CF RFID Reader Card™
CF RFID Reader-Scan Card™

Series 6

User's Guide

Copyright Notice

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1 | Introduction

The Socket CF RFID Reader Card Series 6 enables you to can add high frequency RFID read/write capability to your Socket SoMo® handheld computer or other Windows Mobile based device.

For applications that require both RFID and barcode reading functionality, the series includes the dual-function CF RFID Reader-Scan Card 6P, which offers both capabilities in the same compact form factor.

All three versions read and write to all ISO 15693 and many proprietary 13.56 MHz RFID tags.

The CF RFID Reader Card Series 6 includes three versions:

Model	RFID Reader/Writer	Barcode Scanner
CF RFID Reader Card 6E	Yes	Not included
CF RFID Reader-Scan Card 6P	Yes	Class 2 laser (2D)

The CF RFID Reader Cards feature a sleek design with no cables or batteries. The Battery Friendly® product draws minimal power from the host device, allowing long-lasting operation.

About the Software

SocketScan Plug-in ™ software enters the RFID tag ID or barcode data directly into any open Windows program, as if the data were manually typed. Includes configuration utility.

The RFID Setup utility allows you configure what kinds of data are returned after reading RFID tags, including tag ID, tag memory, tag types, tag type prefix, etc.

Socket RFID Demo allows you to read memory blocks of selected RFID tags in range in either Inventory Mode or a continuous Loop Mode. Advanced users can write data to the RFID memory.

SocketScan Trigger places a software trigger on your screen that you can tap to trigger the RFID reader or barcode scanner. Installation is optional.

The Socket Trigger Select program allows you to press a button to quickly switch between the RFID and laser scanning modes of the CF RFID Reader-Scan Card.

The Read Barcode program allows you to assign a button on your device to triggering the barcode laser scanner.

The Read RFID program allows you to assign a button on your device to trigger the RFID reader.

For software updates, please visit: http://www.socketmobile.com/support/downloads

Package Contents
- CF RFID Reader Card
- *SocketScan Plug-in Installation CD*
- Booklet with copyright and warranty information

System Compatibility Requirements
- Any of the following Windows Mobile versions:
  - Windows Embedded Handheld
  - Windows Mobile 2003, 2003SE or 5.0 for Pocket PC
  - Windows Mobile 6 Classic/Professional
- Available CompactFlash slot
- Software installation requires a host PC with Microsoft ActiveSync or Windows Mobile Device Center software

Accessory
FlexGuard is a protective silicone cover for the SoMo handheld computer and RFID card.
http://www.socketmobile.com/products/handheld-computer/accessories/flexguard-cf-card/

Product Registration

Socket highly recommends that all customers register their products. Registered users receive priority technical support and can opt to receive product updates, and special offers. Register online at: http://support.socketmobile.com/

2 | Setup for the SoMo®

This chapter shows how to install, configure, and use the CF RFID Reader Card Series 6 on any version of the Socket SoMo handheld computer.

Setup Summary
STEP 1: Assign a trigger button.
STEP 2: Start SocketScan Plug-in.
STEP 3: Insert the card.
STEP 4: Read tag IDs into your program.

Note: No software installation is required to use the CF RFID Reader Card on the SoMo. However, you may choose to upgrade the SocketScan Plug-in software. The latest software is available online at: http://www.socketmobile.com/support/downloads

STEP 1: Assign Trigger Button(s)

You must set up a mechanism for triggering the CF RFID Reader Card. Hardware button(s) are the best triggering method from a handheld device.

Note: If you do not want to assign a hardware button, you use SocketScan Trigger software, which enables you to tap on a software icon to trigger SocketScan Plug-in and the RFID reader/barcode scanner.

Windows Mobile 6

1. In the Today screen, tap **Getting Started**.
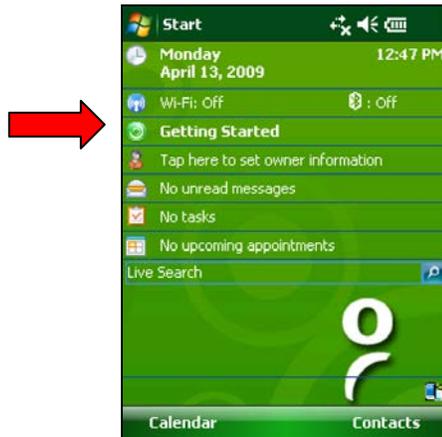
2. In the list, tap on **Set up Data Capture triggers**.
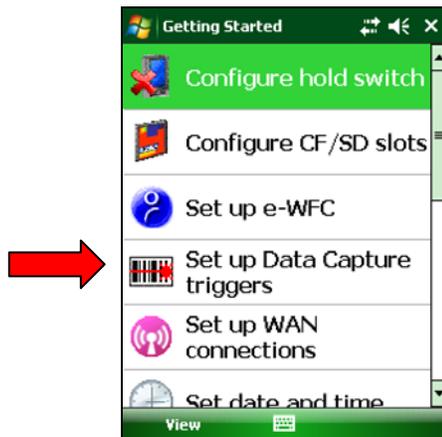
3. CF RFID Reader Card 6E:
    Tap **LEFT** or **RIGHT** in the first set of links. The SoMo will automatically set up the trigger button and send a confirmation message to your inbox.
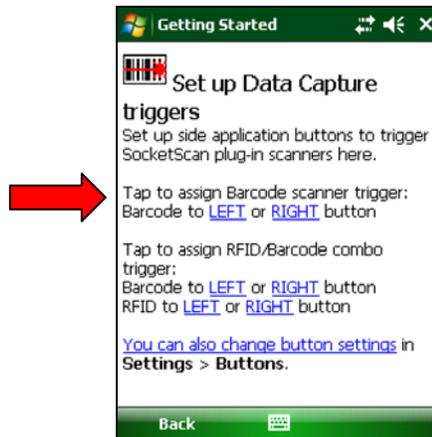
CF RFID Reader-Scan Card 6P

- In the second set of links, tap **LEFT** or **RIGHT** for your barcode scanner trigger. The SoMo will automatically set up the trigger button and send a confirmation message to your inbox.

- You will return to the list of Getting Started tutorials. Tap **Set up Data Capture triggers**.

- For the RFID reader trigger, tap on the link for the side you did not choose for the barcode scanner trigger. The SoMo will automatically set up the trigger button and send a confirmation message to your inbox.

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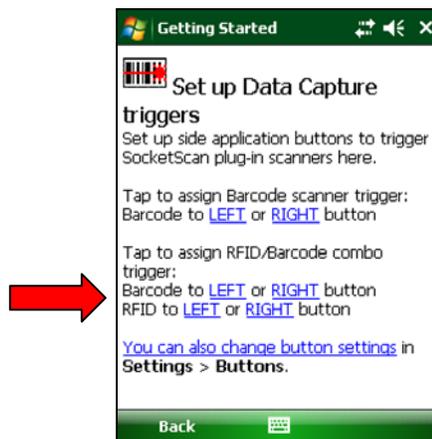
Windows Mobile 5

Please refer to the chart below to determine which SocketScan Plug-in functions you would like to assign to buttons on your device.

Note: If you have the CF RFID Reader-Scan Card 6P, SocketScan Plug-in allows you to configure up to four buttons for launching SocketScan Plug-in and/or triggering the RFID reader or barcode scanner.

Program	What happens when you press a button assigned to this program?
SocketScan	If SocketScan Plug-in is not open, SocketScan Plug-in will launch. If SocketScan Plug-in is open and you have the CF RFID Reader Card 6E, the RFID reader will activate. If SocketScan Plug-in is open and you have the CF RFID Reader-Scan Card 6P, either the RFID reader or the laser scanner will activate, depending on which mode the card is in. **If you assign only one hardware button for use with the CF RFID Reader Card, this is the program that should be assigned.** If you do not assign a button to SocketScan Plug-in, you can only start SocketScan Plug-in by manually tapping through menus.
Socket Trigger Select	If you are using the CF RFID Reader-Scan Card 6P, this program will switch the device from RFID mode to barcode scanning mode, or vice versa. This is designed to be used with a trigger button assigned to SocketScan Plug-in. You can also use Socket Trigger Select to toggle to other Socket Mobile barcode scanners that use a software trigger.
Read Barcode	The laser bar ode scanner will activate. SocketScan Plug-in must be running.
Read RFID	The RFID reader will activate. SocketScan Plug-in must be running.

