Stay-Linked™

Application Mobility. Host Reliability.

Wireless Terminal Emulation

Version 10.1

Windows CE / Pocket PC / Windows Mobile

User's Guide

Stay-Linked™
Application Mobility. Host Reliability.

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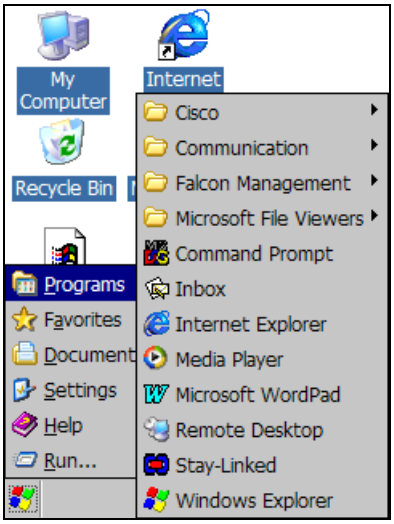
Stay-Linked Client Overview

The Stay-Linked Client software is an "ultra-thin" client that connects to a Stay-Linked Server to provide terminal emulation (5250, 3270, VT) for Windows CE, Pocket PC and Windows based family of terminals.

1.1 Starting the Stay-Linked Client

Launch Stay-Linked via the Start Menu or desktop icon: Stay-Linked can also be started by navigating to the installation directory (typically found in the Program Files\Stay-Linked directory) and running the 'staylinked.exe' program directly.



Stay-Linked™
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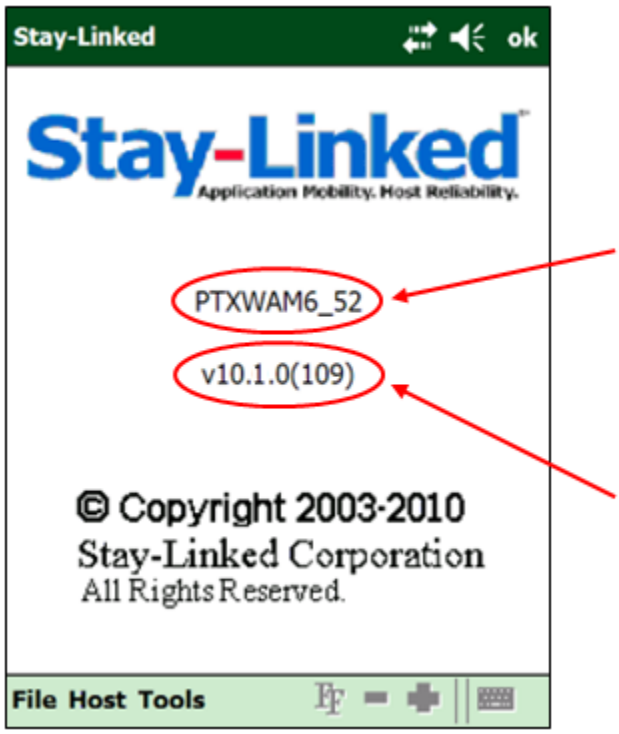
Using the Stay-Linked Client



The Stay-Linked Client application displays the Stay-Linked splash screen on startup.

Device Type: This value is used by Stay-Linked to identify the type of hardware for selection of keyboard maps, client settings, device groups, and software deployment. The default value can be configured to a new type using the Administrator's 'client settings' feature, or by manually adding a line to the staylink.ini file that specifies device_name=xxxxxxxx.

Client Version: These numbers represent the client major version, minor version, service release and (build). This guide represents the features included in all version 9.1 client software packages.

Clients running in full screen mode will display the "0 for Options". With full screen mode disabled, the client will display a File, Host, and Tools menu bar.

From here you can use menu options to:

- Exit the application
- Connect to, disconnect from and quit host sessions
- Configure the device settings
- Run Diagnostics

The sections that follow will discuss the menu options in order. Most often you will choose the "Host - Connect" menu option to start your sessions. In order for the client to establish a connection with the Stay-Linked Server it must be able to establish a UDP protocol based connection. For help configuring your network and radio settings please refer to the manufacturer documentation. Once your settings are complete, the Ping option can help confirm that connectivity has been properly established.

2.1 File Menu

The ‘File’ menu provides options for displaying the ‘About’ dialog and for exiting the application.

2.1.1 About

Select the ‘About’ option from the ‘File’ menu and the ‘About’ dialog will be displayed.

This dialogue allows a reset of the unique value used by the Stay-Linked server top identify this device. When reset, the value will be repopulated based on the hardware in which the client is installed. This is typically required only in cases when the unique ID was replicated to multiple devices by cloning the installation. This UID value is referenced in the StayLinkedManager.log file when devices connect to the server during an initial connection request.

2.1.2 Exit

Select the ‘Exit’ option from the ‘File’ menu to quit the Stay-Linked Client Application. The running Stay-Linked client instance will be removed from the device memory. Any existing connection will be maintained on the server waiting for the device to reconnect.

2.2 Host Menu

The 'Host' menu provides options for connecting to the host, disconnecting from the host, quitting a session and configuring the settings of the Stay-Linked client. Some client versions will offer a toggle SIP option, which will show or hide the soft input panel for tappable keyboard input.

2.2.1 Connect

Select the 'Connect' option from the 'Host' menu to start a connection to the Stay-Linked Server. On the terminal display you will see status messages as shown below:

Upon success you will typically see a Telnet Session sign-on screen. The various messages provided by the client are designed to help diagnose the issue. Some of the possible messages include:

Error Code esp0003 No Keyboard Map Found: This message is returned when the device type and emulation do not have a keyboard defined on your server. Adding a keyboard map can be done using the Stay-Linked Administrator console and is explained in detail in the Administrator User's Guide.

Error Code esp0004 Bad License Key: These messages are returned when the connection cannot be created because of Stay-Linked licensing issues. The Stay-Linked Administrator can be used to review the current license keys, the Stay-Linked server process' serial number, and the current number of seats in use.

Other esp00XX Error Codes: These messages are described in detail in the Administrator User's Guide troubleshooting section. If the device returns the same message multiple times, please review the Administrator User's Guide for troubleshooting tips.

Out-of-range: indicates that the device's radio is reporting that it is not associated with an access point. The first step is to review the device radio configuration and make sure it is able to reach the Stay-Linked server. If the device is able to ping your Stay-Linked server, adding a line to the device file staylink.ini always_in_range=1 will force the client to ignore the out of range detection step.

Host Timeout: indicates that the connection between the client and Stay-Linked server has failed. Occasional host timeout messages are not uncommon in a wireless environment. Continued host timeout messages indicate network difficulties and should be resolved using typical network diagnostics.

WSID Timeout and Telnet Timeout: indicates that the telnet host is not responding, or has denied the request for a telnet session. Please make sure the telnet server is enabled on your telnet host. For the iSeries, the virtual device name may not be available or cannot be created. Some versions of the Stay-Linked server may return a Telnet Timeout that may also indicate a required subsystem or QAUTOCFG is disabled. Review of the iSeries configuration, virtual device names and subsystems may be required.

2.2.2 Disconnect

Select the 'Disconnect' option from the 'Host' menu to disconnect from an active session. This option is only available if the device is connected to an active session. If you disconnect from an active session, the session remains active on the Stay-Linked Server, waiting for the device to reconnect at a later time. If you wish to terminate the active session, then select the 'Quit Session' menu option.

2.2.3 Quit Session

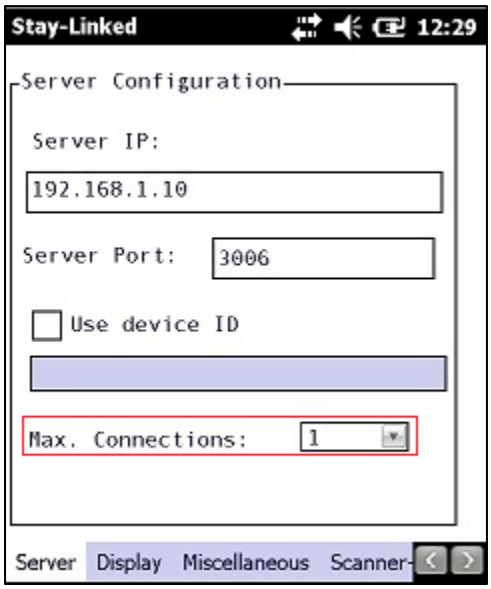
Select 'Quit Session' option from the 'Host' menu to terminate an active session. This option is only available if the device is connected to an active session. If you quit an active session, the session is removed from the Stay-Linked Server, freeing up a licensed seat.

2.2.4 Configure Host

Select the 'Configure…' option from the 'Host' menu in order to configure the device parameters. For example, in this section you can enter the Stay-Linked host address, and port number, configure display options, control the behavior of the Stay-Linked client application on the device, and adjust the scanning options for wedge scanning devices. (Scan as Wedge does not appear on all devices)

Only the most basic features are configured directly on the client. Several configuration options are available using the Client Settings feature of the Administrator. These settings are not only cold boot persistent, but can automatically be deployed to all of your devices without the need to configure each device manually. Please see the Administrator User's guide for additional details.

2.2.5 Host Tab



The settings on the host tab allow you to configure the IP and Port of the Stay-Linked Server. In cases where the device may need to connect to one of multiple Stay-Linked servers, you would configure the device to use a supplemental configuration file called servers.ini. Please see the section 4.1 below for details about the options and format of this configuration file..

