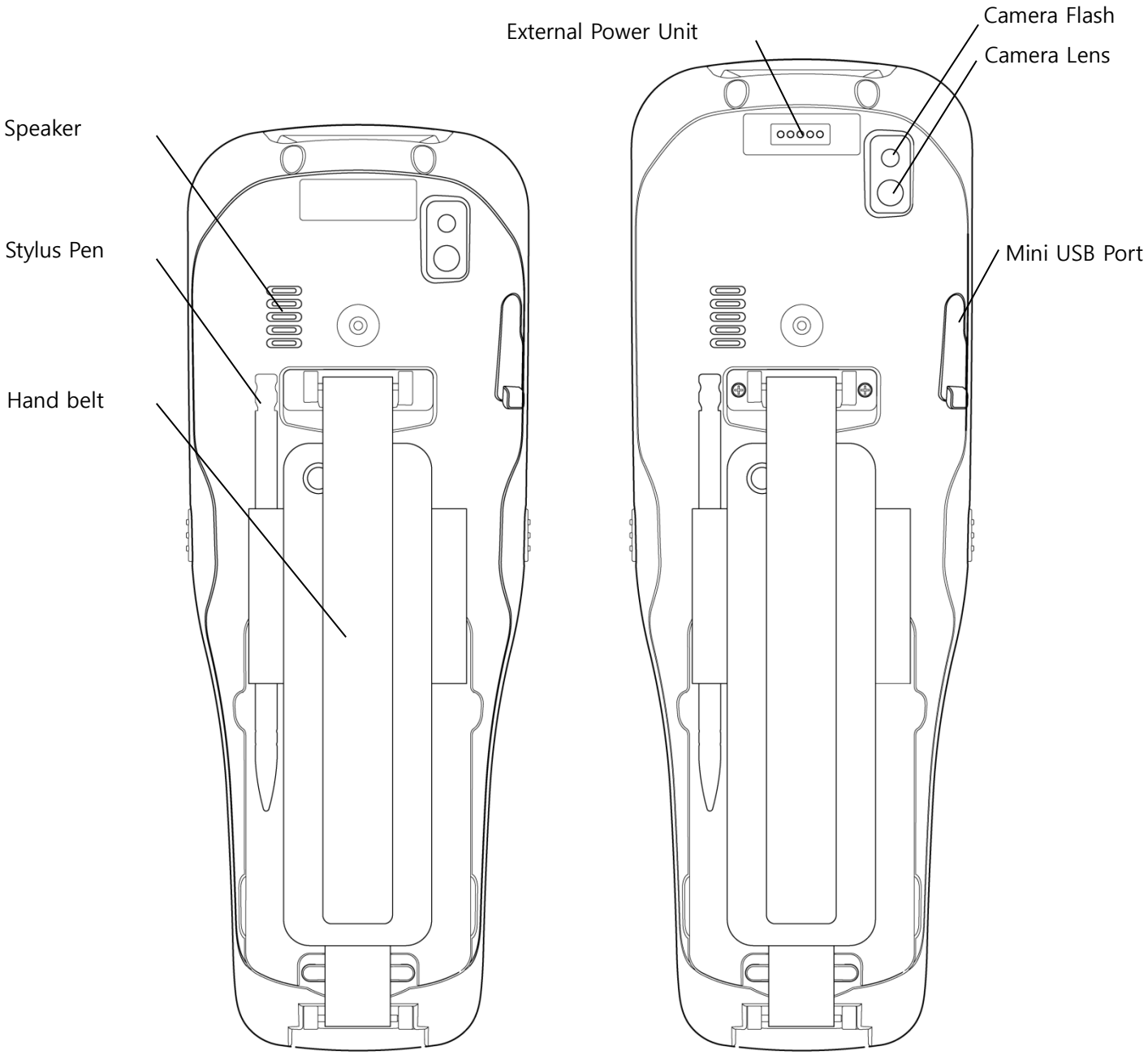
Not all features described in this guide may be available on your device. If you find that a feature is not available, contact your system administrator

Overview of terminal features

DS5 and DS5 wide Front View



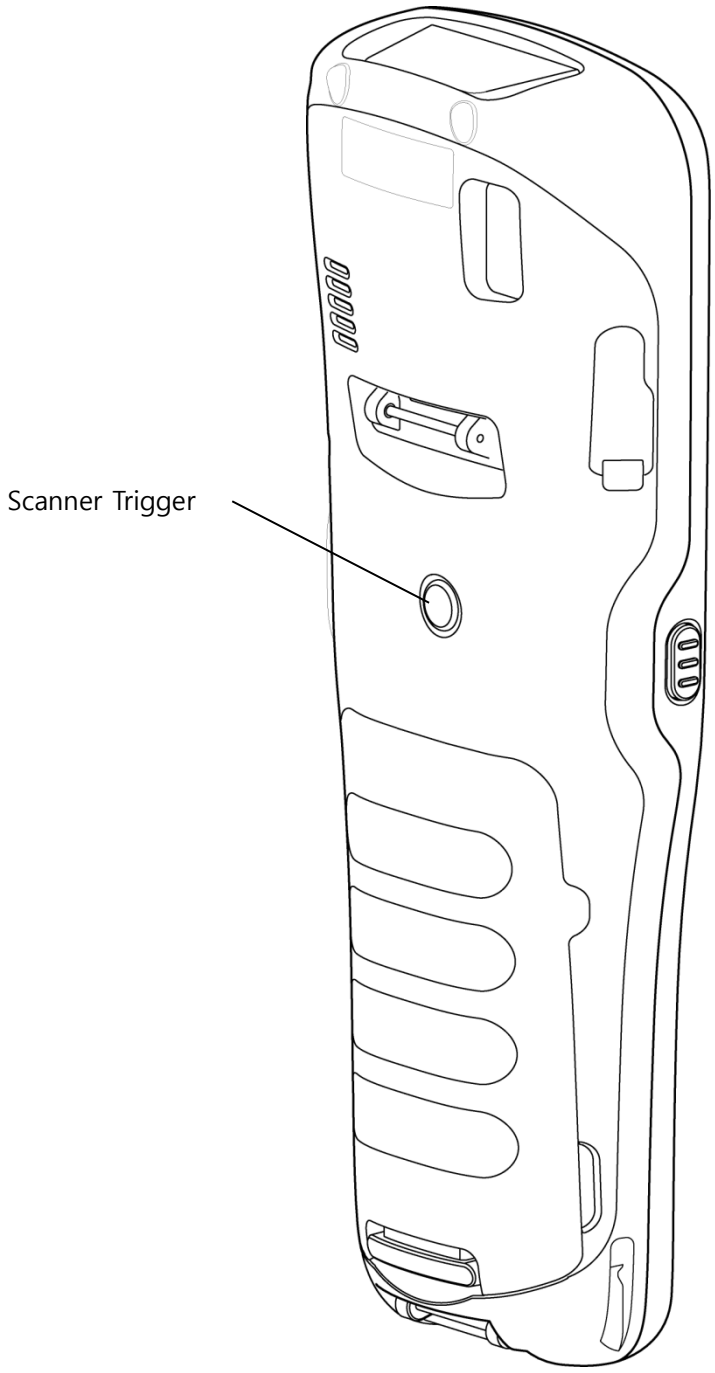
DS5 Back View



DS5

DS5 wide

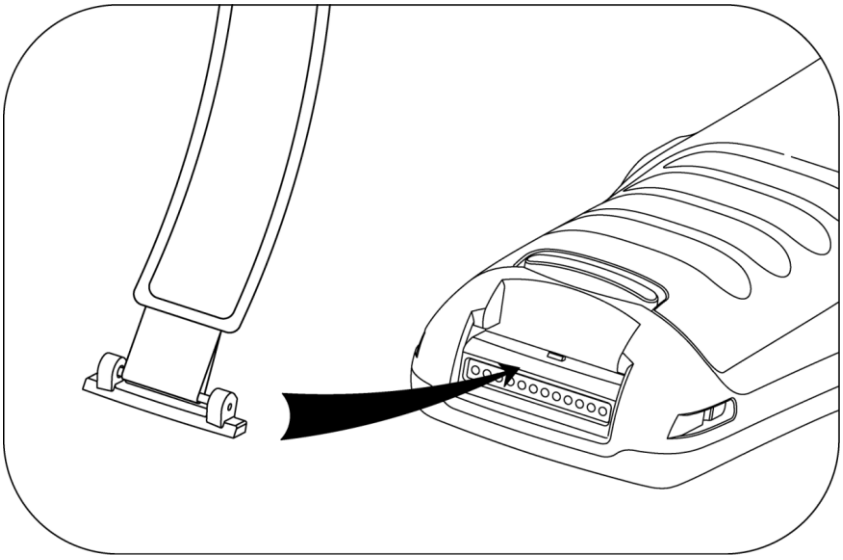
DS5 wide Back View



Hand Strap Removal and Replacement

To remove hand strap:

1. Rip the Velcro strap off
2. Take out the Velcro strap from the upper loop
3. Force to pull out lower loop from the terminal



Battery

Caution

If the Product is wet, do not put it in a device that may heat the terminal (heater, microwave oven, etc.). Heating batteries may cause an explosion, deformation or fault. (Water or any other liquid will change the color of the label inside the terminal.

Battery power source

Series	Description
DS5	3.7V, 5200mAh (14.8Wh)
DS5 wide	3.7V, 5200mAh (14.8Wh)

You may need to fully charge the battery before using your terminal for the first time. Battery can be charged using below listed accessories

Charging Accessory	Charging Time
mini USB cable	About 4hours 30minutes
Desktop cradle and AC adapter	About 4hours 30minutes
Snap on	About 4hours 30minutes
4 Slot cradle	About 4hours 30minutes

Note

In combination with Vehicle cradle with Snap on, the terminal can be charged on vehicle

Power Adapter

Recharge only with the charger specified by the manufacturer.

Power Adapter	Specification
mini USB Cable	5V, 3A
Desktop cradle	5V, 3A
Snap on	5V, 3A
4 Slot cradle	5V, 12A

Chapter 2: Getting Started

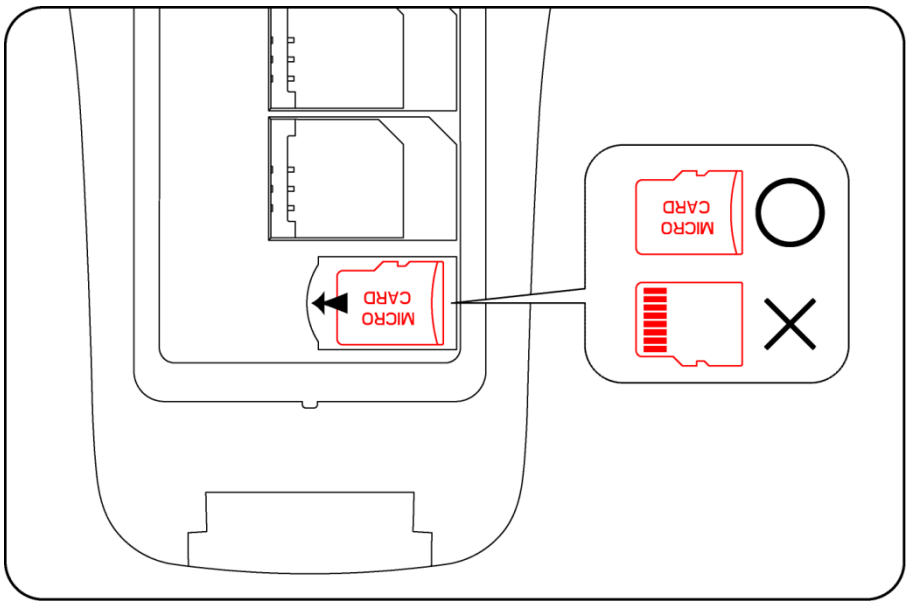
This chapter will describe how to install and charge battery, mount micro SD card and start up the terminal

To start up the terminal:

- Install Micro SD card
- Mount Battery
- Connect power source
- Operate power of the terminal

Installation micro SD card

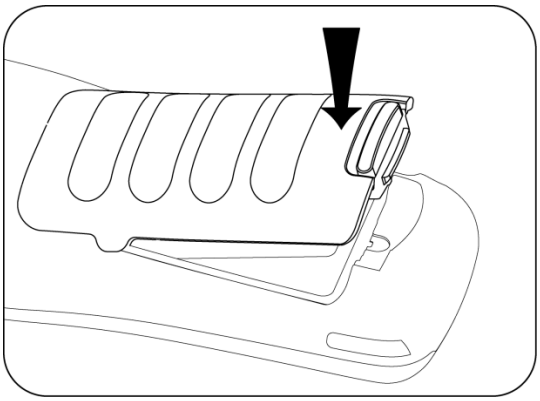
Insert the micro SD card carefully as shown in the following illustrations. Make sure the micro SD card terminal position before insert the micro SD card. Push the back end of the micro SD card to fix it at the last step.



Note

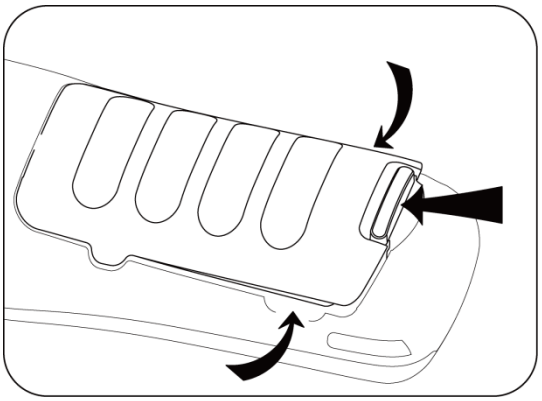
- Do not use the power too much when you insert the micro SD card. The micro SD card may be damaged
- If you install the micro SD card in the wrong position, the micro SD card may be damaged or it may cause the malfunction of the micro SD card Slot.
- Keep the terminal part of the micro SD card in clean. Be careful the terminal part of the micro SD card not to dusty
- As the micro SD card is consumable, the micro SD card end its days and may be not able to save data if you use it more than over certain times. In this case, replace micro SD card to buy a new one.

Battery Mounting and Operation



Push the battery release and mount clear the battery to terminal and gently release it.

Inserting the battery



Push the battery release toward the top of terminal until the battery released and lift it up

Remove the battery

Note

Battery Maintenance

Lithium-ion batteries have a limited life, which is affected by several factors; environment, storage, the number of charge/ discharge cycles, and level of discharge/ charge

To extend battery lifespan and battery life, we recommend following these simple guideline;

- Avoid heat and humidity
- If do not use the terminal regularly, fully recharge the battery at least once per month.
- Do not leave the terminal connected to a charging device for longer than 3 days.
- Use only charging adapter approved
- In case of storing terminal 3 months or longer,
  - The best temperature for proper care and storage is between 0~25°C
  - Extended storage can cause batteries to discharge deeply, which can deteriorate the cell and reduce battery capacity, service life and ability to recharge. It is suggested, therefore, that the battery be fully charged before putting to the terminal in extended storage and that it be recharged fully every three months while in storage
- Update the terminal Operating System as new updates available. OS updates may contain new programs to optimize battery life.

Transportation

The contained lithium ion batteries are subject to the Dangerous Goods Legislation requirements. The user can transport the batteries by road without further requirements. When being transported by third parties (e.g: air transport or forwarding agency), special requirements on packaging and labeling must be observed. For preparation of the item being shipped, consulting an expert hazardous material is required.

Disposal

Rechargeable batteries should be sorted for environmental friendly recycling. Do not disposal batteries into household waste. According to the European Guideline 2006/66/EC, defective or used battery packs/ batteries, must be collected separately and disposed of in an environmentally correct manner. Batteries no longer suitable for use can be directly returned at

DSIC Co., Ltd.
2nd Floor, Daeryung Technotown 3, 448 Gasan-Dong, Guemchun-Gu, Seoul, Korea
Tel. Service: +82-2-2107-5152
Fax: +82-2-2107-5178
Email:pda_service@dsic.co.kr

Subject to change without notice

Connecting Power Source

Connect power, using one of the methods listed below.

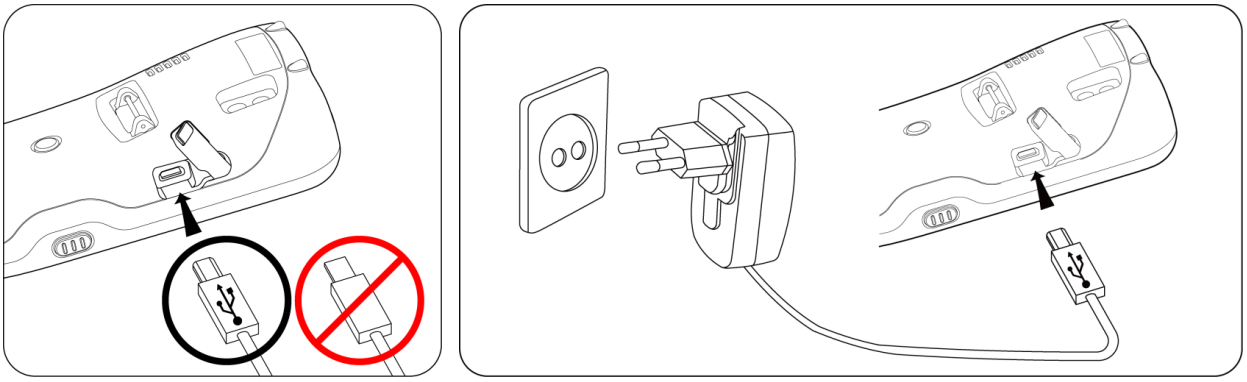
Caution

Verity that the terminal battery is installed prior to connection. If the battery is not properly installed and the wall charger is connected, the terminal may power off and on continuously, preventing proper operation.

Note

Failure to unplug the wall charger before you remove the battery, can cause damage to the terminal

To use mini USB Travel Charger



1. Plug the flat end of the mini USB Travel Charger into the Power interface connector and the other end into standard AC wall outlet
2. When charging is finished, remove the flat end from the interface connector jack on the terminal

To use Cradle

Plug the AC power cord into cradle and plug the other end into a wall outlet

---

Operating Power of the Terminal

Power On and Off

Make long press **Power button**  to turn on, or off the terminal.

Select **OK** confirmation message, when you make long press  to turn off the terminal

Suspend and Resume

Press power button shortly to enter Suspend, or Resume the terminal

Reset

If the terminal stops responding, try reset to kill running applications. To reboot the terminal press **RESET** button. Your data in storage will be retained in terminal while not saved data will be in lost.

Chapter 3 Getting Understanding Details

Battery Status

Below battery title bar is indicating your battery status.

Battery Icon	Status
	Battery is fully charged
	Battery capacity is high
	Battery capacity is in medium to continue work for several hours
	Battery is weak and a few minutes of operation remain
	Battery power is critical low. When battery level becomes too low, the terminal automatically turns off
	Battery is charging

LEDs indication upon charging Status

Device	Color	Status
Computer	Red	Charging
	Green	Charging completed
Cradle	Red	Spare battery charging
	Green	Spare battery charging completed
4 Slot Cradle	Red	Spare battery charging
	Green	Spare battery charging completed
Snap on	Red (Computer)	Charging
	Green(Computer)	Charging completed

Spare battery charging

Three accessories are available to charge spare battery

Accessory	Description	Charging Time
Single Slot Cradle	Chargeable 1 terminal and 1 spare batteries	About 4 hours 30 minutes
4 Slot Cradle	Chargeable 4 terminals and 4 spare batteries	About 4 hours 30 minutes

Clean Boot

Cold boot also enables to kill all running applications. However, it deletes all stored data and entries in RAM. It makes the terminal to factory default status. Try Reset first if the terminal is not responding.

Caution

Clean boot set the terminal to factory default settings. All applications and stored data will be erased. Do not clean boot without your IT administrator's support.

Short press RESET button, while pressing ESC and ▼ button simultaneously until DSIC boot image displayed.

Note

The following table presents the results for different types of booting

Type of boot	key	Registry	Nand folder	RAM (excepting Nand)
Factory reset	◀ + ▶, reset	Cleared	Cleared	Cleared
Clean	ESC + ▼, reset	Cleared	Retained	Cleared
Cold	⏻ + Reset, (back up battery fully discharged)	Retained	Retained	Cleared
Warm	reset	Retained	Retained	Retained

Backup Manager

Windows CE 6.0

Your data, such as registry at Windows CE 6.0 can be deleted after Clean boot.

To keep your data, use Backup manager.

Start ▶ **Programs** ▶ **Backup Manager**

Or

My Device ▶ **Windows** ▶ **View** menu ▶ Options.. ▶ Uncheck all **Advanced Settings** ▶ **Backup_manager.Ink**

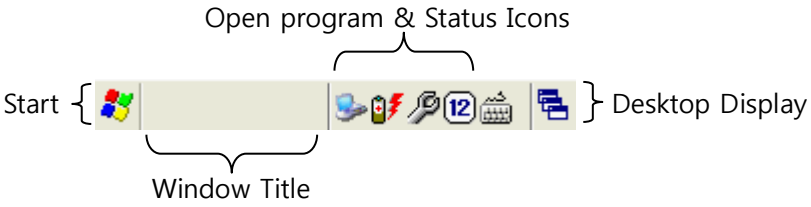
WEH 6.5

At WEH 6.5 is storing data at **Nand** area. Thus user data will not be deleted after Clean boot.

Windows CE Desktop

Icons in the task bar

At the bottom of Desktop screen, t he task bar displays active programs



Icons are provided in the terminal display to indicate the state of feature choices.

The icons that appear in the terminal display are described in following table.

