Intermec®

SG10T

Tethered Scanner



User's Guide

Intermec Technologies Corporation

Worldwide Headquarters
6001 36th Ave.W.
Everett, WA 98203
U.S.A.

www.intermec.com

The information contained herein is provided solely for the purpose of allowing customers to operate and service Intermec-manufactured equipment and is not to be released, reproduced, or used for any other purpose without written permission of Intermec Technologies Corporation.

Information and specifications contained in this document are subject to change without prior notice and do not represent a commitment on the part of Intermec Technologies Corporation.

© 2011 by Intermec Technologies Corporation. All rights reserved.

The word Intermec, the Intermec logo, Norand, ArciTech, Beverage Routebook, CrossBar, dcBrowser, Duratherm, EasyADC, EasyCoder, EasySet, Fingerprint, i-gistics, INCA (under license), Intellitag, Intellitag Gen2, JANUS, LabelShop, MobileLAN, Picolink, Ready-to-Work, RoutePower, Sabre, ScanPlus, ShopScan, Smart Mobile Computing, SmartSystems, TE 2000, Trakker Antares, and Vista Powered are either trademarks or registered trademarks of Intermec Technologies Corporation.

There are U.S. and foreign patents as well as U.S. and foreign patents pending.

Contents

Before You Begin v
Safety Information v
Global Services and Support vi
Warranty Information vi
Web Support vi
Telephone Support vi
Service Location Support vi
Who Should Read This Manual vii
Related Documents vii

1 Introducing the SG10T 1

What is the SG10T Tethered Scanner 2

Supported Interfaces 2

Powering the SG10T 2

Connecting the Interface Cable 3

Removing the Interface Cable 3

Accessories 4

2 Scanning with the SG10T 5

Understanding the SG10T Behavior 6
Understanding the Status Light 6
Understanding the Beeps 7

Scanning Bar Codes 8

3 SG10T Interfaces 11

USB Interface 12
Connecting a USB Cable 12

Keyboard Wedge 13
Connecting a Keyboard Wedge 13

Setting up an International Keyboard 13

4 Configuring the SG10T 17

Basic Setup with Configuration Bar Codes 18
Resetting Your Scanner 18
Configuring the Preamble or Postamble 19

Configuring Your Scanner with EasySet 23

5 Troubleshooting and Maintaining the SG10T 25

Troubleshooting the SG10T 26
Calling Product Support 26
Problems and Possible Solutions 26

Maintaining the SG10T 29
Cleaning the SG10T 29
Upgrading the SG10T 29

A Specifications and Reading Distances 31

Specifications 32

Reading Distances 34

Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Information

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

This section explains how to identify and understand warnings, cautions, and notes that are in this document.



A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.



A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.



Note: Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec web site at **www.intermec.com** and click **Support** > **Returns and Repairs** > **Warranty**.

Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided "as is with all faults." All warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

Web Support

Visit the Intermec web site at **www.intermec.com** to download our current manuals (in PDF). To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at **www.intermec.com** and click **Support** > **Knowledge Central** to review technical information or to request technical support for your Intermec product.

Telephone Support

In the U.S.A. and Canada, call **1-800-755-5505**.

Outside the U.S.A. and Canada, contact your local Intermec representative. To search for your local representative, from the Intermec web site, click **About Us** > **Contact Us**.

Service Location Support

For the most current listing of service locations, go to **www.intermec.com and** click **Support** >**Returns and Repairs** > **Repair Locations.**

For technical support in South Korea, use the after service locations listed below:

AWOO Systems
102-1304 SK Ventium
522 Dangjung-dong
Gunpo-si, Gyeonggi-do Korea, South 435-776
Contact: Mr. Sinbum Kang
Telephone: +82-31-436-1191
Email: **mjyun@awoo.co.kr**

IN Information System PTD LTD
6th Floor
Daegu Venture Center Bldg 95
Shinchun 3 Dong
Donggu, Daegu City, Korea
E-mail: **jmyou@idif.co.kr** or **korlim@gw.idif.co.kr**

Who Should Read This Manual

This guide is for the person who is responsible for installing, configuring, and maintaining the SG10T.