1. Tap **Start | Settings | Buttons**.
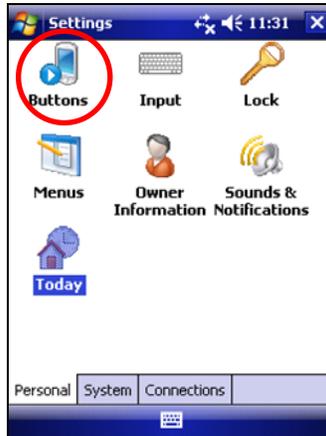
2. In the **Button** list, select a button. In the drop-down menu, select the program. If desired, repeat to assign additional trigger buttons. When done, tap **ok**.
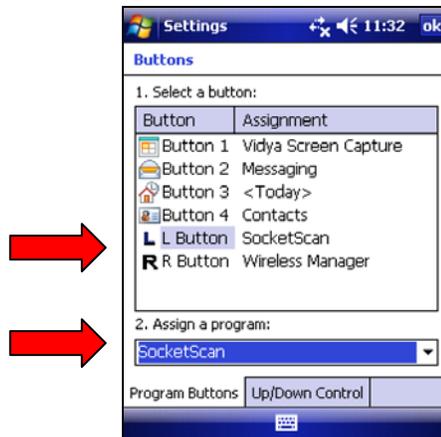
Note: For best ergonomics, choose the left or right buttons.

STEP 2: Start SocketScan Plug-in

1. If you assigned a hardware button to SocketScan Plug-in, you can press the button to quickly launch the program. Otherwise, tap **Start | Programs | SocketScan Plug-in folder | SocketScan Plug-in**.

2. An icon will appear in the task tray of the Today screen indicating that the system does not detect the RFID reader.

   When SocketScan Plug-in is running, any of the following icons will appear in the task tray of the Today screen:

Icon	Meaning.
	Card detected, RFID mode. SocketScan Plug-in detects the card and is ready to read RFID tags.
	Card detected, scanning mode. SocketScan Plug-in detects the card and is ready to read barcodes.
	No RFID Reader Card detected. The reader card is either missing or improperly inserted.

STEP 3: Insert the Card

1. Open the card slot cover on top of the SoMo.

2. Insert the card into the CompactFlash slot. Make sure the card is right-side up, with the blue label on top. Push the card all the way into the slot.

Windows Mobile 5: If you have the CF RFID Reader-Scan Card 6P, and you did not assign buttons to Trigger ISC or Trigger RFID, make sure the card is in the correct mode you wish to use. The SocketScan Plug-in icon at the bottom of the Today screen indicates your current mode.

To switch modes, do either of the following:

- *If you assigned a button to Trigger Select, press the button.*

  - *Tap on the SocketScan Plug-in icon. In the pop-up menu, tap to select the card mode you want.*

STEP 4: Open Your Application

Open the application that you want to receive the data (e.g., Excel, Notepad, etc.). Place the cursor where you want to enter data.
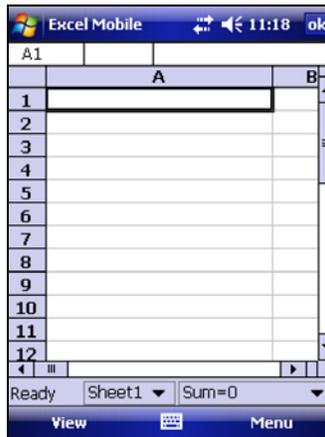
Note: If reading RFID tags into Excel, you may want to widen the cells to fit the full tag ID, which may exceed 20 characters.

STEP 5: Read Data into Your Application

Please note that the correct positions for RFID reading and barcode scanning are very different!

CORRECT <u>RFID</u> POSITION:

Hold the card <u>parallel</u> to and directly above the tag, at most 3.0 inches above the tag.

Parallel,
3.0 inches (7.6 cm)
maximum

Note: The LED will turn amber to indicate that the card is reading tag IDs.

CORRECT <u>BARCODE SCANNING</u> POSITION:

Hold the card so that the lens is angled about <u>45° to the barcode</u> and <u>at least 2.0 inches away from the barcode</u>. The red laser line should cover the entire width of the barcode.

Note: The proper scanning distance and angle vary depending on the size, type, quality, and print surface of the barcode.

WRONG <u>RFID</u> POSITION:

DO NOT direct the RFID Reader-Scan Card at an angle towards the tag.

WRONG <u>RFID</u> POSITION:

DO NOT hold the RFID Reader-ScanCard perpendicular to the tag.

When data is read, a beep should sound indicating a good read, and data should appear in your application.

For example, in an Excel Mobile spreadsheet, data should appear in the cell you highlighted. The next cell should now be highlighted, ready for the next scan/read.

If the card fails to read data within a few seconds, you must try again.

Note: By default, the RFID reader will return the tag ID. The RFID Setup utility can be used so that the RFID Reader-Scan Card returns only the tag data, or the tag ID plus the tag data. (See the next page for instructions.)

3 | Setup for Non-SoMo PDA

This chapter shows how to install, configure, and use the CF RFID Reader Card Series 6 on a Windows Mobile powered device.

Setup Summary
STEP 1: Uninstall other scanning software.
STEP 2: Install the software.
STEP 3: Assign a trigger button.
STEP 4: Start SocketScan Plug-in.
STEP 5: Insert the card.
STEP 6: Read tag IDs into a Windows program.

STEP 1: Uninstall Other Scanning Software

Uninstall any barcode scanning software already in your computer, including previous versions of SocketScan Plug-in ™ software.

1. Make sure the software is not running.
2. Tap **Start | Settings | System tab | Remove Programs**.
3. Use the utility to delete the software.

STEP 2: Install the Software

ADVANCED USERS: Refer to the README file for CAB file installation instructions.

Follow these instructions to install SocketScan Plug-in. Afterwards, you can use the same process to install RFID Demo and/or Floating Trigger.

1. Use a serial/USB cable or cradle and the appropriate Microsoft synchronization software to make an active connection between your device and a host PC.

2. Insert the installation CD into your host PC.

3. Use **My Computer** or **Windows Explorer** to access your CD-ROM drive. In the CD, click on SETUP.EXE.

4. The SocketScan Setup Center will appear in your web browser. Read the first page and click **Installation** in the left margin.

5. In the SocketScan Installation page, in the Windows CE section, click **Install** In the first paragraph.

6. Your web browser will present a series of dialogs.

   Internet Explorer:
   - In the File Download –Security Warning dialog, click **Run**.
   - In the second warning dialog, click **Run**.
   - Internet Explorer will download the file.

   Firefox:
   - In the file opening dialog, click **Save File**.
   - Firefox will download the file.
   - In the Downloads list, next to SocketScanCE.exe, click **Open**.
   - In the warning dialog, click **OK** to continue.

7. The InstallShield Wizard for SocketScan Plug-in Software will automatically launch. Follow the wizard to install the software.
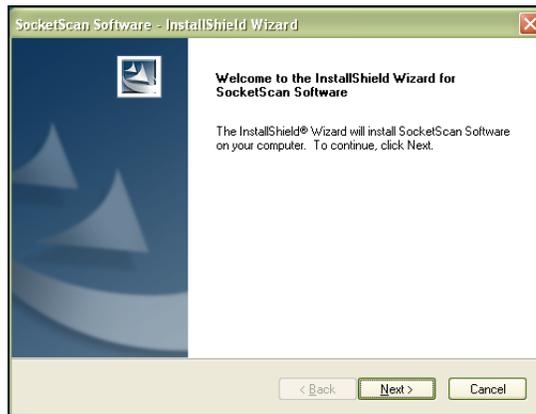
8. If your device warns that the software comes from an unknown publisher, tap **Yes** to continue installation.

9. When software installation is complete, remove the device from the cradle. Soft reset the device by pressing the reset button.

Note: After software installation, several new icons will appear in the Programs screen.

STEP 3: Assign Trigger Button(s)

You must set up a mechanism for triggering the CF RFID Reader Card. Hardware button(s) are the best triggering method from a handheld device.

If you have the CF RFID Reader-Scan Card 6P, SocketScan Plug-in allows you to configure up to four buttons for launching SocketScan Plug-in and/or triggering the RFID reader or barcode scanner.

Please refer to the chart below to determine which SocketScan Plug-in functions you would like to assign to buttons on your device.

Program	What happens when you press a button assigned to this program?
SocketScan	If SocketScan Plug-in is not open, SocketScan Plug-in will launch. If SocketScan Plug-in is open and you have the CF RFID Reader Card 6E, the RFID reader will activate. If SocketScan Plug-in is open and you have the CF RFID Reader-Scan Card 6P, either the RFID reader or the laser scanner will activate, depending on which mode the card is in. **If you assign only one hardware button for use with the CF RFID Reader Card, this is the program that should be assigned.** If you do not assign a button to SocketScan Plug-in, you can only start SocketScan Plug-in by manually tapping through menus.
Socket Trigger Select	If you are using the CF RFID Reader-Scan Card 6P, this program will switch the device from RFID mode to barcode scanning mode, or vice versa. This is designed to be used with a trigger button assigned to SocketSca Plug-in n. You can also use Socket Trigger Select to toggle to other Socket Mobile barcode scanners that use a software trigger.
Read Barcode	The laser barcode scanner will activate. SocketScan Plug-in must be running.
Read RFID	The RFID reader will activate. SocketScan Plug-in must be running.

