DATALOGIC™

OEM USB, RS232 Standard
RS232 Single Cable
OPOS Service Objects

Quick Reference Guide

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Should future revisions of this manual be published, you can acquire printed versions by contacting your Datalogic representative. Electronic versions may either be downloadable from the Datalogic website (www.scanning.datalogic.com) or provided on appropriate media. If you visit our website and would like to make comments or suggestions about this or other Datalogic publications, please let us know via the "Contact Datalogic" page.

Disclaimer

Datalogic has taken reasonable measures to provide information in this manual that is complete and accurate, however, Datalogic reserves the right to change any specification at any time without prior notice.

Patents

This product may be covered by one or more of the following patents: 4603262 • 4639606 • 4652750 • 4672215 • 4699447 • 4709369 • 4749879 • 4786798 • 4792666 • 4794240 • 4798943 • 4799164 • 4820911 • 4845349 • 4861972 • 4861973 • 4866257 • 4868836 • 4879456 • 4939355 • 4939356 • 4943127 • 4963719 • 4971176 • 4971177 • 4991692 • 5001406 • 5015831 • 5019697 • 5019698 • 5086879 • 5115120 • 5144118 • 5146463 • 5179270 • 5198649 • 5200597 • 5202784 • 5208449 • 5210397 • 5212371 • 5212372 • 5214270 • 5229590 • 5231293 • 5232185 • 5233169 • 5235168 • 5237161 • 5237162 • 5239165 • 5247161 • 5256864 • 5258604 • 5258699 • 5260554 • 5274219 • 5296689 • 5298728 • 5311000 • 5327451 • 5329103 • 5330370 • 5347113 • 5347121 • 5371361 • 5382783 • 5386105 • 5389917 • 5410108 • 5420410 • 5422472 • 5426507 • 5438187 • 5440110 • 5440111 • 5446271 • 5446749 • 5448050 • 5463211 • 5475206 • 5475207 • 5479011 • 5481098 • 5491328 • 5493108 • 5504350 • 5508505 • 5512740 • 5541397 • 5552593 • 5557095 • 5563402 • 5565668 • 5576531 • 5581707 • 5594231 • 5594441 • 5598070 • 5602376 • 5608201 • 5608399 • 5612529 • 5629510 • 5635699 • 5641958 • 5646391 • 5661435 • 5664231 • 5666045 • 5671374 • 5675138 • 5682028 • 5686716 • 5696370 • 5703347 • 5705802 • 5714750 • 5717194 • 5723852 • 5750976 • 5767502 • 5770847 • 5786581 • 5786585 • 5787103 • 5789732 • 5796222 • 5804809 • 5814803 • 5814804 • 5821721 • 5822343 • 5825009 • 5834708 • 5834750 • 5837983 • 5837988 • 5852286 • 5864129 • 5869827 • 5874722 • 5883370 • 5905249 • 5907147 • 5923023 • 5925868 • 5929421 • 5945670 • 5959284 • 5962838 • 5979769 • 6000619 • 6006991 • 6012639 • 6016135 • 6024284 • 6041374 • 6042012 • 6045044 • 6047889 • 6047894 • 6056198 • 6065676 • 6069696 • 6073849 • 6073851 • 6094288 • 6112993 • 6129279 • 6129282 • 6134039 • 6142376 • 6152368 • 6152372 • 6155488 • 6166375 • 6169614 • 6173894 • 6176429 • 6188500 • 6189784 • 6213397 • 6223986 • 6230975 • 6230976 • 6244510 • 6259545 • 6260763 • 6266175 • 6273336 • 6276605 • 6279829 • 6290134 • 6290135 • 6293467 • 6303927 • 6311895 • 6318634 • 6328216 • 6332576 • 6332577 • 6343741 • 6454168 • 6478224 • 6568598 • 6578765 • 6705527 • 6857567 • 6974084 • 6991169 • 7051940 • 7170414 • 7172123 • 7201322 • 7204422 • 7215493 • 7224540 • 7234641 • 7243850 • 7374092 • 7407096 • 7490770 • 7495564 • 7506816 • 7527198 • 7527207 • 7537166 • 7562817 • 601 26 118.6 • AU703547 • D312631 • D313590 • D320011 • D320012 • D323492 • D330707 • D330708 • D349109 • D350127 • D350735 • D351149 • D351150 • D352936 • D352937 • D352938 • D352939 • D358588 • D361565 • D372234 • D374630 • D374869 • D375493 • D376357 • D377345 • D377346 • D377347 • D377348 • D388075 • D446524 • EP0256296 • EP0260155 • EP0260156 • EP0295936 • EP0325469 • EP0349770 • EP0368254 • EP0442215 • EP0498366 • EP0531645 • EP0663643 • EP0698251 • EP01330772 • GB2252333 • GB2284086 • GB2301691 • GB2304954 • GB2307093 • GB2308267 • GB2308678 • GB2319103 • GB2333163 • GB2343079 • GB2344486 • GB2345568 • GB2354340 • ISR107546 • ISR118507 • ISR118508 • JP1962823 • JP1971216 • JP2513442 • JP2732459 • JP2829331 • JP2953593 • JP2964278 • MEX185552 • MEX187245 • RE37166 • RE40071 • Other Patents Pending