This guide provides you with information about the features of the SG10T, and how to install, configure, operate, maintain, and troubleshoot it.

Related Documents

The Intermec web site at **www.intermec.com** contains our documents (as PDF files) that you can download for free.

To download documents

1. Visit the Intermec web site at **www.intermec.com**.
2. Click the **Products** tab.
3. Using the **Products** menu, navigate to your product page. For example, to find the CN3 computer product page, click **Computers** > **Handheld Computers** > **CN3**.
4. Click the **Manuals** tab.

If your product does not have its own product page, click **Support** > **Manuals**. Use the **Product Category** field, the **Product Family** field, and the **Product** field to help you locate the documentation for your product.

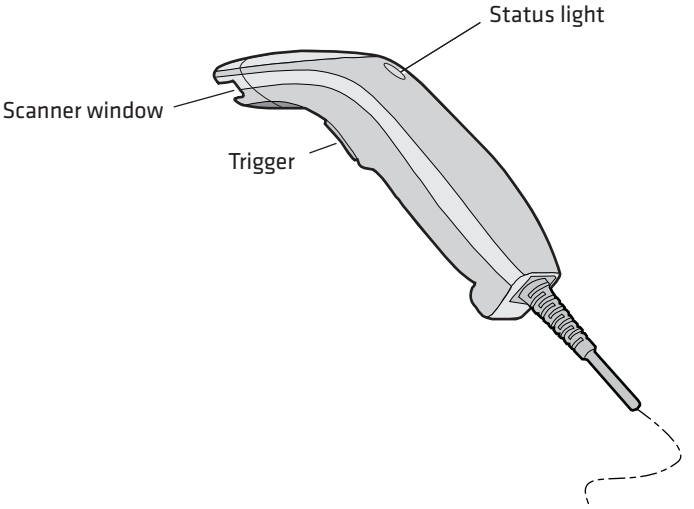
1 Introducing the SG10T

This chapter provides an overview of the SG10T. This chapter covers these topics:

- **What is the SG10T Tethered Scanner**
- **Supported Interfaces**
- **Powering the SG10T**
- **Connecting the Interface Cable**
- **Removing the Interface Cable**
- **Accessories**

What is the SG10T Tethered Scanner

The SG10T Tethered Scanner is a small, lightweight, ergonomically designed and easy-to-use handheld 1D linear imager.



SG10T

Supported Interfaces

The SG10T supports the following interfaces:

- USB
- Keyboard wedge

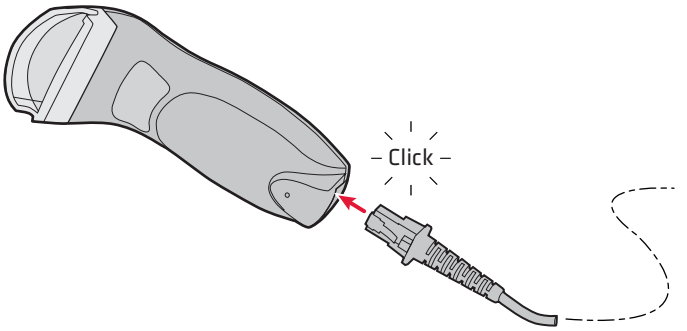
Powering the SG10T

The SG10T is powered through the cable that connects it to the host computer. No external supply is necessary.

Connecting the Interface Cable

The SG10T comes either with a USB or a keyboard wedge cable for connecting it to the host computer.