Note: If you do not want to assign a hardware button, you can install and use SocketScan Trigger software from the installation CD, which enables you to tap on a software icon to trigger SocketScan Plug-in and the RFID reader/barcode scanner.

Refer to your device manual for specific instructions.

1. Tap **Start | Settings | Personal | Buttons**.
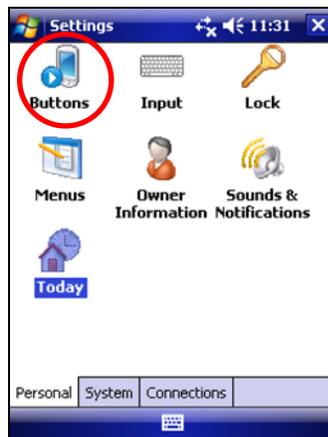
2. In the **Button** list, select a button. In the drop-down menu, select the program. If desired, repeat to assign additional trigger buttons. When done, tap **ok**.

Note: For best ergonomics, choose a button located beneath your thumb or forefinger when you hold the device.

STEP 4: Start SocketScan Plug-in

1. If you assigned a hardware button to SocketScan Plug-in, you can press the button to quickly launch the program. Otherwise, tap **Start | Programs | SocketScan Plug-in folder | SocketScan Plug-in**.

2. An icon will appear in the task tray of the Today screen indicating that the system does not detect the RFID reader.

   When SocketScan Plug-in is running, any of the following icons will appear in the task tray of the Today screen:

Icon	Meaning.
	Card detected, RFID mode. SocketScan Plug-in detects the reader-scan card and is ready to read RFID tags.
	Card detected, scanning mode. SocketScan Plug-in detects the reader-scan card and is ready to read barcodes.
	No RFID Reader Card detected. The reader card is either missing or improperly inserted.

STEP 5: Insert the Card

Insert the card into the CompactFlash slot of your device. Make sure the card is right-side up, with the blue label on top. Push the card all the way into the slot.

STEP 6: Verify Card Mode

If you are using the dual-function CF RFID Reader-Scan Card 6P, and you did not assign buttons to Trigger ISC or Trigger RFID, make sure the card is in the correct mode you wish to use. The SocketScan Plug-in icon at the bottom of the Today screen indicates your current mode.

To switch modes, do either of the following:
- If you assigned a button to Trigger Select, press the button.
  - Tap on the SocketScan Plug-in icon. In the pop-up menu, tap to select the card mode you want.

STEP 7: Open Application

Start the application that you want to receive the data (e.g., Excel, Notepad, etc.). Make sure a document or spreadsheet is open. Place the cursor where you want to enter data.
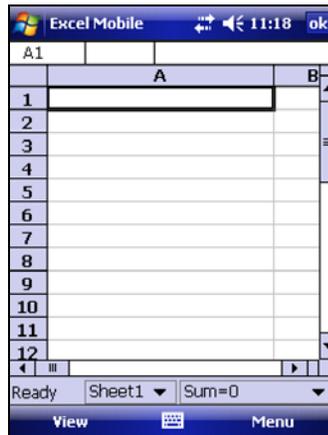
Note: If reading RFID tags into Excel Mobile, you may want to widen the cells to fit the full tag ID, which may exceed 20 characters.

STEP 8: Read Data

Please note that the correct positions for RFID reading and barcode scanning are very different!

CORRECT <u>RFID</u> POSITION:

Hold the card <u>parallel</u> to and directly above the tag, at most 3.0 inches above the tag.

Parallel,
3.0 inches (7.6 cm)
maximum

Note: The LED will turn amber to indicate that the card is reading tag IDs.

CORRECT <u>BARCODE SCANNING</u> POSITION:

Hold the card so that the lens is angled about <u>45° to the barcode</u> and <u>at least 2.0 inches away from the barcode</u>. The red laser line should cover the entire width of the barcode.

Note: The proper scanning distance and angle vary depending on the size, type, quality, and print surface of the barcode.

WRONG <u>RFID</u> POSITION:

DO NOT direct the RFID Reader-Scan Card at an angle towards the tag.

WRONG <u>RFID</u> POSITION:

DO NOT hold the RFID Reader-ScanCard perpendicular to the tag.

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When data is read, a beep should sound indicating a good read, and data should appear in your application.

For example, in an Excel Mobile spreadsheet, data should appear in the cell you highlighted. The next cell should now be highlighted, ready for the next scan/read.

If the card fails to read data within a few seconds, you must try again.

Note: By default, the RFID reader will return the tag ID. The RFID Setup utility can be used so that the RFID Reader-Scan Card returns only the tag data, or the tag ID plus the tag data. (See the next page for instructions.)

4 | SocketScan Plug-in Software

This chapter shows how to install, configure, and use the CF RFID Reader Card Series 6 on a Windows Mobile powered device.

Application Features

RFID settings
Symbology selector
SocketScan Trigger.
Version information.

RFID Settings

Note: These settings are only used with the SocketScan Plug-in keyboard wedge programs and Scan Demo.

1. Tap on the SocketScan Plug-in icon. In the pop-up menu, tap **Settings**.

2. In the Prefix/Suffix screen, enter the characters you would like added to each read/scan of data (128 character maximum).
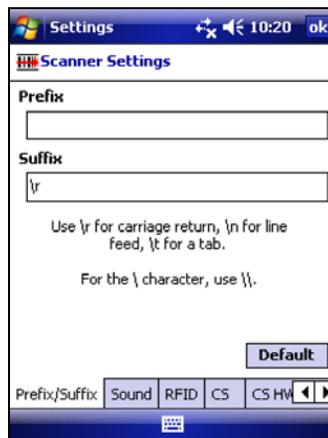
Note: Only printable ASCII characters can be used as prefixes or suffixes.

Note:

- *The default suffix is a carriage return.*

- *If in the RFID Setup utility you selected Tag ID & Read Data, the prefix/suffix is added to both the tag ID and the read data fields.*

3. Tap on the **Sound** tab.

4. In the Sound screen, select which sound you would like SocketScan Plug-in to make to indicate a good read.
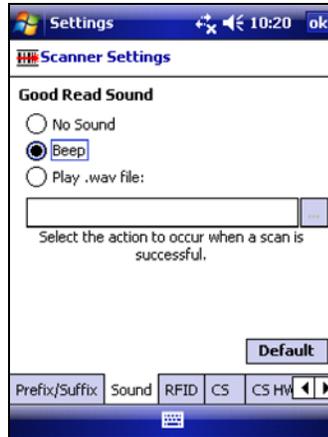
To you want to play a .WAV file, after selecting **Play .wav file,** you can search through files by tapping the browse box. In the **Open** screen, tap on the file you want:

Note: You can only select a WAV file from the My Documents folder. If needed, copy the file you need to this folder.

5. After selecting your sound, tap on the **RFID** tab.

6. In the RFID screen, enter the following settings:

Trigger mode:
- **Tag ID Only**: Select to read only the tag ID.
- **Read Data Only**: Select to read only data from the tag memory.
- **Tag ID & Read Data**: Select to read both the tag ID and tag memory.

Starting block: If you selected a **Read Data** option, enter the number of the first block you want to begin reading.

Number of blocks: If you selected a **Read Data** option, enter the number of blocks you want to read.

Read error string: Enter the string you want your application to display in case the RFID reader cannot read the tag data.

Tag type: Select the type of RFID tag you want to read. The Auto Detect setting enables all tag types to be read.

Note: Choosing a specific tag may result in a longer read range and faster read.

Inventory mode: Select for the RFID reader to read all tags present in an RFID field, if supported by the tag type.

Display tag ID prefix: Select to display the RFID tag ID prefix with each tag ID. The prefix indicates the tag type.

Displayable characters only: Select for the RFID reader to read only displayable characters while reading data from the tag memory. Otherwise, the RFID reader will also read "filler" symbols used in memory blocks that aren't completely filled with data. This option is only available if you selected a Read Data trigger mode.

7. After selecting all of your Prefix/Suffix, Sound and RFID settings, tap **ok**.

Symbology Selector

If you have the dual-function CF RFID Reader-Scan Card 6P, SocketScan Plug-in provides an applet that makes it easy to modify which barcode symbologies the scanner will recognize and attempt to decode. By default, the scanner is set to recognize several of the most common symbologies.

1. Tap on the SocketScan Plug-in icon at the bottom of the Today screen.

2. In the pop-up menu, tap **Symbology Selector**. If SocketScan Plug-in is currently configured for more than one scanner, then tap **In-Hand Scanner** in the submenu that appears.
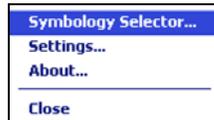
3. In the screen that appears, use the checkboxes to enable/disable symbologies. Tap **ok**.
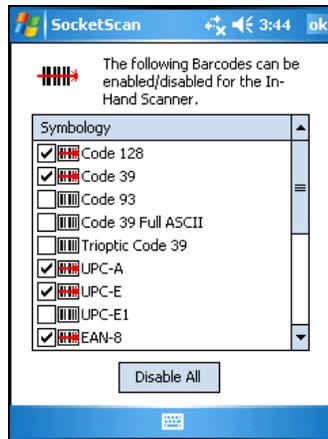
Note: Enabling all possible symbologies will make the decode process slightly longer.