Icon	Description
	Start menu
	Display running application on the terminal and enabling to shift
	Input Panel: Open SIP (Soft Input Panel) key board
	Connected Active Sync
	Connected with external power
	LAN enabled status
	LAN disabled status
	Recharging status
	Battery is low (remained capacity is between 10%~14%)

 Battery is very low (remained capacity is under 9%)

 Mobile Manager. It consisted with:

- Wireless: WLAN and Bluetooth power control
- Battery: Display battery capacity in percentage
- Volume: Volume level adjustment
- Backlight: Backlight adjustment
- Task Manager: open task manager to manage current task and process of the terminal

Start Button

Press **Start** icon to launch

- **Programs**: access to available programs
- **Favorites**: lists files in favorites directory
- **Documents**: displays files in Documents directory
- **Settings**: access to Control Panel, Network and Dial-up Connections, and Taskbar and Start Menu
- **Help**: access Windows CE Help, Summit Utility Client Manual has included
- **Run**: Open to specific program, folder or document
- **Suspend**: Set the terminal to Suspend status. Press  to **Resume** the terminal

Icons in Control Panel

Icon	Description	Icon	Description
	**Backlight:** Set Backlight time and LCD Brightness controlling Battery Power and AC Power		**Bluetooth Device Properties:** Activate Bluetooth manager
	**Certificates:** Certificate information of DS5 series		**CPU Settings:** Select Power management mode of CPU
	**Date/Time:** Set Date/Time and Time Zone		**Dialing:** Set dial properties in modem communication
	**Display:** Change Desktop Background and appearance		**Input Panel:** Switch soft key between large and small size
	**Internet Options:** Set connection property options		**Keyboard:** Set keyboard repeat speed delay and rate
	**Mouse:** Check double click sensitivity		**Network and Dial-Up Connections:** Set network connections, such as Dial up, WLAN and Bluetooth
	**Owner:** Change owner's personal information		**Password:** Set a password to terminal

PC Connection: Set direct connection to PC

Power: Indicate current main battery remained power

Remove Programs: Remove application programs

Storage Manager: Check current Storage information and partitions

System: General information of the terminal and Memory space control

Volume &Sounds: Set volume and sound in event, notification, applications, Key and Screen taps

Pocket Controller: Configure General Settings and status information, such as Mani battery and Back up battery

Regional Settings: Set your locale such as currency, Time and Date, and language and Input

SCU: WLAN card utility client to control features

Stylus:

Version: Terminal feature and version information including OS, Applications

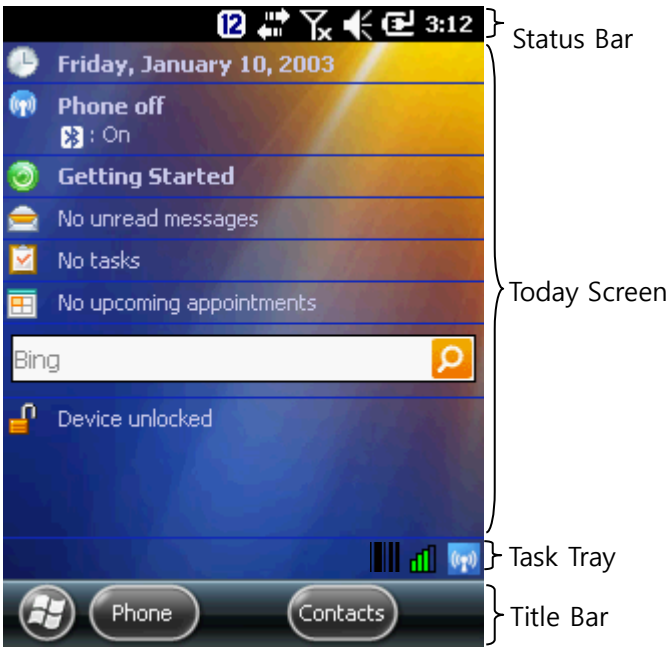
Wireless Manager: WLAN and Bluetooth power control tool kit

Taskbar and Start Menu

Set Task bar and Start menu to configure always on top, Auto hide and Show clock

Start -> **Settings** -> **Taskbar and Start Menu**

Windows Embedded Handheld 6.5 Home Screen



Icons in the Status Bar

It displays current status of system of the terminal.

○,1 Input mode
○,2 Connectivity
○,3 Signal Strength
○,4 Audio
○,5 Battery
○,6 Clock

Icon	Description
Input mode	
	Numeric key input
	Lower character input (double press **Orange modifier** key board)
	Upper character input (double press **Orange modifier** and double press **SHIFT** key board)
Connectivity (WLAN, and Active Sync)	
	Connection is active (In case SCU activated)
	Connection is inactive (In case SCU activated)
	WLAN on, but not connected. And no networks are detected. (In case MS Zero Config)
	Phone is not connected to a network, and other networks are detected. (MS Zero Config)
	Other wireless networks are detected (MS Zero Config)
	Connected to a wireless network (MS Zero Config)
	Synchronizing through a Wi-Fi connection (MS Zero Config)
	Connected to a network, and other networks are detected (MS Zero Config)
	Connected to a network, and other networks are detected (MS Zero Config)
	Information about a new network is available (MS Zero Config)
Signal Strength (Cellular, GSM/GPRS, HSPA, UMTS)	

Phone has maximum signal strength

Phone has no signal

Phone capability is off

Phone has no service

Phone is searching for service

Data is being transferred

A voice call is in progress

A voice call is on hold

There is no SIM card search

Line 1 is selected

Line 2 is selected

Audio

Volume is off and terminal is set to vibrate

Volume is on

Volume is off

Battery

Battery has a full charge

Battery has a high charge

Battery has a medium charge

Battery has a low charge

Battery has a very low charge

Battery is charging

No battery

Icon Bar

Tab **Status Bar** to display **Icon Bar.** Slide **Icon Bar** to see more information

Icon	Description
	Enlarge screen display
	Display current input mode
	Wireless connectivity display. Enabling to access Wireless Manager
	Display Phone connection status. Enabling to set Phone power
	Display volume setting window
	Display Power setting window
	Display Clock & Alarms setting

Icons in the Task Tray

It displays current applications status which is running on top of terminal system

Icon	Description
	Wireless Manager: power on/off Phone, WiFi and Bluetooth
	Barcode Tray: barcode application tool. To display this icon, refer **Barcode Scanner**

Programs in Start Screen

Icon	Description	Icon	Description
	Barcode: Barcode scanner execution		**Home:** Return to Today Screen

program


Version: Terminal feature and version information including OS, Applications


Phone: Access to dial phone program


Email: Set up email


Internet Explorer: Access Internet Explorer Mobile. Press key to return **Start** menu


Settings: Set, or access Bluetooth, Clock & Alarms, Home screen, Lock, Power, Sounds & Notifications, Network Connections, System Information


Alarms: Set time zone and alarm


Windows Media: Access music, video, TV, playlists and now playing


Messenger: Activate Messenger program


Windows Live: Access Windows Live


Calculator: Calculator feature


Notes: Note pad program. Add, edit, save a note


Tasks: Write your work task and Notes


Internet Sharing: Connect to your PC by Bluetooth, or USB


Search Phone: Search contacts, data, and other information on the terminal


Remote Desktop Mobile: Log onto Windows NT server type computers and use all of the programs that are


Backlight: Set LCD brightness and back light off timing when the terminal is not used


Text: Text message create window


Contacts: Input, edit, search Contact lists


Calendar: View calendar and Set scheduler. Press key to return **Start** menu


Getting Started: Manual to operate Windows Embedded Handheld 6.5 features


Picture & Videos: Access Camera application and view Album


Marketplace: Purchase applications from the Marketplace


MSN Weather: Set your regional weather information


MSN Money: Set Stock market information


Games: Microsoft's mobile game application


Notes: Note pad program. Add, edit, save a note


Active Sync: Synchronize your terminal to desktop PC


Task Manager: Enables viewing of memory and CPU allocations and stops running processes.


Help: You can find help document from online Help Site

	available on that computer from your terminal

Setting Applications

Icon	Description	Icon	Description
	**Bluetooth:** Open Microsoft's Bluetooth application to set Bluetooth feature to connect other device in the area		**Clock & Alarms:** Set Time and Alarms
	**Home:** Select Home theme for your terminal		**Lock:** Set password to lock your terminal
	**Power:** Displays Main battery power gauge and set battery power saving		**Sounds & Notifications:** Set sound and vibration in specific events, and program notification
	**Personal:** Included personal settings		**System:** Included system settings

Connections Folder

	**Beam:**		**Connections:** Set up your network connection, such as modem, ISP, VPN and dial up
	**Domain Enroll:** Register your terminal in a domain		**Network Cards:** Set up network cards such as WLAN, Bluetooth, USB Ethernet and others
	**USB to PC:** enable, or disable advanced network functionality		**Wireless Manager:** Power control to Bluetooth and WWAN modem

System Folder

	**About:** Terminal information such as OS type, processor, memory and Copyrights. Assigns terminal name to identify from other computer		**Backlight:** Control backlight of LCD and Keypad
	**Certificates:** Certificate Information using on the terminal		**Customer Feedback:** Send feed back to Microsoft about the OS

Encryption: Make encryption all your storage files. Encrypted files are only readable

External GPS: GPS setting program such as GPS program port, hardware port, Baud rate and method to check GPS data in multiple programs

Memory: Terminal RAM and ROM (Nand) memory information

Regional Settings: Set region, display type of number, currency, time and data

Screen: Control display orientation type, align screen, font setting to Clear Type and change text size,

Task Manager: Stop running programs and processes

Error Reporting: Reporting error to Microsft to improve better software

Managed Program: Displays the program installed in the terminal

Pocket Controller: Terminal control application and management

Remove Programs: Remove program installed in the terminal

Summit: Access SCU to control WLAN settings

Personal

Buttons: Setting Hot key and customize Up/Down control. This function needs to set up with registry

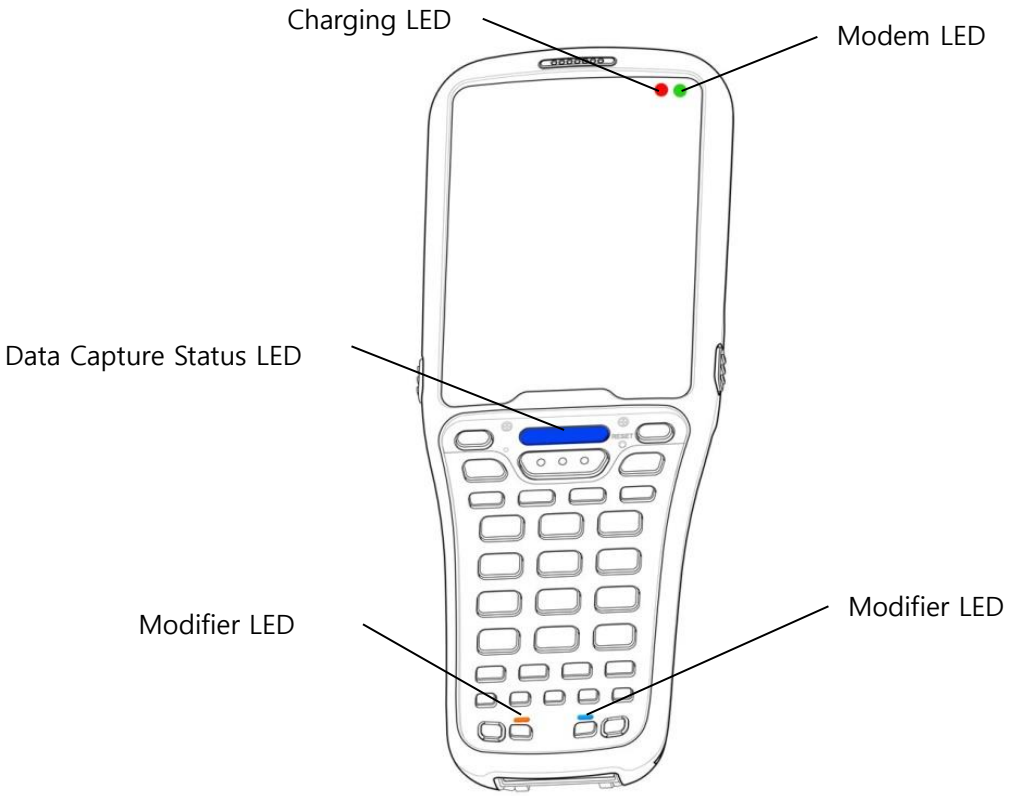
Phone: Turning on phone

Owner Information: Input the terminal owner information

LEDs

LED indicates status of the terminal in power sourcing, data capture, network connection

Location of the DS5 Status LEDs



LED Appearance upon terminal feature

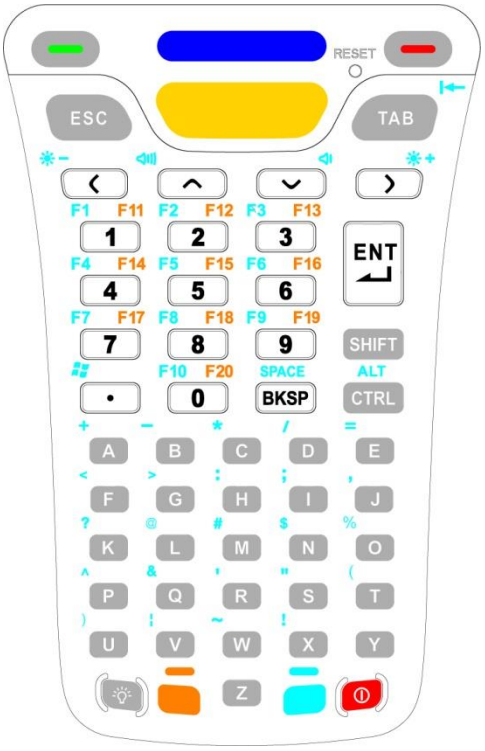
Feature	Color	Description
Data capture status LED	Blue	Good read barcode, or RFID
Charging LED	Red	The terminal is in charging status
	Green	The terminal has fully charged
	Off	Phone off status, or modem is not included in the terminal configuration
Modem	Green blinking (3 seconds interval)	Modem is connected to network
	Green blinking (1 second interval)	Modem is not connected to network
Modifier	Blue	Blue modifier is in activation
	Orange	Orange modifier is in activation

Keypad

DS5 series comes with large numeric keypad including function 1~10, full alphanumeric keypad

Numeric Keypad

Full Alphanumeric Keypad



Enter characters on Numeric Keypad

Following explains how to make continuous character input. For single character input, please refer **Key Strokes**.

You need to use **orange modifier key** and **blue modifier key** to access all characters and functions on Numeric Keypad

Input lower character continuously

- Press twice
- Toggle key one to four times depending on the position of the alphabet.
- Press one time to return to numeric input

Input upper character continuously

- Press twice
- Press SHIFT twice, then shall be displayed right bottom of the screen.
- Toggle key one to four times depending on the position of the alphabet.
- Press SHIFT one time to return lower character
- Press one time to return to numeric input

For example

- type **DEF**
- Press twice, SHIFT twice, 3, 3 3, 3 3 3

Note

If you need other than above the Special character other than DS5 Numeric keypad provide, you may search at **SIP** input panel on screen

Upon repetition of SHIFT key press, input method varied

Status Bar	Shift Repetition	Remark
12	Default	Return to default
⇧	SHIFT	Single shift function. Return back to default after 1 time key stroke
⬆	SHIFT SHIFT	Fixed shift function. Shift functions are effective at multi key strokes

Enter characters on Full Alphanumeric Keypad

Following explains how to make continuous character input. For single character input, please refer **Key Strokes**.

Input numeric

- Press required numeric key button from 1~0.
- With modifier keys, special functions can be programmable from F1 to F20.
- Press  , then press Numeric key to use F1 ~ F10.
- Press  to use F11 ~ F20

Input Alphabet

- Default input is lower alphabet character
- In case single Alphabet character input, press SHIFT then press a Alphabet
- In case continuous Alphabet character input, press SHIFT twice then press Alphabet keys

For Example

- Input **A1a2**
- Press SHIFT, A, 1, A, 2

Note

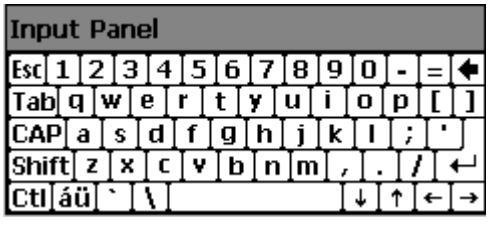
When you press SHIFT key 1 time, it is effective only 1 time. Input icon status:

If you need continuous upper character input, press SHIFT twice to fix the function. Input icon status:

- Input **ACDZY**
- Press SHIFT SHIFT, then A, C, D, Z, Y

Enter characters using SIP (Soft Input Panel)

Tap keyboard at task bar (Windows CE), or at the input required task (Windows Embedded Handheld 6.5) to open SIP window. Tap again to hide SIP window.



Windows CE

Windows Embedded Handheld 6.5

Picture: Keyboard Input Panel

Configure the Display Back Light

Set LCD display brightness of your terminal.

Press twice , then configure level of your favorable LCD back light brightness pressing to brighter ( ) and to dimmer ( ). Dimmer lessens power consumption of the terminal.

function lets you to switch back and forth to the brightness you have configured. Press to dimmed brightness, and press again the button to back to the brighter display.

Adjust Volume

Press twice amber green modifier then configure level of your sound volume pressing to volume up ( )and button to volume down ( )

Barcode Scanner

DS5 series provides industry leading barcode scanner options for the best data capture performances in most of labels and field conditions.

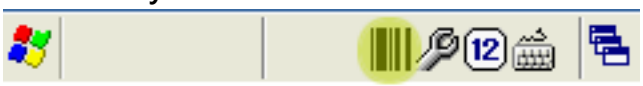
- Launch Barcode Tray
- Aim scanner window exit to barcode
- Press scan button

1. To read barcode, **Barcode Tray** launching is required as followings:

Barcode Tray Launching at Windows CE

Tap **Start** ▶ **Programs** ▶ **Barcode**

Barcode Tray icon will be shown in Task bar as following



Barcode Tray Launching at Windows Embedded Handheld 6.5

Tap **Start** ▶ **Barcode**

Barcode Tray icon will be shown in Command bar as following

2. Aim barcode scanner window exit to barcodes

Aim 1D Laser Scanner window to barcode

- 1D laser scanner aiming angle recommendation
- 1D Laser scanner module: SE955, SE965, SE1524

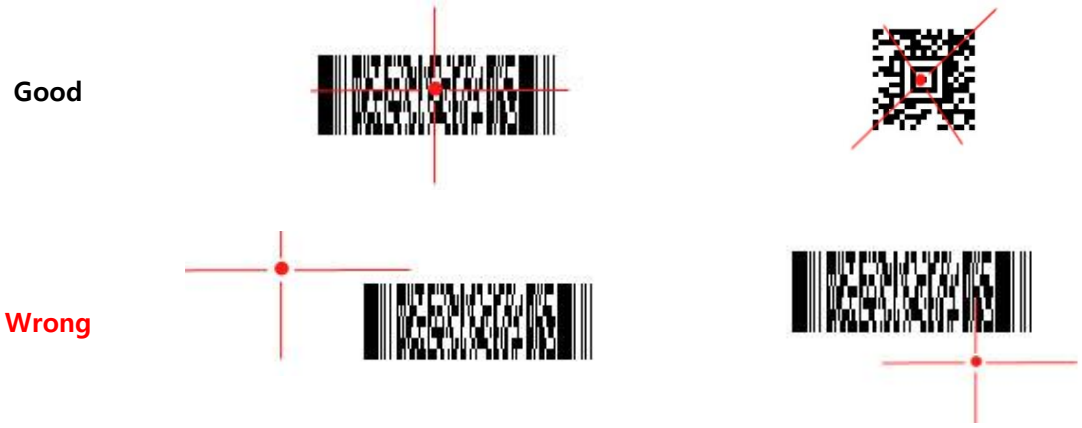
Note

Upon scanner module specification, decodable barcode density and reading distance is different. Also, too sharp scanning angle from barcode may make to blind the scanner from poor collection of scattered beam reflection. To find proper reading range distance angle, move the scanner angle, or move the scanner closer or further to find right working distance.

Aim 2D Imager Scanner window exit to barcode

[5100 SR/ N5600 SR/ N5600 HD]

[5300 SR/ 5300 HD]



3. Press scan button, or trigger and see scanner beam is generating. When scanner read barcode in success, scan indicator notify you with sound, vibration and LED

Scanner Module Types

Scanner Type	Scanner Module	Barcode Type	Remarks
Laser Scanner	SE955	1D barcodes	Standard range. Red laser beam aimer
	SE96X	1D barcodes	Long range Red laser beam aimer
	SE1524	1D barcodes	Extra-long range Red laser beam
CMOS Imager Scanner (360° Omni-directional)	5100 SR	1D/2D barcodes	Adaptus 5.0 High visibility green LED aimer Standard range
	5300 SR	1D/2D barcodes	Adaptus 5.0 Red Laser beam aimer Standard range
	5300 HD	1D/2D barcodes	Adaptus 5.0 Red laser aimer High Density(DPM), or ID cards
	N5600/N5603 SR	1D/2D barcodes	Adaptus 6.0 High visibility green LED aimer
	N5600/N5603 HD	1D/ 2D barcodes	Adaptus 6.0 High visibility green LED aimer

High Density(DPM), or ID cards

Note

Adaptus 6.0 Imaging Technology provides fast and accurate reading of barcodes and OCR fonts and extraordinary motion tolerance, even hard to read codes and those displayed on mobile phone screens.