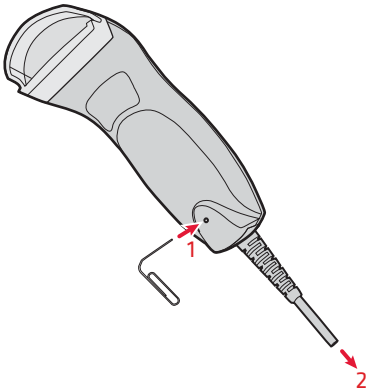
To connect the cable, insert it and press firmly until inserted all the way.



Removing the Interface Cable

To remove the cable follow these steps:

1. Insert a pin or straightened paper clip into the release hole.
2. Push on the pin or paper clip while pulling out the cable.



Accessories

You will need one or more of the following cables for your SG10T.

SG10T Cable List

Cable	Part Number
USB cable	CAB-SG10-USBxx
Keyboard wedge cable	CAB-SG10-KBWxx

2 Scanning with the SG10T

This chapter explains how to scan bar codes and includes the following sections:

- **Understanding the SG10T Behavior**
- **Scanning Bar Codes**

Understanding the SG10T Behavior

The SG10T uses lights and beeps to indicate if a bar code has been successfully decoded. The following sections describe lights and beeps.

Understanding the Status Light

The status light on the SG10T flashes green. The flash is either long or short depending on the status of the scanner.

Default SG10T Status Light Description

Light State	What it Means
Green flash on for 2 seconds	• Power-up • The scanner successfully decoded a bar code and sent the data to the host device • The scanner successfully scanned a configuration bar code • The scanner scanned an unexpected bar code while a configuration procedure was in progress
Short green flash	The scanner successfully scanned a compose bar code (ASCII character or keyboard key in Code 39) during a configuration procedure

Understanding the Beeps

The SG10T beeps to give you audio feedback when performing some functions. For example, you hear a beep each time you scan a valid bar code.

Default SG10T Beep Descriptions

Beep Sequence	What it Means
Single long beep	Power-up
Single beep	The scanner successfully scanned a bar code
Single fast beep	The scanner successfully scanned a compose bar code (ASCII character or keyboard key in Code 39) in a configuration procedure
Two beeps	The scanner successfully scanned a configuration bar code
Three fast beeps	The scanner scanned an unexpected bar code while a configuration procedure was in progress, meaning that the procedure is not complete yet

Scanning Bar Codes

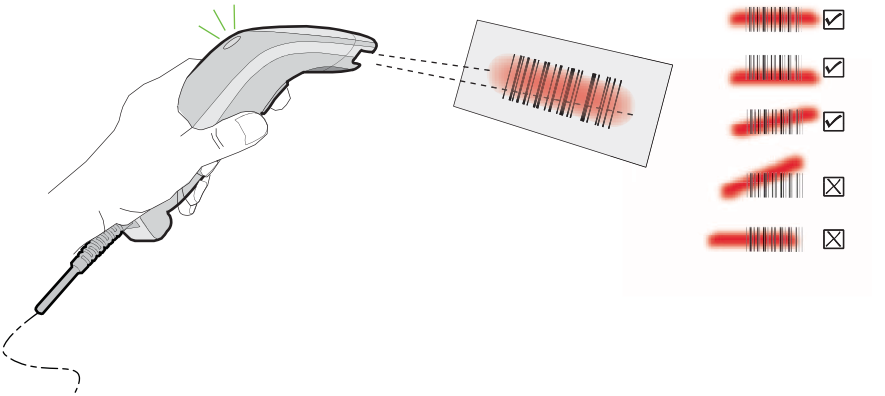
When you unpack the SG10T, these bar code symbologies are enabled:

- Code 39
- Code 128 / GS1-128
- EAN/UPC

If you are using bar code labels that are encoded in a different symbology, you need to enable the symbology on your SG10T. Use EasySet version 5.6.4.0 or later (in offline mode only, see **"Configuring Your Scanner with EasySet" on page 23**) to enable and disable symbologies for your scanner. EasySet is available on the Intermec web site at **www.intermec.com/EasySet**. Simply download and install it.