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Introduction

Document Conventions

Formatting conventions are used throughout this guide to provide a consistent method for representing screen shots and command entries.

Notes contain additional information of interest to the user.

The CAUTION symbol advises you of actions that could damage equipment or property.

Keystrokes. Filenames, paths, field selections, and data or keystrokes entered by the user are shown in this `monospaced` typeface.

About the Datalogic OPOS Service Objects

Service Objects are current to OPOS version 1.12, published in January 2007. They are fully compatible with the *Unified POS Retail Peripheral Architecture, version 1.12* and the OPOS appendix to that spec. To view the current version of the document, go online to the National Retail Federation at www.nrf-arts.org/download. The Service Objects support three types of DATALOGIC interfaces: RS232 Standard (also called Dual Cable), RS232 Single Cable, and OEM USB.

Datalogic Products Supported

Device Type	Scanner			Scale		
	RS232 Std	RS232 SC	OEM USB	RS232 Std	RS232 SC	OEM USB
Table Top Scanner/Scales						
Magellan 2200VS	●	●	●			
Magellan 2300HS	●	●	●			
Magellan 8100	●	●	●	●	●	●
Magellan 8200	●	●	●	●	●	●
Magellan 8300	●	●	●	●	●	●
Magellan 8400	●	●	●	●	●	●
Magellan 8500	●	●	●	●	●	●
Magellan 9500	●	●	●	●	●	●
Magellan 1000i	●		●			
Magellan 1100i	●		●			
Magellan 1400i	●		●			
Duet	●		●			
VS800	●		●			
Handheld Scanners						
QS6000+	●		●			
QS2500	●		●			
QS6500	●		●			
QS6500BT	●		●			
QD23XX	●		●			
QD21XX	●		●			
PD71XX	●		●			
GD41XX	●		●			

Installation

Running the Install

Uninstall any previous DATALOGIC or PSC OPOS scanner/scale service objects before proceeding with the installation of the DATALOGIC OPOS Service Objects.

DATALOGIC Service Objects are compatible with OPOS Common Control Objects version 1.12.000 included in this package.

Installation can be performed in either of two ways: using a standard GUI installation, or as a silent install from the Command Prompt.

GUI Installation

To install, please perform the following steps:

1. Download the most current install file for the DATALOGIC OPOS service objects from the Datalogic website (www.datalogic.com).
2. Double-click **`R96-xxxx.msi`** to run the install program.
3. Follow the on-screen instructions to complete the installation.

Version and date fields will be different depending on the version of the downloaded file.

Silent Install from Command Prompt

To perform a "silent install", open a command window and **`cd`** to the directory containing the **`R96-xxxx.msi`** file. Type the following command to execute the install process:

```
> R96-xxxx.msi /quiet
```

Silent Install mode does not install Common Control Objects.