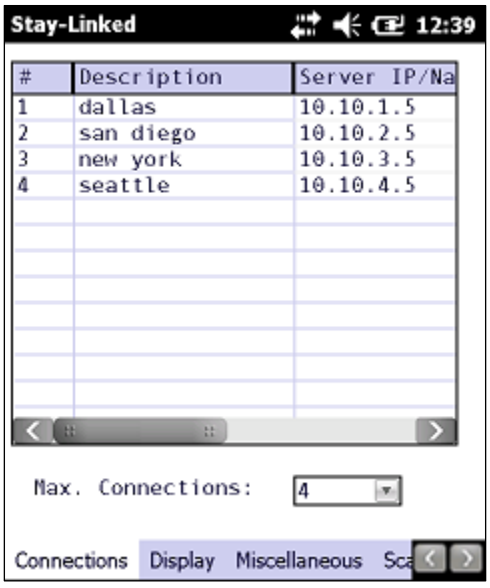
Host IP: Host name or IP address of your Stay-Linked server. The Operating System must be configured and able to resolve host names to use them as a valid address. Some client version may limit the number of characters allowed.

Host Port: Port number server is listening on. The Stay-Linked server is configured by default to listen for new connections on port 3006.

Use Device ID: Allows you to specify a [deviceid] value specific to this device. This value can be used in Stay-Linked scripts or will be used for iSeries virtual device names when the client connects to a device group that contains the [deviceid] mnemonic in the device name prefix field. Devices that do not contain a Device ID value in the Stay-Linked client will use the windows system name.

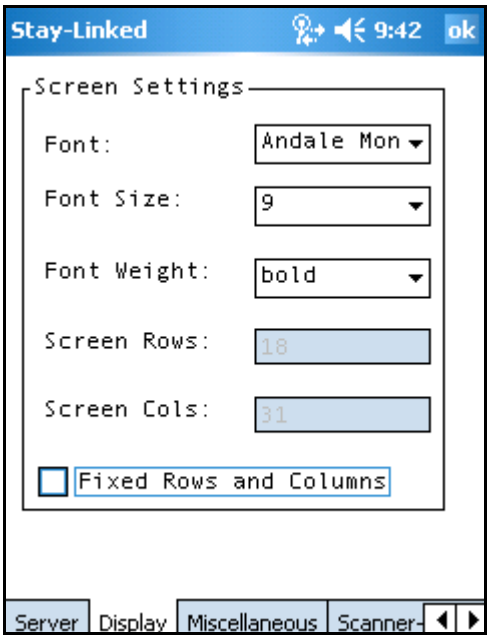
Max Connections: This setting will change the server address dialogue to include multiple Stay-Linked servers. When the option is selected for only one server, the user will automatically be connected to that server when selecting 'Connect'. If multiple servers are added to this list, the user will be presented with a selection under the connect menu.

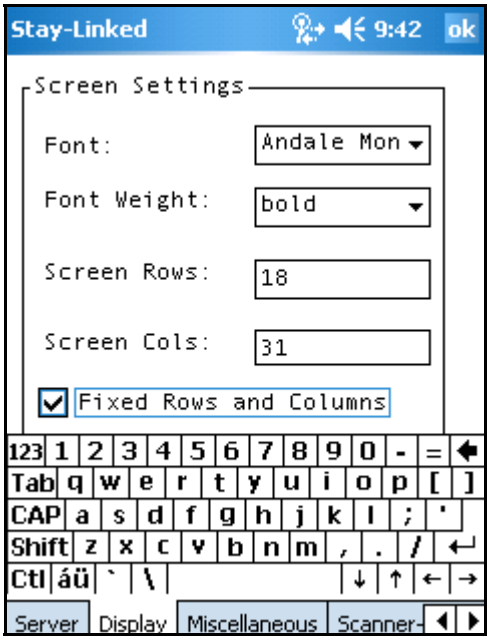
Please note that **you must press enter** to populate each cell in the server list.



2.2.6 Display Tab

Display options are selected by tapping the “Display” menu tab.





Font: Available font families. Please note that Stay-Linked currently supports only true type, fixed width fonts.

Font Weight: Allows you to specify bold or normal font weights. Bold fonts will be easier to read but may reduce the number of columns displayed on your device.

Font Size: Desired font size to display upon connection. Stay-Linked will typically offer each font size available from the Operating System between 6 points and 22 points

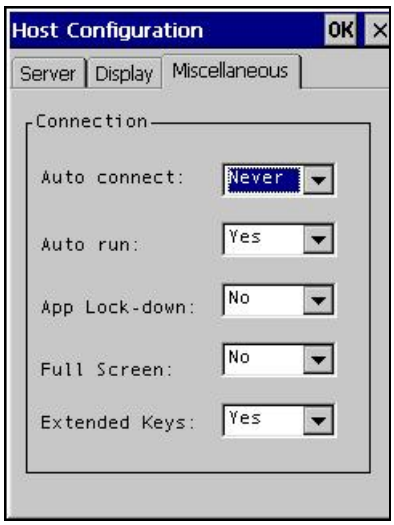
Fixed Rows and Columns: This option allows you to select the number of rows and columns of emulation space. The font will automatically adjust to present the desired rows and columns within the available presentation space.

Screen Rows: When using a font size, this field will display the estimated number of rows for the selected font and size. When using a fixed size, this value will always be used. This may cause the emulation text to appear stretched when the aspect ratio is disproportionate to the display space available.

Screen Columns: When using a font size, this field will display the estimated number of columns for the selected font and size. When using a fixed size, this value will always be used. This may cause the emulation text to appear stretched when the aspect ratio is disproportionate to the display space available.

2.2.7 Miscellaneous Options

Miscellaneous options are selected by tapping the “Miscellaneous” menu tab.



Auto Connect: The Auto Connect option has three possible settings:

- Select ‘0=Never’ to cause the Stay-Linked Main Menu to be displayed on startup and be redisplayed at the conclusion of a session. Sessions must be manually started from the client main menu.
- Select ‘1=Start’ to cause the client to automatically connect to the Stay-Linked Server one time upon startup. The Stay-Linked Menu will be displayed upon conclusion of the first session.
- Select ‘2=Always’ to cause the client to always automatically connect to the server, even after conclusion of a session. **IMPORTANT:** This ‘Always Auto-Connect’ setting makes it difficult for the user to get to the main menu, instead keeping the client connected to a session. If you need to get back to the client main menu on the device, you must press a special key during the connection handshake process. The special key is generally the ESC key. Each device has it’s own special key as described in the ‘Client Support Guide’ for the make/model of the device.

Auto Run: Select ‘Yes’ to cause the Stay-Linked client application to automatically launch on a warm-boot start.

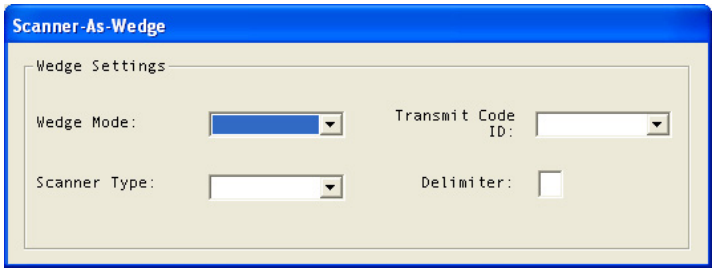
App Lock-down: Select ‘Yes’ to password protect options such as program exit and application minimizing. Window CE clients after version 7.1.114 will offer ‘Show’ and ‘Hide’ lockdown options. These items will lock down the client similar to the Yes option, but allow you to decide if the Windows toolbar at the base of the screen will be displayed. Tapping the toolbar will remove focus from Stay-Linked, but will not allow alternate configuration or applications to be accessed.

Full Screen: Select ‘Yes’ to cause the Stay-Linked client application to remove the taskbar and menu bar for more of a DOS style operating space. This also provides additional display area for your emulation screens and makes it more difficult to exit or minimize the Stay-Linked client.

Extended Keys: Select ‘Yes’ to enable the tap capable toolbar. This option is best used on devices where there are enough physical keys on the device to map your required operations. Details on this option can be found in the Supplemental Configuration Files section 4.3.

2.2.8 Scanner as Wedge

Some devices allow external scanning devices for data collection. These external scanners typically feed data to applications on the device using an application called a 'wedge reader'. The wedge reader software transfers the scanned data to the application by feeding it through the keyboard interface of the operating system, as if the scanned data were typed-in at high speed. The Stay-Linked solution handles scanned data in a different manner than keyboard input, sending the scanned data in a single scan packet with additional information like symbology type. If the scanner and Stay-Linked client are not properly configured for the wedge reader interface, then the scanned data is treated as keyboard input and each scanned character will be transmitted to the server individually. This mis-configuration can cause buffer overflows on long scanned data and cause some data to not reach your application. So it is important that devices using a wedge reader interface be specially configured, allowing the Stay-Linked client to identify the scanned data coming through the keyboard interface. This scan data is identified by special formatting where the scan data should be prefix/suffix delimited by a special character and the symbology ID code should be included right after the prefix delimiter. Following are descriptions of the Stay-Linked Client settings for wedge readers.



Wedge Mode: Allows for 'Enabled' or 'Disabled'. Set this option to Enabled if the scanner is feeding data to the application through a 'wedge reader' keyboard interface. Set this option to 'Disabled' if the scanner is internal and/or the Stay-Linked Client can read the scanner data directly from the operating system.