Note: If you want to read UPC-A barcodes disable GS1 DataBar (RSS) so that UPC-A barcodes aren't mistakenly read as GS1 DataBar.

Note: The RSS symbology is now known as GS1 DataBar.

SocketScan Trigger

If you find it inconvenient or impossible to assign or use a hardware button to trigger the reader, you can install this virtual trigger button that "floats" on top of the active application.

1. Make sure to do all of the following before using SocketScan Trigger:

   - Install SocketScan Trigger from the installation CD. The software must be installed separately from SocketScan Plug-in.

   - Start SocketScan. Tap **Start | Programs | SocketScan Plug-in**.

   - Insert the CF RFID Reader Card into your device.

   - Open the application that you want to receive data.

2. Start SocketScan Trigger. Tap **Start | Programs | SocketScan Trigger**.

SocketScan
Trigger

3. The floating trigger button will appear on your screen on top of the active application.
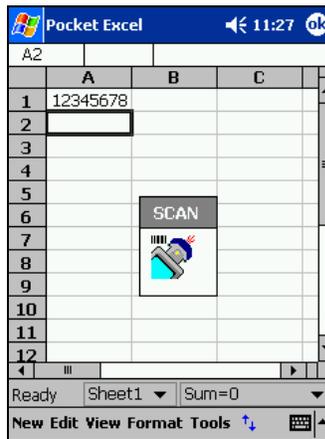
Drag from the title bar to move the trigger button to a convenient place on the screen.

Tap the trigger button to activate the RFID reader/barcode scanner.

4. A SocketScan Trigger icon will also appear in the menu bar of the Today screen. Tap on this icon to reveal a pop-up menu with the following options:
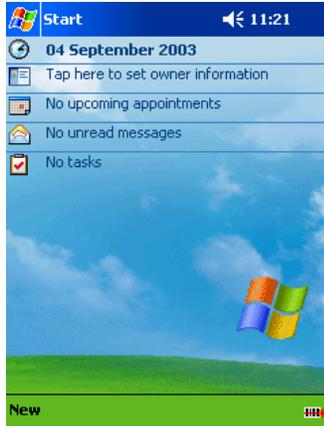
- Tap **Scan Now** to activate the scanner as if you had tapped the trigger button.

- Tap **Remove Floating Trigger** to remove the trigger button from the screen but keep the icon handy on the task bar. To restore the trigger button, tap on the menu bar icon. In the pop-up menu, tap **Launch Floating Trigger**.

- Tap **About** to view SocketScan Trigger version information.

- Tap **Close SocketScan Trigger** to close the application completely. From this state, the SocketScan trigger can only be launched from the Programs page.

DUAL DEVICE SUPPORT

SocketScan v7.2.4.0 and later supports the simultaneous use of two Socket data collection devices with the same computer. This enables you to use the CF RFID Reader Card with a Socket *Bluetooth* barcode scanner on the same computer.

Note: SocketScan Plug-in can capture data from only one cordless scanner at a time.

Simply connect or plug in each device you plan to use as you normally would.

The functionality of each device is the same, and no extra configuration is required.

You can configure each device separately. In the SocketScan Plug-in menu, tap on the appropriate device to configure its settings.

5 | RFID Demo

This chapter explains how to use the Socket Mobile RFID Demo application with the CF RFID Reader Card to perform the following:

- Read an RFID Tag.
- Enable Loop Mode.
- Select Tag Type.
- *Advanced* – Write to Tag.

Before you begin using the Socket Mobile RFID Demo application, make sure you have done the following:

- Installed the RFID Demo application onto your device, following the same software installation procedure described in Chapter 2.

- Inserted the CF RFID Reader Card into your device.

- When you use this application, you should only trigger the RFID Reader Card by tapping on the **Select Tags** or **Read Tag** button on the RFID Demo screen.

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Read an RFID Tag

1. Start RFID Demo. Tap **Start | Programs | RFID Demo**.

Socket RFid Demo

2. The main screen of RFID Demo will appear with blank fields.

3. Hold the device in the correct position to read an RFID tag, as described in Chapter 2. Hold the device so the CF RFID Reader Card is <u>parallel</u> to and directly above the tag, at most 2.0 inches above the tag.

Parallel,
3.0 inches (7.6 cm)
maximum
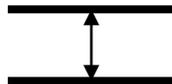
4. Tap **Select Tags**.

5. Tag ID(s) should appear in the Available Tags field. Additionally, the bottom of the screen will report the number of RFID tags found in range.

6. In the Available Tags field, tap to highlight the RFID tag you wish to read, then tap **Read Tag**.

7. After the CF RFID Reader Card reads the tag, Tag Data will appear. If desired, check **Display as hex data** to view the data in hexadecimal format.

Enable Inventory and Loop Modes

The CF RFID Reader Card has four reading modes, based on different combinations of inventory mode and loop mode. The chart below shows the results of enabling or disabling the modes.

Tag Select Mode	Loop Mode	Inventory Mode	Description
One tag	Disabled	Disabled	Selects the first tag in RF field
One tag continuously	Enabled	Disabled	Selects the first tag continuously (the same tag ID will be returned as long as the tag remains in the RF field.
All tags present	Disabled	Enabled	Inventory mode: returns the tag IDs of all tags in the RF field and then reports when there are no more tags.
All tags continuously	Enabled	Enabled	Returns the tag IDs of all tags in the RF field. It does not repeat a tag ID unless the tag goes out and then re-enters the RF field.

Note: Not all tag types are readable in Inventory Mode.

1. In the main screen of RFID Demo, tap RFID at the bottom of the screen. In the pop-up menu, select adjust the Inventory Mode and/or Loop Mode settings as desired.
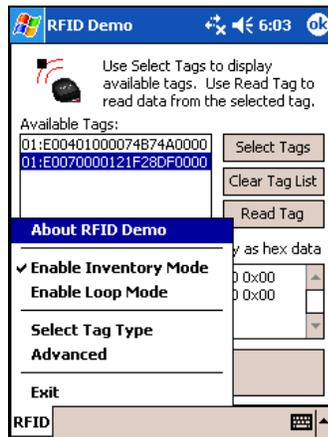
2. After selecting the desired settings, tap **Select Tags**. The CF RFID Reader Card will search for tags in range, according to your settings.

Select Tag Type

1. In the main screen of Socket Mobile RFID Demo, tap **RFID** at the bottom of the screen. In the pop-up menu, tap **Select Tag Type**.
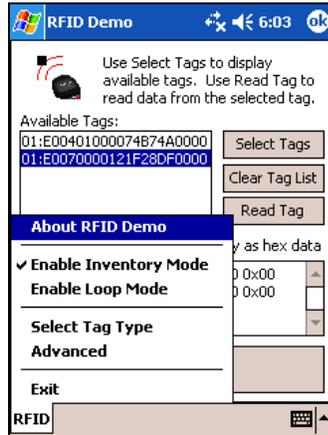
2. In the Select Tag Type dialog box, use the drop-down menu to select the tag type. Tap **ok**.
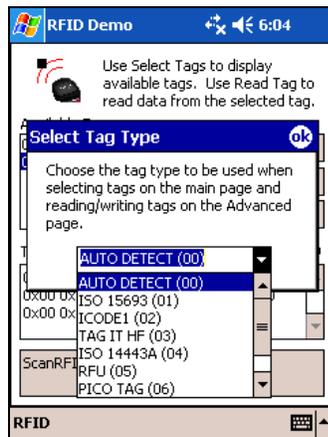
Note:

- *Tag selection response time is longer with **Auto Detect** than for specific tag types. If **Auto Detect** is not selected, only the type of tags selected can be read or written to.*

- ***Auto Detect** will search for tag types 01 to 04. **Pico Tag** (06) must be selected in order to read tag ID.*

ADVANCED: Write to Tag

1. In the main screen of Socket Mobile RFID Demo, tap **RFID** at the bottom of the screen. In the pop-up menu, tap **Advanced**.
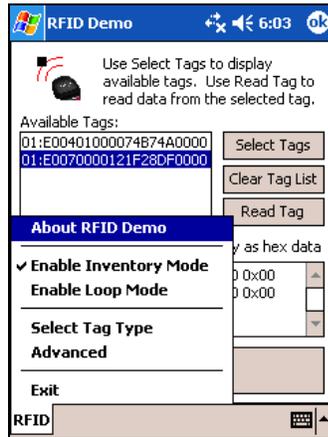
2. Use the next screen to read and write data in specific blocks of an RFID tag. Enter the number of the starting block and number of blocks you would like to read.
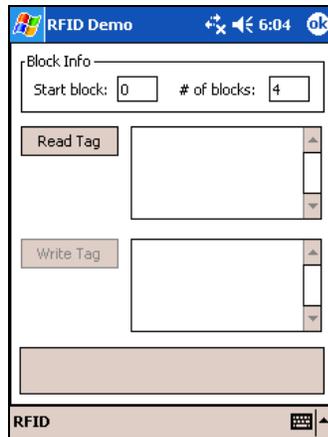
3. Hold the Pocket PC in the correct position to read RFID tags — parallel to the tag and directly above it, at most 2.0 inches above. Tap **Read Tag**.