Scan Indicators

Followings are indication scan status

Type	Indication		Remarks
LED	White	No scanning	hearing aid, useful to noisy and vehicles condition
	Amber blue	Scan success	
Sound	Bib sounds	Bib sound in scan success	To setting, refer **barcode tray**
Vibration	Vibration	Vibration in scan success	Hearing aid, useful to noisy and vehicle condition To setting, refer **barcode tray**

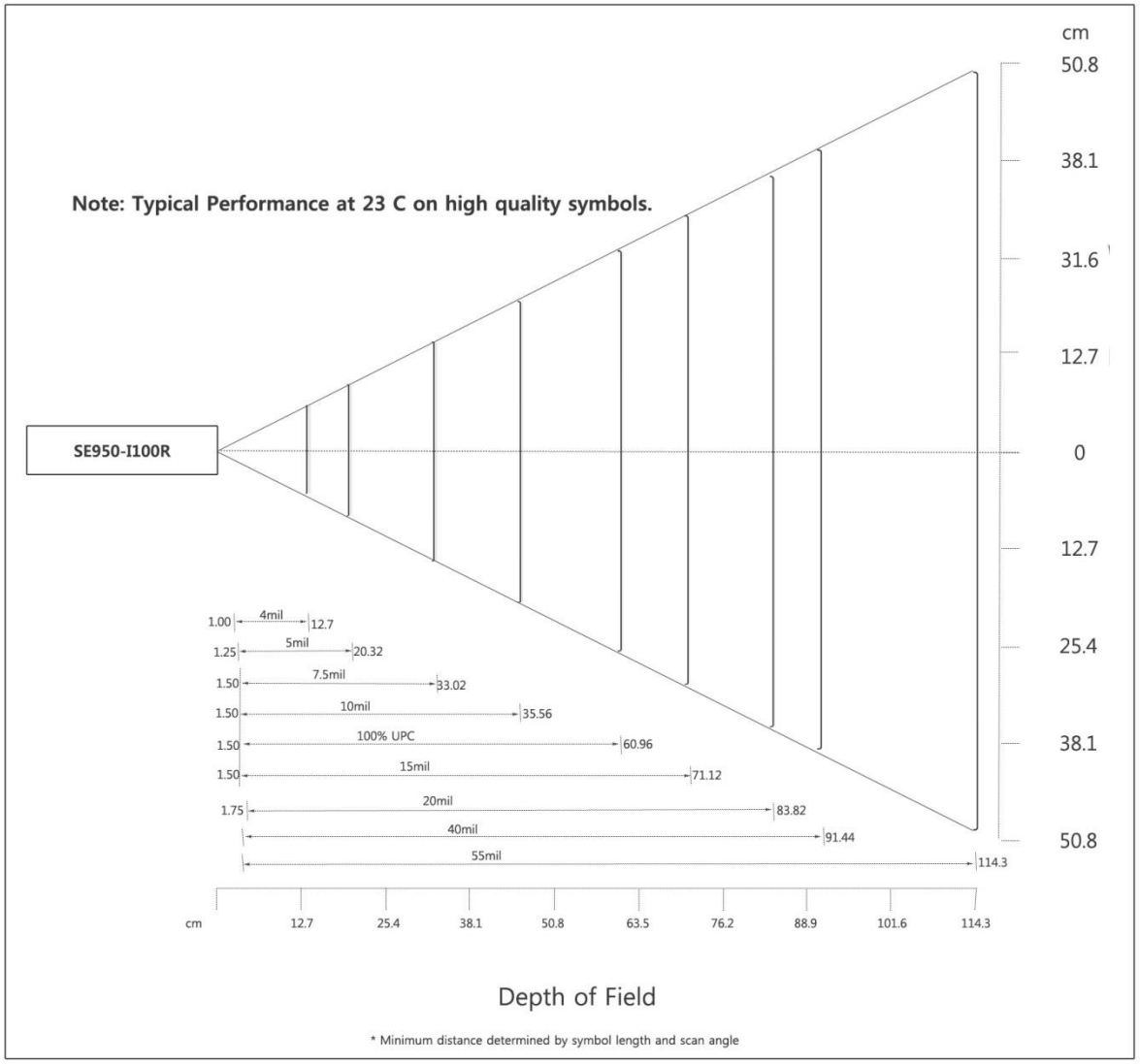
Scanner Specifications

1D Laser Specifications (SE955/ SE96X/SE1524 Specifications)

Scan Engine	SE955	SE96X	SE1524
Scan Angle	47° ± 3°	47° (Typical) **Note** This scan engine does not require margin on either side of the barcode to decode.	13.5° ± 0.7°
Scan Rate	104 (± 12) scan/sec (bidirectional)	104 (± 12) scan/sec (bidirectional)	35 (± 5) scan/sec (bidirectional)
Scan Pattern	Linear	Linear	Linear
Input Voltage	3.0-5.5 VDC ±10%	3.3 VDC ±0.3 VDC	3.3 VDC ±10%
Input Current	65mA typical	78mA typical	210mA typical
Standby Current	8µA max	25µA typical	60µA max
Operating Temperature	-20° to 60° C	-30° to 60° C	-30° to 60° C
Print Contrast	Minimum 25% absolute dark/light reflectance measured at 650 nm	Contrast measured as Mean Reflective Different (MRD) at 650nm	Minimum 25% absolute dark/light reflectance measured at 650 nm
Dimensions	1.21 cm H x 2.16 cm W x 1.55 cm D	1.17cm H x 2.16 cm W x 1.55cm D	2.03cm H x 4.48 cm W x 3.49cm D

Symbologies	UPC/EAN, Code128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI Plessey	UPC/EAN, Code128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5,Codabar, MSI Plessey	UPC/EAN, Code128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5,Codabar, MSI Plessey

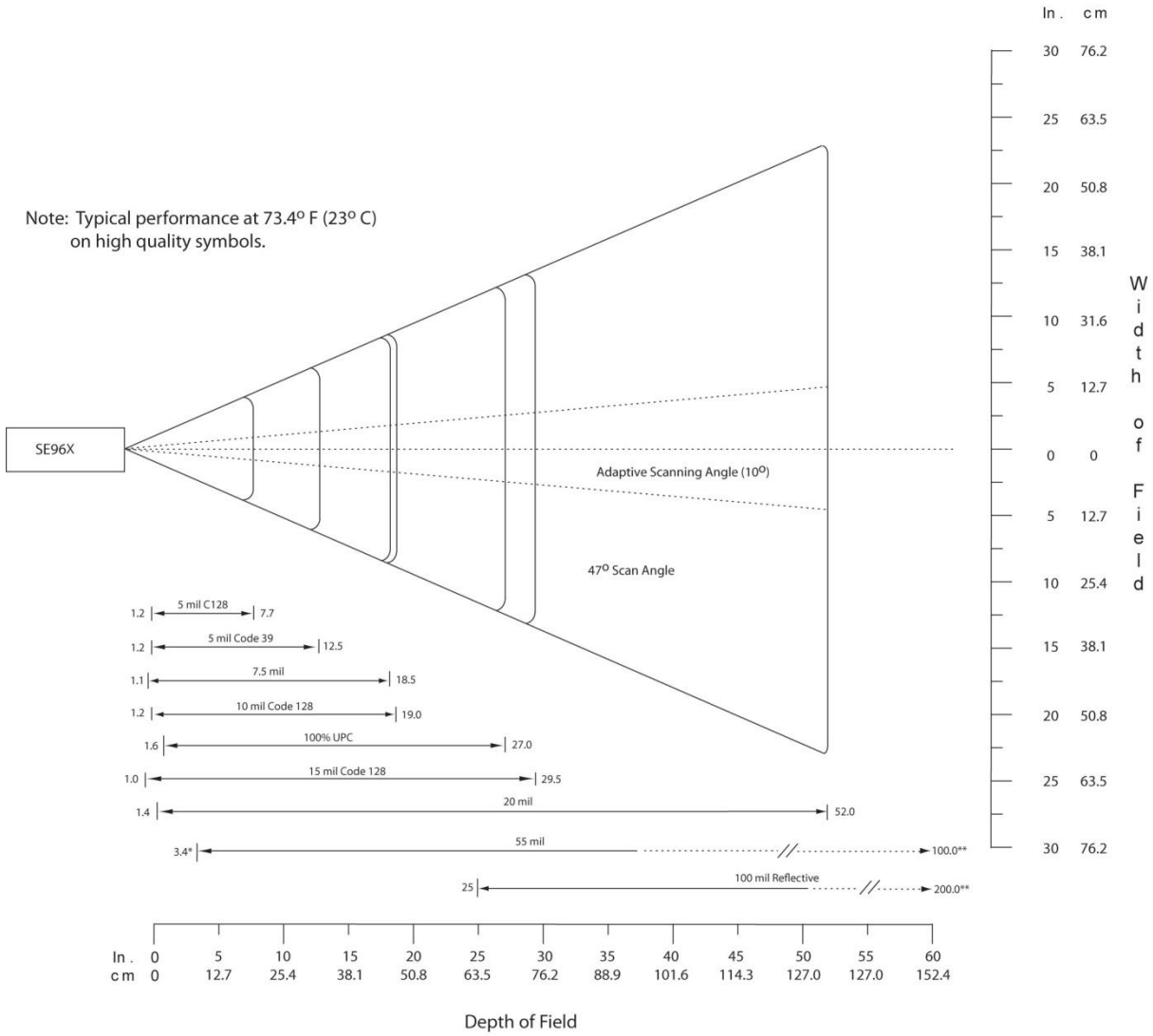
SE955 Decode Zone



4mil	2.54cm – 13.97cm
5mil	3.18cm – 20.32cm
7.5mil	3.81cm – 33.66cm
10mil	3.81cm – 44.45cm
UPC 100%	3.81cm – 59.69cm
15mil	3.81cm – 74.93cm
20mil	4.45cm – 90.17cm
40mil	*~40cm - * ~101.6cm
55mil	*~55cm - * ~139.7cm

* dependent on width of barcode

SE96X Decode Zone



*Minimum distance determined by symbol length and scan angle
**Distances achieved using adaptive scanning mode.

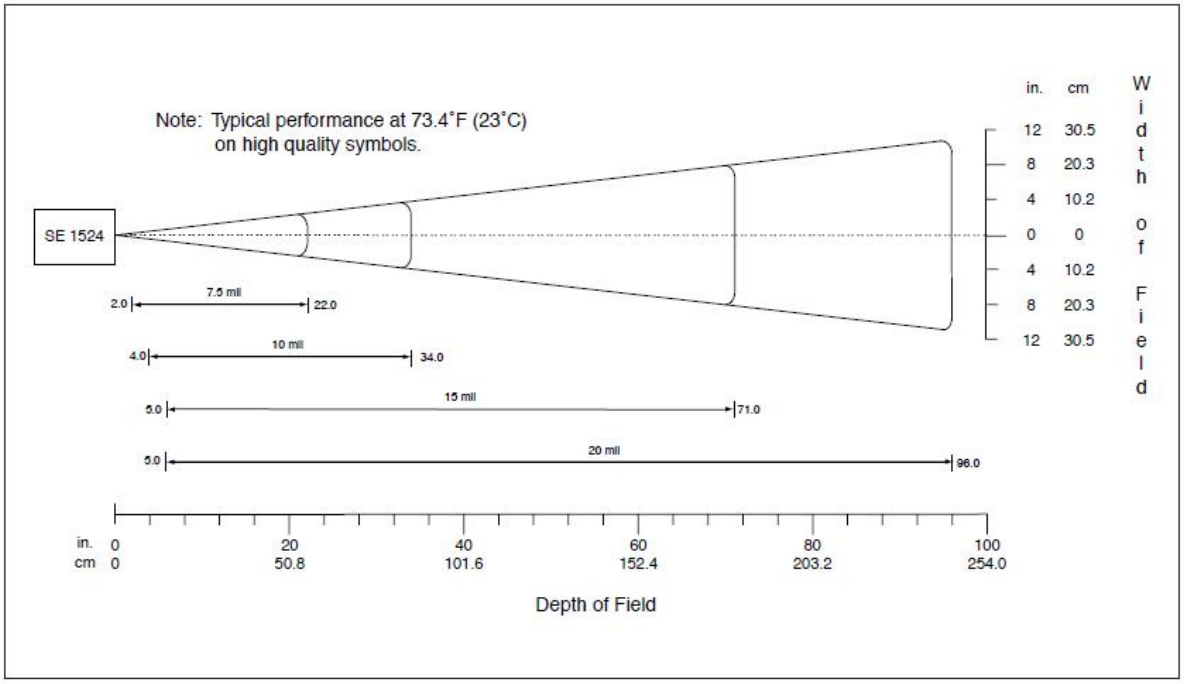
SE96X Decode Distance at Adaptive Mode

Density/ Barcode type W-N Ratio	Barcode Content/ Contrast	Typical Working Range Near	Far
5.0mil Code 128	1234 80% MRD	3.05cm	19.56cm
5.0mil Code 39; 2:5:1	ABCDEFGH 80% MRD	3.05cm	31.75cm
7.5mil Code 39; 2:5:1	ABCDEF 80% MRD	2.79cm	46.99cm
10mil Code 128	1234 80% MRD	3.05cm*	48.26cm

13mil	12345678905	4.06cm	68.58cm	
100% UPC	90% MRD			
15mil	1234	2.54cm*	74.93cm	
Code 128	80% MRD			
20mil	123	3.56cm*	132.08cm	
Code 39; 2.2:1	80% MRD			
55mil	CD		8.64cm*	254.00cm
Code 39; 2.2:1	80% MRD			
100mil	123456		60.96cm*	518.16cm
Code 39; 3.0:1	80% MRD			
Reflective				

* Depend on width of barcode

SE1524 Decode Zone



SE955 Decode Zone

Density/ Barcode type W-N Ratio	Barcode Contrast	Typical Working Range	
		Near	Far
7.5mil	80% MRD	5.08cm	55.88cm
Code 39; 2.5:1			
10mil	80% MRD	10.16cm	86.36cm
Code 39; 2:5:1			
15mil	80% MRD	12.7cm	180.34cm
Code 39; 2:5:1			

20mil Code 39; 2.2:1	80% MRD	12.7cm	243.84cm
55mil Code 39; 2.2:1	80% MRD	38.1cm	457.2cm
70mil reflective Code 39; 3:1	80% MRD*		~ 932.18cm
100mil reflective Code 39; 3:1	80% MRD*		~ 1372.68cm

* = (Near range on reflective bar codes determined by degree of reflectivity and width of bar code)

2D Imager scanner specifications (5100/5300/N5600/5603HD)

5100/ 5300 Specifications

Category	5100	5300
Focal Point	SR: 17.8cm from lens plate; SF 11.4cm from lens plate	
Image Sensor	752 x 480 CMOS sensor	
Motion Tolerance	10.2cm per second	
Rotational Sensitivity	360°	
Viewing Angle	40°	
Ambient Light	Total darkness to 100,000 Lux (full sunlight)	
Illumination LEDs	626nm ± 30nm	
Aiming	LEDs: 526nm ± 30nm	Laser 650nm ± 10nm
Symbologies	PDF417, MicroPDF417, MaxiCode, Data Matrix, QR Code, Aztec, Aztec Mesa, Code 49, UCC Composite, UPC, EAN, Interleaved 2 of 5, RSS, Code 93, Codablock, Postnet (US), Planet Code, BPO 4 State, Canadian Post, Japanese Post, KIX (Netherlands) Post, OCR-A, OCR-B	
Dimensions (cm)	14.33 D x 20.57 W x 11.43 H	17.8 D x 27.9 W x 12.1 H
Operational Input Voltage	3.0VDC to 6.0 VDC (23°C)	3.0 VDC to 5.5 VDC (23°C)
Current Draw	Max 100 mA, Standby Current 100 µA	
Operating Temperature	-30°C to 50°C	

5100/ 5300 Decode Zone

	Near	Far
8.3mil Linear	8.9cm	19.3cm
10mil PDF417	7.9cm	22.9cm
13mil UPC	5.3cm	33.5cm

15mil	5.8cm	25.9cm
Data matrix		
15mil	7.9cm	22.4cm
QR		
35mil	5.1cm	33cm
MaxiCode		

N5600/N5603

Category	N5600	N5603
Image Sensor	844 x 640 CMOS sensor, 60 frame per second; optional color	
Motion Tolerance	Up to 584cm per second in total darkness with 100% UPC at 10cm distance	
Field of View	SR: 42.4° (Horizontal), 33.0° (Vertical) HD: 41.4° (Horizontal), 32.2° (Vertical)	
Scan Angles	Tilt: 360°, Pitch: ±45°, Skew: ±65°	
Symbol Contrast	20% minimum reflectance	
Illumination LEDs	617nm visible red LED	
Aiming	528nm visible green LED	650 nm high visibility red laser
Symbologies	UPC/EAN/JAN, GS1 DataBar, Code 39, Code 128, Code 32, Code 93, Codabar/NW7, Interleaved 2 of 5, Code 2 of 5, MSI, Telepen, China Post, PDF417, MicroPDF417, GS1 Composite, Aztec Code, Data Matrix, QR Code, Micro QR Code, MaxiCode, Han Xin Code, Intelligent Mail Barcode, Postal-4i, Australian Post, British Post, Canadian Post, Japanese Post, Netherlands (KIX) Post, Postnet, Planet code, OCR-A, OCR-B, E13B (MICR)	
Dimensions (mm)	12.5 D x 20.8 W x 17.2 H	
Operational Input Voltage	3.3VDC ± 5%to 6.0 VDC	
Current Draw	276 mA; Sleep 90µA	228 mA; Sleep 90 µA
Operating Temperature	-25°C to 50°C	
MTBF	>2,000,000 hours	>375,000 hours

N5600/ N5603 HD Decode Zone

Symbology/ X-Dim	Typical Density (HD) Optics
3mil Code 39	48mm – 91mm
5mil Code 39	30mm – 127mm
7.5mil Code 39	33mil – 152mm
5mil MicroPDF417	43mm – 84mm
5mil Data Matrix	41mm – 86mm

* Resolution, linear bar codes: 0.076mm (3.0mil)

* Resolution, 2D Matrix codes: 0.127mm (5.0mil)

N5600/ N5603 SR Decode Zone

Symbology/ X-Dim	Typical Density (HD) Optics
100% UPC	46mm – 419mm
5mil Code 39	64mm – 163mm
10mil Code 39	28mil – 338mm
6.7mil PDF417	46mm – 185mm
10mil Data Matrix	53mm – 203mm

* Resolution, linear bar codes: 0.127mm (5.0mil)

* Resolution, 2D Matrix codes: 0.169mm (6.7mil)

Camera

This section explains how to use the camera on your terminal. You can take photographs and shoot video by using the built-in camera functionality. Your 5 megapixel camera products photos in JPG and BMP format, and videos in ASF format.

Note

DS5 series may vary upon your order configuration. Please check your terminal configuration has included camera in your device. If not, please consult with your sales agent

Using Camera

Taking Photos

Taking picture with your terminal's built-in camera is as simple as choosing a subject, then press ENTER at keyboard, or touch  at screen

Note

When taking a photo in direct sunlight or in bright conditions, shadows may appear on the photo.

1. From the main Desktop, **Start ▶ Program ▶ Camera**

Note

If your terminal has camera configuration, the **Program** initially contains the **Camera** icon. If you delete it, or if you want to access the camera at the Program, you must activate Camera once, **My Device ▶ Nand ▶ MBApp ▶**  **DS_Camera**

2. Use your main display as viewfinder.
3. Before you take a picture, use the  and  key to zoom in or out. You can magnify up to x4 (400 percent)
4. If desired, before taking the photo, you can tap on-the screen icons to access various camera options and settings.

5. Press icon , or press ENTER key until the shutter sounds. (The picture is automatically stored within your designated storage location. If no microSD is installed, all pictures are stored on the **Nand\Album**. For more information, refer to "Camera Options".
6. While viewing a picture, after you have taken it, press > key to zoom in or < to zoom out. You can magnify the picture up to x4.
7. Press ESC key to return to the viewfinder.

Camera Options

Options are represented as below

Icon	Feature	Description
	Camera mode	Allow you to take a photo in various modes. Tap the icon to switch feature
	Camcorder mode	Allows you to take video. Tap to switch Camcorder mode
	Flash	Allows you to set the flash options to Off, On, or Auto flash
	Settings	· **Album Path:** allows to set storage path you took photo · **Snap Shot:** allows to set resolution, format type and photo quality. - Snap Resolution: 10 different resolutions Min: 176x144 ~ Max: 2592x1944 - Save Type: JPG, BMP

- JPG Quality: Low, Mid, High

· **Record:** allows to set resolution of photo and video

Album	Allows you to access Image viewer. The photo you took, will be displayed as a thumbnail in the image viewer icon. Double click a thumbnail to view the photo. Press navigation key board to zoom in (^) and out (v), or < and > to move next photos To return Camera mode, press ESC at key board

---

Wireless Manager

Before setting up wireless configuration, you need to access Wireless Manager to switch on the radio power.

This application is to set up wireless functionality. To access wireless manager,

- Windows CE 6.0: **Start ▶Setting ▶ Control Panel ▶ Wireless Manager**
- Windows Embedded Handheld 6.5: **Start ▶ Setting ▶ Connections ▶ Wireless Manager**

Power Switch

Following image shows user interface of Wireless Manager. Upon module configuration, it shows radio status of your terminal.