Scanner Type: This option allows you to select the pre-defined symbology IDs that are the default IDs for some device manufacturers. Choices typically include Symbol, PSC, ITC, and Custom. Selecting the custom option requires you to configure a special 'scanner.ini' file to be placed on the device that describes the symbology IDs. See below for details.

Transmit Code ID: Allows for 'Enabled' or 'Disabled'. Set this option to 'Enabled' if you have programmed your scanner to include the Symbology Code ID after the prefix with the scanned data. This setting being Enabled will allow the Stay-Linked Client to identify the barcode symbology and transmit the ID to the Stay-Linked Server. If this option is disabled, all barcodes will be treated as 'Unknown' symbology types.

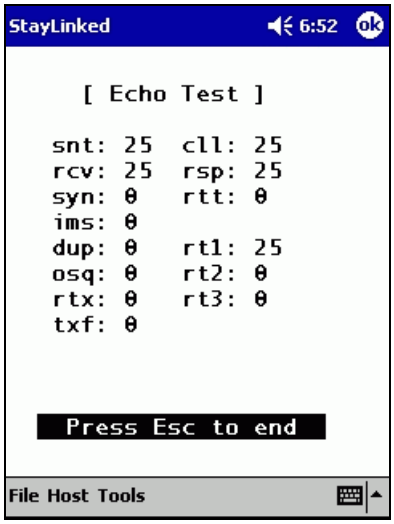
Delimiter: A printable ASCII character in the range of 32 to 127 which is used by the client to identify the scanned data coming though the keyboard interface. The default delimiter is a caret (^).

2.3 Tools Menu

The 'Tools' menu provides options for testing and diagnostics.

2.3.1 Echo Test

Select 'Echo Test' from the 'Tools' menu to test network performance between the Stay-Linked client and the Stay-Linked Server. This tool is only available while the client is connected to an active session.



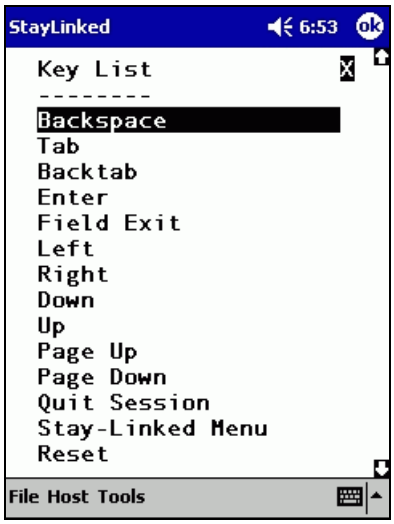
The test will run through 200 iterations if allowed to complete. To cancel the test, press the <ESC> key or tap on the screen. Below is a description for the echo test screen:

SNT: Sent packets.
RCV: Received packets.
SYN: Synchronization requests.
IMS: Immediate synchronization requests.
DUP: Duplicate Packets.
OSQ: Out-of-Sequence packets.
RTX: Retransmitted packets.
TXF: Transmit buffers full.
CLL: Echo packets requested.
RSP: Echo packets responded.
RTT: Round-trip time for the last packet burst.
RT1: Packets with round-trip below 200 ms.
RT2: Packets with round-trip below 500 ms.
RT3: Packet with round-trip 500 ms. or above.

During a perfect test, only the SNT, RCV, CLL, RSP and RT1 values will increment. The RT1, RT2 and RT3 results will provide a basic look at the quality of your connection. Typically, almost all results should be RT1, with very few RT2s. The more RT3 values returned the more likely network infrastructure problems will need to be addressed. Stay-Linked may mask connectivity and latency issues due to the host based architecture.

2.3.2 Key List Tool

Select the ‘Key List’ option from the ‘Tools’ menu to access host key shortcuts. The key list is available through the menu option “Tools > Key List”. This tool is only available while the client is connected to an active session.



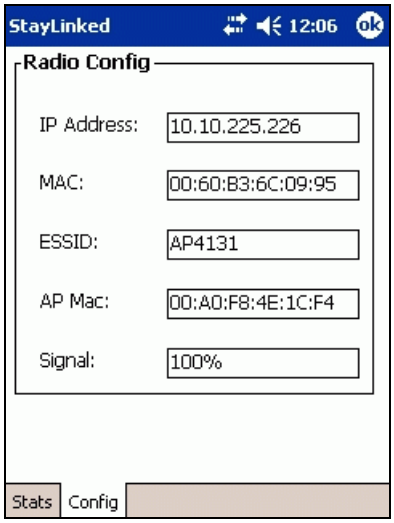
To pick a key, tap on the item to highlight it and tap again to run it. To scroll down, tap below the last item in the list. To scroll up, tap on the “Key List” row.

2.3.3 Radio Stats

Select the ‘Radio Stats’ option from the ‘Tools’ menu to display the “Radio Stats” screen. The Radio Status screen displays basic radio statistics and configuration. You can use this information to troubleshoot "out of range" conditions, and to survey the radio coverage area of your facility.

2.3.4 Config Tab

The Config tab displays additional Radio and IP data.



IP Address: Current IP address of the device.

MAC: Current MAC address of the device.

ESSID: Station ID of the Access Points to which the device is connecting.

AP Mac: MAC Address of the Access Point to which the device is currently associated.

Signal: Depending on whether or not the device is currently in radio coverage, one of the following will be displayed in the “Signal:” field.

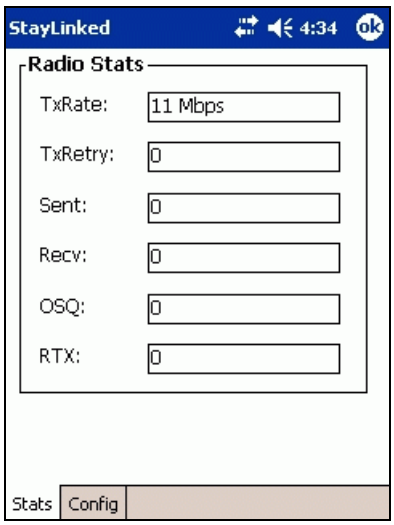
- Signal strength expressed as a percentage
- "Not Associated”

As the device is moved in/out of radio coverage, the value of the “Signal:” field will toggle between the values above. Where the “Signal:” value changes to "Not Associated" indicates dead zones, obstructions in the communication path, or fringe areas of radio coverage.

This tab is sometimes hidden for wired devices, or devices running a generic client that does not talk directly to the device’s radio.

2.3.5 Stats Tab

The Stats tab displays radio and Stay-Linked protocol performance data.



TxRate: Current transmit rate in Mega bits per second.

TxRetry: Number of transmit retries.

Sent: Number of Stay-Linked packets sent.

Recv: Number of Stay-Linked packets received.

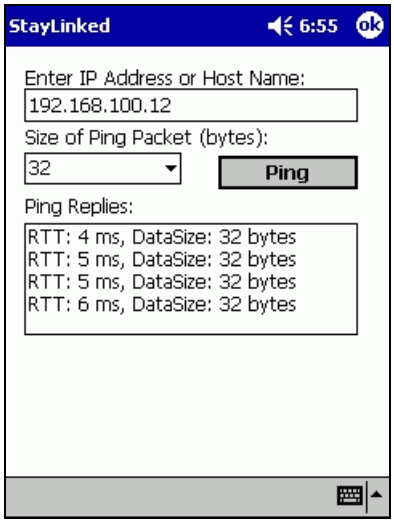
OSQ: Number of out-of-sequence Stay-Linked packets.

RTX: Number of Stay-Linked packets retransmitted.

High values in the OSQ and RTX fields may indicate network issues. Stay-Linked will only transmit net changes to your devices. This means that packets received out of sequence will be discarded until the next sequential packet is received at the device.

2.3.6 Ping

Select the ‘Ping’ option from the ‘Tools’ menu to test network access between the Stay-Linked client and the selected host machine.



During a typical ping, the results will be displayed in the number of milliseconds that the packet took to make the round trip to the destination and back. Lower numbers are better. If you numbers become excessively high, connectivity will be sluggish or unreliable.

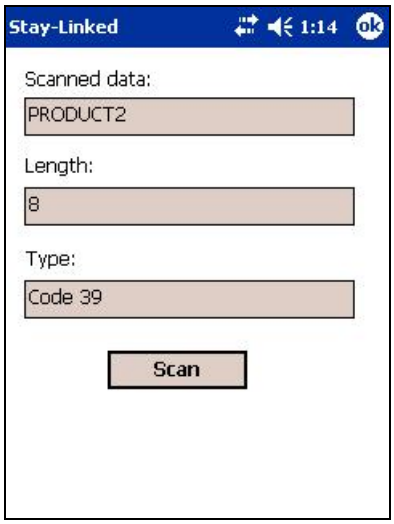
If the results say Host Unreachable, no route was available to make the round trip or the packets were dropped before the round trip could complete.

If the results report Unable to Resolve, the name used was not listed in the name server, or the name server was not reachable.

Enter the host IP address (defaults to the Stay-Linked Server) and choose "Ping" to cause the client to attempt to ping the host.

2.3.7 Scan Test

Select the ‘Scan Test’ option from the ‘Tools’ menu to test scanning on the device.