4. RFID Demo will report any data saved to the RFID tag, as well as the type of tag and number of bytes per block. The bottom of the screen will report the read status and tag ID.
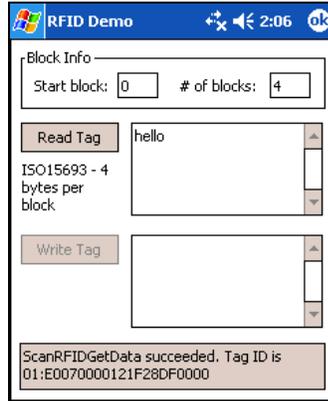
5. To write data to the tag, enter text into the bottom field. The type and amount of text that can be written varies depending on your tag type. After entering text, hold the Pocket PC in the correct reading/writing position and tap **Write Tag**.
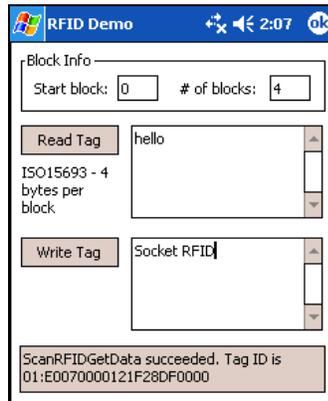
Note:

- *The number of characters in the Write Tag field must match the number of bytes per block multiplied by the number of blocks, or an error will occur.*

- *See Appendix B to find out the type and amount of text that can be written to your tag.*

- *The most common cause of write failures is either an incorrect "start block" or number of blocks.*

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6. After writing data to the tag, the bottom of the screen will report the write status.
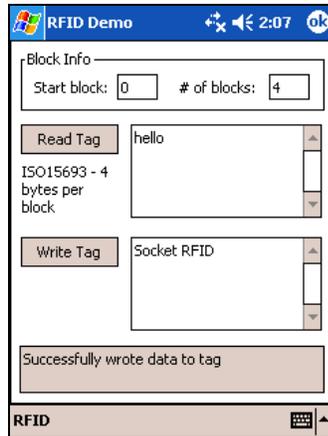
7. To verify that the data was written successfully to the tag, hold the device in the correct reading/writing position, and tap **Read Tag**.
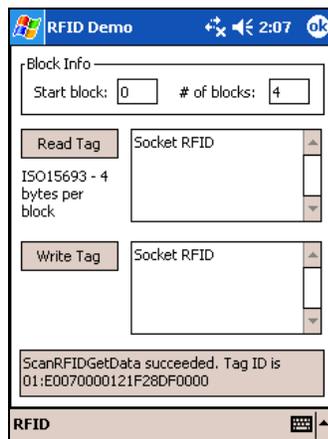
8. To close the advanced screen, tap **ok**.

Appendix A
Product Specifications

Physical Characteristics

CompactFlash Card Size: 1.4 x 1.68 x 0.20 inches (36 x 42.7 x 5.0 mm)

Reader/Scanner Head Size: 1.8 x 1.9 x 0.83 inches (45 x 49 x 21 mm)

Weight:

6E: 1.1 oz. (31 g)

6P: 1.3 oz (37 g)

Environmental:

Operating Temperature: -10 to +50°C (-4 to +122°F)

Storage Temperature: -40 to +70°C (-40 to +158°F)

Humidity: 5-95% RH non-condensing

Ambient Light for Barcode Scanning (6P only):

Sunlight: 10,000 ft candles (107,640 lux)　　　Artificial light: 450 ft candles (4,844 lux)

Electrical Specifications:
Power Consumption (3.3 V):

6E:　　　　　Standby: 11mA (36 mW),

　　　　　　　Reading/Writing RFID: 52 mA (171 mW)

6P:　　　　　Standby: 11 mA (36 mW) typical

　　　　　　　Scanning barcodes: 72 mA (238 mW) typical

　　　　　　　Reading/Writing RFID: 52 mA (171 mW)

Also operates at 5 V

Laser Power (6P):　　　　1.7 mW (±0.2 mW)

Compatibility*:* Windows COM port

Operating System Support*:*
Windows Mobile 6 Classic/Professional
Windows Mobile 2003, 2003SE, 5.0 for Pocket PC

Certification*:* FCC: Part 15, Class B, CE: EN55024:1998, C-TICK: s.182

RFID Characteristics:
Frequency: 13.56 MHz (HF)
Maximum Read Range: ~ 3.0 inches for ISO15693 tags, depending on tag antenna size

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HF RFID Tags Supported

ISO15693: ICode SL2, LRI512, my-d, Tag-It HF-I

Proprietary: ICode SL1, PicoTag (no anti-collision), Tag-It HF

ISO14443A: Mifare (Tag ID only), Mifare Ultralight (no anti-collision)

Barcode Scanner Characteristics (6P only):
Symbology Support: Chinese 2 of 5, Codabar, Code 11, Code 128, Code 39, Code 93, Discrete 2 of 5, GS1-128, GS1 DataBar (formerly RSS), Interleaved 2 of 5, MSI, UPC/EAN

*Scan Repetition Rate: 1*00 scans/sec (bidirectional)

Optical Resolution: 0.004 in. minimum/barcode element width (X Dimension)

Print Contrast: Minimum 25% absolute dark/light reflectance (MRD) measured at 650 MRD

Scan Angle: Wide (default): 47° ±3°, Narrow: 35° ±3°

Decode Zone: 1.5 to 45+ inches (3.8 to 144+ cm)

Appendix B
HF RFID Standards and Tag Descriptions

ISO15693

The ISO/IEC 15693 standard was developed for "Contactless Vicinity Cards". Adopted in 1998, ISO15693 has significantly enabled global acceptance of 13.56MHz RFID technology. Based on contributions by Texas Instruments and Philips, ISO/IEC 15693 is largely a superset of the features and specifications of the Tag-it HF and I·Code1 products, respectively.

- **ISO15693-1:** Defines the physical characteristics of a credit card transponder.

- **ISO15693-2:** Specifies the 13.56MHz air interface and modulation methods that accommodate regulatory bodies worldwide.

- **ISO15693-3:** Specifies the command protocol and anti-collision method for data exchange between tags and readers.

The ISO15693 "standard" permits tags to be manufactured that support optional and custom commands, and that have custom memory structures, sizes and architectures. The SkyeRead family of RFID readers fully supports all four (4) IC manufacturers that offer ISO/IEC 15693 compatible tags.

Tag-It HF-I ISO15693 (Texas Instruments)
The complete Tag-It HF-I specification can be found in the Texas Instruments publication titled "Tag-It HF-I Transponder Inlays Reference Guide".

Figure 1 - Memory Structure of the Tag-It HF-I

2K bits (256 bytes) of user memory is available for read/write.

Block #	32 bits (4 bytes per block)			
0 (0x00)				
1 (0x01)				
2 (0x02)				
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
62 (0x3E)				
63 (0x3F)				

The user can permanently lock any block.

Once a block is locked, it can not be unlocked.

A 64-bit ID (factory programmed) uniquely identifies each Tag-It HF-I chip.

TID	0xE0	0x07	Unique Tag ID - 48 bits (6 bytes)
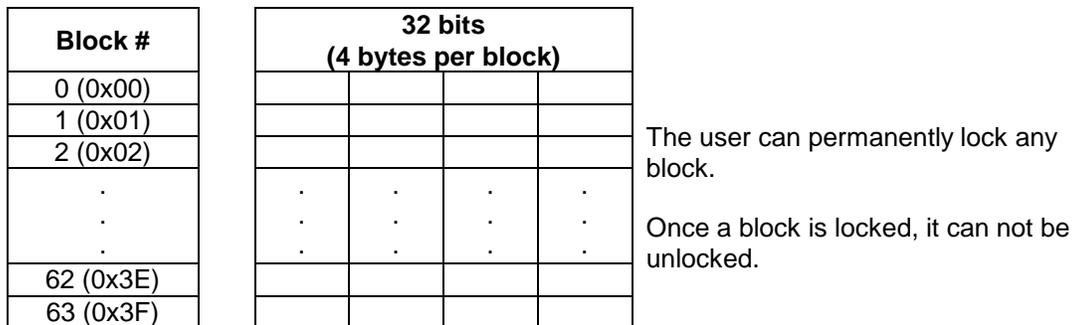
I·Code SLI_ISO15693 (Philips)

The complete I·Code SLI specification can be found in the Philips publication titled "I·Code SLI Smart Label IC SL2 ICS20 Functional Specification".