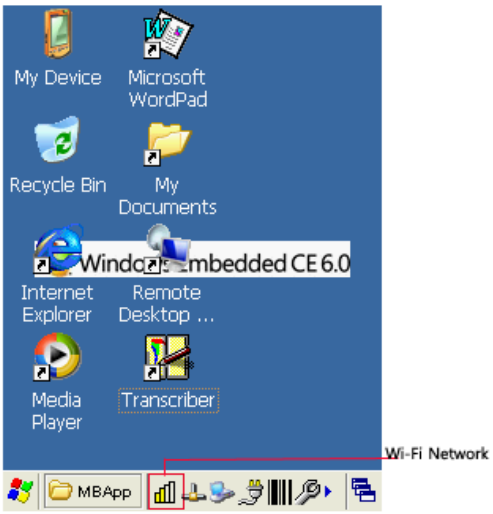
Switch Status

	WiFi	Bluetooth	Phone
Not Supported			
Power on			
Power off			

Wi-Fi Setting

- Power on WiFi power at Wireless Manager
- Open Summit Client Utility
- Configure your WLAN

When you power on WiFi, following WiFi signal will be displayed at your task tray and task bar.



Windows CE6.0	Windows Embedded Handheld 6.5

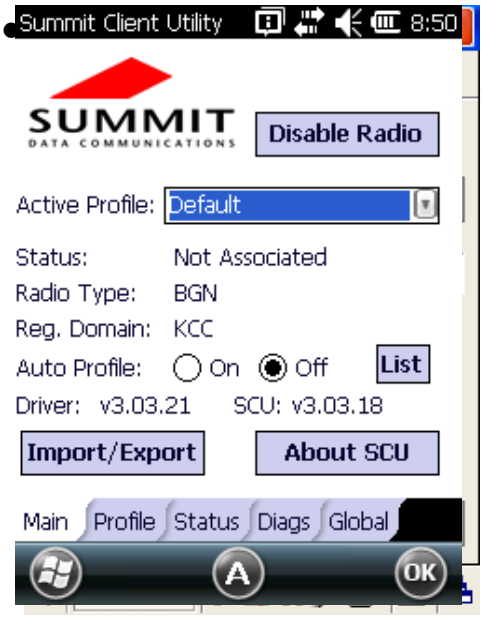
Radio Signal Strength

- The radio is not associated/authenticated to an AP
- The signal strength (RSSI) for the current AP (to which the radio is associated) is -90 dBm or weaker, which means that a Summit 802.11b/g radio will operate at 802.11b data rates only
- The RSSI for the current AP is stronger than -90 dBm but not stronger than -70 dBm, which means that a Summit radio will operate at 802.11g or 802.11a data rates that are less than 54 Mbps
- The RSSI for the current AP is stronger than -70 dBm but not stronger than -50 dBm, which means that a Summit radio should operate consistently at 54 Mbps
- The RSSI for the current AP is stronger than -50 dBm

Configuration WLAN – Summit Client Utility

This section describes the steps required to set up Summit Client Utility. It shows review about the options within the SCU tabs – Main, Profile, Status, Diags and Global Settings.

After turn on WiFi Power Switch from Wireless Manager, tab



Control Panel ▶ SCU

Start ▶ Setting ▶ System ▶ SCU

Windows CE6.0 Main Tab Windows Embedded Handheld 6.5 Main Tab

Enable/ Disable Radio: this is toggle button when your WiFi radio is on, the button displays *Disable Radio*. When your radio is off, the button shows *Enable Radio*.

- **Active Profile**: Lists the name of the active configuration profiles. When you select a profile from the chosen drop down menu, the settings for the profile become active. When you select *Third Party Config,* the terminal goes through a power cycle, WZC (Windows Zero Config) is used for configuration..
- **Status**: Indicates if the radio is associated to an AP and, if not, indicates the radio's current status. Potential values include: Down (not recognized), Disabled, Not Associated, Associated, or EAP type authenticated.
- **Radio Type**- Indicates the terminal's radio type including:
  - **BGN** : Summit 802.11 g radio (supports 802.11 b, 802. 11g and 802. 11 n)
- Reg. Domain: Indicates the regulatory domain(s) for which the radio is configured by an administrator of user.
- Auto Profile – Enables the user to activate or deactivate an automatic profile selection facility. Tab **List** and use the dialog box to select a created profile. When the facility is active and the Summit radio makes its first attempt to associate to an AP (after a terminal startup or resume), SCU tries each profile, in order, until the radio associates to an AP. That profile becomes the active profile and remains the active profile until one of the following occurs:
  - The device is suspended and resumed, power-cycled, or restarted, which causes the automatic profile selection facility to restart the selection process.
  - The user turns off the automatic profile selection facility and manually selects a different profile on the SCU Main window.

  Note

  The profile list should not include any profiles with an Ad Hoc Radio Mode setting.

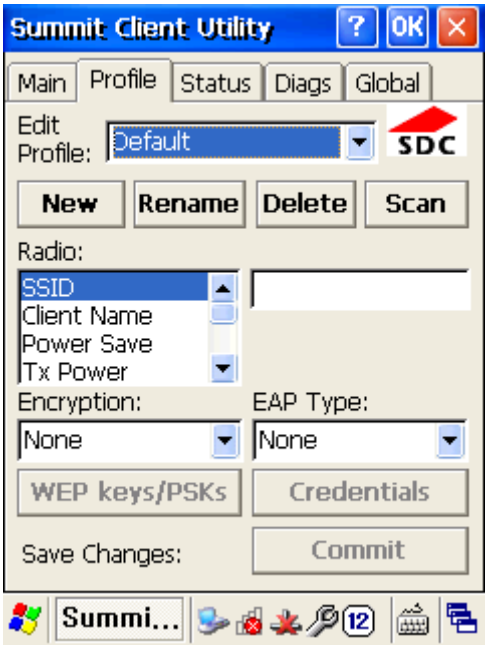
- **Driver**- Indicates the current version of the device driver.
- **SCU**- Indicates the SCU version currently running on the device. Displays only if space permits.
- **Import/ Export** – Displays only if the radio is programmed to allow import/ export functions and if you are logged in as an administrator. Click Import/ Export and use the dialog box to do one of the following:
  - Export global settings, all standard SC profiles, and the special Third Party Config profile from the SCU area of a device's registry to a file that can be transferred to another terminal.
  - Import global settings, all standard SCU profiles, and the special Third Party Config profile from a file (created using the Export facility) to the SCU area of a device's registry to enable SCU to use the information.

  Note

- When importing information, select **Add to existing** to merge new information with current registry information. Select **Replace** to overwrite the current registry information with the newly-imported information.

Profile

The profile settings are radio and security settings that are stored in the registry as part of configuration profile. When a profile is selected as the **Active Profile** on the Main tab, the setting for that profile become active. You can define up to 20 profiles. Profile changes are not saved to the profile until you click **Commit**



- **Edit Profile** – Use the drop-down menu to select the profile to be viewed or edited. Only an administrator can edit a profile
- **Actions** – Actions included New, Rename, Delete, and Scan. New, Rename and Delete are only available to an administrator.
  - **New**: Create a new profile with default settings. Assign a unique name (a string of up to 32 characters). Edit profile settings using other profile window selections.
  - **Rename**: Change the profile name to one that is not assigned to another profile
  - **Delete**: Delete a non-active profile. You cannot delete an active profile.
  - **Scan**: Click to view a list of APs that are broadcasting SSIDs; select an SSID and create an profile for it. See "Using Scan to Create a Profile" for more information

Note

  - If WLAN is off (**Enabled Radio** status at **Main** tab), Scan button is not activated.

- **Radio** – Select a radio attribute from the list on the left to view its value or setting in the box on the right. Only an administrator can edit these values or settings. For more

information, see **Radio Settings**

- **Security** – Values for the two primary security attributes, EAP type and encryption type, are displayed in separate drop-down lists with the current the current values highlighted. Only an administrator can edit these security settings.
- **Encryption** – When the administrator selects and encryption type that requires the definition of WEP keys or a pre-shared key (PSK), the WEB keys/PSKs button become active. Click **WEP keys/PSKs** to define WEP keys or a PSK.
- **EAP Type** – When the administrator selects an EAP type, the Credentials button becomes active. Click **Credentials** to define authentication credentials for the selected EAP type.
- **Save Changes** – To save changes for the selected profile, you must click **Commit**. If you make changes without clicking **Commit** and attempt to move to a different SCU windows, a warning message displays and provides the option of saving your changes before you leave the Profile window.

Radio Settings

- **SSID** – Service set identifier for the WLAN to which the radio connects.
  - Value: A string of up to 32 characters
  - Default: None (Warning! This setting allows association to the strongest unsecured detected network.)
- **Client Name** - The name assigned to the Summit radio and the client device that uses it.
  - Value: A string of up to 16 characters
  - Default – None
- **Power Save** – Indicates the radio's power save mode.
  - Value:
    · CAM – Constantly Awake Mode
    · Maximum – Maximum power savings
    · Fast – Fast power save mode
  - Default – Fast
- **Tx Power** – Indicates transmit power. Transmit power can be overridden by a Cisco AP if the CCX support global setting is set to Full and the AP defines maximum transmit power for the client as a lower value.
  - Value:
    · Maximum – Maximum defined for current regulatory domain
    · One of the following values in milliwatts (mW): 50, 30, 20, 10, 5, 1
  - Default: Maximum
- **Bit Rate** – Indicates the bit rate used by a radio when interacting with a WLAN AP.
  - Value: Auto (rate negotiated automatically with AP) or one of the following rates in megabits per second (Mbps): 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54.
  - Default: Auto

- **Radio Mode** – Use of 802.11 a, 802.11g, 802.11b, and 802.11n frequencies and data rates when interacting with AP, or use of ad hoc mode to associate to a client radio instead of an AP.
  When SCU operates with a Summit 802.11g radio, an administrator can select from among the following Radio Mode values:
  - Value:
  · B rates only – 1, 2, 5.5, and 11 Mbps
  · G rates only – 6, 9, 12, 18, 24, 26, 48, and 54Mbps
  · BG rates optimized – 1, 2, 5.5, 6, 11, 24, 36, and 54 Mbps. This should only be used with Cisco APs running IOS in autonomous mode (without controllers, For Cisco APs that are tied to controllers and for non-Cisco APs, Summit recommends BG rates full.)

Security Settings

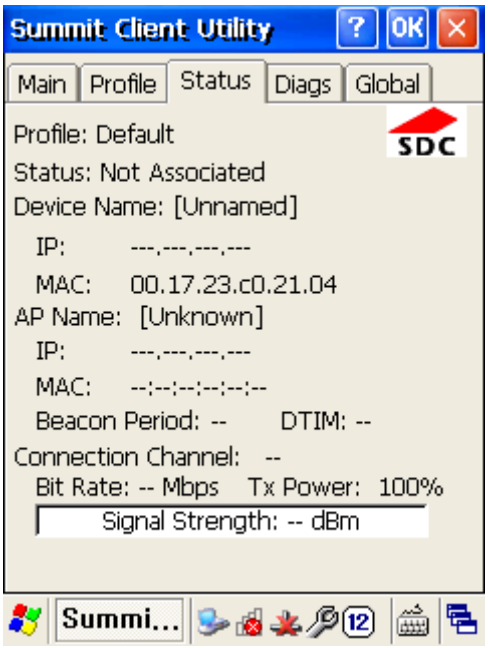
- **EAP type** – Extensible Authentication Protocol type used for 802.1x authentication to AP.
  - Value: None, LEAP, EAP-FAST, PEAP-MSCHAP, PEAP-ETC, PEAP-TLS, EAP-TLS, EAP-TTLS
  - Default: None
- **Credentials** – Authentication credentials for the selected EAP type.
- **Encryption** – Type of encryption (and decryption) used to protect transmitted data.
  - Value
  · None: No encryption
  · WEP: WEP with up to four static keys (40 bit or 128 bit in ASCII or hex) defined under WEP/ PSK Keys.
  · WEP EAP – WEP with key generated during EAP authentication
  · WPA-PSK (WPA Personal) – TKIP with PSK (ASCII passphrase or hex PSK) defined under WEP/PSL Keys.
  · WPA-TKIP (WPA Enterprise) – TKIP with key generated during EAP authentication
  · WPA CCKM (WPA Enterprise) – TKIP with key generated during EAP authentication and with Cisco key management protocol for fast re-authentication
  · WPA2-PSK (WPA2 Personal) – AES with PSK (ASCII passphrase or hex PSK) defined under WEP/PSK Keys.
  · WPA2-AES (WPA2 Enterprise) – AES with key generated during EAP authentication.
  · WPA2-CCKM (WPA2 Enterprise) – TKIP with key generated during EAP authentication and with Cisco key management protocol for fast re-authentication.

Third Party Config

If you choose to configure *ThirdPartyConfig*, the *SCU* will work with the operating system's *Windows Zero Config* (WZC) to configure radio and security settings for the radio installed in the unit.

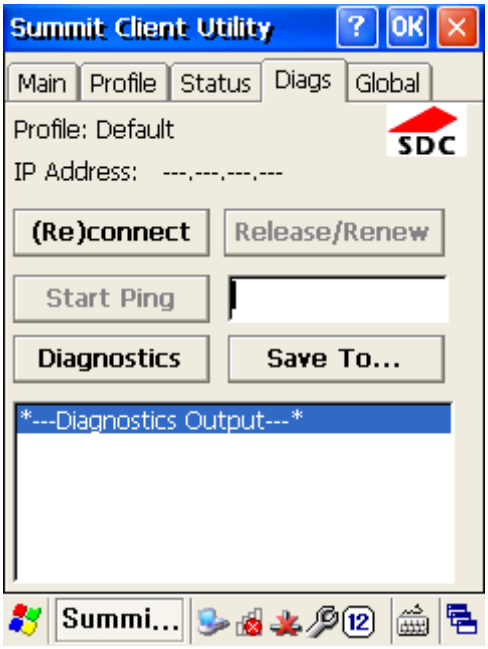
Choosing this *profile* means that *WZC* must be used to define the following radio and security options: *SSID*, *Auth Type*, *EAP Type* and *Encryption*. The SCU settings for *ThirdPartyConfig* include: *Client Name*, *Power Save*, *Tx Power*, *Bit Rate* and *Radio Mode*.

Status



The *Status* tab provides status information including IP address and MAC address for the client radio, IP address and MAC address for the AP, signal strength, channel, transmit power and data rate.

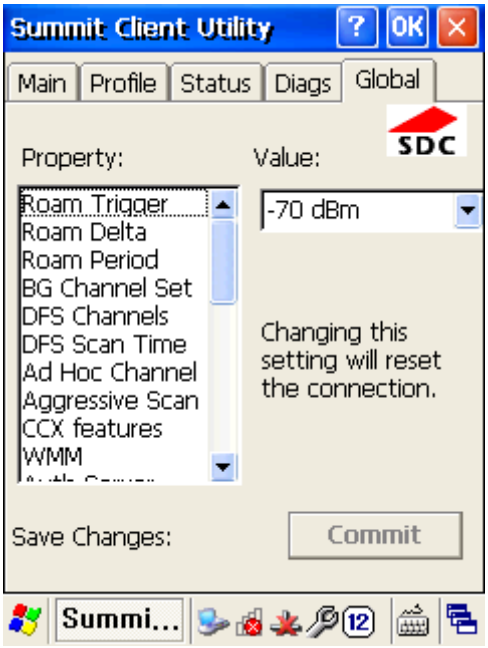
Diags



The following functions are available from the Diags window:

- **(Re)connect** – Disable and enable the radio, apply or reapply the current profile, and attempt to associate and authenticate to the wireless LAN, logging all activity in the output area at the bottom.
- **Release/ Renew** – Obtain a new IP address through DHCP release/renew and log all activity in the output area at the bottom.
- **Start Ping** – Start a continuous ping to the address in the edit box next to the button. Once the button is clicked, its name and function change to Stop Ping. Pings continue until you click Stop Ping, move to an SCU window other than Diags or Status, exit SCU, or remove the radio.
- **Diagnostics** – Attempt to (re) connect to an AP and provide a more thorough dump of data than is obtained with (Re)connect. The dump includes radio state, profile settings, global settings, and a BSSID list of APs in the area.
- **Save to...** - Save the diagnostics output to a file.

Global



The *Global* settings tab allows you to define radio and security settings that apply to all *profiles*, along with settings that apply specifically to the *SCU*.

Global Setting	Description	Value	Default
Roaming Trigger	If RSSI from AP is less than roam trigger value, radio performs roam scan or probes for an AP with stronger signal.	-50, -55, -60, -65, -70, -75, -80, -85, -90, or Custom	-70 dBm
Roam Delta	When Roam Trigger is met, a second AP's signal strength (RSSI) must be Roam Delta dBm stronger than moving average RSSI for current AP before radio will attempt to roam to the second AP	5, 10, 15, 20, 25, 30, 35, or Custom	15 dBm
Roam Period	After association or roam scan (with no roam), radio will collect RSSI scan data for **Roam Period** seconds before considering roaming	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, or Custom	10 sec
BG Channel Set	Defines the 2.4GHz channels to be scanned when the radio is contemplating a roam and needs to determine what APs are available.	Full; 1,6,11 (the most commonly used 2.4 GHz channels); 1,7,13 (for ETSI and TELEC radios only); or Custom	Full
DFS Channels	Support for 5GHz (802.11a) channels where support for dynamic frequency selection (DFS) is required. Supported in	On, Off, Optimized	Off

	v2.0 and later		
DFS Scan Time	Because passive scanning consumes a longer period of time, this feature enables you to determine the dwell time when passively scanning on a DFS channel.	A number between 20~500 milliseconds (ms). Recommending 1.5 times dwell time that of beacon period. For example, DFS scan time is set to 30ms, the beacon period should be adjusted to 20ms	120
Ad Hoc Channel	The channel to be used for an ad hoc connection if the active profile has an Ad Hoc radio mode value.	One of the 2.4GHz channels (1~14), or UNII-1 channels (36, 40, 44, 48). If you select a channel that is not supported by your radio, the SCU uses the default value for this setting	1
Aggressive Scan	When this setting is On and the current connection to an AP becomes tenuous, the radio scans for available APs more aggressively. Aggressive scanning complements and works in conjunction with the standard scanning that is configured through the Roam Delta, and Roam Period settings. Summit recommends that the Aggressive Scan global setting be On unless there is significant co-channel interference because of overlapping coverage from APs that are on the same channel	On, or Off	On
CCX features	Use of Cisco information element (IE) and CCX version number; support for CCX features.	Full: Use Cisco IE and CCX version number which is supporting all CCX features Optimized: Use Cisco IE and CCX version number which is supporting all CCX features except AP-	Optimized

		assisted roaming, AP-specified maximum transmit power, and radio management. Off: Do not use Cisco IE and CCX version number	
WMM	Use of Wi-Fi Multimedia Extensions, also known as WMM.	On or Off	N/A
Auth Server	Type of authentication server being used for EAP authentication	Type 1 – Cisco Secure ACS or another server that uses PEAPv1 for PEAP with EAP-MSCHAPV2 (PEAP-MSCHAP) Type 2 – A different authentication server, such as Juniper Networks Steel RADIUS, that uses PEAPv0 for PEAP-MSCHAP	Type 1
TTLS Inner Method	Authentication method used within secure tunnel created by EAP-TTLS	Auto-EAP – Any available EAP method MSCHAPV2 MSCHAP PAP CHAP EAP-MSCHAPV2	Auto-EAP
PMK Caching	When WPA2 is in use, type of Pairwise Master Key (PMK) caching to use	Standard or OPMK When switching from Standard to OPMK, you must initiate a suspend resume of the device. Only tapping **Commit** does not cause the change to take effect.	Standard
TX Diversity	How to handle antenna diversity when transmitting data to AP	Main only: Use main antenna only	On

		Aux only: Use auxiliary antenna only Summit does not support the AUX antenna as a single antenna solution	
RX Diversity	How to handle antenna diversity when receiving data from AP.	On: Use diversity On-Start on Main: On startup use main antenna On-Start on Aux: On startup, use auxiliary antenna Main only: Use main antenna only Aux only: Use auxiliary antenna only Summit does not support the AUX antenna as a single antenna solution	On-Start on Main
Frag Thresh	If packet size (in bytes) exceeds threshold, then packet is fragmented.	An integer from 256 to 2346	2346
RTS Thresh	Packet size above which RTS/CTS is required on link.	An integer from o to 2347	2347
LED	Use of LED; DS5 is not supporting this feature	On, Off	Off
Tray Icon	Enabling of System Tray Icon.	On, Off	On
Hide Password	If this is On, then SCU as well as EAP authentication dialog boxes mask passwords and other sensitive information, such as WEP keys.	On, Off	Off
Admin Password	Password that must be specified when Admin Login button pressed.	A sting of up to 64 characters	SUMMIT
Auth Timeout	Specifies the number of seconds that Summit software waits for an EAP	An integer from 3 to 60	8

	authentication request to succeed of fail. If authentication credentials are specified in the active profile and the authentication times out, the association fails. If authentication credentials are not specified in the active profile and the authentication times out, then the user is prompted to re-enter authentication credentials.		
Certs Path	Directory where certificate(s) for EAP authentication are stored.	A valid directory path of up to 64 characters	Depends on device
Ping Payload	Amount of data in bytes to be transmitted on a ping	32,64, 128, 256, 512, 1024	32 bytes
Ping Timeout	Amount of time in milliseconds that transpires without a response before ping request is consider a failure	An integer from 1 to 30000	5000
Ping Delay ms	Amount of time in milliseconds between successive ping requests	An integer from 0 to 7200000	1000

When global settings are changed on the window and **Commit** is clicked, the changes take effect immediately.