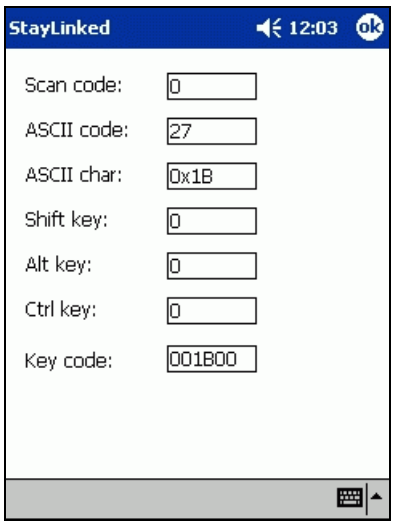
This client side test will display what information the device’s scan engine returns.

If the Type is listed as unknown or duplicate, the scan engine may need to be adjusted to report the correct barcode symbology identifier.

If you scan data when this test screen is displayed, you should see the scanned data, the length of the scanned data and the symbology type of the scanned data. If you do not see your scanned data on this screen, then it is most likely caused by an external scanner that is not or has not been properly configured for ‘Wedge Reader’ mode. Please see the section on ‘Scanner as Wedge’ to configure the client and the external scanner for wedge reader mode.

2.3.8 Key Test

Select the 'Key Test' option from the 'Tools' menu to test the keyboard on the device.



Press any key on the keyboard to display its Scan code, ASCII code and Key code. The Key code is an important reference value to be used when programming keyboard maps using the Stay-Linked Administrator. Dismiss the dialog with a tap on the ok button.

2.4 Font Adjustment Buttons

In client version 7.1.115 and later, font adjustment buttons have been added to the Windows toolbar. These buttons appear next to the File, Host and Tools options with a font toggle, decrease and increase icon.

Font toggle: Allows the client to alternate between the font_ size and alternate_font_size values set in the staylink..ini file.

Minus: Reduces the font point by one increment.

Plus: Increases the font point by one increment.

Due to the architecture of Stay-Linked, only text that appears on the screen of the device will be transmitted from the server. When using these buttons, the client will actually disconnect its session and then reconnect, renegotiating the display space on each reconnection. With server build 7.1.132, changes have been made to the server code that increase the speed of these font adjustments dramatically. These changes allow these adjustments to work within the Stay-Linked reliable protocol, avoiding the disconnect and reconnect process.

Tapping these buttons faster than the renegotiation can respond may cause the display to become garbled. When this happens, the next action on the device that affects the screen will cause it to repaint, clearing the text to normal.

These buttons can be disabled using the Administrator Device Settings options or by adding the following line to the staylink.ini file: font_adjust_option=0

Stay-Linked Client Features

The following features apply to all Windows Mobile, Pocket PC and Windows CE clients.

3.1 Out of Range / Linking

The device will detect two types of disruptions in session communication. They are as follows:

- "Out-of-Range"
- "Linking"

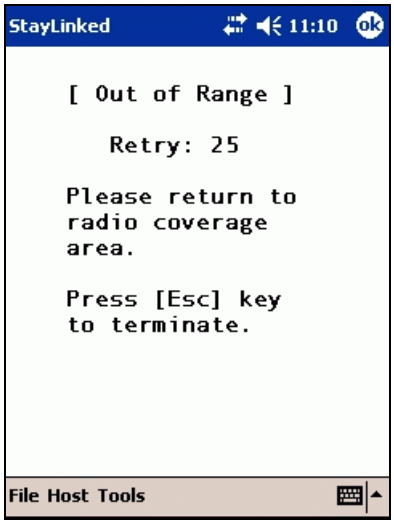
In both cases, the device will attempt to automatically recover from these conditions. The following sections describe detection and recovery from both scenarios.

3.1.1 Out of Range

The most common communication fault is an "out-of-range" condition. Common causes of "out-of-range" conditions:

- Device is physically moved outside the radio coverage area supported by the radio hardware.
- Communication path to access point is obstructed.
- Antenna on the device is bad.

When an "out-of-range" state is detected the device will display an "!" character in the top right corner of the screen. The "!" will alternate between normal and inverse video for a short period as the device monitors the out-of-range state. If the device detects that it is back in radio coverage it will return to the session screen. If the condition persists, the device will switch to the out-of-range screen shown below.



As the device continues to monitor the radio state, the retry attempts will increment on the screen. From here you have the option to terminate the connection by pressing the <ESC> key or tapping on the [Esc] area of the screen.

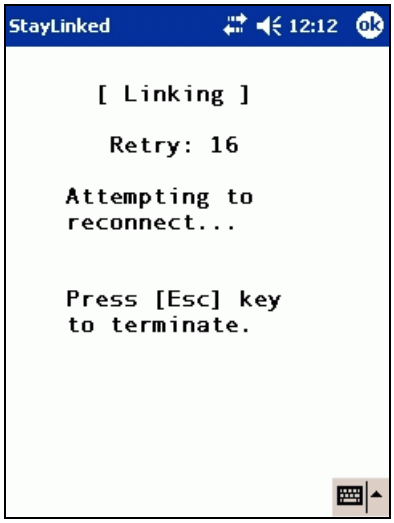
3.1.2 Linking

A "Linking" condition occurs when there is no longer any response from the Stay-Linked server.

Possible causes of a "Linking" condition:

- Unable to reach server (i.e. network failure)
- Network congestion interfering with transactions
- Session terminated by administrator while device is powered off
- Server software shutdown

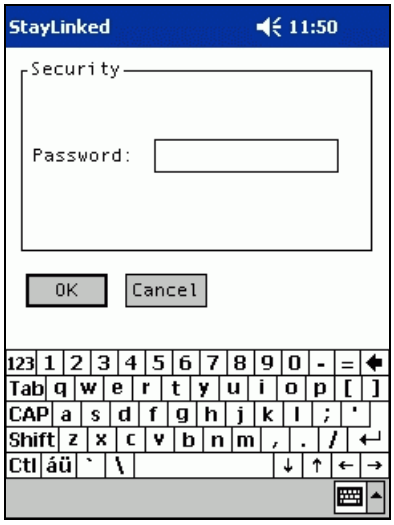
When a "Linking" state is detected, the device will display an "*" character in the top right corner of the screen. The "*" will alternate between normal and inverse video for a short period as the device monitors the link state. If the device detects that the link is restored, it will return to the session screen. If the condition persists, the device will switch to the “Linking” screen shown below.



As the device attempts to contact the server, the retry attempts will increment on the screen. From here you have the option to terminate the connection by pressing the <ESC> key or tapping on the [Esc] area of the screen.

3.2 Security

Some menu options, such as “Host - Configure” require a password. The default password is “**esp**”.



You can specify a new password for the device by using the ‘Manage Device Settings’ feature of the Stay-Linked Administrator. The ‘Manage Device Settings’ feature of the Stay-Linked Administrator allows you to centrally manage many of the device-specific settings of the Stay-Linked Client software on the device.

3.2.1 Client to Server Communications Security

Stay-Linked provides multiple possible levels of security for the transactions between the Stay-Linked client and server. These settings are discussed in detail in the Stay-Linked Administrator User’s Guide.

Controlled through the Administrator’s ‘Server Settings’ dialogue, two options are available.

- **None** – No Stay-Linked packets will be encrypted.
- **Level 1** – Stay-Linked data transferred between the Stay-linked Thin-Client and the Stay-Linked Server will be encoded using a proprietary 64-bit encryption scheme.
- **Blowfish**– Stay-Linked data transferred between the Stay-linked Thin-Client and the Server will be encoded using the Blowfish/CBC/PKCS5Padding encryption algorithm.

Using Blowfish Encryption: Blowfish encryption provides a very high level of data security for the Stay-Linked packets that are transmitted between the Stay-Linked Thin-Client and the Stay-Linked Server. ***Stay-Linked Blowfish encryption is available only for PPC/WM/CE/CE.Net devices that are running a Stay-Linked Client of at least Version 9.1.0. Blowfish encryption is not available for any DOS devices.***

3.3 Tap Navigation

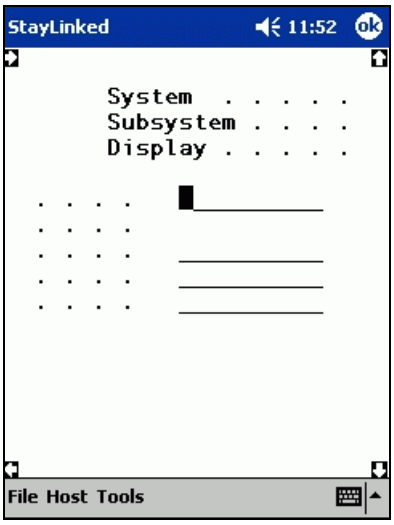
Tap navigation provides the ability to use the stylus to maneuver the display view port within the session display screen on the host. If enabled for display, the scrollbars become visible only when the host session display screen is larger than the device physical screen (view port).

Scrollbar settings are maintained using the 'Configure…' option on the 'Host' menu.

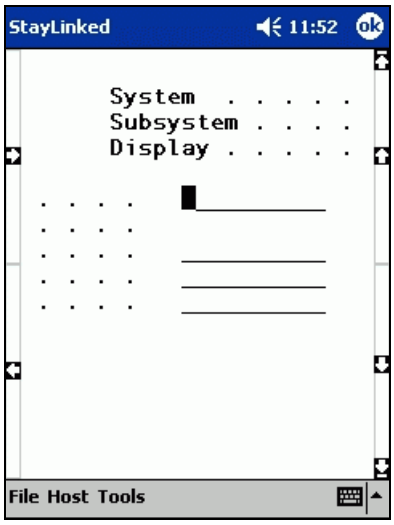
The navigation scrollbars can be configured for three different display modes, 'full', 'partial' and 'none'.