Figure 1 - Memory Structure of the I·Code SLI (version SL2 ICS20)

896 bits (112 bytes) of user memory is available for read/write.

Block #	32 bits (4 bytes per block)			
0 (0x00)				
1 (0x01)				
2 (0x02)				
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
26 (0x1A)				
27 (0x1B)				

The user can permanently lock any block.

Once a block is locked it can not be unlocked.
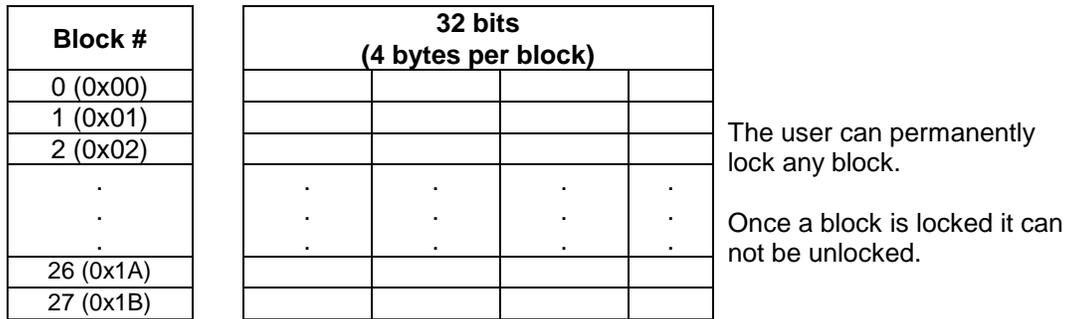
A 64-bit ID (factory programmed) uniquely identifies each I·Code SLI chip (SL2 ICS20).

TID	0xE0	0x04	0x01	Unique Tag ID 40 bits (5 bytes)
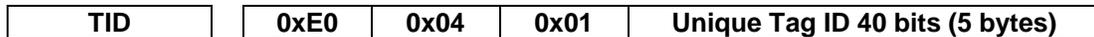
my-d SRF55VxxP ISO15693 (Infineon)

The complete my-d SRF55VxxP specification can be obtained from Infineon.

Figure 2 - Memory Structure of the my-d SRF55V02P

29 blocks of 8 bytes = 232 bytes (1856 bits) of user memory is available for read/write.

Block #	64 bits (8 bytes per block)							
3 (0x03)								
4 (0x04)								
5 (0x05)								
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
30 (0x1E)								
31 (0x1F)								

The user can permanently lock any block

Once a block is locked it can not be unlocked.
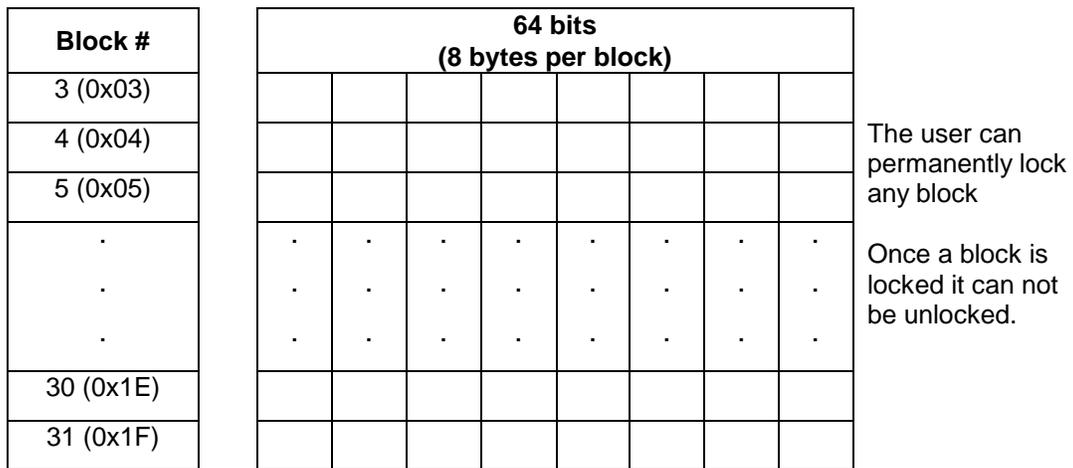
A 64-bit ID (factory programmed) uniquely identifies each my-d SRF55V02P chip.

TID		0x60	0x05	0x02	Unique Tag ID - 40 bits (5 bytes)

Figure 4 - Memory Structure of the my-d SRF55V10P

125 blocks of 8 bytes = 1000 bytes (8000 bits) of user memory is available for read/write.

Block #	64 bits (8 bytes per block)								
3 (0x03)									The user can permanently lock any block
4 (0x04)									
5 (0x05)									
.	.	.	.	.	.	.	.	.	Once a block is locked it can not be unlocked.
.	.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	.	
126 (0x7E)									
127 (0x7F)									

A 64-bit ID (factory programmed) uniquely identifies each my-d SRF55V10P chip.

TID		0x60	0x05	0x00	Unique Tag ID - 40 bits (5 bytes)

LRI512 ISO15693 (ST Microelectronics)

The full LRI512 specification was included in "LRI512 Memory TAG IC 512 bit High Endurance EEPROM 13.56MHz, ISO 15693 Standard Compliant with E.A.S." by ST Microelectronics.

Figure 5 - Memory Structure of the STM LRI512

512 bits (64 bytes) of user memory is available for read/write.

Block #	32 bits (4 bytes per block)			
3 (0x03)				
4 (0x04)				
5 (0x05)				
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
14 (0x0E)				
15 (0x0F)				

The user can permanently lock any block.

Once a block is locked it can not be unlocked.

A 64-bit ID (factory programmed) uniquely identifies each STM LRI512 chip.

TID		0xE0	0x02	Unique Tag ID 48 bits (6 bytes)

Tag-it HF

The first 13.56MHz RFID IC that Texas Instruments developed was the Tag-it HF. Still in high volume production, Tag-it HF is widely used in applications globally and has an existing installed base of millions of tags. The Tag-it HF uses a protocol air interface that is proprietary to Texas Instruments.

By contrast, the Tag-it HF-I was released by Texas Instruments in 2001 is compatible with ISO/IEC 15693 parts -2 and -3. The host application developer should be aware of the distinction between the Tag-it HF and the Tag-it HF-I.

Figure 7 - Memory Structure of the Tag-it HF

256 bits (32 bytes) of user memory is available for read/write.

Block #	32 bits (4 bytes per block)			
0 (0x00)				
1 (0x01)				
2 (0x02)				
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
.				
6 (0x06)				
7 (0x07)				

The user can permanently lock any block.

Once a block is locked it can not be unlocked.

A 32-bit ID (factory programmed) uniquely identifies each Tag-it HF chip.

TID	Unique Tag ID 32 bits (4 bytes)

The complete Tag-it HF specification can be obtained from Texas Instruments.

I·Code1

The first long range 13.56MHz RFID IC that Philips released was the I·Code1 (SL1). Still in high volume production, I·Code1 (SL1) is still widely used in applications globally and has an existing installed base of millions of tags. The I·Code1 (SL1) uses a protocol and air interface that is proprietary to Philips.

By contrast, the I·Code SLI (SL2), released by Philips in 2002, is fully compatible with ISO/IEC 15693 parts -2 and -3. The host application developer should be explicitly aware of the distinction between the I·Code1 (SL1) and the I·Code SLI (SL2).

Figure 8 - Memory Structure of the I·Code1 (version SL1 ICS30 01)

512 bits (64 bytes) of user memory is available for read/write.

Block #	32 bits (4 bytes per block)			
3 (0x03)				
4 (0x04)				
5 (0x05)				
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
.				
14 (0x0E)				
15 (0x0F)				

The user can permanently lock any block.

Once a block is locked it cannot be unlocked.

A 64-bit ID (factory programmed) uniquely identifies each I·Code1 chip.

TID	Unique Tag ID 64 bits (8 bytes)

PicoTag

Inside Contactless (formerly Inside Technologies) makes a contactless RFID product series called the PicoTag. There are two different sizes of PicoTag memories, 2K and 16K. There are two different modes of operation, plain and secure.

Figure 9 - Memory Structure of the PicoTag   2K

29 blocks of 8 bytes = 232 bytes (1856 bits) of user memory is available for read/write.