Two exceptions include the WMM and DFS Channels settings. If you change either of these settings, you must do a power cycle or suspend/resume on the device to cause the change to take effect. To cause global settings changes to take effect without a power cycle, Summit software may have to reset and re-establish the WLAN connection between the Summit radio and the access point. If you make changes without clicking **Commit** and attempt to move to a different SCU window, SCU displays a warning message and gives you the option of saving your changes before you leave the Global window.

Wi-Fi Roaming

Summit provides two complementary sets of roaming algorithms to provide for more reliable connectivity. Those sets of algorithms are;

- **Standard**: which manages roaming behavior under typical conditions. Users can adjust Standard Roaming parameters to customize roaming behavior for a particular environment.
- **Aggressive**: which manages roaming behavior when the station device is in areas of particularly low coverage and is in imminent jeopardy of losing its connection to the network infrastructure. Users may not adjust Aggressive Roaming parameters but may disable this feature.

Standard Wi-Fi Roaming

The standard roaming algorithm is employed when Summit-enabled station devices are operating in areas of relatively strong RF coverage. This roaming algorithm is based on the signal strength, or Received Signal Strength Indication (RSSI, which is measured in dBm) of the current AP (the access point to which the station is currently associated) and any other APs that are within range of the station. The Summit radio calculates a moving-average RSSI for the current AP and treats it as the "current RSSI". This value is displayed on the Status tab of the Summit Client Utility (SCU).

A Standard Roam scenario would be as follows: A station that is associated to an AP sees the RSSI go below the -75 dB Roam Trigger value, e.g. it goes to -80 dB. This prompts it to initiate a roam scan looking for a better AP ("better" in terms of signal strength). If it finds one, it will roam to it if the RSSI on the target AP is greater than the current AP by the Roam Delta value and it has been associated to the current AP for at least the Roam Period value.

Changing these parameters allows users to customize the roaming behavior of the station for environments that might be somewhere on a continuum between two extremes: if an environment has under-coverage (i.e., relatively few APs for the size of the facility) then the user can set the Roam Trigger to look for a new AP sooner and set the Roam Delta and Roam Period to smaller values so that the station will roam more quickly when it finds an alternative to the current AP. On the other hand, if an environment has over-coverage (i.e., a relatively large number of APs for the size of the facility) the user can set the Roam Trigger to a high value so that the station will only start looking for a new AP if the current AP signal gets very low, the new AP has a much stronger signal (Roam Delta), and the station has been associated to the current AP for some larger amount of time (30 seconds perhaps). How a given customer will configure these settings will depend on their RF environment, but also on the types of devices they use (laptop vs. data terminal for example), how those devices are used (truck-mounted going 25 MPH (40 KPH) or carried on a belt and being walked around), and what types of data they handle (voice/video vs. low data rate/latency insensitive bar-code scanning).

The administrator can configure three parameters for the standard roaming algorithm:

- **Roaming Trigger**: Roam trigger indicates the signal strength (RSSI) (in dBm) at which the radio scans for an access point with a better signal strength. When scanning for a different access point, the radio looks for one with a RSSI at the indicated roam delta dBm level or stronger.
- **Roaming Delta**: Roam delta indicates the signal strength (RSSI) level (in dBm) that the radio looks for in a different access point (after the roam trigger is met) before it attempts to roam to the new access point

Roaming Period: Roam period indicates the amount of time a radio collects RSSI scan data (after association or a roam scan) before it considers roaming to a different access point.

Aggressive Wi-Fi Roaming

Aggressive Roaming is employed when Summit-enabled station devices are operating in areas of relatively weak RF coverage such as the edge of a coverage area. Aggressive roaming uses settings that are not configurable but have been determined in real customer environments to be optimal for reliable connectivity in areas of relatively weak coverage. Aggressive Roaming can, however, be disabled as per the below. Aggressive roaming is triggered when the radio misses too many of the beacons expected from the current AP during a defined interval. The number of expected beacons is determined from the AP's beacon rate and DTIM interval.

Once aggressive roaming is triggered, the radio scans for a "better" AP every second. If Aggressive Roaming is triggered Aggressive Roaming will stop only when the station finds an AP with an RSSI that is stronger than that of the current AP and the station then roams to that AP. Aggressive Roaming will stop after a successful roam or if the number of received beacons returns to the expected number. If the station moves completely out of the coverage area for all APs, it will miss all beacons, determine that it no longer is associated to an AP, and will change its status to "Not Associated". The station will then revert to Standard Roaming.

In some environments such as environments with more than enough RF coverage (and significant co-channel interference) it may be desirable to disable Aggressive Roaming. This may be done through the "Aggressive Scan" menu item on the Global Settings tab in the Summit Client Utility (SCU). Changing the Aggressive Scan value from "On" to "Off" will disable this feature.

Aggressive Scanning may also be disabled by adding the below DWord to the registry and setting it to all zeroes as per the below:

"aggScanTimer"=dword:00000000

Bluetooth Setting

Caution

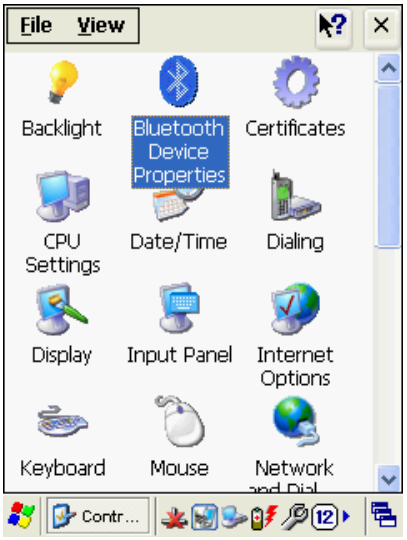
The open COM port at DS5 is COM6, COM9

At Windows CE6.0, it assigns COM6 first. If COM6 is pre-assigned, then it try to assign to COM9.

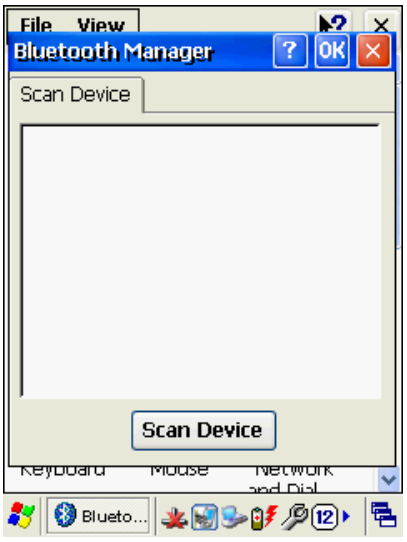
At WEH 6.5, it is selectable one of COM port between COM6 and COM9

Windows CE6.0

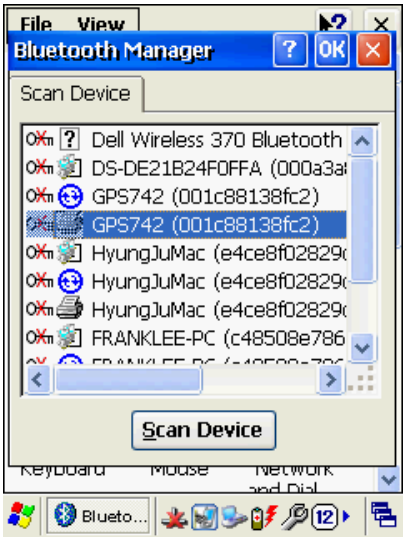
1. Power on Bluetooth module. (Go to **Wireless Manager** to turn on Bluetooth)
2. Click Start ▶ **Settings** ▶**Control Panel** ▶ **Bluetooth Device Properties**



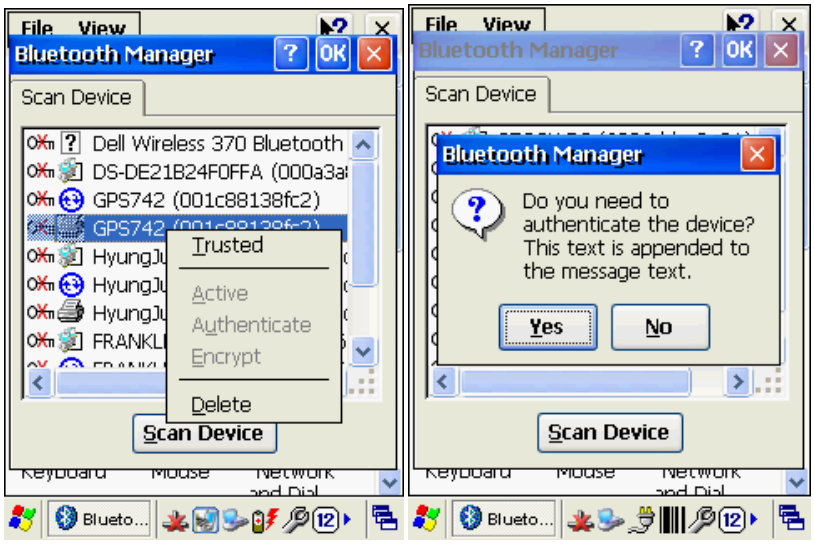
3. Click **Scan Device**



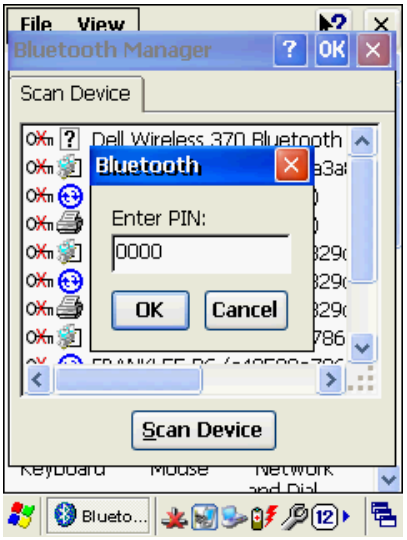
4. Select your Bluetooth device and double click the device name



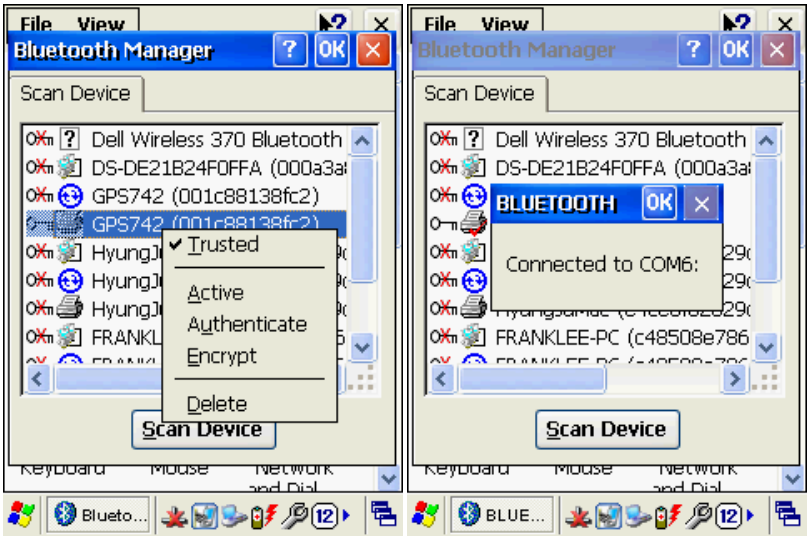
5. Select **Trusted** to open PIN input window



6. Enter your PIN number

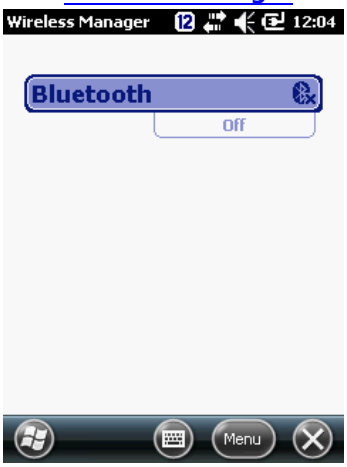


7. After your PIN number validation, double click the Bluetooth name. then select **Active**
   Your **COM** information will be displayed after success



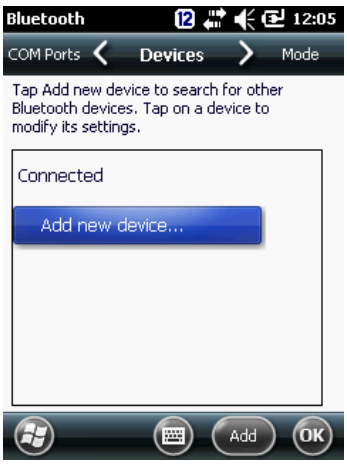
WEH6.5

1. Power on Bluetooth module. (Go to **Wireless Manager** to turn on Bluetooth)



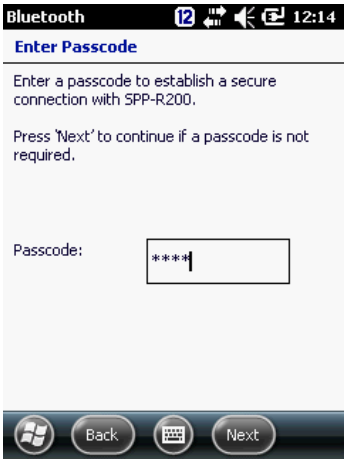
2. Click **Menu** at bottom of display and select **Bluetooth Settings**

3. Select **Add new device** to scan Bluetooth around the terminal

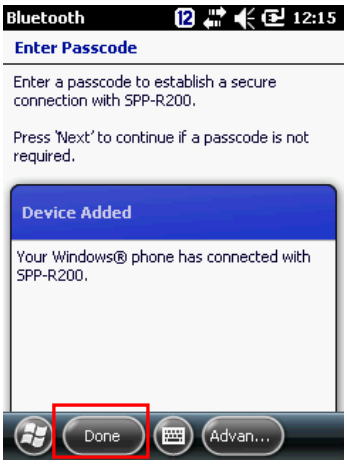


4. Select your Bluetooth device. Then press next at bottom of display menu

5. Enter **Passcode** to secure your connection



6. When your device added, press **Done** at bottom of display menu

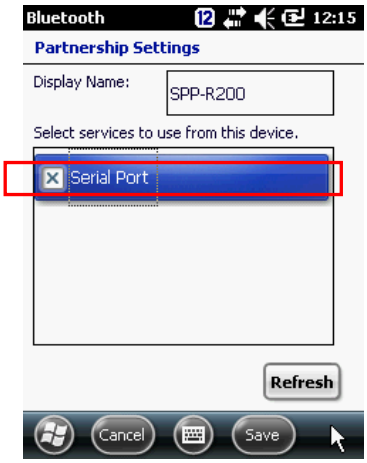


7. Assign a COMPORT. Click your Bluetooth device name

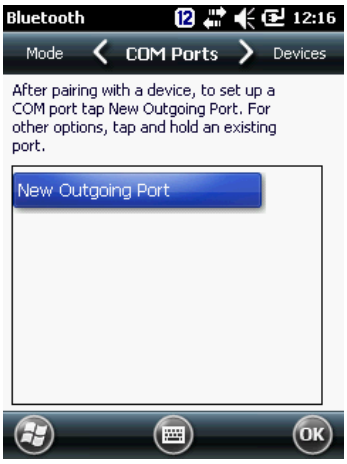
8. Select **Serial Port** as picture, and select Save at bottom of display menu

Caution

In case you don't select Serial Port at this stage, you will have error when you delete the Bluetooth profile.

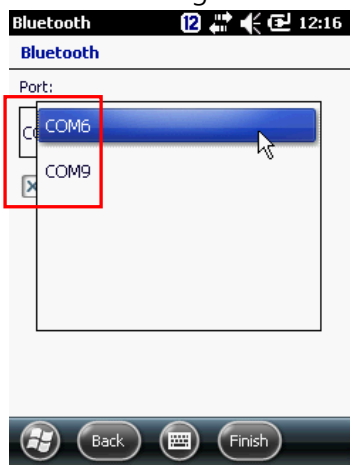


9. Select **COM Ports** at top menu, then click **New Outgoing Port**

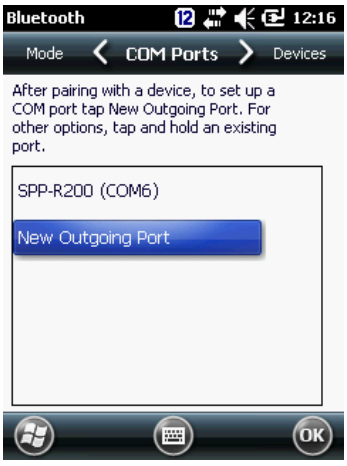


10. Select **Next** at bottom of display menu

11. Select appropriate COM Port, which is not assigned. Then select **Finish**



12. Select **OK**

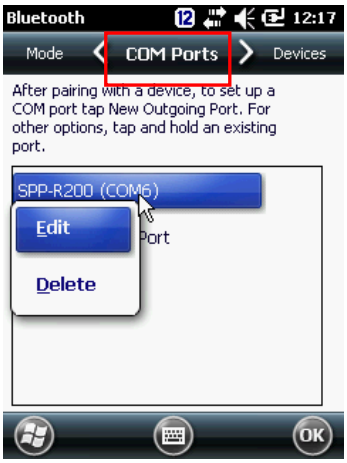


Bluetooth setting trouble

In any case you delete the assigned Bluetooth device and have to reassign SAME, or different Bluetooth device, please follow below delete and reassign comport process. Windows Mobile 6.5 is keeping the last registry record, and it interferes reassigning the Bluetooth device to the same port.

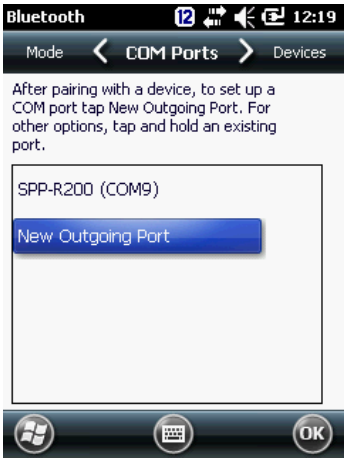
Microsoft Windows Mobile 6.5 recommends step 8 **"Select services to use from this device"**
If you have forgotten this step, you need to delete the assigned profile, and resetting process.

1. Delete the assigned COM. Or cold boot to delete registry value.



2. Resetting Bluetooth in proper way. Make sure to check Step 8 **"Select services to use from this device"**

3. Set **COMPORT** again.



4. When you delete the assigned **COMPORT**, then it shall be deleted all information including recorded registry.


Bluetooth
12:19
COM Ports
Devices
Mode
Tap Add new device to search for other Bluetooth devices. Tap on a device to modify its settings.
Connected
Add new device...
Edit
Delete
Connect
Connect
OK

Appendix Ⅰ Key Strokes

DS5 series inter-changeable different types of keyboards in simple manual way. Following tables are how to make key character entry using keypads. Characters are not mentioned at this key stroke sequence, it is also available in Soft Input Panel (SIP)

- 38-key Descriptions
- 54-key Descriptions
- DS5 and DS5 wide Alphanumeric Characters
- DS5 and DS5 wide Special Functions

DS5 and DS5 wide 34 Key Descriptions

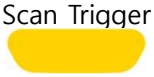
34K-key has Alpha and numeric input in a key. Also, programmable keys are available using function keys from up to F1~F10

Key	Description
Power 	Turns on the terminal and off.
Green/ Red 	Programmable keys. Blue-bar key is used when Cold boot and Factory reset
Scan Trigger 	Scanning button barcode scanner, or RFID
ESC 	Escape the current operation
Enter 	Execute selected item or function
Move Left/Right 	Moves left and right. With blue modifier on. it can adjust LCD back light levels
Move Up/Down 	Moves page, or items lists up and down. With blue modifier, it can adjust volume level
Alphanumeric 	Input numeric in default. With orange modifier, it can switch numeric to alphabet character input
Tab/Back Tab 	Tabulator key which is used to advance the cursor to the next tab stop. With Orange modifier on, the function switch to back tab.
Shift 	It is modifier key which is used to type capital letters and other alternative upper characters.
Control 	It is modifier key which, when pressed in conjunction with another key, performs a special operation, for example Ctrl+C. similar to the Shift key.