To navigation within the host screen, the user can tap on one of the four quadrants:

The upper left quadrant is the "Window Page Right" scroll
The lower left quadrant is the "Window Page Left" scroll
The upper right quadrant is the "Window Page Up" scroll
The lower right quadrant is the "Window Page Down" scroll



PARTIAL DISPLAY MODE



FULL DISPLAY MODE

Display of the scrollbars can be disabled, however, the tap navigation functionally remains active.

The tapping areas at either end of the up/down scroll bar are particularly helpful for scrolling to the beginning/end of the host key list.

3.4 Alternate Program Configuration

Stay-Linked allows the configuration of one application to be executed from the Stay-Linked client. This application, is configured by adding a line to the staylink.ini file similar to the example below:

execute_program=000000,[c:\windows\myprogram.exe]

In order for this feature to operate, the device must have the application lockdown feature enabled. The 6 digit key code can be determined using the keyboard test features, and will cause the corresponding key stroke to execute the program specified in the square brackets.

Supplemental Configuration Files

Stay-Linked provides support for several features that are not part of the configuration panels available within the client. These configuration options are available through the Settings Deployment features of the Stay-Linked Administrator only by replacing the complete configuration files. This option can be found among the "All –" options and is called Configuration File Transfer. Please refer to the Administrator User Guide for details using this method of settings management.

4.1 Configuring for Multiple/Backup Stay-Linked Servers *(servers.ini)*

The purpose of this enhancement is to provide a mechanism by which the Stay-Linked Client can provide the ability to select from and connect to multiple Stay-Linked Servers and to support the ability of the Stay-Linked Client to fail-over to a backup Stay-Linked Server. *This feature requires build 7.1.112.*

Basic Implementation:

The new enhancement will only be available if the new SERVERS.INI file exists on the device. If this file does not exist, or the contents of the file are malformed, then the client will revert to the original functionality as provided by the contents of the STAYLINK.INI file.

Multiple Server Handling:

The SERVERS.INI file will provide the ability to specify multiple Stay-Linked Server to be available to the client for connections. When only a single server is specified, then the user will not be presented with a selection but will instead be connected directly to the server. If there are multiple server specified, then the user will be able to select from a menu that lists these servers. Once a connection is established to a server, that server will be the 'current server' and the connection will be persistent until the user 'Exits the Session'. If the client receives commands to 'Restart the Client', or receives new client software or new device settings, then the device should automatically reconnect to the same 'current server'. Session switching commands should also apply to the 'current server'.

Backup Server Handling:

If a backup server is specified, then special handling of connection failures will be processed. If the backup server is optional, then when a connection failure to the primary server occurs, the user will be presented with a menu of options. If the backup server is mandatory, and the 'failover retries' are exceeded, the client will automatically connect to the backup server. Once a connection to the backup server is established, it will be considered to be the 'current server' and handling will proceed as described in the 'MULTIPLE SERVER HANDLING' section of this document. If the connection to the backup server fails, then the entire backup processing mechanism will be reset and the next connection attempt will be to the primary server.

SERVERS.INI Overview:

The SERVERS.INI file describes the list of Stay-Linked Servers and the backups that are available to the Stay-Linked Client. This file is stored in the 'Persistent' Stay-Linked folder on your device. If the file does not exist in the persistent folder, any cold boot operation may result in the loss of the file. If the SERVERS.INI file is transferred to the device using the Administrator's reliable file transfer, then the file will be recognized by the Stay-Linked Client and handled appropriately, being transferred to persistent storage if possible.

SERVERS.INI Sections:

SERVERS.INI contains two sections. Firstly, a [servers] section that will describe one or more Stay-Linked Servers that will be made available to the Stay-Linked Client for connections. Secondly, an [options] section that can describe options to control the conditions and actions to follow when the primary selected server fails to connect.

[servers] Section:

Each server line, or key, in the [servers] section begins with server#' where the # refers to the number of the server entry beginning with one. It is recommended that these key names are sequential. Duplicate key names will cause one or in some cases, all of the lines to be ignored. Key values are limited to 10 entries. If there is only one server entry in this section, then the device will immediately connect to that server. If there are multiple servers defined in this section, then the device will display the list of available servers for the user to select from. Each comma-delimited entry in this file will describe a Stay-Linked Server Name, IP or Host Name and Port. Optionally, the entry can also contain a backup IP or Host Name and Backup Port. Here is a sample of the contents of the [servers] section:

```
[servers]
server1=WMS Server,jupiter.dne.inc,3006,192.168.100.23,3006
server2=PTL Server,192.168.100.10,3006,192,168,100.24,3006
server3=Test Server,test.dne.inc,3006
```

Key: server#=ServerName,ServerAddress,ServerPort,BackupAddress,BackupPort

[options] Section:

The [options] section contains the options that affect the behavior of these features. The following options are available:

allow_quit - Describes whether or not a 'Quit' menu option will be displayed at the bottom of the server selection menu. Valid values are 1=Show the Quit option (Default), 0=Do not show the Quit option.

failover_optional - If a selected server also contains backup server data, then this option determines whether the failover is optional or mandatory. If optional, then the user will be presented with options when the client is unable to connect to the primary server. Valid values are 0=Mandatory, 1=Optional (Default)

failover_retries - If the failover is mandatory, then this option describes how many retries will be attempted after the initial attempt before the client automatically tries to connect to the backup server. Valid Values are a range from 1 to 5 retries with a default of 2.

Excluding any of these items from the options section will use the normal default value in its place.

If failover is optional and the client fails to connect to the primary server (occasional host timeouts are expected in most environments and simply means the client dropped or transposed a packet during the handshake with the server), then a connection failure menu will be displayed like this:

```
Err: Host Timeout
--------------------
1 - Retry Primary
2 - Use Backup
3 - Quit
```

If the user has selected to connect to the backup, and that connection fails, then a connection failure menu will be displayed like this:

```
Err: Host Timeout
--------------------
1 - Retry Backup
2 - Use Primary
3 - Quit
```

If failover is mandatory, and the client fails to connect to the primary server, then the dialog will display the following form, based on your specific server information:

```
Host=102.168.100.95
Port=3006
Primary Retry 1 of 3    <--- This line appears only during retry failures
Connecting...
Err: Host Timeout
* Now Using Backup *    <--- This line appears only after the last retry to the primary server
Press any key
```

After all retries to the primary have failed, the next connection attempt will be to the backup server. If the client fails to connect to the backup server, then the client will revert to the primary server.

```
Host=102.168.100.12
Port=3006
Backup Retry 1 of 3    <--- This line appears only during retry failures
Connecting...
Err: Host Timeout
Press any key
```

After all retries to the backup server have failed, the client will return to the main Stay-Linked menu unless 'Always Auto-connect' is set. When 'Always Auto-connect' is set, the client will automatically restart the connection process from the beginning.

[options] Section Sample:

```
[options]
allow_quit=0
failover_optional=0
failover_retries=5
```

Server Selection Menu:

When there are multiple servers defined in the [servers] section of SERVERS.INI, then the user will be presented with a menu from which to select the desired server. Each menu option will use the Server Number and the Server Name to create the menu text. A sample server menu follows:

```
Select a Server
---------------
1) WMS Server
2) PTL Server
3) Test Server
4) Quit
```

Session ID Management:

Stay-Linked tracks each session with a unique session ID number. These session IDs are managed by interaction between the client and server process. The following information is provided for reference only. Manually adjusting session ID values may result in lost or orphaned sessions.

If a device is allowed to connect to multiple servers, then it will track session IDs for each server. As always, the session IDs will be managed in the SESSION.INI file. If the device is not using the SERVERS.INI file, then the session information will be stored in the [defaults] and [alternate] sections like this:

```
[defaults]
session_id=124D7
session_number=2
[alternate]
session_id=124D6
session_number=1
```

If the device is using the SERVERS.INI file, then there will be a section created in SESSION.INI for each server like this:

```
[server1_defaults]
session_id=114B9
session_number=1
[server1_alternate]
session_id=114BA
session_number=2
```

Each alternate section applies only to servers using dual session licensing.

4.2 Scanner Configuration Options *(scanner.ini)*

Some device manufacturers do not provide an interface to adjust your scanner settings. Stay-Linked provides support for scanner.ini for two reasons, firstly for these devices that depend on the emulation to configure the hardware scanner and secondly for tethered scanners that need to be customized to identify the symbology type when a barcode is read. *This feature requires build 7.1.113 for non tethered scanners.*

The values available for adjustment with your scanner hardware will vary based on the hardware options available. Each manufacturer has a table of available values that are typical among their devices, but may not be precise to each specific device.

The [symbologies] section should contain a line for each symbology and all of the options for that symbology. If the line exists in your document, it will override the default values.

For complete instructions and definitions of the available configuration options, please refer to the help documents available in the miscellaneous downloads section of our website.