Block #	64 bits (8 bytes per block)							
3 (0x03)								
4 (0x04)								
5 (0x05)								
. . .	.	.	.	.	.	.	.	.
30 (0x1E)								
31 (0x1F)								

The user can permanently lock any block

Once a block is locked it can not be unlocked.
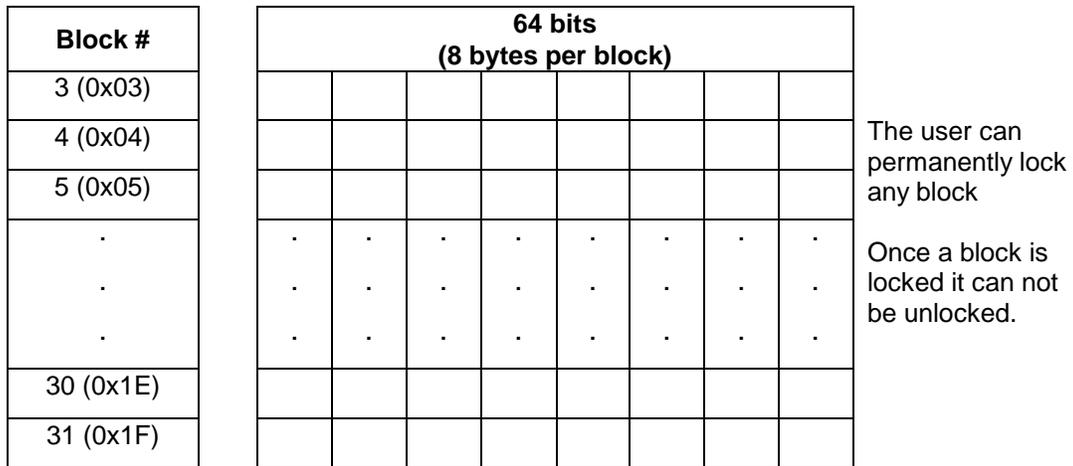
A 64-bit ID (factory programmed) uniquely identifies each PicoTag chip.

TID	Unique Tag ID 64 bits (8 bytes)

Note: Only the tag ID can be read by the CF RFID Reader-Scan Card.

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ISO14443

ISO/IEC 14443 is a 4-part RFID standard for short-range "Contactless Proximity Cards". Adopted in 1999 and 2000, ISO14443 has become the worldwide standard for cashless payment and contactless stored value applications.

- ISO14443-1 defines the physical characteristics of an RFID card.

- ISO14443-2 specifies two types (A and B) of 13.56MHz air interface and modulation methods used for communication between tags and readers.

- ISO14443-3 specifies the anti-collision method for selecting one tag among many.

- ISO14443-4 defines the high-level protocol and method for data exchange between tags and readers.

14443-A Mifare Standard 4K (Philips)

The Mifare chip from Philips is used in millions of secure contactless applications since it was introduced in 1995.

Figure 10 - Memory Structure of the Mifare Standard 4K (MF1 IC S70)

BLOCK	SECTOR	BYTE															
		15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00
0	0	Serial Number				Check Byte	Manufacturer Data										
1		Data															
2		Data															
3		Key A				Lock Bits			Key B								
4	1	Data															
5		Data															
6		Data															
7		Key A				Lock Bits			Key B								
. . .	. . .	. . .															
60	15	Data															
61		Data															
62		Data															
63		Key A				Lock Bits			Key B								

The complete Mifare specification can be obtained from the Philips publication "Mifare Standard 4 kByte Card IC MF1 IC S70" dated October 2002.

Note: Only the tag serial number can be read by the CF RFID Reader Card.

Mifare Ultralight (Philips)

The complete Mifare Ultralight specification can be obtained from the Philips publication "Mifare Ultralight Contactless Single-trip Ticket IC MF0 IC U1 Functional Specification" dated March 2003.

Figure 11 - Memory Structure of the Mifare Ultralight (MF0 IC U1)

Block	Byte			
	00	01	02	03
0	SN0	SN1	SN2	BCC0
1	SN3	SN4	SN5	SN6
2	BCC1	Internal	Lock 0	Lock 1
3	OTP 0	OTP 1	OTP 2	OTP 3
4	Data 0	Data 1	Data 2	Data 3
. . .	. . .			
15	Data 44	Data 45	Data 46	Data 47

☐ **System Area**

▨ **User Area**

Note: Only the tag serial number can be read by the CF RFID Reader Card.

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LTO CM 14443-A (LTO) The LTO-CM is compliant with ISO14443-A air interface.

Figure 12 - Memory Structure of the LTO CM

128 blocks of 32 bytes = 4096 bytes (32768 bits) of user memory is available for read/write.

BLOCK	0	1	2	3	4	5	6	7	08 … 15
					WORD (2 Bytes)				
0	Serial Number		Check Byte & LTO Size	Transponder Type	Manufacturer Data				
1	Last Write Inhibited Block & Block 1 Protection Flag		Reserved	Protected Page Table					
2 / 3	Cartridge Manufacturer's Information Page								
4 / 5	Media Manufacturer's Information Page								
6 / 7	Unprotected Page Table								
8 / 9	Initialization Data Page								
10	Tape Write Pass Page								
11	Tape Write Pass Page Cont..								Tape Directory Page
12 ...	Tape Directory Page Cont								
59									
60	EOD Information Page								
61	Cartridge Status and Tape Alert Flags Page								
62 / 63	Usage Information Page 1								
64 / 65	Usage Information Page 2								
66 / 67	Usage Information Page 3								
68 / 69	Usage Information Page 4								
70 ...	Mechanism Related Page								
82 ... 115	Applications Specific Page								
116 ... 127	Suspended Append Writes page								

Note: Only the tag serial number can be read by the CF RFID Reader-Scan Card.

Appendix C
Barcode Label Specifications

All barcode symbols/labels should satisfy the appropriate AIM Uniform Symbology Specification.

Background Substrate:
The barcode symbol should be printed on material (media) that is reflective and has a matte (not glossy) finish. A background diffuse reflectance of at least 70% to 80% is desirable for optimum contrast. Retro-reflective media should be used to obtain decode distances greater than 36 inches.

Ink Color and Type:
The inked bars should not exceed 25% reflectance at the wavelength that is being used for reading, whether printed with black ink or colored ink. The reflectance value should not vary more than 5% within the same character.

Voids and Specks:
The code should be printed clearly, free of voids, specks, blemishes and lines that could "fool" the scanner. Specks or blemishes in the white spaces, or false or missing bar sections could be interpreted by the reading equipment as part of the code. Generally, the width of such flaws is more serious than the height. Code symbols/ labels should be rejected if these defects are present.

Definition:
The bars in the barcode symbol should be well defined. Their edges should not be rough or fuzzy, so that the bars and spaces have the proper widths intended for the barcode symbology used.

Contrast:
Background reflectance (that of the substrate on which the codes are printed) should always provide a good contrast relative to the ink reflectance (that of the code bars). The difference between the two should be at least 37.5% at the wavelength used for reading.

Tolerance:
The ratio of the widths of bars and spaces in a barcode symbol must conform to the appropriate AIM barcode specifications and can cause problems if not correct throughout the barcode. Problems can occur when bar edges are smeared or rough, or when they exhibit voids.

Appendix D
Enabling or Disabling Symbologies

All Socket Mobile barcode scanning products are preset to automatically detect and decode (autodiscriminate) the most common barcode symbologies. Refer to the table on the next page to determine which symbologies and parameters are enabled by default. If you would like to change your symbology settings, you can use either of two methods, depending on which device you are using and which settings you want to change.

Note: If more symbologies are enabled, the scanner must work harder to search through all possible combinations. This may make the decoding process slightly longer.

OPTION 1: Symbology Selector
If you are using a Windows Mobile-based device, you can quickly enable and disable any of the seventeen most popular symbologies by using the SocketScan Symbology Selector. Refer to Chapter 2 for instructions.

Note: The length of some symbologies will change after Symbology Selector is used. Refer to the table on the next page.

OPTION 2: Scan Programming Barcodes
If you want to modify an option not included in Symbology Selector, you can scan programming barcodes to configure your CF RFID Reader-Scan Card. There are a variety of programming barcodes available that let you enable/disable symbologies as well as configure special features (e.g., specify barcode lengths, transmit check digits, recognize supplementals, etc.).

To obtain the programming barcodes, download the Programming Guide online from http://www.socketmobile.com/support/downloads

WARNING!

When scanning programming barcodes with the CF RFID Reader-Scan Card 6P, do not scan any barcodes that set communication protocols, or the card will be disabled and must be returned to Socket Mobile for reprogramming.

Table 1. Default Symbologies and Settings of the CF RFID Reader-Scan Card

Symbology	Default	Length	Length with Symbology Selector
UPC-A	Enabled	N/A	N/A
UPC-E	Enabled	N/A	N/A
UPC-E1	Disabled	N/A	N/A
EAN-8	Enabled	N/A	N/A
EAN-13	Enabled	N/A	N/A
• Supplementals	Disabled	N/A	N/A
• Transmit Check Digit	Enabled	N/A	N/A
Bookland EAN	Disabled	N/A	N/A
Code 128 - All	Enabled	Any	Any
Code 39	Enabled	2 to 55	2 to 55
Trioptic Code 39	Disabled	2 to 55	2 to 55
Code 39 Full ASCII	Disabled	2 to 55	2 to 55
• Transmit Check Digit	Disabled	N/A	N/A
Code 93	Disabled	4 to 55	2 to 55
Interleaved 2 of 5*	Enabled	14 Only	2 to 55
• Transmit Check Digit	Disabled	N/A	N/A
Discrete 2 of 5*	Disabled	12 Only	2 to 55
Codabar	Disabled	5 to 55	2 to 55
MSI Plessey*	Disabled	6 to 55	2 to 55
• Transmit Check Digit	Disabled	N/A	N/A

WARNING: Setting the length to "Any" may lead to inaccurate decodes in these symbologies

Appendix E
Laser Decode Zone

The decode zone for the Class 2 laser in the CF RFID Reader-Scan Card 6P is shown below. The minimum element width ("X Dimension" or barcode "size") is the width in thousandths of an inch (mils) of the narrowest element (bar or space) in the symbol. The figures shown are the typical scanning distances (depths of field) for selected barcode sizes. The maximum usable length of a barcode symbol (Width of Field) at any given range is also shown below.