	Pressing Blue modifier key, the function change to Alt key
Space/ Back Space 	Space: its main purpose is to conveniently enter a space. Back Space: it moves the display cursor one position backwards, delete the character at that position. And shift back the text after that position by one position.
Function 	Programmable key buttons. Default F1~F5, press blue modifier key for F6~F10
Orange Modifier 	Function key to input Alphabet. Pressing 1 time is to apply single effect and back to default. Press 2 times to keep the function continuously.
Blue Modifier 	Function key to execute special function, or special characters. Press 1 time is to apply single effect and press 2 times to keep its function continuously.
LCD lighting Control 	It controls LCD back light. Press the button to display brightest, and press again to the dim status you had set using left/right button

DS5 and DS5 wide 54 Key Description

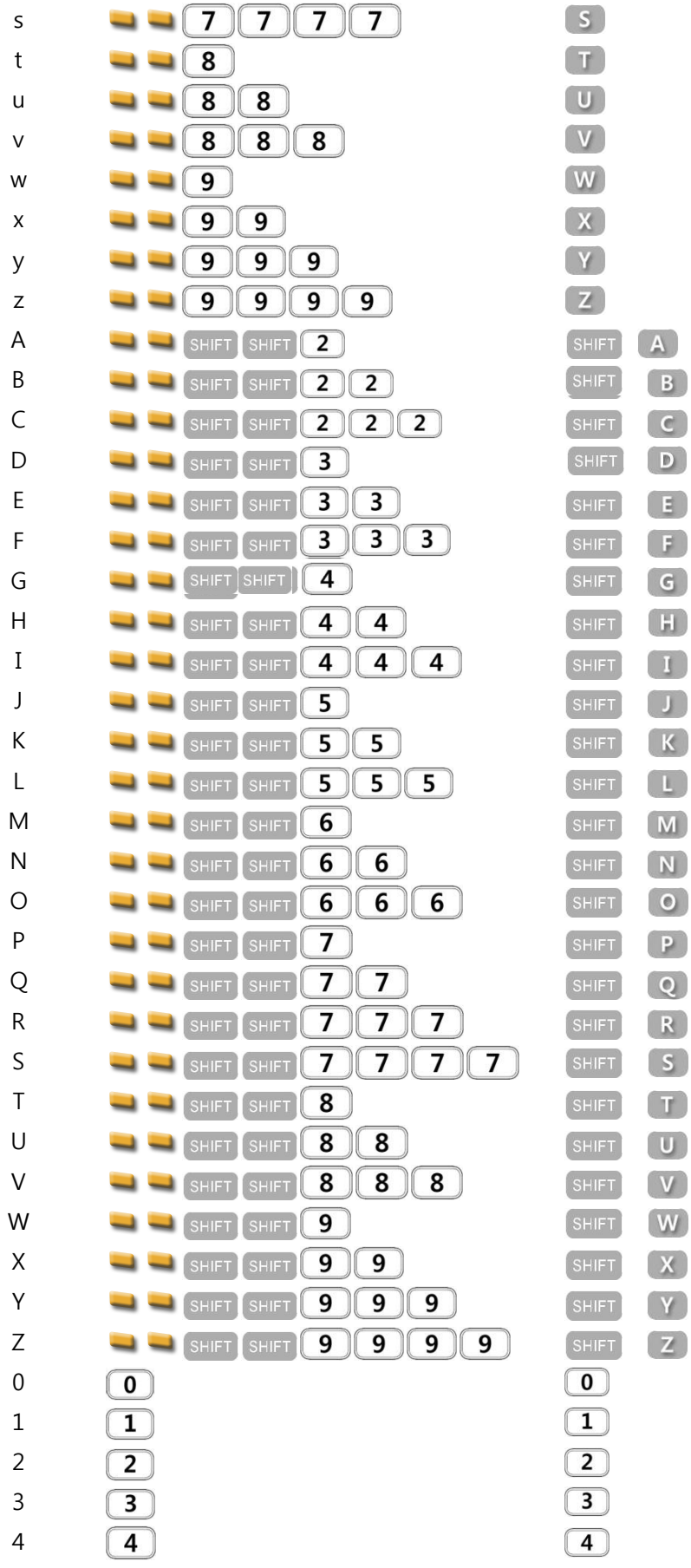
54 key has full alpha-numeric key board. Programmable keys are able to be assigned from F1 to F20 using modifier keys.

Key	Description
Power 	Turns on the terminal and off.
Green/ Red 	Programmable keys. Blue-bar key is used when Cold boot and Factory reset
Scan Trigger 	Scanning button barcode scanner, or RFID
ESC 	Exit the current operation
Tab 	Tabulator key which is used to advance the cursor to the next tab stop. With Orange modifier on, the function switch to back tab.
Enter 	Execute selected item or function
Move Left/Right 	Moves left and right. With blue modifier on. it can adjust LCD back light levels
Page Up/Down 	Moves page, or items lists up and down. With blue modifier, it can adjust volume level
Numeric 	Input numeric. Execute preset function, or application by your IT desk, press blue modifier for F1~F10 and orange modifier for F11 ~ F20

Alphabet 	Input alphabet. Default is lower characters. Press SHIFT to input upper characters.
Shift 	It is modifier key which is used to type capital letters and other alternative upper characters.
Control 	It is modifier key which, when pressed in conjunction with another key, performs a special operation, for example Ctrl+C. similar to the Shift key. Pressing Blue modifier key, the function change to Alt key
Back Space 	It moves the display cursor one position backwards, delete the character at that position. And shift back the text after that position by one position. Press Blue modifier for Space function.
Modifier (Orange) 	Function key to access F11 ~F20
Modifier (Blue) 	Function key to access F1~F10 and special characters and features
LCD lighting Control 	It controls LCD back light. Press the button to display brightest, and press again to the dim status you had set using left/right button

DS5 and DS5 wide Alphanumeric Characters

Character	Numeric Keypad	Full Alpha Numeric Keypad
a	2	A
b	2 2	B
c	2 2 2	C
d	3	D
e	3 3	E
f	3 3 3	F
g	4	G
h	4 4	H
i	4 4 4	I
j	5	J
k	5 5	K
l	5 5 5	L
m	6	M
n	6 6	N
o	6 6 6	O
p	7	P
q	7 7	Q
r	7 7 7	R


s 7 7 7 7 S
t 8 T
u 8 8 U
v 8 8 8 V
w 9 W
x 9 9 X
y 9 9 9 Y
z 9 9 9 9 Z
A SHIFT SHIFT 2 SHIFT A
B SHIFT SHIFT 2 2 SHIFT B
C SHIFT SHIFT 2 2 2 SHIFT C
D SHIFT SHIFT 3 SHIFT D
E SHIFT SHIFT 3 3 SHIFT E
F SHIFT SHIFT 3 3 3 SHIFT F
G SHIFT SHIFT 4 SHIFT G
H SHIFT SHIFT 4 4 SHIFT H
I SHIFT SHIFT 4 4 4 SHIFT I
J SHIFT SHIFT 5 SHIFT J
K SHIFT SHIFT 5 5 SHIFT K
L SHIFT SHIFT 5 5 5 SHIFT L
M SHIFT SHIFT 6 SHIFT M
N SHIFT SHIFT 6 6 SHIFT N
O SHIFT SHIFT 6 6 6 SHIFT O
P SHIFT SHIFT 7 SHIFT P
Q SHIFT SHIFT 7 7 SHIFT Q
R SHIFT SHIFT 7 7 7 SHIFT R
S SHIFT SHIFT 7 7 7 7 SHIFT S
T SHIFT SHIFT 8 SHIFT T
U SHIFT SHIFT 8 8 SHIFT U
V SHIFT SHIFT 8 8 8 SHIFT V
W SHIFT SHIFT 9 SHIFT W
X SHIFT SHIFT 9 9 SHIFT X
Y SHIFT SHIFT 9 9 9 SHIFT Y
Z SHIFT SHIFT 9 9 9 9 SHIFT Z
0 0 0
1 1 1
2 2 2
3 3 3
4 4 4

5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

DS5 and DS5 wide Special Functions

Character	Numeric Keypad	Full Alpha Numeric Keypad
. Decimal/Full stop	.	.
OK OK	1	
+ Plus	1	A
- Hyphen/Minus	2	B
***** Asterisk	3	C
/ Slash(Punctuation)	4	D
# Number Sign	6	M
Start Menu	.	.
= Equals		E
< Less-than		F
> Greater-than		G
: Colon		H
; Semicolon		I
, Comma	.	J
?		K

Question

@

@

$

Dollar

%

Percent

^

Caret

&

Ampersand

‘

Apostrophe

“

Quotation

(

Parentheses

)

Parentheses

|

Vertical bar

~

Tilde

!

Exclamation

Chapter 4: Admin Manual

P/N (Product Number) Structure

1	2	3	4	5	6	7	8	9	10	11	12	13
Model	OS	Barcode	Bluetooth	Camera	WWAN	GPS	WLAN	LCD	RFID	Resolution	Keypad	Language
DS5	6: CE6.0 7: WEH6.5	1: SE955 2: 5000SR 3: 5100SR 4: 5300SR 5: 5300HD 6: N5680 7: N5600SR 8: N5600HD 9: SE4500 L: SE965 M: uE966 X: Void	F: 2.1+EDR	5: 5Mega X: Void	L: LGT 1X C: SKT 1X K: KT 3G 7: 2.5GSM 8: 3.7GSM X: Void	U: U-blox X: Void	3: a/b/g 4: b/g/n X: Void	C: Casio M: Micro	L: LF H: HF U: UHF X: Void	Q: QVGA V: VGA W:WVGA	3: 34 key 5: 54 key	KR: Korean EN: English CN: Chinese

S/N (Serial Number) Structure

1	2	3	4	5	6	7	8	9	10	11	12	13
Model & OS	Barcode	Bluetooth	Camera	WWAN	GPS	WLAN	Year	Month	Production Number			
1: CE6.0 4.3" 2: WEH6.5 4.3" 6: CE6.0 3.5" 8: WEH 6.5"	1: SE955 2: 5000SR 3: 5100SR 4: 5300SR 5: 5300HD 6: N5680 7: N5600SR 8: N5600HD 9: SE4500 L: SE965 M: uE966 X: Void	F: 2.1+EDR	5: 5Mega X: Void	L: LGT 1X C: SKT 1X K: KT 3G 7: 2.5GSM 8: 3.7GSM X: Void	U: U-blox X: Void	3: a/b/g 4: b/g/n X: Void	G:2014 H:2015 I:2016 J:2017 K:2018	A: Jan B: Feb C: Mar D: Apr E: May F: Jun G: Jul H: Aug I: Sep J: Oct K: Nov L: Dec	1~9	1~9	1~9	1~9

SDK

Windows CE6.0: Please download from below link.
https://www.dropbox.com/s/0mdz2s9upula5d9/DS5_SDK.msi

WEH6.5: DS5 uses Microsoft providing SDK. To use DTK (Developer Tool Kit), please install SDK (Software Development Kits) first.

WEH 6.5 SDK & DTK
Windows Mobile 6 Professional and Standard Software Development Kits Refresh
http://www.microsoft.com/download/en/details.aspx?id=6135

Windows Mobile 6 Localized Emulator Images
http://www.microsoft.com/download/en/details.aspx?id=7974

Windows Mobile 6.5.3 Developer Tool Kit
http://www.microsoft.com/download/en/details.aspx?id=5389

Setup. Ini File

This file is to setting your PDA behavior when you boot the device.
You can control the device as below using the file.

- Registry registration
- File copy
- File delete
- Short cut to idle screen
- Executable file running

Location of SetupApp.ini file

Windows CE6.0: ₩Nand₩MBApp₩
WEH 6.5: ₩Nand₩DSICApp₩

Section

Each control defined by sections, and it is as following
"[Section]"
"Reset type"
"Feature description"

Section enclosed with **[** and **]**
Available section types are as following

1. [REGISTRY]

2. [FILECOPY]
3. [DELETEFILE]
4. [SHORTCUT]
5. [EXECUTE]

Reset Type

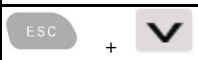
Below is type of reset and the device behaviors

Reset Type	Behavior	Remarks
ResetType=0	Applicable when all booting	
ResetType=1	Applicable when factory reset, Clean boot	
ResetType=2	Applicable when Warm boot	
ResetType=3	Applicable when Cold boot	Only Windows CE6.0
ResetType=4	Applicable when Factory reset, Clean boot, Cold boot	Only Windows CE6.0


Note

Booting behaviors

The following table presents the results for different types of booting

Type of boot	key	Registry	Nand folder	RAM (excepting Nand)
Factory reset	 , reset	Cleared	Cleared	Cleared
Clean	 , reset	Cleared	Retained	Cleared
Cold (Windows CE6.0 only)	 + Reset, (back up battery fully discharged)	Retained	Retained	Cleared
Warm	reset	Retained	Retained	Retained

Application

Setting Registry

[REGISTRY]

ResetType=1

[HKEY_LOCAL_MACHINE₩Drivers₩Builtin₩SDBusDriver]

"Order"=dword:0

"Dll"="SDBus.dll

"Prefix"="SDC"

Setting File copy

[FILECOPY]

ResetType=1

SrcFile=₩SetupApp.ini
DesFile=₩Nand₩SetupApp.ini

Setting File delete

[DELETEFILE]
DeleteFile=₩Nand₩aaa.txt

Setting Short cut

[SHORTCUT]
ResetType=0
FileName=₩NAND₩MBApp₩MB_BarcodeTray.exe
DestPath=₩Windows₩Desktop₩Shortcut to MB_BarcodeTray

Setting exe file

EXECUTE]
ResetType=2
FileName=₩Nand₩MBApp₩MB_BarcodeTray.exe
Argment=₩

Installing Cab file

[EXECUTE]
ResetType=4
FileName=₩Windows₩wceload.exe
Argment=/noaskdest /noui /delete 0 ₩Nand₩Install.CAB

Wi-Fi power control (on)

[REGISTRY]
ResetType=1
[HKEY_LOCAL_MACHINE₩DSIC₩WirelessPower]
"WLANPower"=dword:1

Wi-Fi profile setting

[WLAN]
ResetType=1

ConfigName=***Profile_name*** *; profile name*
SSID=***SSID_name*** *; SSID name*
TxPower=0
AuthType=0
EapType=0
PowerSave=2
WepType=***0*** *;0: none, 1: WEP, 3: WPA_PSK, 5: WPA2_PSK*
BitRate=0
RadioMode=6
PSKKey=********** *;Input password in case your WepType is WPA_PSK, or WPA2_PSK*
WEPKEY=********** *;Input password, in case your Wep Type is WEP*

[REGISTRY]
ResetType=1
[HKEY_LOCAL_MACHINE₩Comm₩SDCCF10G1₩Parms₩Configs]
"ActiveConfig"=dword:1
"NumConfigs"=dword:1

[REGISTRY]
ResetType=1
[HKEY_LOCAL_MACHINE₩Comm₩SDCCF10G1₩Parms₩Configs₩GlobalConfig]
"autoProfile"=dword:0

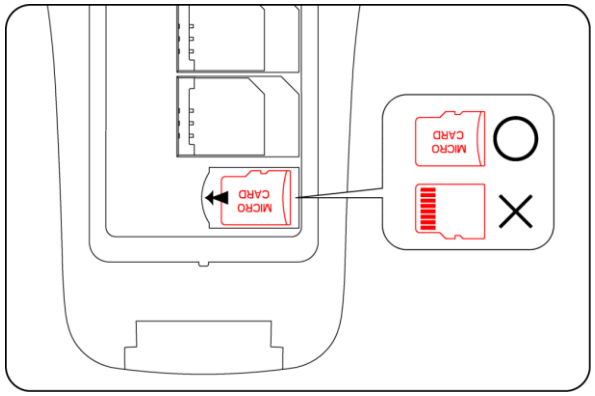
OS Update

Windows CE6.0/ WEH6.5/DS5/DS5 Wide

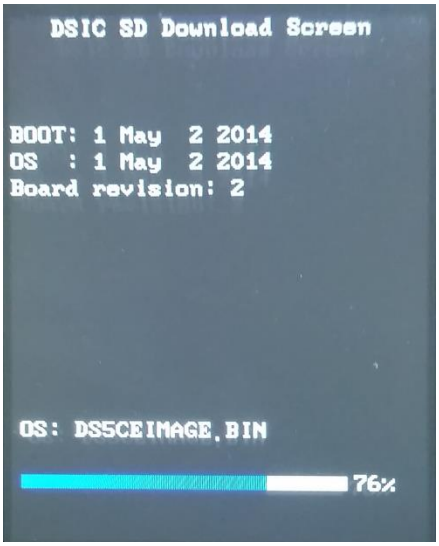
Caution

When you use OS update with micro SD card, please make sure the card is formatted, and battery is fully charged.

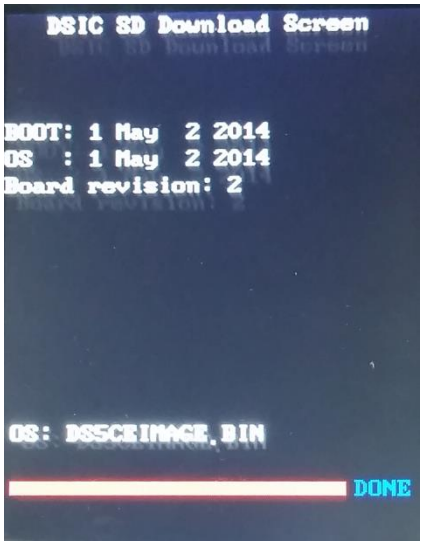
1. Copy the firmware image to root folder of the SD card
2. Input micro SD card into terminal



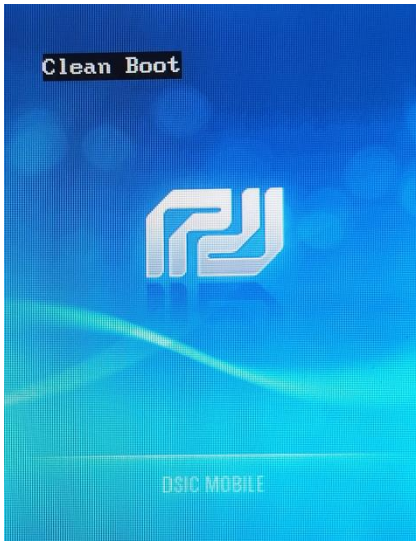
3. While Pressing and holding ESC 2 together, short press RESET key for a second to enter below screen



When image.bin file is copied and installed in complete, below image will be displayed at your screen.



4. After **DONE** message like in above, press RESET button to enter **Clean Boot**



Your device will be restarted.

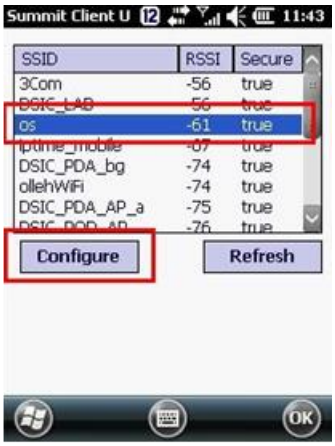
Wi-Fi connection through SCU (Summit Client Utility)

8. Power on Wi-Fi module. (Go to **Wireless Manager** to turn on Wi-Fi module)
9. Click Wi-Fi signal icon as below image

10. Click Profile tab to set your Wi-Fi

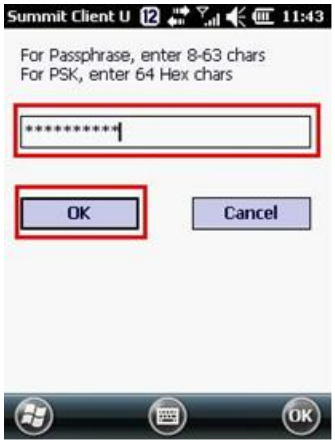
11. Click Scan to search Wi-Fi SSID around your device. If your AP's SSID is in hidden mode, you are not able to see and you need to input manually.

12. Select your SSID, and click **Configure**



13. Select **Yes** to save your SSID. This process to save your SSID to the device not to re-input the SSID on your device.

14. Input your network password. Then **OK**.

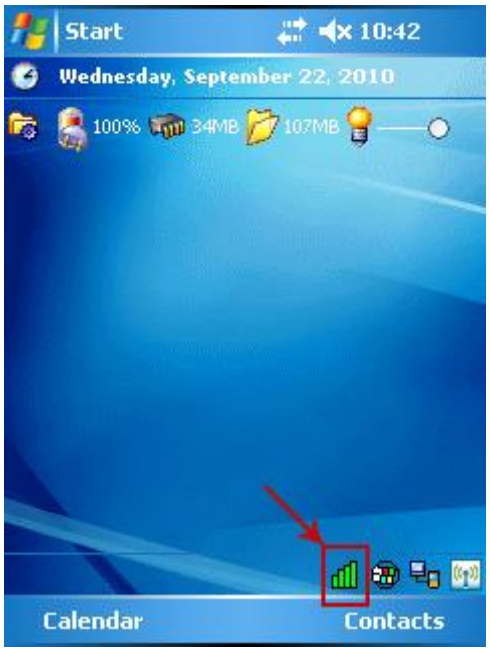


15. Press **Commit.** Go to **Main** tab to select your saved profile.

16. Select your profile at **Active Profile**

Microsoft Zero Config is not in active when you use SCU

On Windows CE6.0 or WEH6.5, Summit software includes a service that displays an icon in the Windows System Tray. This icon provides a visual status for the Summit radio in the device and it provides access to the SCU application.



Note: Tap the icon to launch the SCU application.

The service is active and displays an icon in the System Tray only when all of the following conditions are met:

- A Summit radio is installed in the device or inserted in an external slot in the device.
- The device is active.
- Windows Zero Config (WZC) is not active.
- The SCU Tray Icon global setting is On (the default setting).

When the service is active, it queries the radio every three seconds for connection status. Based on the radio's response to the query, the service displays one of the following icons:

Table: SCU Tray Icons

	The radio is not associated/authenticated to an AP.
	The signal strength (RSSI) for the current AP (to which the radio is associated) is -90 dBm or weaker, which means that a Summit 802.11b/g radio will operate at 802.11b data rates only.
	The RSSI for the current AP is stronger than -90 dBm but not stronger than -70 dBm, which means that a Summit radio will operate at 802.11g or 802.11a data rates that are less than 54 Mbps
	The RSSI for the current AP is stronger than -70 dBm but not stronger than -50 dBm, which means that a Summit radio should operate consistently at 54 Mbps
	The RSSI for the current AP is stronger than -50 dBm.

On most CE devices, the System Tray icon is not visible while SCU is running, but the service remains active.