- **Symbol Integrated Scanner Configuration Guide**
- **HHP Integrated Scanner Configuration Guide**

Directly preceding the first parameter is a single binary value to disable or enable that symbology. Any symbologies excluded from the scanner.ini file will be disabled by default. Please note that in the examples below, each symbology begins with a value of 1, which represents enabled. To disable a symbology at the hardware level it can be excluded from the list. It is usually recommended that all symbologies are enabled within your hardware settings, and then disabled as desired using the barcode management settings in the Administrator by telnet host or device group.

4.2.1 Symbol Settings

The Symbol file contains two sections, a default settings and a symbology settings. These sections are designated with a header in square brackets denoting [defaults] and [symbologies].

The [defaults] section may contain the following settings:

scan_aim_time: Defines the laser timeout between scans. The value is in milliseconds in the range 0 to 5000. The default value is 3000.

scan_beep_time: Defines the scanner beep duration on a good decode. The value is in milliseconds in the range 0 to 5000. The default value is 200.

scan_frequency: Defines the scanner beep frequency on a good decode. The value is in herts in the range 2500 to 3500. The default value is 2670.

scan_wave_file: Defines the wave file to play on a good decode. The value is a string with the proper path and filename for the wave file. The default value is none.

The following table is a list of each symbology and the settings available for configuration.

	Parm 2	Parm 3	Parm 4	Parm 5	Parm 6	Parm 7	Parm 8	Parm 9	Parm 10
UPCE0	Report Check Digit	Preamble	Convert To UPCA						
UPCE1	Report Check Digit	Preamble	Convert To UPCA						
UPCA	Report Check Digit	Preamble							
MSI	Redundancy	Check Digits	Check Digit Scheme	Report Check Digit	Min Length	Max Length			
EAN8	Convert To EAN13								
EAN13									
CODABAR	Redundancy	Clsi Editing	Notis Editing	Min Length	Max Length				
CODE39	Verify Check Digit	Report Check Digit	Concatenate	Full ASCII	Redundancy	Convert To Code32	Code32 Prefix	Min Length	Max Length
D25	Redundancy	Min Length	Max Length						
I25	Redundancy	Verify Check Digit	Report Check Digit	Convert To EAN13	Min Length	Max Length			
CODE11	Redundancy	Check Digit Count	Report Check Digit	Min Length	Max Length				
CODE93	Redundancy	Min Length	Max Length						
CODE128	Redundancy	EAN128	SBT128	Other128	Min Length	Max Length			
TRIOPTIC39	Redundancy								
RSS14	Redundancy								

The following is an example of a typical scanner.ini file. If you use this as a base for your settings, please use notepad or be sure to save the file in a true text file format:

```
[defaults]
scan_aim_time=3000
scan_beep_time=200
scan_frequency=2670
scan_wave_file=\windows\decode.wav

[symbologies]
UPCE0=1,0,0,0,0,0,0,0,0,0
UPCE1=1,0,0,0,0,0,0,0,0,0
UPCA=1,1,1,0,0,0,0,0,0,0
MSI=1,1,0,0,0,4,55,0,0,0
EAN8=1,0,0,0,0,0,0,0,0,0
EAN13=1,0,0,0,0,0,0,0,0,0
CODABAR=1,1,0,0,6,55,0,0,0,0
CODE39=1,0,0,0,0,0,0,0,0,55
D25=1,0,0,14,0,0,0,0,0,0
I25=1,1,0,0,0,14,10,0,0,0
CODE11=1,1,1,0,4,55,0,0,0,0
CODE93=1,0,0,55,0,0,0,0,0,0
CODE128=1,0,1,1,1,0,55,0,0,0
TRIOPTIC39=1,1,0,0,0,0,0,0,0,0
RSS14=1,0,0,0,0,0,0,0,0,0
```

4.2.2 HHP Settings

The following table is a list of each symbology and the settings available for configuration.

	Parm 2	Parm 3	Parm 4	Parm 5	Parm 6	Parm 7	Parm 8
CODABAR	SS Xmit	Check Char On	Xmit Check Char	Min Length	Max Length		
CODE 11	Two Check Digits	Min Length	Max Length				
CODE 128	Min Length	Max Length					
CODE 39	SS Xmit	Check Char On	Xmit Check Char	Full ASCII	Append	Min Length	Max Length
CODE 93	Min Length	Max Length					
EAN-8	Xmit Check Char	Addenda 2Digit	Addenda 5Digit	Addenda Req	Addenda Separator		
EAN-13	Xmit Check Char	Addenda 2Digit	Addenda 5Digit	Addenda Req	Addenda Separator		
I_2_of_5	Check Digit On	Xmit Check Digit	Min Length	Max Length			
UPC-A	Xmit Check Digit	Xmit Num Sys	Addenda 2Digit	Addenda 5Digit	Addenda Req	Addenda Separator	
UPC-E0	Xmit Check Digit	Xmit Num Sys	Expand Version E	Addenda 2Digit	Addenda 5Digit	Addenda Req	Addenda Separator
UPC-E1	N/A	N/A	N/A	Addenda 2Digit	Addenda 5Digit	Addenda Req	Addenda Separator
IATA_2_of_5	Min Length	Max Length	Xmit Check Char				
MSI	Min Length	Max Length					
S_2_of_5	Min Length	Max Length					
M_2_of_5	Min Length	Max Length					
Plessey	Min Length	Max Length					
RSS	Min Length	Max Length					

The following is an example of a typical scanner.ini file. If you use this as a base for your settings, please use notepad or be sure to save the file in a true text file format:

```
[Symbologies]
Codabar=1,1,0,1,2,60,0,0,0
Code 11=1,1,4,80,0,0,0,0,0
Code 128_EAN_128=1,0,80,0,0,0,0,0,0
Code 39=1,0,0,0,0,0,2,48,0
Code 93=1,0,80,0,0,0,0,0,0
EAN-8=1,1,1,0,0,0,0,0,0
EAN-13=1,1,0,0,0,1,0,0,0
I_2_of_5=1,0,0,4,80,0,0,0,0
UPC-A=1,1,1,0,0,0,0,0,0
UPC-E0=1,1,0,0,0,0,0,1,0
UPC-E1=1,1,0,0,0,0,0,1,0
IATA_2_of_5=1,4,80,0,0,0,0,0,0
MSI=1,4,48,0,0,0,0,0,0
S_2_of_5=1,4,48,0,0,0,0,0,0
M_2_of_5=1,4,80,0,0,0,0,0,0
Plessey=1,4,48,0,0,0,0,0,0
RSS=1,4,74,0,0,0,0,0,0
```

4.2.3 Configuring a tethered scanner

When 'Custom' is selected for the 'Scanner Type', a file named *SCANNER.INI* must be placed in the Stay-Linked directory on the device. **For tethered scanners, this file allows you to configure the single character symbology identifier for each barcode symbology**. Setting the wrong identifier, or not setting an identifier, will make the Stay-Linked client unable to determine the symbology type to be transmitted to the Stay-Linked server. If the client cannot identify the symbology type, then the server will be sent an 'Unknown' symbology identifier.

It is also important that the *SCANNER.INI* file be created in a true ASCII format. The hidden formatting information used by MS Word, WordPad, and other text editors can prevent Stay-Linked from properly reading from your settings file. Only required Symbologies need an entry in this file. The *SCANNER.INI* file should contain the following entries where the symbology name is followed by an equals sign and then the single character identifier for that symbology:

```
[defaults]
code3_of_9=A
upcA=B
upcE=C
ean8=D
ean13=E
code_11=F
code_128=G
code_93=H
codabar=I
interleaved_2_of_5=J
regular_plessey=K
isbn_plessey=L
RSS_14=M
RSS_limited=N
RSS_expanded=O
UCC/EAN_128=O
bookland_EAN=P
standard_2_of_5=Q
discrete_2_of_5=R
industrial_2_of_5=R
matrix_2_of_5=S
pure_plessey=T
sain_plessey=T
ames=U
alpha_plessey=V
```

These symbology ID settings must match the value that your scanner has been programmed to return for each symbology.

Properly configured, an external scanner should provide data in the following format:
<delimiter><symbology id>YOURDATA<delimiter>

An example Code39 barcode scanned by a PSC Powerscan Scanner would appear like this:
^*YOURDATA^

4.3 Supplemental Toolbar Configuration *(extkeys.ini)*

For added touch screen functionality we have created a toolbar that will show at the bottom of the device screen. This toolbar serves as additional area for activating pre-define functions.

The file that controls the functions and labels of the toolbar is named ***extkeys.ini***. The contents of this file (a simple ASCII format) simply list the button number, the text to be displayed on the button and the mnemonic to be issued when the button is used.

In this example, replace statements within the < > with the appropriate information.

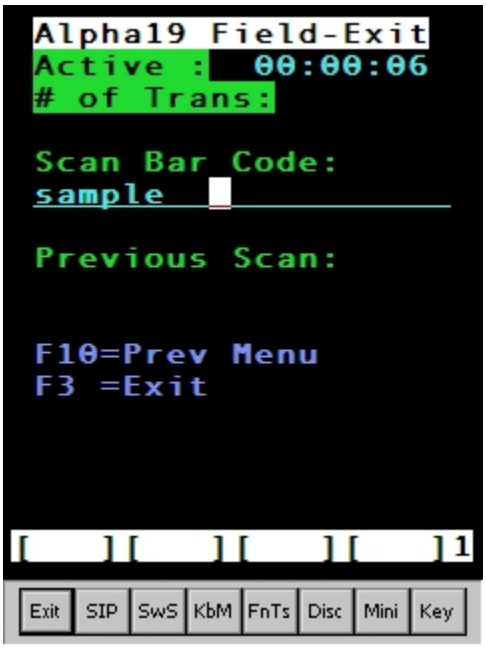
Button<#> = <Button Text> , <mnemonic>

By example: button1=Tab,[tab]

This would cause the first button to be labeled "Tab" and perform the [Tab] function (which moves the cursor position to the next field) each time it is activated.