To scan a bar code label with a linear imager

1. Point the SG10T at the bar code label and hold the SG10T at a slight angle, close enough to the label (a few cm/inches maximum).
2. Hold the scanner so that the scanner window is as parallel as possible to the bar code plane, pull the trigger, and direct the red beam so that it falls across all bars in the bar code label. Try to keep the beam as parallel as possible to the bar code.



Use this test bar code:

Code 39 Test Bar Code



123456

Tip: Depending on your screen resolution, you can scan bar codes displayed on your computer screen. Otherwise, print out and scan bar codes.

When the SG10T successfully reads a bar code label, it beeps one time, the status light briefly turns green, and the scanner beam turns off.

3 Release the trigger.

3 SG10T Interfaces

This chapter explains the different interfaces available with the SG10T:

- **USB Interface**
- **Keyboard Wedge**

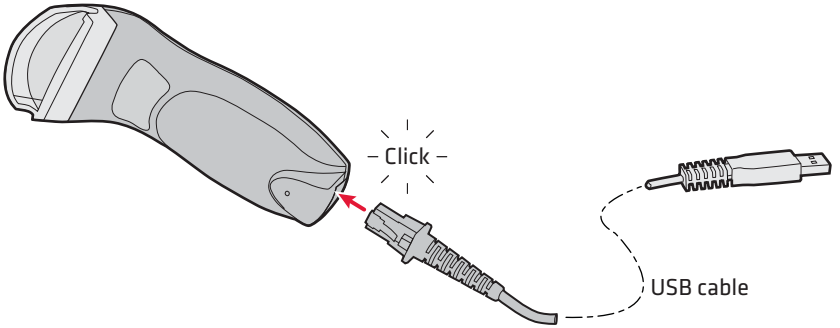
USB Interface

The SG10T can be connected to a USB host using the provided USB cable. It is USB and is powered by the host. See the **"Accessories" on page 4** for a list of part numbers for the different cables.

Connecting a USB Cable

To connect with a USB cable

1. Turn off your host device.
2. Connect the USB cable to your SG10T and to the host.



3. The scanner beeps and is automatically detected by the host.
4. Turn on your host device.
5. If necessary, configure your SG10T for an International keyboard (see **"Setting up an International Keyboard" on page 13**). The default keyboard is North America.

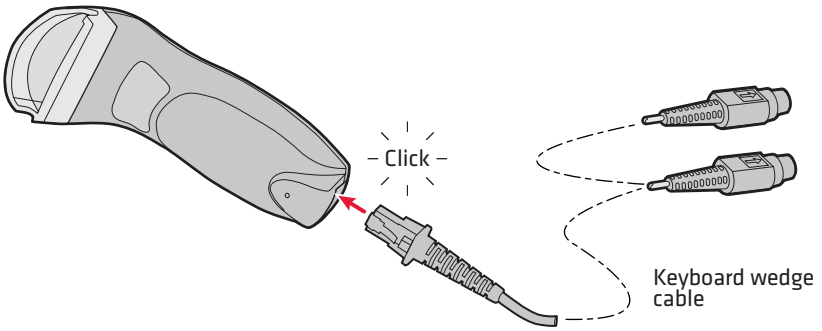
Keyboard Wedge

The SG10T can be connected to a host using a keyboard wedge cable. Power is provided by the host. See the **"Accessories" on page 4** for a list of part numbers for the different cables

Connecting a Keyboard Wedge

To connect with a keyboard wedge cable

1. Turn off your host device.
2. Connect the keyboard wedge cable to your SG10T and the host.



3. Turn on your host device.
4. If necessary, configure your SG10T for an International keyboard (see **"Setting up an International Keyboard" on page 13**). The default keyboard is North America.

Setting up an International Keyboard

The SG10T is configured by default to be used with a North American keyboard layout. If you use a different keyboard, you need to set up the SG10T keyboard layout parameter accordingly.