Utilities

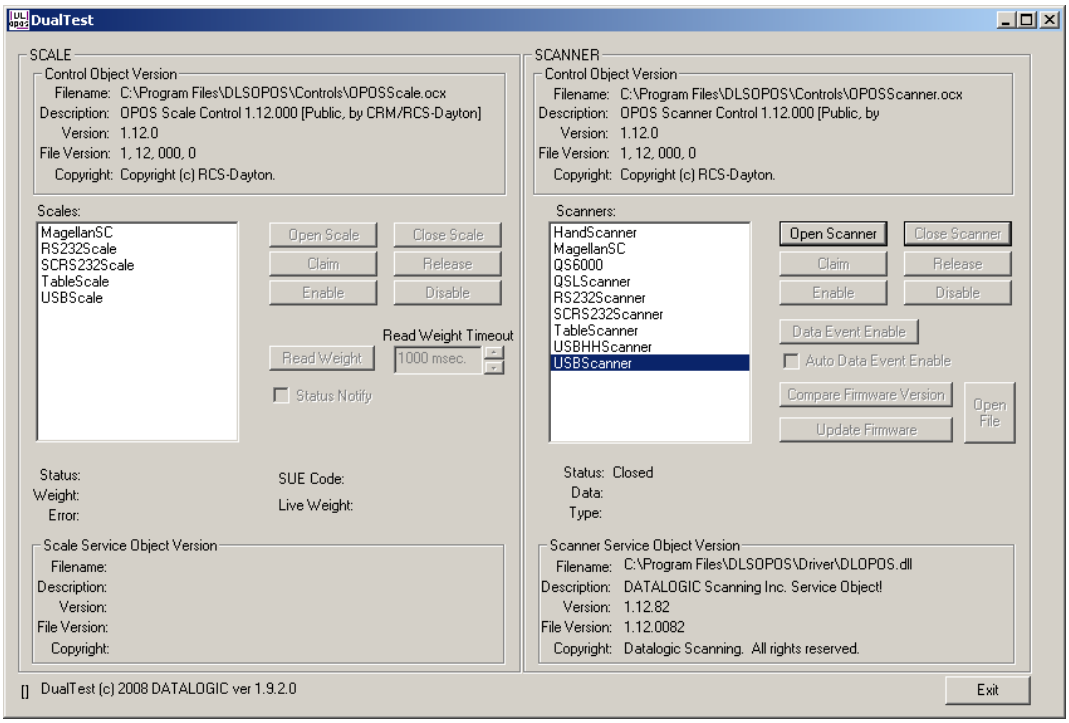
DualTest Utility

The Datalogic 1.12 OPOS package contains a utility called DualTest that provides customers with the ability to quickly connect and test the operation of a Datalogic scanner/scale with the Datalogic service objects. Simple OPOS operations such as Open, Claim, Enable, Read Weights, bar code scanning, bar code type, Release, and Close can be exercised with this utility. DualTest is a fully operational OPOS application which exercises the connection and data path through the Common Controls and Service Objects to the physical device.