The following is a sample layout of the extkeys.ini file. This file must be in a true txt file format. Any formatting information in the file will prevent it from being used by the client software. Any errors found on a line of the file will cause the line to be ignored, which will display the default function key value in its place.

```
[display]
font_size=8
[defaults]
button1=Tab,[tab]
button2=F12,[pf12]
button3=F13,[pf13]
button4=F14,[pf14]
button5=F15,[pf15]
button6=F16,[pf16]
button7=F17,[pf17]
button8=F18,[pf18]
button9=F19,[pf19]
buttonA=EXIT,[device-exit]
buttonB=HOME,[home]
buttonC=PgUP,[device-pageup]
buttonD=PgDN,[device-pagedown]
buttonE=KbMnu,[keyboard menu]
```



Please note that all mnemonics (the text in square brackets) should be lower case characters only.

The font_size option in this file will control the size of the characters used to describe each button. On small devices it is recommended that no more than 3 characters are used and on vehicle mounts or full screen devices no more than 5 characters. If more characters are used the software will center the text on the button and could cut off the edges on large fonts or long descriptions.

4.3.1 Map-able Mnemonic options

Each button on the toolbar may be configured to perform one of the following actions:

Cursor Positioning	Paging Support	Function Keys	Custom Options
[backspace]	[device-up]	[pf1]	[call1]
[tab]	[device-down]	[pf2]	[call2]
[clear]	[device-left]	[pf3]	[call3]
[down]	[device-right]	[pf4]	[device-exit]
[left]	[device-pageup]	[pf5]	[keyboard menu]
[right]	[device-pagedown]	[pf6]	[staylinked menu]
[up]	[device-pageleft]	[pf7]	[toggle_sip]
[delete]	[device-pageright]	[pf8]	[switch_session]
[enter]	[device-fullup]	[pf9]	[disconnect_device]
[eof]	[device-fulldown]	[pf10]	[minimize_client]
[home]	[device-fullleft]	[pf11]	[execute_program]
[insert]	[device-fullright]	[pf12]	[increase_font]
[pageup]	[device-followcursor]	[pf13]	[decrease_font]
[pagedn]		[pf14]	[renegotiate]
[printhost]		[pf15]	[soft_trigger]
[reset]		[pf16]	[key=xxxxxx]
		[pf17]	[disabled]
		[pf18]	[hide]
		[pf19]	
		[pf20]	
		[pf21]	
		[pf22]	
		[pf23]	
		[pf24]	

The number of keys will vary depending on the size of the device display. Typical configurations will have 8 available buttons, with vehicle mounts having a maximum of 14 keys. The default toolbar appears with F11-F24 if the extkeys.ini file is not found. Each button will appear as the default function key if any errors in formatting are found in that line of the extkeys.ini file.

While many of the settings are self explanatory, the following may be helpful in some environments:

[soft_trigger] ~ Activates the device's scanning laser as though the trigger had been depressed.
[renegotiate] ~ Toggles the display between the maximum and configured font sizes.
[minimize_client] ~ Moves the Stay-Linked client to the background and displays the device desktop.
[device-exit] ~ Ends the Stay-Linked session and the telnet session. Always requests confirmation.
[toggle_sip] ~ Hides or shows the Soft Input Panel, also known as the tappable keyboard.
[disconnect_device] ~ Disconnects the client from the server but leaves the telnet session active. The device will return to the last state once it is re-connected to the Stay-Linked server.
[execute_program] ~ This option must be accompanied by a program call configured in the staylink.ini file. Please review section 3.4 for details on configuring a third party program call.
[key=xxxxxx] ~ Acts as a keyboard key by generating a code that can be configured in the Administrator keyboard definition for the specific device type.

4.3.2 Distributing toolbar configurations

To copy the configuration of the toolbar from one device to another, simply copy the desired extkeys.ini file into the Stay-Linked directory of the destination computer. This is easily completed if you start a Stay-Linked session and use the reliable file transfer to copy the file to the desired devices. Please note that the client software will store your settings file in persistent space if you transfer the file from the Stay-Linked Administrator.

If changes are made to this file they will not take effect until the Stay-Linked device software is restarted, which can also easily be done from the Stay-Linked Administrator.

4.4 Color to Monochrome Settings

Devices with a color display running Stay-Linked have the ability to disable color support. This feature can be done with the settings management tools provided within the administrator or by adding the following setting to the device's staylink.ini:

```
color_support=0
text_color=RED
back_color=BLUE
```

The text color and background color settings will work with any of the primary colors listed below to provide a monochrome display appearance. The client software must be restarted for these changes to take effect.

4.5 Color Re-mapping Support *(colors.ini)*

In cases where color support is required, but the end application can not be modified to replace one color with another, Stay-Linked can provide a solution. When a file is place on the device with a name of colors.ini, the client software will read the file and display adjusted color codes with your desired colors.

The text color re-mapping should begin with a header line of [foreground], followed by each color you wish to adjust.. In addition to the text color, reverse video can be adjusted to your needs. The reverse video section should begin with a [background] tag. Each entry of the file should be on its own line. The following colors can be programmed to display alternate values:

[foreground]

Red	Green	Blue	Black
Yellow	Magenta	Cyan	White
Gray	Lt_blue	Lt_green	Lt_cyan
Lt_red	Lt_magenta	Lt_yellow	Lt_white

[background]

Red	Green	Blue
Yellow	Magenta	Cyan
Gray	Black	White

All entries in this file must be made in lower case to take effect. The color re-mapping is completed by selecting the base color you would like to change, and providing the value of the color to show in it's place. The replacement colors are entered in BGR (Blue, Green, Red) and hexadecimal. The resulting 6 digit values range from 000000 to FFFFFF. For example:

Red: 0000FF	Green: 00FF00	Blue: FF0000	Black: 000000
Yellow: 00FFFF	Magenta: FF00FF	Cyan: FFFF00	White: FFFFFF

By example, if you wanted to set the text to be white text on a black background, and change the green text of a telnet session to display white in its place, you could use the following file contents:

```
[foreground]
white=000000
black=FFFFFF
green=000000

[background]
green=FFFFFF
white=FFFFFF
black=000000
```

In order for the changes present in the colors.ini file to take effect, the Stay-Linked client software will need to be restarted. Client versions that support colors.ini will automatically make the file persistent if transferred to the device via the Stay-Linked Administrator. In cases where you wish to discontinue use of the color changes, simply send a blank colors.ini file to the device and restart the client software.

4.6 Multi-Language and Localization Support *(locale.ini)*

In order to display characters used in various languages, Stay-Linked provides support for localization. This is accomplished through the use of a file named locale.ini that lists the character map translations. Characters are substituted by mapping the ASCII character value to the Unicode value. Any value that is not included in your locale.ini file will display the default ASCII value. **Please note that Stay-Linked currently supports only true type, fixed width fonts.** *This feature requires build 7.0.107.*

This feature may also be used to customize the display of you application. One example would be to replace the letter O with Ø. This change may allow you to easily identify the difference between similar characters in your chosen font.

In order to make this change take effect, you would need only one line in your locale.ini file:

4F=0216

Once the locale.ini file was transferred to your device, restart the Stay-Linked client software and the change will be in place. These entries are not case sensitive, both upper and lower case hex codes will be accepted.

Each character represents on a single glyph on your device, so changing the upper case and lower case values will require their own line, as designated in ASCII and Unicode.

On a Windows PC you can see the available character sets by and select the start menu, then the run command and enter *charmap* and press enter. The Windows character map will provide a graphical display of the available Unicode characters. The first 256 characters are identical to the ASCII character set, thus the leading 00 is left off of the re-mapping lines of locale.ini. As an example, each of the following entries would be made for conversion from ASCII to Greek:

41=0391	53=03A3	69=0399	80=02C7	91=05D1	B7=003D	BC=255D	CD=2550
42=0392	54=03A4	6A=039E	81=02C6	92=00C6	B8=0192	BD=255C	CE=256C
43=0393	55=03A5	6B=039A	82=2191	93=05D2	B9=20A7	BE=255B	CF=2567
44=0394	56=03A6	6C=039B	83=2193	94=00F6	BA=2030	BF=2510	D0=2568
45=0395	57=03A7	6D=039C	84=0023	95=05D3	D7=2265	C0=2514	D1=2564
46=0396	58=03A8	6E=039D	85=0109	96=05D4	DD=2191	C1=2534	D2=2565
47=0397	59=03A9	6F=039F	86=0101	97=05D5	F7=044C	C2=252C	D3=2559
48=0398	5A=03AA	70=03A0	87=0192	98=05D8	FD=2264	C3=251C	D4=2558
49=0399	60=03B0	72=03A1	88=25BC	99=00D6	B3=2502	C4=2500	D5=2552
4A=039A	61=0391	73=03A3	89=25B2	9A=05DD	B4=2524	C5=253C	D6=2553
4B=039B	62=0392	74=03A4	8A=21D1	9B=00A2	B5=2561	C6=255E	D7=256B
4C=039C	63=03A8	75=0398	8B=21D3	9C=05E1	B6=2562	C7=255F	D8=256A
4D=039D	64=0394	76=03A9	8C=0023	9D=05E2	B7=2556	C8=255A	D9=2518
4E=039E	65=0395	78=03A7	8D=0063	9E=05E3	B8=2555	C9=2554	DA=250C
4F=039F	66=03A6	79=03A5	8E=0061	9F=05E4	B9=2563	CA=2569	
50=03A0	67=0393	7A=0396	8F=0066	A0=00AF	BA=2551	CB=2566	
51=03A1	68=0397	7F=2302	90=05D0	AF=2260	BB=2557	CC=2560	

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Centralized Device Management

This section describes the behavior of the Stay-Linked Client as the device management features are implemented and take effect the device. These features include the Stay-Linked emulation client update processes as well as the device management only mode available for Windows style devices with Stay-Linked Version 9. Please note that Device management features as described in the Stay-Linked Administrator User's Guide require different licensing than the emulation product.