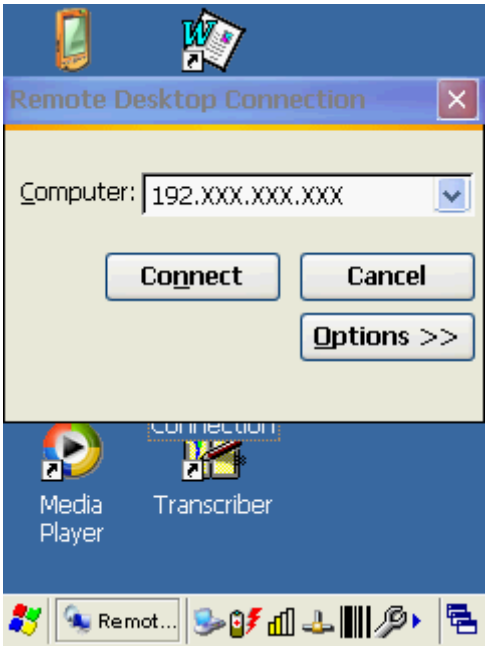
Remote Desktop Connection

 **Caution**

Make sure your device has been connected to your network

Windows CE6.0

1. Click **Remote Desktop Connection** on idle screen
2. Input your IP address of your server computer, then click **Options>>**



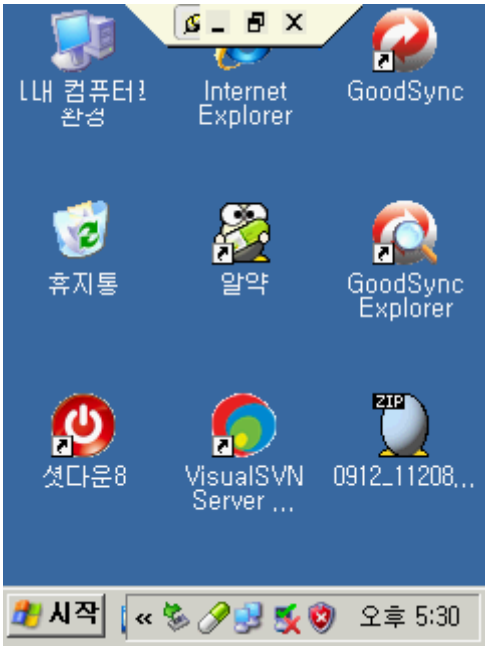
3. Select **Local Resources** tab. and select **On the local computer** at **Keyboard** menu. Then press ENT key.

Caution

Enter key must be used in PDA keypad

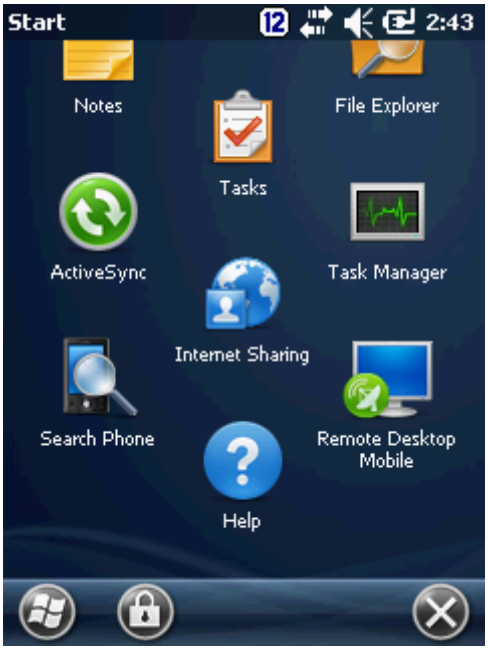
4. Input your credentials to connect the local computer, then click **OK**

5. Your device will be connected to the local computer



WEH6.5

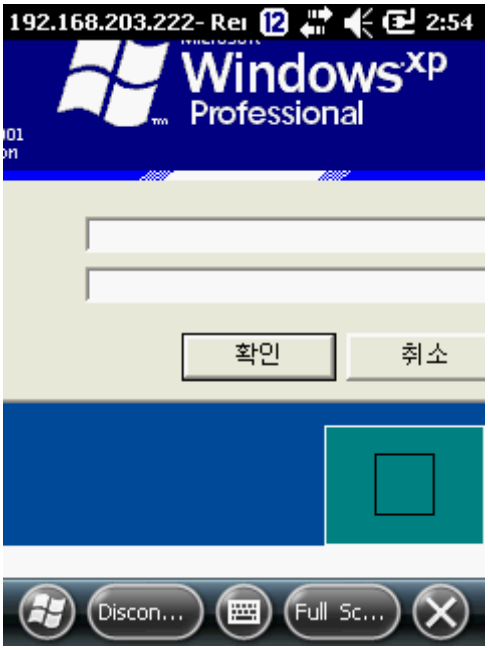
1. Click **Start** , scroll down screen and click **Remote Desktop Mobile**



2. Input your local computer information

Caution

In case you don't input necessary information, you will see below log in screen to require information.



3. Your local screen will be displayed at the device

DS5 Key map (34 Key & 54 key)

CE6.0 & WEH6.5 Common

GPRS Connection

Before you programming GPRS, you may need following 2 files.

- cmsample.zip : Reference project to make sample
- ConnectionManager_Sample_CSharp.zip: A sample referred from above file

Download files at below link
https://www.dropbox.com/sh/hdxre34npe6zraj/AABvfEB-AzDK6Vg89_MCO3Yqa

Caution

Before use the program,

- ✓ Beside the phone modem, turn off all your wireless radios
- ✓ Disconnect Active Sync with PC

Setting APN (Access Point Name)

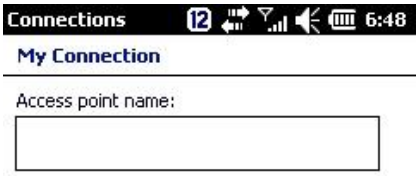
1. Select Phone icon at **Icon Bar**

2. Click **Settings**

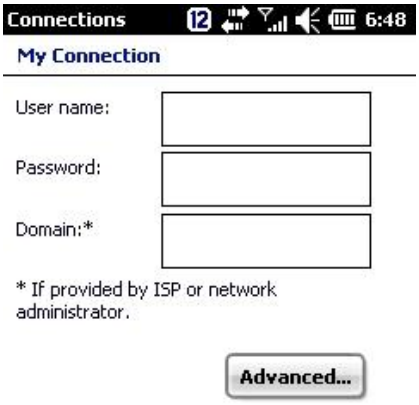
3. Click "**Add a new modem connection**"

4. Set your name at **Enter a name for the connection.** Select **Cellular Line (GPRS).** Then press **Next**

5. Check APN address with your Telecom operator to fill in Access point name. Click **Next**

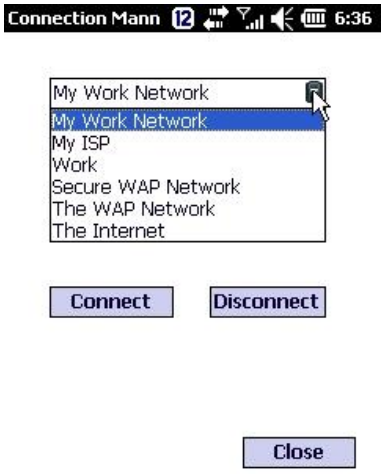


6. Click **Finish**

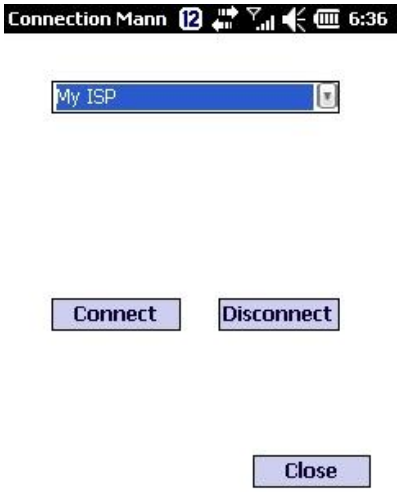


Using Connection Manager Sample

1. Select **MY ISP** at combo box

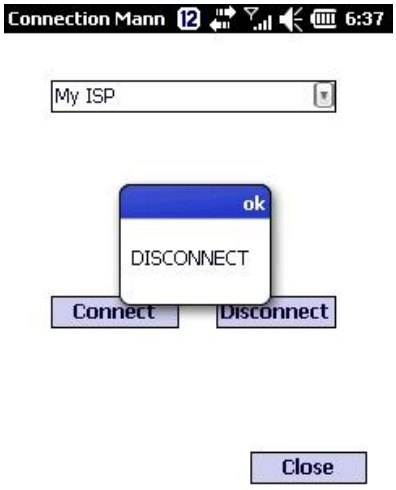


2. Select **Connect**



3. If GPRS is connecting properly, you will see the screen as below

4. If you want to disconnect GPRS, press **Disconnect** button

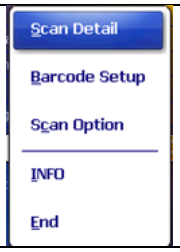


Barcode Tray

DS5 and DS5 wide uses same **Barcode tray** regardless operation system in Windows CE 6.0 and WEH 6.5.

1D Laser

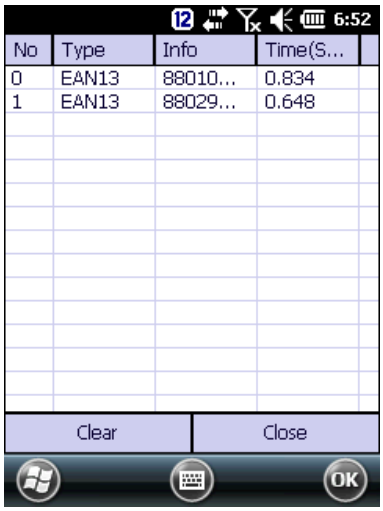
1D Barcode

Image	Menu lists	Details
	Scan Detail	View to detailed barcodes
	Barcode Setup	Setting by barcode types
	Scan Option	Scanning setting
	INFO	Barcode Tray version information
	End	Closing barcode tray program

Scan Detail

It is test function barcode scanning is operating properly. It shows;

- Type: Type of barcode
- Info: Contents in barcode
- Time(Sec): Time to scanning

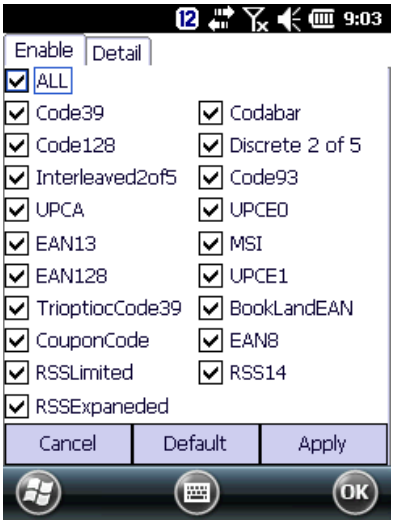


Barcode Setup (Enabling tab)

Setting to able, or disable bar type to read barcode, or factory default barcode tray

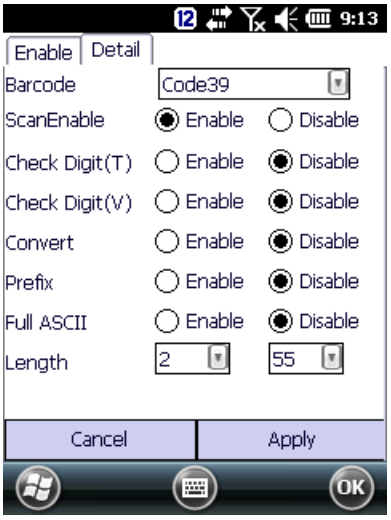
Enabling barcode types on Factory default

- Code39, Code128, Interleaved2of5, UPCA, UPCE0, EAN13, EAN128, EAN8



Barcode Setup (Detailed tab)

Setting option by barcode types such as length, change, or check sum



Scan Option (Option tab)

Setting Time out, Prefix/ Suffix, Transfer Method

Timeout: Setting barcode beam lighting interval per pressing a scanning button

TransMethod: Barcode value transfer method.

- Keyboard: virtual key typing effect when input barcode value. It delivers 1 character by 1 character
- Clipboard: delivery all barcode value at 1 time like copy and paste effect.

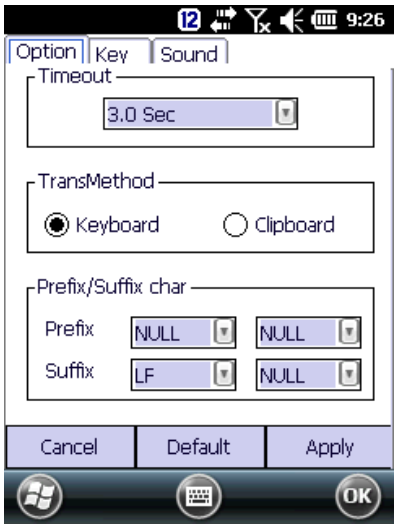
Prefix/ Suffix: additional ASCI code add function from original barcode value. You can set 2 additional value in front of original barcode value (Prefix), or after (Suffix)

Please refer ASCII code for detailed information. (http://www.asciitable.com/)

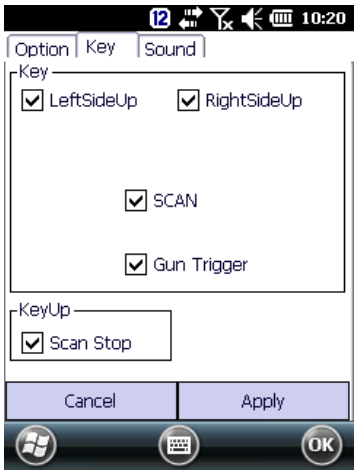
- Clipboard is not supporting Prefix, or suffix option.

DS3 Barcode Tray Default Value

Time out: 3.0S, TransMethod: Keyboard, Prefix 1: Null (0X00), Prefix 2: Null (0X00), Suffix 1: LF (0X0A), Suffix 2: Null (0X00)



Scan Option (Key tab)



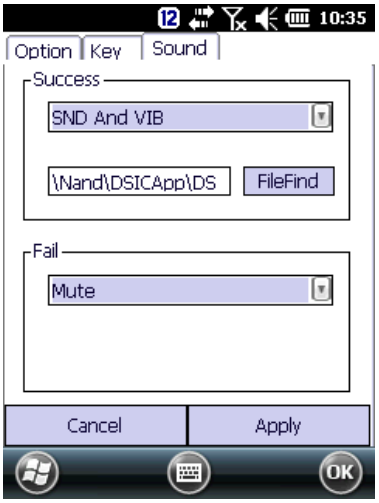
Scan Stop: When scan button getting up after pressing the button, barcode beam is out.

Un-checking Scan Stop: Scanner beam out after user set time out

Scan Option (Sound tab)

Setting notification when scan success or fail.

FileFind: setting user proprietary scanning sound



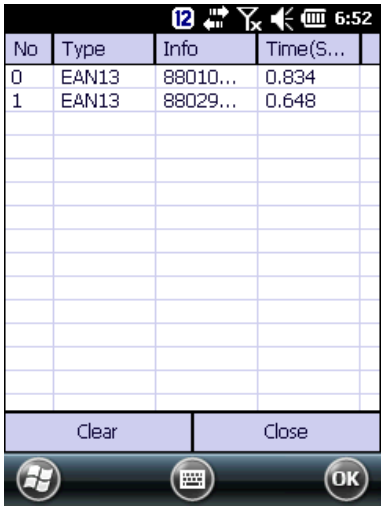
2D Imager Barcode

Image	Memu lists	Details
	Scan Detail	View to detailed barcodes
	Barcode Setup	Setting by barcode types
	Scan Option	Scanning setting
	Image Capture	Imaging Capture
	INFO	Barcode Tray version information
	End	Closing barcode tray program

Scan Detail

It is test function barcode scanning is operating properly. It shows;

- Type: Type of barcode
- Info: Contents in barcode
- Time(Sec): Time to scanning



Barcode Setup (Enabling tab)

Setting to able, or disable bar type to read barcode, or factory default barcode tray

Special: Setting for non barcode types such as OCR

Factory Default Barcode Types

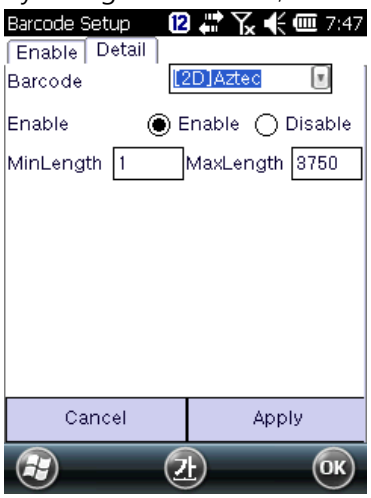
1D : ChinaPost, Codabar, Code39, CODE93, Code128, CouponCode, EAN13, IATA25, INT25, Mx25, PLESSEY, Posicode, Strt25, Telepen, UPCA

2D : AusPost, Aztec, Code16k, Code49, IDTag, KoreaPost, MicroPDF, PDF417, QR, USPS4CB

Barcode Setup (Detail tab)

Setting option by barcode types such as length, change, or check sum

Caution: Barcode option change may change result value, or barcode type in some case



Scan Option (Option tab)

Setting Time out, Prefix/ Suffix, Transfer Method

DS3 Barcode Tray Default Value

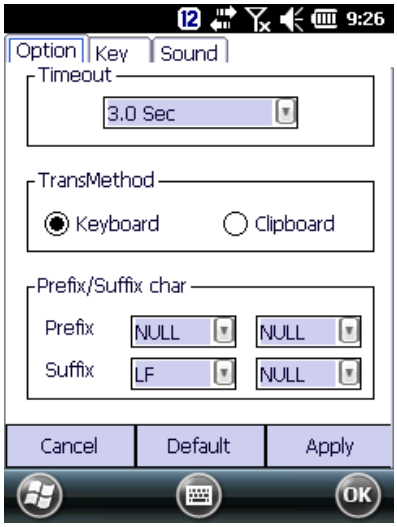
Time out: 3.0S, TransMethod: Keyboard, Prefix 1: Null (0X00), Prefix 2: Null (0X00), Suffix 1: LF (0X0A), Suffix 2: Null (0X00)

Timeout: Setting barcode beam lighting interval per pressing a scanning button

TransMethod: Barcode value transfer method.

- Keyboard: virtual key typing effect when input barcode value. It delivers 1 character by 1 character
- Clipboard: delivery all barcode value at 1 time like copy and paste effect.

Prefix/ Suffix: additional ASCII code add function from original barcode value. You can set 2 additional **char** in front of original barcode value (Prefix), or after (Suffix)



Caution

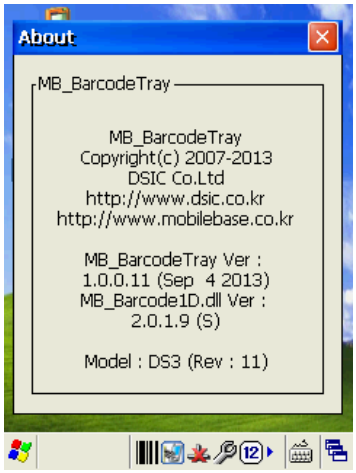
Transmethod **"Clipboard"** is not supporting Prefix, or suffix option.