This section provides configuration bar codes for setting up the keyboard. Use these configuration bar codes to select the keyboard for your country.

Note: For additional keyboards see EasySet.

North American (QWERTY) (*)



.C010$

German (QWERTZ)



.C011$

French (AZERTY)



.C012$

Spanish (QWERTY)



.C013$

Italian (QWERTY)



.C014$

Swiss German (QWERTZ)



.C016$

Czech Republic (QWERTY)



.C017$

UK English (QWERTY)



.C018$

Japanese 106/109-key (QWERTY)



.C009$

Hungarian (QWERTZ)



.C021$

Czech Republic (QWERTZ)



.C022$

Swiss French (QWERTZ)



.C023$

Hungarian 101-key (QWERTY)



.C024$

French Canadian (QWERTY)



.C025$

Swedish (QWERTY)



.C026$

Danish (QWERTY)



.C027$

Dutch (QWERTY)



.C028$

Norwegian (QWERTY)



.C029$

Belgian French (AZERTY)



.C030$

Pourtuguese (QWERTY)



.C031$

Slovakian (QWERTY)



.C032$

Brazilian Portuguese (QWERTY)



.C033$

English Canadian (QWERTY)



.C034$

4 Configuring the SG10T

This chapter provides some basic configuration bar codes and information on how to configure the SG10T using the EasySet configuration application. This chapter includes:

- **Basic Setup with Configuration Bar Codes**
- **Configuring Your Scanner with EasySet**

Basic Setup with Configuration Bar Codes

This chapter provides you with configuration bar codes and procedures for a basic setup.

Most of the SG10T parameters can be configured by simply reading the corresponding configuration bar code - this is the case when you want to enable a symbology or reset your scanner to factory default settings (see **"Resetting Your Scanner" on page 18**) for instance.

Some other parameters require following a precise step-by-step configuration procedure to be set. These are the following:

- Preamble/Postamble (see **"Configuring the Preamble or Postamble" on page 19**),
- Minimum and Maximum Bar Code Length,
- Consecutive Same Read Data Validation,
- User Define Symbology Identifier (UDSI).

Only the configuration procedure for composing a Preamble/Postamble is described here. For more configuration options and procedures, use EasySet (see **"Configuring Your Scanner with EasySet" on page 23**).

Resetting Your Scanner

To reset your scanner to the default factory configuration, read the Reset factory defaults bar code.

Reset factory defaults



.A001$

To cancel a configuration procedure and start over, read the Cancel configuration procedure bar code.

Cancel configuration procedure



.P023$

Configuring the Preamble or Postamble

Preamble and postamble are configured by default to <LF>+<CR>. For certain applications you may need to change this setting.

The following procedure shows you how to compose a preamble and postamble using the most current characters.

Note: Three fast beeps indicate that the configuration procedure is not complete yet. In case of mistake, read the Cancel configuration procedure bar code (see above).

For more characters, use EasySet (see **"Configuring Your Scanner with EasySet" on page 23**).

To configure a preamble or postamble

1 Scan the Clear Preamble and Postamble bar code:

Clear Preamble and Postamble



.A011$

2 Scan either the Preamble or Postamble bar code, depending on which one you need to configure:

Postamble



.A013$

Preamble



.A012$

3 Compose the preamble or postamble by scanning in turn all required alphanumeric characters. The most common characters are displayed below.

Carriage Return + Line Feed (*)



MJ

Carriage Return



$M

0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



G



H



I



J



K



L



M



N



O



P



Q



R



S



T



U



V



W



X



Y



Z



4 Scan again the Preamble or Postamble bar code, depending on which one you scanned in step 2:

Postamble



.A013$

Preamble



.A012$

5 Use this test bar code to check that your preamble or postamble is correctly configured:

Code 39 Test Bar Code



123456

Configuring Your Scanner with EasySet

EasySet is an Intermec configuration application that provides you with an easy way to configure your scanner.