<u>Class 2 Laser Decode Zone</u>

Note: Typical performance at 73.4 F (23 C) on high quality symbols.

Class 2 Laser Scanner

Width of Field

In.	cm
20	50.8
15	38.1
10	31.6
5	12.7
0	0
5	12.7
10	25.4
15	38.1
20	50.8

1.00 — 4 mil — 5.50
1.25 — 5 mil — 8.00
1.50 — 7.5 mil — 13.00
1.50 — 10 mil — 18.00
1.50 — 100% UPC — 24.00
1.50 — 15 mil — 28.00
1.75 — 20 mil — 33.00
— 40 mil — 36.00
* — 55 mil — 45.00

In. 0	5	10	15	20	25	30	35	40	45
cm 0	12.7	25.4	38.1	50.8	63.5	76.2	88.9	101.6	114.3

Depth of Field

*Minimum distance determined by symbol length and scan angle

Appendix F
Troubleshooting

For help on SocketScan Plug-in on a Windows Mobile-based device, tap **Start | Help**.

SYMPTOM:
I get the "No Card Detected" icon in the task tray and can't trigger the RFID reader or scan any barcodes.

POSSIBLE REASON	SOLUTION
Your device does not recognize the card.	Make sure the card is inserted properly. Push it in all the way. If necessary, remove and reinsert.

SYMPTOM:
When I try to read an RFID tag, no data appears on my screen.

POSSIBLE REASON	SOLUTION
You are holding the RFID Reader Card in the wrong position.	Hold the device so the RFID Reader Card is parallel to and directly above the RFID tag, at most 2.5 inches above the tag.
The RFID tag antenna is broken or incorrectly formatted.	Try reading another RFID tag that is correctly formatted.
The tag type may be disabled.	Use RFID Demo to determine the tag type. If needed, reconfigure the RFID Reader Card for the correct tag type.

SYMPTOM:
When I press the trigger button, nothing happens.

POSSIBLE REASON	SOLUTION
You programmed the trigger button incorrectly.	Test the button by assigning a different program to it and make sure it works properly.

Appendix G
Technical Support

If you have trouble installing or using the CF RFID Reader Card, Socket has different support options to help you.

Online Knowledge Base: Search for articles, Frequently Asked Questions or Hot Topics any time, day or night. http://support.socketmobile.com/faq

Online Requests: Register your product and submit a question to our Technical Support Team. http://support.socketmobile.com/

By Phone: Contact our Tier 1 Technical Support by calling either:
- USA & Canada Toll-Free: 800-279-1390
- Direct: +1- 510-933-3020

Please refrain from disassembling the card. Disassembly of this device will void the product warranty.

Limited Warranty

Socket Mobile, Inc. warrants this product against defects in material and workmanship, under normal use and service, for one (1) year from the date of purchase.

EXCLUDES: Consumables such as batteries, removable cables, cases, straps, chargers, and CF-to-PC Card adapters (90 day coverage only)

Incompatibility is not a defect covered by the Socket Mobile warranty. During the warranty period, Socket Mobile will, at its option, repair or replace the defective product at no charge when furnished with proof of retail purchase, provided that you deliver the product to Socket Mobile or to an authorized Socket Mobile Service Center.

The returned product must be accompanied by a return material authorization (RMA) number issued by Socket Mobile or by an authorized Socket Mobile Service Center. If you ship the product, you must use the original container or equivalent and you must pay the shipping charges to Socket. Socket Mobile will pay surface shipping charges back to any location in the contiguous United States. This warranty applies only to the original retail purchaser and is not transferable.

Socket Mobile may, at its option, replace or repair the product with new or reconditioned parts and the returned product becomes the property of Socket Mobile. Socket Mobile warrants the repaired or replaced products to be free from defects in material or workmanship for ninety (90) days after the return shipping date, or for the remainder of the original warranty period, whichever is greater.

This warranty does not cover the replacement of products damaged by abuse, accident, misuse or misapplication, nor as a result of service or modification other than by Socket Mobile.

SOCKET MOBILE IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING DAMAGE TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitation of implied warranties, or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This product may contain fully tested, recycled parts, warranted as if new.

For warranty information, please visit: http://support.socketmobile.com/

Limited Software Warranty

LIMITED WARRANTY. SOCKET MOBILE warrants that the original disk or CD ROM is free from defects for 90 days from the date of delivery of the SOFTWARE.

CUSTOMER REMEDIES. The entire liability of SOCKET MOBILE and your exclusive remedy shall be, at the option of SOCKET MOBILE, either (a) return of the price paid or (b) replacement of the SOFTWARE which does not meet the SOCKET MOBILE Limited Warranty and which is returned to SOCKET MOBILE with a copy of your receipt. Any replacement SOFTWARE will be warranted for the remainder of the original warranty period or 30 days, whichever is longer. THESE REMEDIES ARE NOT AVAILABLE OUTSIDE OF THE UNITED STATES OF AMERICA.

NO OTHER WARRANTIES. SOCKET MOBILE disclaims all other warranties, either express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the SOFTWARE and the accompanying written materials. This limited warranty gives you specific legal rights. You may have others which vary from state to state.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall SOCKET MOBILE or its suppliers be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or inability to use the SOFTWARE, even if SOCKET MOBILE has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

EXPORT LAW ASSURANCES. You may not use or otherwise export or re-export the SOFTWARE except as authorized by United States law and laws of the jurisdiction in which the SOFTWARE was obtained. In particular, but without limitation, none of the SOFTWARE may be used or otherwise exported or re-exported (a) into (or to a national or resident of) a United States embargoed country or (b) to anyone on the U.S. Treasury Department's list of Specially Designated Nationals or the U.S. Department of Commerce's Table of Denial Orders. By using the SOFTWARE, you represent and warrant that you are not located in, under control of, or a national or resident of any such country or on any such list.

GOVERNMENT END USERS. If the SOFTWARE is supplied to the U. S. Government, the SOFTWARE is classified as "restricted computer software" as defined in clause 52.227-19 of the FAR. The U. S. Government 's rights to the SOFTWARE are as provided in clause 52.227-19 of the FAR.

CONTROLLING LAW AND SEVERABILITY. This License shall be governed by the laws of the United States and the State of California. If for any reason a court of competent jurisdiction finds any provision, or portion thereof, to be unenforceable, the remainder of this License shall continue in full force and effect.

Regulatory Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. This equipment is also CE EN55024:1998 and C-TICK compliant. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user may try to correct the interference by doing any of the following:
- Reorient or relocate the receiving antenna of the radio or television.
- Increase the distance separating the equipment and the receiver.
- Connect the equipment to an outlet on a different branch circuit than that of the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet helpful: *How to Identify and Resolve Radio-TV Interference Problems.* This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402

LASER DEVICES: The Socket barcode scanning product (version 6P) described in this User's Guide contains a Symbol SE955 laser scan engine.

For the Class 2 version of this engine, the following applies:
- Complies with 21CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001."

Caution: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

- Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful. A label such as the one below should appear on the end product.

LASER EMITTED FROM THIS APERTURE
CAUTION - LASER LIGHT.
DO NOT STARE INTO BEAM.
IEC CLASS 2 LASER PRODUCT
630nm-680nm, 1.0mW LASER

ACHTUNG LASERSTRAHL, LASERKLASSE 2,
NICHT IN DEN STRAHL BLICKEN
LUMIERE LASER – NE PAS REGARDER DANS
LE FAISCEAU
APPAREIL A LASER DE CLASSE 2.
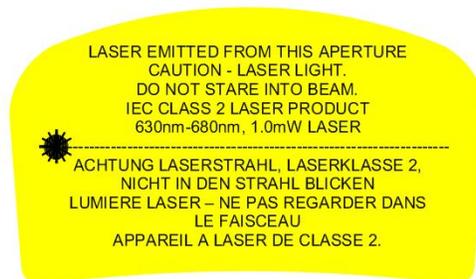
Example of Class 2 Laser Warning Label

PRODUCT DISPOSAL: Your device should not be placed in municipal waste. Please check local regulations for disposal of electronic products.