Required Prefix/ Suffix enabling application version from

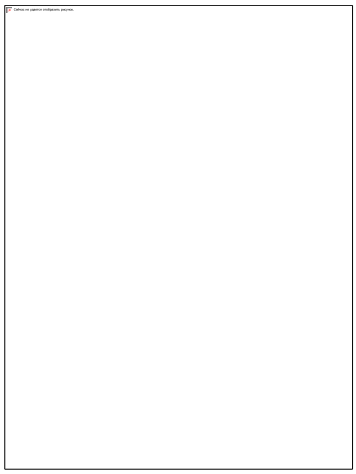
OS	Windows CE		Windows Mobile	
Scanner Type	1D	2D	1D	2D
Tray Version	1.0.0.11		3.0.2.5	
DLL version	2.0.1.9	2.0.0.19	3.0.2.5	3.0.0.14

Example) Applying "Ctrl+F" in prefix

1. Check your Barcode Tray and Scanner DLL is higher than **Required Prefix/ Suffix enabling application version described above**



2. Select "DC1" at 1st Char, and "F" at 2nd Char in Prefix



3. ASCII Table

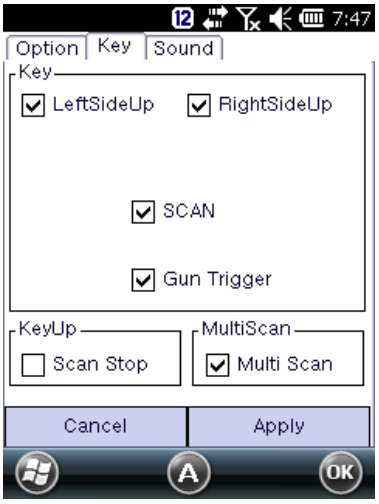
DEC	HEX	OCT	Char	HTML Number	Description
0	0	000	NUL	&#000;	Null char
1	1	001	SOH	&#001;	Start of Heading
2	2	002	STX	&#002;	Start of Text
3	3	003	ETX	&#003;	End of Text
4	4	004	EOT	&#004;	End of Transmission
5	5	005	ENQ	&#005;	Enquiry
6	6	006	ACK	&#006;	Acknowledgment
7	7	007	BEL	&#007;	Bell
8	8	010	BS	&#008;	Back Space
9	9	011	HT		Horizontal Tab
10	0A	012	LF
Line Feed
11	0B	013	VT	&#011;	Vertical Tab
12	0C	014	FF		Form Feed
13	0D	015	CR
Carriage Return

14	0E	016	SO	&#014;	Shift Out / X-On
15	0F	017	SI	&#015;	Shift In / X-Off
16	10	020	DLE	&#016;	Data Line Escape, Shift
17	11	021	DC1	&#017;	Device Control 1 (oft. XON), Control
18	12	022	DC2	&#018;	Device Control 2, VK_MENU, ALT
19	13	023	DC3	&#019;	Device Control 3 (oft. XOFF), VK_PAUSE
20	14	024	DC4	&#020;	Device Control 4, VK_CAPITAL
21	15	025	NAK	&#021;	Negative Acknowledgement
22	16	026	SYN	&#022;	Synchronous Idle
23	17	027	ETB	&#023;	End of Transmit Block
24	18	030	CAN	&#024;	Cancel
25	19	031	EM	&#025;	End of Medium
26	1A	032	SUB	&#026;	Substitute
27	1B	033	ESC	&#027;	Escape
28	1C	034	FS	&#028;	File Separator
29	1D	035	GS	&#029;	Group Separator
30	1E	036	RS	&#030;	Record Separator
31	1F	037	US	&#031;	Unit Separator
32	20	040			Space
33	21	041	!	!	Exclamation mark
34	22	042	"	"	Double quotes (or speech marks)
35	23	043	#	#	Number
36	24	044	$	$	Dollar
37	25	045	%	%	Procenttecken
38	26	046	&	&	Ampersand
39	27	047	'	'	Single quote
40	28	050	(	(	Open parenthesis (or open bracket)
41	29	051	)	)	Close parenthesis (or close bracket)
42	2A	052	*	*	Asterisk
43	2B	053	+	+	Plus
44	2C	054	,	,	Comma
45	2D	055	-	-	Hyphen
46	2E	056	.	.	Period, dot or full stop
47	2F	057	/	/	Slash or divide
48	30	060	0	0	Zero
49	31	061	1	1	One
50	32	062	2	2	Two
51	33	063	3	3	Three
52	34	064	4	4	Four

53	35	065	5	5	Five
54	36	066	6	6	Six
55	37	067	7	7	Seven
56	38	070	8	8	Eight
57	39	071	9	9	Nine
58	3A	072	:	:	Colon
59	3B	073	;	;	Semicolon
60	3C	074	<	<	Less than (or open angled bracket)
61	3D	075	=	=	Equals
62	3E	076	>	>	Greater than (or close angled bracket)
63	3F	077	?	?	Question mark
64	40	100	@	@	At symbol
65	41	101	A	A	Uppercase A
66	42	102	B	B	Uppercase B
67	43	103	C	C	Uppercase C
68	44	104	D	D	Uppercase D
69	45	105	E	E	Uppercase E
70	46	106	F	F	Uppercase F
71	47	107	G	G	Uppercase G
72	48	110	H	H	Uppercase H
73	49	111	I	I	Uppercase I
74	4A	112	J	J	Uppercase J
75	4B	113	K	K	Uppercase K
76	4C	114	L	L	Uppercase L
77	4D	115	M	M	Uppercase M
78	4E	116	N	N	Uppercase N
79	4F	117	O	O	Uppercase O
80	50	120	P	P	Uppercase P
81	51	121	Q	Q	Uppercase Q
82	52	122	R	R	Uppercase R
83	53	123	S	S	Uppercase S
84	54	124	T	T	Uppercase T
85	55	125	U	U	Uppercase U
86	56	126	V	V	Uppercase V
87	57	127	W	W	Uppercase W
88	58	130	X	X	Uppercase X
89	59	131	Y	Y	Uppercase Y
90	5A	132	Z	Z	Uppercase Z
91	5B	133	[	[	Opening bracket

92	5C	134	₩	\	Backslash
93	5D	135	]	]	Closing bracket
94	5E	136	^	^	Caret - circumflex
95	5F	137	_	_	Underscore
96	60	140	`	`	Grave accent
97	61	141	a	a	Lowercase a
98	62	142	b	b	Lowercase b
99	63	143	c	c	Lowercase c
100	64	144	d	d	Lowercase d
101	65	145	e	e	Lowercase e
102	66	146	f	f	Lowercase f
103	67	147	g	g	Lowercase g
104	68	150	h	h	Lowercase h
105	69	151	i	i	Lowercase i
106	6A	152	j	j	Lowercase j
107	6B	153	k	k	Lowercase k
108	6C	154	l	l	Lowercase l
109	6D	155	m	m	Lowercase m
110	6E	156	n	n	Lowercase n
111	6F	157	o	o	Lowercase o
112	70	160	p	p	Lowercase p
113	71	161	q	q	Lowercase q
114	72	162	r	r	Lowercase r
115	73	163	s	s	Lowercase s
116	74	164	t	t	Lowercase t
117	75	165	u	u	Lowercase u
118	76	166	v	v	Lowercase v
119	77	167	w	w	Lowercase w
120	78	170	x	x	Lowercase x
121	79	171	y	y	Lowercase y
122	7A	172	z	z	Lowercase z
123	7B	173	{	{	Opening brace
124	7C	174	|			Vertical bar
125	7D	175	}	}	Closing brace
126	7E	176	~	~	Equivalency sign - tilde
127	7F	177	DEL	&#127;	Delete

Scan Option (Key tab)

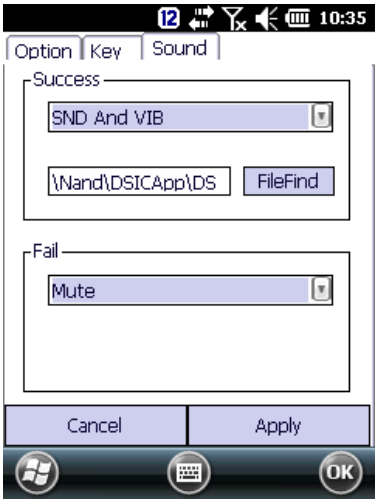


Scan Stop: When scan button getting up after pressing the button, barcode beam is out.
Un-checking Scan Stop: Scanner beam out after user set time out

Multi Scan: This is special feature at 2D barcode function. It is enabling to read continuous barcode scanning. Duplicated barcode in buffer range may skip. Buffer ranges in 2D is about 8~10 barcodes.

Scan Option (Sound tab)

Setting notification when scan success or fail.
FileFind: setting user proprietary scanning sound



2D Barcode Scanner Center Aiming (N560X SR/ HD)

This feature is to modify aiming area of 2D barcode scanner to improve aiming accuracy.
When barcode labels are located very closely, and it is required to capture user's aimed barcode only, this tool provide option to scale aiming area of 2D barcode scanner.

Download DS_Barcode2DADDOPTIONS.exe file from below link

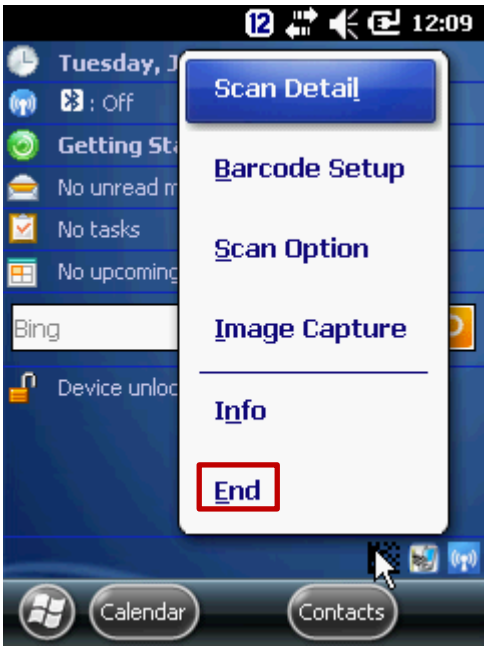
It is applicable to only N560X SR/HD 2D Imager scanner option.

https://www.dropbox.com/sh/r3zh027xuscku1o/AABYboQdIyLVTsQV90qTHCdPa?dl=0

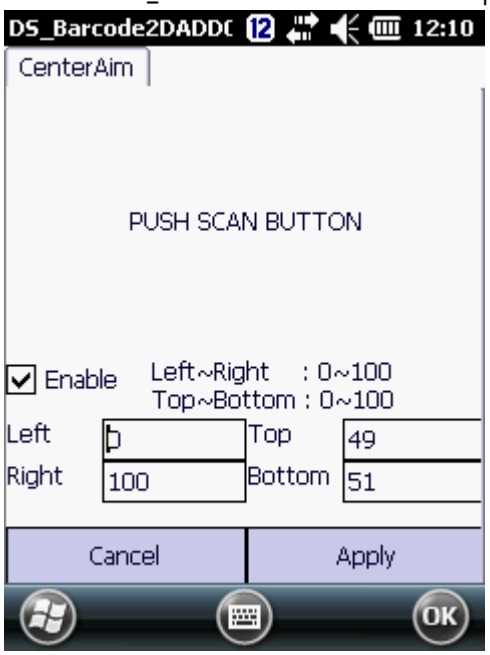
Copy to the device under **Nand₩DISCApp₩DS_BarcodeTray**

Note: It should be placed in same location with MB_Barcode2D_Gen6.dll

1. Close (End) Barcode Tray program on your device.



2. Execute **DS_Barcode2DADDOPTIONS** program and Check **Enable**



When it is not checked, Left:0, Right: 100, Top:0, Bottom: 100 as default.

3. Press **Apply**. Your setting will be saved in BarcodeGEN6Added.dat file

Barcode API

DS5 and DS5 wide use same **Barcode tray** regardless operation system in Windows CE 6.0 and WEH 6.5.

However barcode API is different between 1D, and 2D, and Windows CE 6.0 and WEH6.5

	1D Barcode API	2D Barcode API
Windows CE6.0	https://www.dropbox.com/sh/pir1vr2kxkkh80c/AAAwBHsS7U4MozZ4CRdGJzSza	https://www.dropbox.com/sh/dj1w0fbt67tsg40/AADuZHY82pR-yrnmtVhQYlBDa
WEH6.5	https://www.dropbox.com/sh/0wpou53x65al33e/AAB_6AXF1xnOilKYgZZkGYbDa	https://www.dropbox.com/sh/hias5hvu5s3dy00/AABumh7LgZ1TtrQsYM2rnVhYa

HF RFID (13.56Mhz)

RFID Summary

DS5 and DS5 wide supporting 13.56Mhz HF RFID at WEH 6.5, and Windows CE6.0. Typical reading distances are 3~9cm depends on tag types and sizes.

Development Tools

WEH 6.5: Microsoft Visual Studio 2008 C#, VS2005 C++

Supporting HF RFID tags

Contents	Description
Standards	ISO 14443A, ISO 14443B, ISO 15693, ISO 18000-3, NFC enabled, ICODE

Tag-IC

MIFARE Standard, MIFARE 4K, MIFARE Plus, MIFARE Pro, MIFARE Ultralight, MIFARE DESFire, MIFARE DESFire EV1, MIFARE SmartMX, I-CODE SLI (SL2 ICS 20), I-CODE EPC (SL2 ICS 10), I-CODE UID, (SL2 ICS11), I-CODE, NFC (Reader to Tag Mode) SLE 55Rxx, SRF55VxxP +S, SLE 66CL160S, SLE 66CLX320P, SR176, SRIX 4K, LRI 64, LRI 512,EM4135, KSW Temp Sens' Tag-it™ HF-I Pro, Jewel Tag, Sharp B, ISO 14443A Tags, ISO 14443B Tags, ISO 15693B Tags, ISO 18000-3 Tags, Master Card PayPass, and Visa paywave compliant tags

Reading DistancesUp to 9cm depending on tag and its sizeApprovals/ ComplianceRoHS compliant,

EMVCo 2.01MTBF (RFID Core⇨30,000h

DS_CommonAPI.DLL

lls\CFReader

CFReader.DLL

der.dllHID
PIDll.hHID R
libHID RF R
harp]
ample Project
VS 2005 VC
2005 VC++

F Reader Uti

RFID Control

DS CommonAPI.DLL

S ⇨

```
DSIC_RFSetPower(TRUE)
presetSettings psSettings;
psSettings.baudRate = 9600;
psSettings.protocol = 0;
RDR_OpenSingle("COM3",0,0,&psSettings)

RDR_EmptyCommRcvBuffer();
RDR_SendCommandGetData("pon","", buffer);
RDR_SendCommandGetDataTimeout("s","", buffer, 2000);
RDR_SendCommandGetData("poff","", buffer);
RDR_CloseReader();
RDR_CloseComm();
DSIC_RFSetPower(FALSE);
```

Windows CE6.0WEH 6.5PortCOM9COM3Baud Rate96009600

RFID Control DLL

DLL TypesDescriptionDS_CommonAPI.DLL· DSIC DS Common API Library

· DSAPISetRFPower

· DSAPIGetRFPower

· DSAPISetVibrator

· DSAPIKeyReMapping

· DSAPIKeyMapAllRecoveryCFReader.DLL·HID RF Reader API Library

·RDR_OpenReader

·RDR_CloseReader

·RDR_OpenComm

·RDR_OpenSingle

·RDR_CloseComm

·RDR_SendCommand

·RDR_SetReaderConfig

RFID Control Flow

UHF RFID

DS5 wide (4.3inch screen option) supports UHF RFID in connection with UHF Gun. It detailed programming source and application will be updated soon.

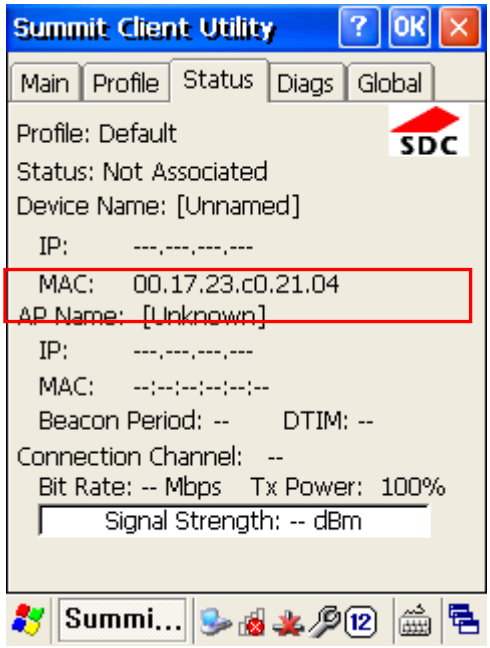
UHF GUN Specification

DescriptionValueProtocolEPC Gen2(ISO 18000-6C)Frequency860MHz to 960MHzMax TX power30dBmPower control5dBm to 30dBm (1dBm step)Hopping channels4SignalingUART , Buad rate (115200 bps)Modulation MethodPR - ASKTag Read DistanceMAX 10mMax current1.4AChannel Spacing600KHzChannel Dwell time0.4 secondsSupply Voltage3.8 to 4.2 VBuilt in Camera (T.B.D)5M Pixel

Telnet Emulator

DS5 uses Nawoo Emulator. This emulator authenticates through the device MAC address.
Please contact your sales to purchase TE Emulator with your device MAC address.

In order to check your device MAC address,
Power on Wi-Fi at **Wireless Manager**, ▶ Open **SCU** (**Summit Utility Client**) ▶ click **Status**


Summit Client Utility
OK
Main
Profile
Status
Diags
Global
SDC
Profile: Default
Status: Not Associated
Device Name: [Unnamed]
IP: ---.---.---.---
MAC: 00.17.23.c0.21.04
AP Name: [Unknown]
IP: ---.---.---.---
MAC: --:--:--:--:--:--
Beacon Period: -- DTIM: --
Connection Channel: --
Bit Rate: -- Mbps Tx Power: 100%
Signal Strength: -- dBm
Summi...

Ordering Code

Clients selectable modules

Below red printed sections are defined by manufacturers own, which is not selectable by clients

1234567**8**910111213 OSBarcode CameraWWANGPS**W**LAN RFIDResolutionKeypadLanguage**DS5**6: CE6.0

7: WEH6.51: SE955

2: 5000SR

3: 5100SR

4: 5300SR

5: 5300HD

6: N5680

7: N5600SR

8: N5600HD

9: SE4500

L: SE965

M: uE966

X: Void

F: 2.1+EDR5: 5Mega

X: VoidL: LGT 1X

C: SKT 1X

K: KT 3G

7: 2.5GSM

8: 3.7GSM

X: VoidU: U-blox

X: Void 3: a/b/g

4: b/g/n

X: Void**M: Micro**L: LF

H: HF

U: UHF

X: VoidQ: QVGA

V: VGA

W:WVGA3: 34 key

5: 54 keyKR: Korean

EN: English

CN: Chinese

1st selection criteria

Please define your configuration at yellow criteria in followings

12345678910**111213**Model**OS**BarcodeBluetoothCameraWWANGPSWLANLCDRFID**Resolution**Keypad**Language**DS5**6: CE6.0**

7: WEH6.51: SE955

2: 5000SR

3: 5100SR

4: 5300SR

5: 5300HD

6: N5680

7: N5600SR

8: N5600HD

9: SE4500

L: SE965

M: uE966

X: VoidF: 2.1+EDR5: 5Mega

X: VoidL: LGT 1X

C: SKT 1X

K: KT 3G

7: 2.5GSM

8: 3.7GSM

X: VoidU: U-blox

X: Void 3: a/b/g

4: b/g/n

X: VoidM: MicroL: LF

H: HF

U: UHF

X: Void**Q: QVGA**

V: VGA

W:WVGA3: 34 key

5: 54 keyKR: Korean

EN: English

CN: Chinese

DS5 Available Resolution

DS5 of 3.5inch has 2types of resolution. QVGA (240x320 pixels), or VGA (480x640 pixels)

In case your resolution is not fit on the terminal, you need to rescale your application size to fit into the device.

DS5 of 4.3inch has only 1 resolution. WVGA (480x800 pixels)

2nd selection criteria

Select detailed features to integrate to your terminal.

12**3**4**5678**9**10**111213ModelOSBarcodeBluetoothCameraWWANGPSWLANLCDRFIDResolutionKeypadLanguageDS56: CE6.0

7: WEH6.51: SE955

2: 5000SR

3: 5100SR

4: 5300SR

5: 5300HD

6: N5680

7: N5600SR

8: N5600HD

9: SE4500

L: SE965

M: uE966

X: VoidF: 2.1+EDR5: 5Mega

X: VoidL: LGT 1X

C: SKT 1X

K: KT 3G

7: 2.5GSM

8: 3.7GSM

X: VoidU: U-blox

X: Void 3: a/b/g

4: b/g/n

X: VoidM: MicroL: LF

H: HF

U: UHF

X: VoidQ: QVGA

V: VGA

W:WVGA3: 34 key

5: 54 keyKR: Korean

EN: English

CN: ChineseBarcode

1D Laser barcode scanners: SE955 (Motorola) is default 1D Laser scanner.

uE988 is eco 1D laser for standard reading range

2D Imager scanners: 5100SR(Honeywell) is default 2D Imager Scanner

UHF RFID: UHFT is not integrated in PDA. It will be applied at DS5 wide (4.3inch) only in conjunction with UHF Gun accessory. Some of part in device is different with general DS5. Thus it is required to mention when you make order as it is not able to change after shipment.

Windows CE6.0 is not available with any WWAN option.

Ordering Code

Your P/N will be your product ordering code.

Ordering Code Example

Order Code: DS5-61F57U4MHQ5EN

12**3**4**5678**9**10**111213ModelOSBarcodeBluetoothCameraWWANGPSWLANLCDRFIDResolutionKeypadLanguage**DS56: CE6.0**

7: WEH6.5**1: SE955**

2: 5000SR

3: 5100SR

4: 5300SR

5: 5300HD

6: N5680

7: N5600SR

8: N5600HD

9: SE4500

L: SE965

M: uE966

X: Void**F: 2.1+EDR5: 5Mega**

X: VoidL: LGT 1X

C: SKT 1X

K: KT 3G

7: 2.5GSM

8: 3.7GSM

X: Void**U: U-blox**

X: Void 3: a/b/g

4: b/g/n

X: Void**M: Micro**L: LF

H: HF

U: UHF

X: Void**Q: QVGA**

V: VGA

W:WVGA3: 34 key

5: 54 keyKR: Korean

EN: English

CN: Chinese

Hardware Repairing
Explode Table
Part Ordering Table
Disassembly & Assembly in General
FAQ

Related Files and Link

Program Files

Windows CE6.0

Windows CE 6.0 SDK

https://www.dropbox.com/s/0mdz2s9upula5d9/DS5_SDK.msi

Barcode API (1D)

https://www.dropbox.com/sh/pir1vr2kxkkh80c/AAAwBHsS7U4MozZ4CRdGJzSza

Barcode API (2D)

https://www.dropbox.com/sh/dj1w0fbt67tsg40/AADuZHY82pR-yrnmtVhQYlBDa

Camera API

https://www.dropbox.com/sh/11z3cymhz01662r/AABmMj2PSi9SFICs7R2ksChNa

WEH 6.5

GPRS Connection

https://www.dropbox.com/sh/hdxre34npe6zraj/AABvfEB-AzDK6Vg89_MCO3Yqa

Ping test program

https://www.dropbox.com/s/76rr0d3m0cpih0c/PocketPing.zip

Barcode API (1D)

https://www.dropbox.com/sh/0wpou53x65al33e/AAB_6AXF1xnOilKYgZZkGYbDa

Barcode API (2D)

https://www.dropbox.com/sh/hias5hvu5s3dy00/AABumh7LgZ1TtrQsYM2rnVhYa

Camera API

https://www.dropbox.com/sh/11z3cymhz01662r/AABmMj2PSi9SFICs7R2ksChNa

Hardware Guide

Keypad exchange: http://youtu.be/y3fIiw-obm4