The SG10T can be configured using EasySet in offline mode, that is by:

- sending configuration commands from EasySet to a bar code setup sheet,
- printing the setup sheet,
- using a connected scanner to scan the bar codes.

Note: The online setup mode - send configuration commands from EasySet directly to the product - is not supported by the SG10T.

EasySet is available on the Intermec website at **www.intermec.com/EasySet.** Simply download and install.

To configure your scanner offline by scanning bar codes

1 Start EasySet. The first time you start EasySet, the Select product dialog box appears.

If the Select product dialog box does not appear, choose **Product > Select** or click on the product icon in the upper left corner.

2 Select your product.

3 Open the folders to find the configuration commands needed. Double-click each command to send each command to the setup sheet.

4 Click on the Word icon to export the setup sheet to Microsoft Word. Print out the setup sheet and scan the commands.

5 Troubleshooting and Maintaining the SG10T

Use this chapter to solve problems you may have while using the SG10T. This chapter contains these topics:

- **Troubleshooting the SG10T**
- **Maintaining the SG10T**

Troubleshooting the SG10T

If you have problems using the SG10T, use this chapter to find a possible solution.

Calling Product Support

To talk to an Intermec Product Support representative:

- In the U.S.A. and Canada, call **1-800-755-5505**
- Outside the U.S.A. and Canada, contact your local Intermec representative. For help, go to **www.intermec.com** > **About Us** > **Contact Us**.

Before you call Intermec Product Support, make sure you have the firmware version.

To get the firmware version

1. Run an application that can accept bar code information from the SG10T, such as Microsoft® Notepad.
2. Scan this bar code:

   Get firmware version

   .A007$

Problems and Possible Solutions

Use this section to find possible solutions to problems you may have.

Problems and Possible Solutions

Problem	Possible Solution
You pull the trigger, but nothing happens.	The SG10T receives power from the host. Make sure: • You are using the appropriate cable. For more information, see **"Accessories" on page 4**. • The cable is connected to the appropriate port on the host computer.

Problems and Possible Solutions (continued)

Problem	Possible Solution
You pull the trigger, the red scanning beam turns on, but you cannot successfully scan a bar code.	Try these possible solutions. Make sure: • The SG10T is configured for the symbology you are scanning. It is recommended that you enable the symbologies you intend to scan only, to minimze the risk of misreadings from other symbologies. • The bar code symbology parameters match the bar code being read (for example, min./max. length). • The SG10T is at the appropriate scanning distance from the bar code. Move the SG10T closer and farther away to find the appropriate distance, and use the correct scanning technique (see **"Scanning Bar Codes" on page 8**). • The host supplies enough power. Most notebooks do not, resulting in a lower "good read" rate (power too low to support the scanning operation). • The bar code you are trying to scan is not too small, poorly printed, printed on a shiny surface or distorted. Scan a known good bar code and enable CDV (Check Digit Verification) on the symbology you are trying to scan to make sure that the bar code is correct and that the SG10T is working properly.
You scan a bar code, the red beam turns off, the status light turns on, but the SG10T does not beep.	The good read beeps may have been disabled (by reading the Good read beeps disabled configuration bar code). To reset the SG10T, scan this bar code: Reset factory defaults  .A001$

Problems and Possible Solutions (continued)

Problem	Possible Solution
You scan a configuration bar code but the SG10T does not read it.	The Optical setup parameter is disabled, meaning you cannot configure the SG10T using configuration bar codes. To enable optical setup, read the Optical setup enabled configuration bar code. Optical setup enabled  .B015$
You scan a bar code, the SG10T beeps once, and the status light blinks green once, but the data is not transmitted to the host computer.	Try these possible solutions. Make sure: • Your data collection application is set up to receive data from the SG10T. • Your keyboard is functioning. • The host can accept data fast enough. Try to set the intercharacter delay parameter (using EasySet) so that it matches the host keystroke entry speed.