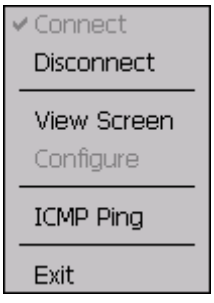
5.1 Device Management Only Mode

When the device is configured for device management only, the client software will appear only as a system tray icon. This icon will show one of three different symbols.

	When Stay-Linked device management is not connected to the Stay-Linked server, it will show a red X over the Stay-Linked chains.
	Once a connection has been established, the chains will display a green checkmark.
	In some cases, the icon will display a yellow exclamation that denotes interruptions in network or radio connection.

For devices that will not be used for Stay-Linked terminal emulation, you can configure the device to automatically assume the device management only system tray icon.

The Stay-Linked client can be configured to check in with the server on a regular interval to confirm connectivity and that a session is established. This synchronization check must be configured from the Stay-Linked Administrator in the Client Settings section. The setting is displayed as PPC/CE – DM Only Heartbeat Interval. This setting allows the device management only clients to display a message when the server is regularly rebooted for maintenance. This message notifies the user that the session was ended, and will follow your standard rules for reconnecting to the server with a new session.



From this icon, a single tap will display a menu with the available options. The availability of these options will vary based on the current connection state of the client. Since there is no need for the connection persistence features of Stay-Linked terminal emulation, the device management only mode will terminate it's session on the server when disconnect is selected. At any time, you may select the view screen option to display the standard Stay-Linked client screen. This screen provides the File, Host and Tools menus discussed earlier in this guide. Pressing escape on your keypad, or selecting the X or OK button in the upper right corner will minimize the client back the system tray icon. Selecting Exit will completely close the Stay-Linked client.

5.2 Automatic Stay-Linked Client Deployment

Wireless Software package Deployment is a feature that is available with Version 7 or later Servers and Version 6.2 or later devices. This feature allows for the automated deployment of Stay-Linked Client Updates to devices, centrally managed from the Stay-Linked Administrator. When a capable device establishes a connection to a capable server, the server will look for any new Stay-Linked Client software that might be available to be deployed to the device. If a new Software Update is available, then the user will be notified. Depending upon the configuration of the deployment package, the update might be optional or the update might be mandatory. The following screens will be displayed, depending upon the deployment package settings, the status of the update queue and the selections of the device user.

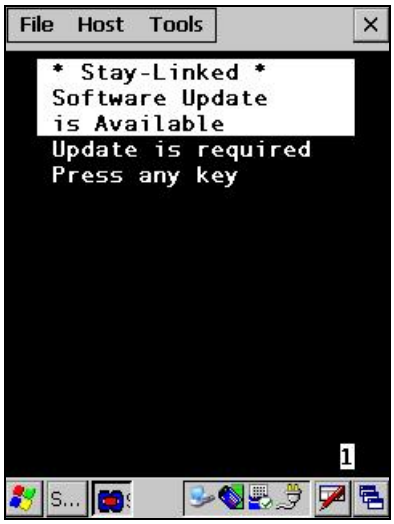
Optional Software Deployment Prompt:

Stay-Linked deployment packages update the Stay-Linked client software on devices that are already running Stay-Linked.

Updating and installing other applications can be done using the Software Provisioning tools available with the Device Management licensing.

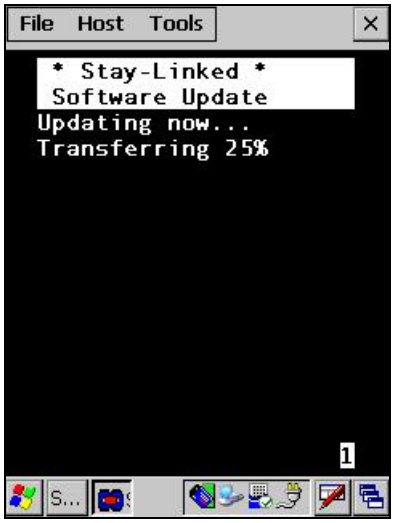
If the software update is optional, then the user can choose to update the software now by pressing ‘Y’ or wait until a more convenient time by pressing ‘N’. If the user selects to update later, then they will be prompted for the update again when they establish their next *new* connection.

Mandatory Software Deployment Prompt:



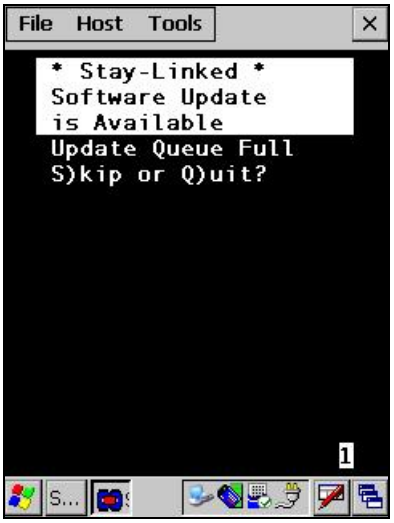
If the software update is mandatory, then the user has no choice but to allow the software to be updated now. The software update will proceed when the user presses any key.

Software Deployment Progress:



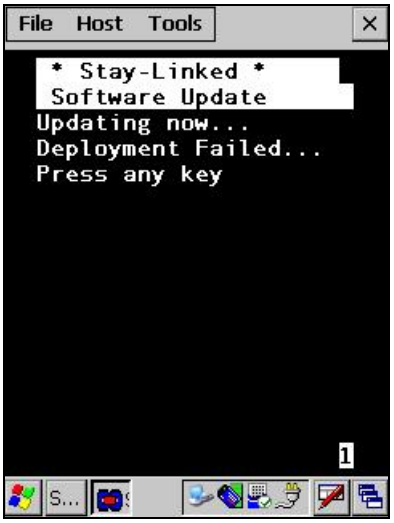
Progress will be displayed as the new client software package is transmitted to the device. Upon completion of the software transfer, the client software will restart or the device will be rebooted. The exact steps required for the automated installation procedure depends upon the device make and model.

Software Deployment Update Queue Full:



If many users are already receiving updates and depending upon the maximum allowed concurrent transfers, the user might get this 'Update Queue Full' prompt. If the user selects 'S' to skip the update, then the update will be skipped and the Stay-Linked Session will be started. If the user selects to skip and get the update later, then they will be prompted for the update again when they establish their next *new* connection. If the user selects 'Q' to quit, then they will be returned to the Stay-Linked Client main menu where they can retry the connection later, when there is room in the update queue for the update to be transferred.

Software Deployment Failed

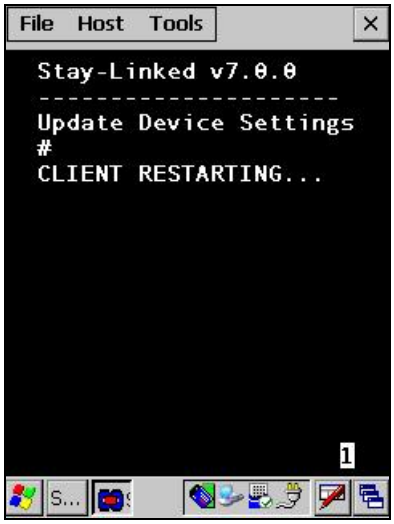


If the software deployment is interrupted for some reason (loss of power during transfer) the user will be able to continue with a normal session using the current version of Stay-Linked on the device. This device will be prompted for the update again when they establish their next *new* connection.

5.3 Centralized Management of Client Settings

Centralized Management of Device Settings is a feature that is available with Version 7 or later Servers and Version 7 or later devices. This feature allows for the automated deployment of Stay-Linked Client Settings to devices, centrally managed from the Stay-Linked Administrator. The settings that can be managed with this feature are those that are described in the 'Configure Device' section of this support guide, plus many other settings that do not have a user interface for their configuration. When a capable device establishes a connection to a capable server, the server will look for any new Stay-Linked Client settings that might be available to be deployed to the device. This determination is made by comparing the date/time stamp of the last client update to the date/time stamps of the applicable settings that are configured and stored on the server. If there are new device settings for the device, then the settings will be transferred to the device and those new settings will be installed into the STAYLINK.INI file on the device. Then, the device will be rebooted or the client restarted so that these new settings can take effect. The exact process that is followed in order for the new settings to take effect depends upon the device make and model.

Device Settings being Applied:



For further information or technical assistance, please contact your Stay-Linked Certified Partner or you may contact us directly.

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