Maintaining the SG10T

To keep your SG10T in good working order, you may need to clean the scanner window.

Cleaning the SG10T

Clean the scanner window as often as needed for the environment in which you are using the SG10T. To clean the scanner window, you can use soapy water, a solution of ammonia and water, or isopropyl alcohol.



Opening the SG10T voids the warranty and may cause damage to the internal components.

To clean the scanner window

1. Dip a clean towel or rag in soapy water, ammonia and water solution, or isopropyl alcohol and wring out the excess. Wipe the scanner window. Do not allow any abrasive material to touch the window.
2. Wipe dry with a lint-free cloth.

Upgrading the SG10T

The SG10T embeds a one-time programmable (OTP) memory. The firmware chip is therefore read-only and cannot be upgraded.

A Specifications and Reading Distances

This appendix contains the technical specifications and reading distances for the SG10T.

- **Specifications**
- **Reading Distances**

Specifications

Use this section to find technical information about the SG10T.

Physical Dimensions	
Length	16.4 cm (6.46 in)
Height	5.4 cm (2.13 in)
Width	6.7 cm (2.64 in)
Weight (scanner)	105 g (3.70 oz)
Weight (USB cable)	188 g (6.63 oz)
Weight (keyboard wedge)	208 g (7.34 oz)

Electrical Specifications	
Electrical rating	⎓ 5V, 0.2A
Standby current	< 110 mA
Operating current	< 200 mA

Typical Power Consumption (5V power supply, continuous scanning)	
USB	< 200 mA
Keyboard Wedge	< 200 mA

Interfaces
USB, Keyboard Wedge

Temperature and Environmental Specifications	
Operating	0°C to 40°C (32°F to 104°F) @ 5V
Storage	-40°C to 60°C (-40°F to 140°F)

Temperature and Environmental Specifications	
Relative humidity	5 to 95% non-condensing @ 45°C (113°F)
Shock	2000G, half sinus, 0.7 ms, 6 directions
Vibrations	8G, from 10Hz to 500Hz, 2hr/axis, 3 axes
Environmental rating	IP30
Ambient light	0 to 50 000 lux

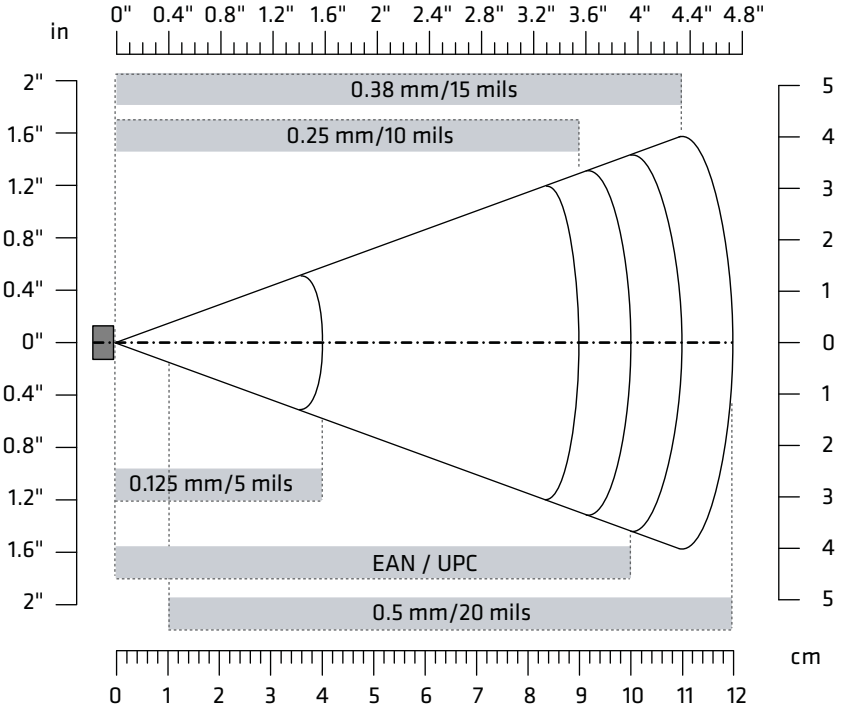
Scanning Performance	
Scan angle	40°
Pitch angle	40°
Skew angle	±20°
Tilt angle	±10°
Minimum X dimension	5 mils (0.125 mm) on Code 39

Bar Code Symbologies	
Codabar	GS1 DataBar Expanded
Code 11	GS1 DataBar Limited
Code 39*	GS1 DataBar Omni-Directional
Code 93	Interleaved 2 of 5
Code 128*	Matrix 2 of 5
EAN/UPC*	Standard 2 of 5

* = These symbologies are enabled by default.

Reading Distances

The reading distances for each scanner are typical distances measured in an office environment (600 lux).



Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.125 mm (5 mils)	0 cm (0 in)	4 cm (1.57 in)
	0.25 mm (10 mils)	0 cm (0 in)	9 cm (3.54 in)
	0.38 mm (15 mils)	0 cm (0 in)	11 cm (4.33 in)
	0.5 mm (20 mils)	1cm (0.39 in)	12 cm (4.72 in)
EAN/UPC	0.33 mm (13 mils)	0 cm (0 in)	10 cm (3.94 in)

Intermec

Worldwide Headquarters
6001 36th Avenue West
Everett, Washington 98203
U.S.A.

tel 425.348.2600

fax 425.355.9551

www.intermec.com

© 2011 Intermec Technologies Corporation. All rights reserved.

SG10T Tethered Scanner User's Guide

P/N DOC-SG10-UG01

Solutions for Automatic Identification, Barcodes and Mobility

More than 3000 customers in 15 countries • More than 12,000 products in stock

www.logiscenter.com
902 050 030

www.logiscenter.it
02 479 216 97

www.logiscenter.de
info@logiscenter.de

www.logiscenter.pt
308 800 842

About LOGISCENTER

Grupo Logiscenter is the leading provider in Europe of automatic identification and data capture equipments. Our products include barcode printing and reading devices, mobile computing devices, wireless access points, identification cards, and consumables.

Reasons to work with us

Our customers come first. Our objective is not only selling our products but also holding a long-lasting relationship with our customers, based on the befenits and advantages we create for you and your company.

The best brands. We offer products from the best manufacturers worldwide.

Expert technical support team. Our support staff are experts in the products we sell. But not just the products, they can tell you the best solution for your particular problem or need.

Largest stock. We have a permament stock of more than 12,000 products.

Same-day shipping. For all orders placed and confirmed before 16:00 on working days.

Best prices. With Logiscenter, you can be sure that you are paying a fair price for your products we will not overcharge you.

Easy returns. Damaged or defective products can be returned easily, for an exchange or reimbursement.

Our Brands

MOTOROLA
ZEBRA TECHNOLOGIES
Intermec
Honeywell
DATALOGIC
datamax·o'neil
Metrologic
LXE
EPSON
elo
star
unitech
PRINTRONIX
symbol

Solutions for: Industry • Consumer • Mobility Transportation and Logistics • Retail • Health



Label printers



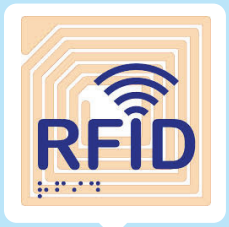
Barcode readers



Data terminals & PDA



PVC card printers



RFID



Consumables
(labels, ribbons, PVC cards)

All Brands Technical Service

GRUPO LOGISCENTER, S.L. - The Barcode Solutions Center
Av. Puente Cultural 10-A • 28702 San Sebastián de los Reyes - MADRID (Spain)
CIF ES B85538601 • info@logiscenter.com • www.logiscenter.com