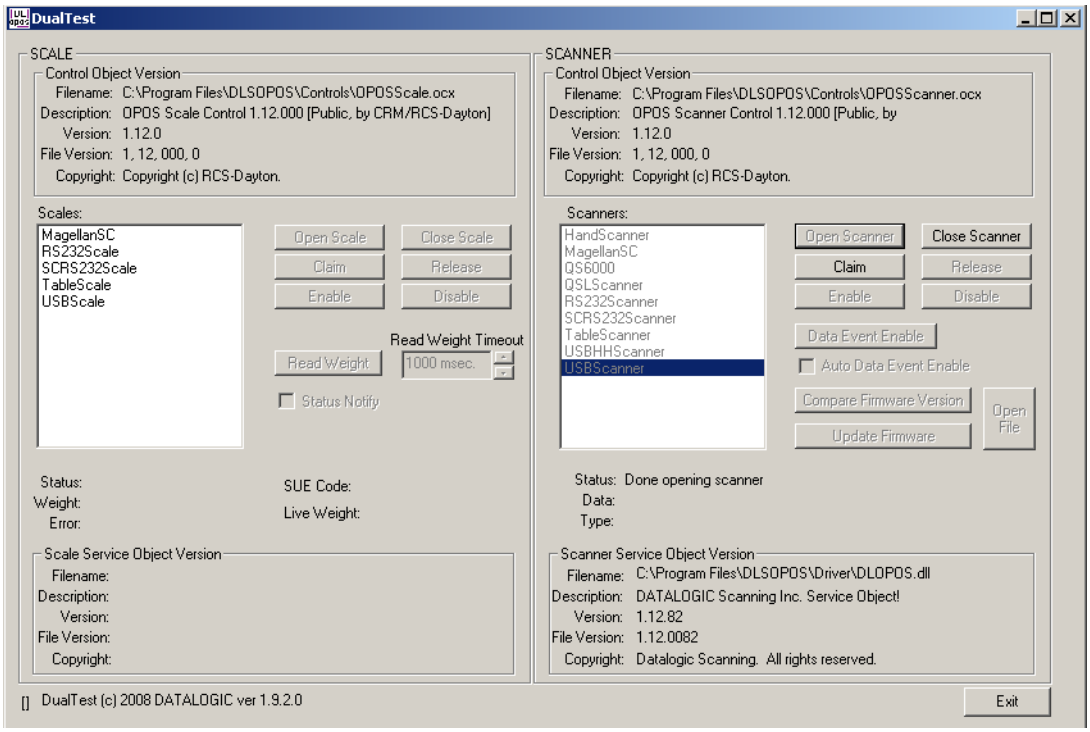
Scanner with DualTest

To connect to a Scanner, follow these steps after installing the 1.12 OPOS package from Datalogic:

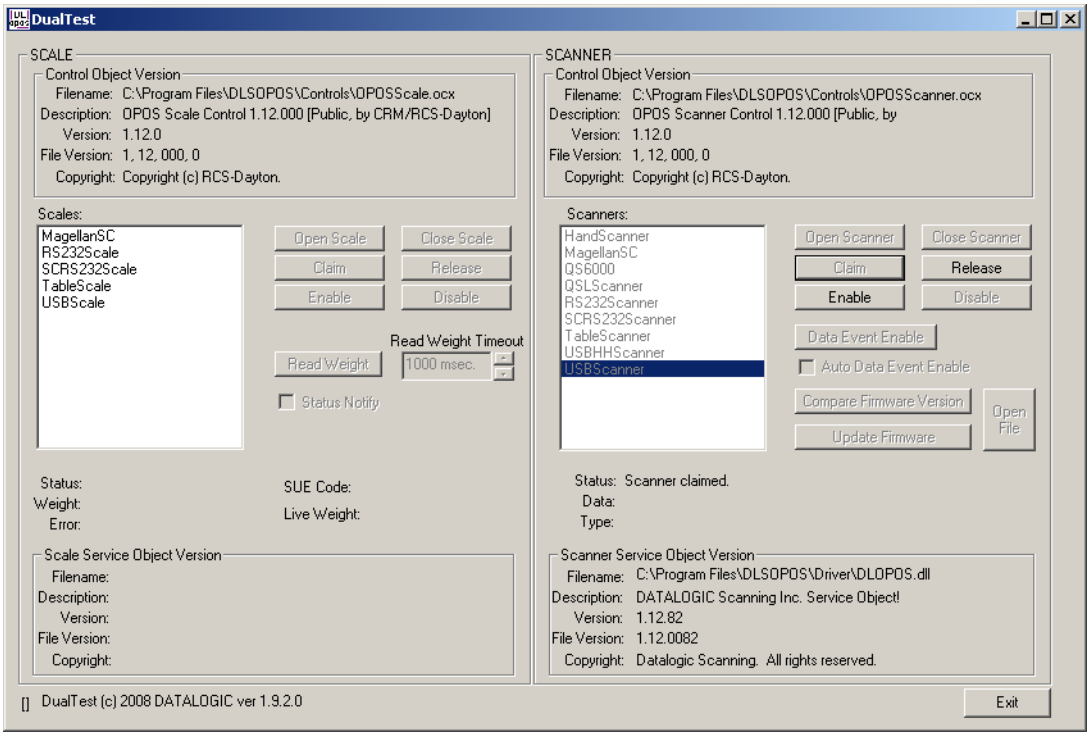
1. Select device:



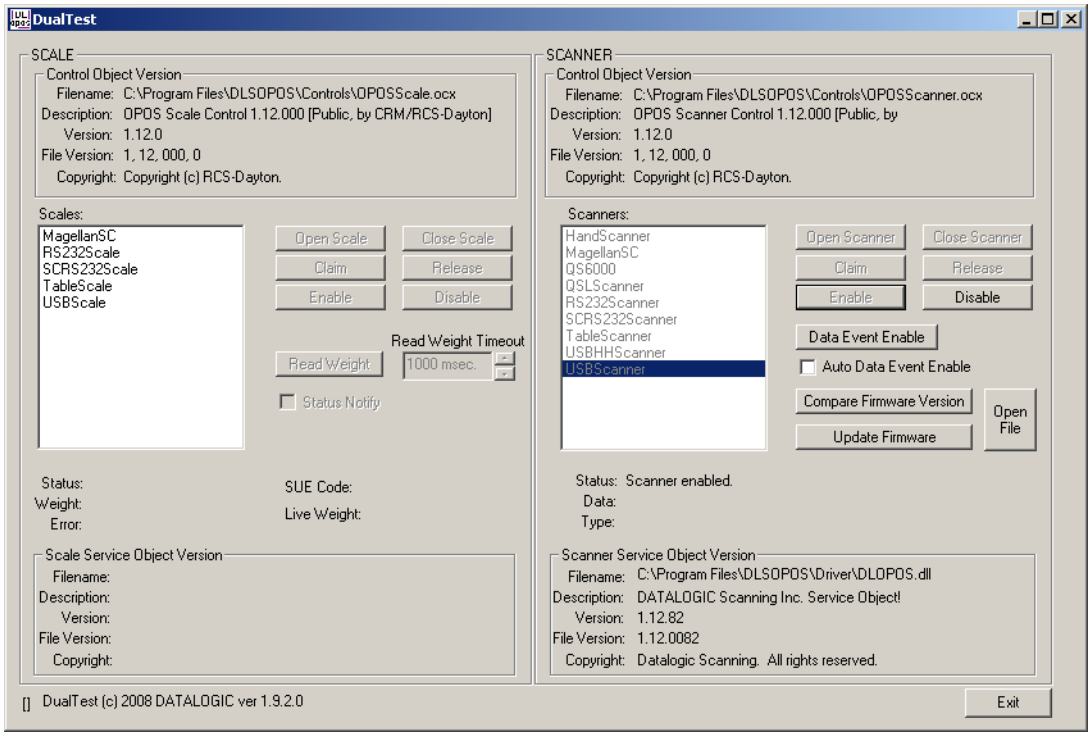
2. Open Scanner:



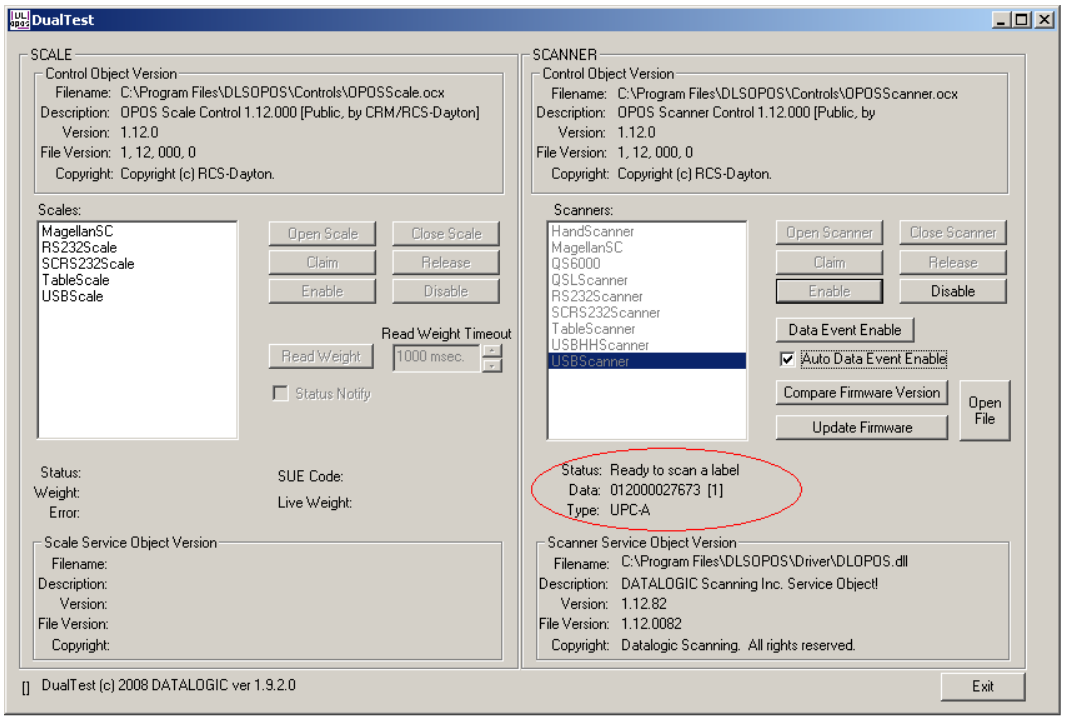
3. Claim:



4. Enable:



5. Now click the "**`DataEventEnable`**" button and check the "**`AutoDataEventEnable`**" box, and scan a bar code. The bar code data and type will be displayed as shown here:



Firmware Update with DualTest

The Datalogic 1.12 OPOS Scanner Service Object supports the ability to update firmware on select scanners in accordance with the UPOS Specification (version 1.9 and above). The user's application may be written to take advantage of this capability in the service (see the UPOS specification for details). In addition, the DualTest application bundled with Datalogic's services supports this capability and may be used to upgrade firmware on select scanners. The following screen shots represent the steps used to upgrade firmware on a scanner that supports this ability using DualTest.

CAUTION

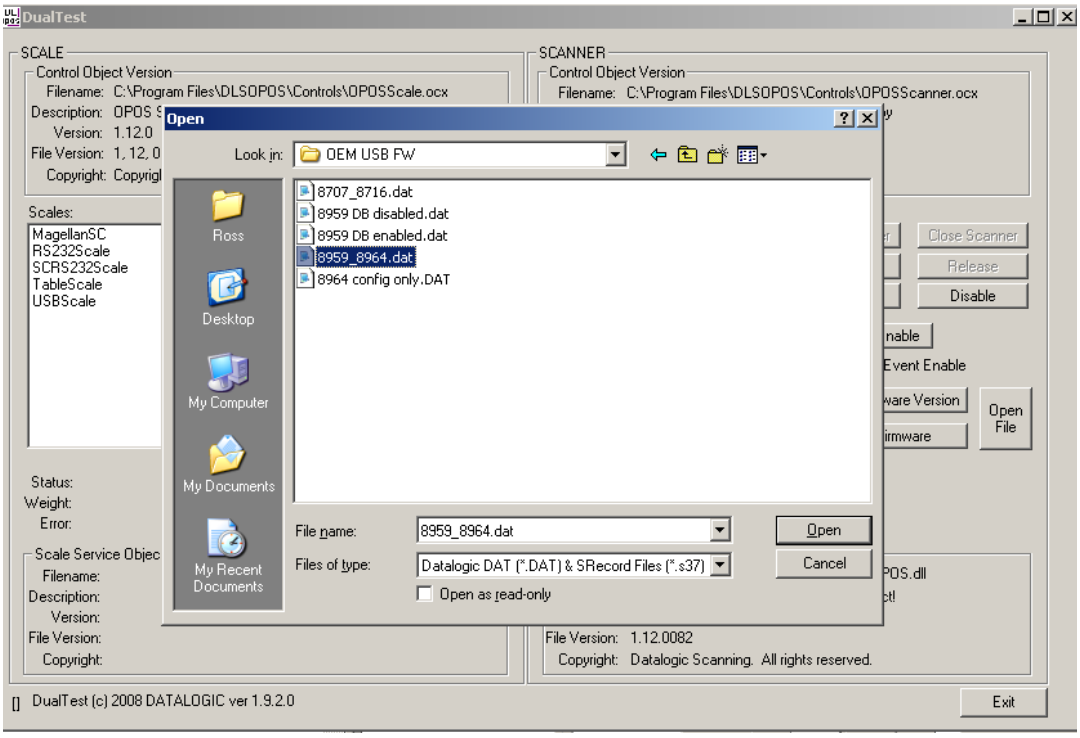
IMPORTANT NOTE to OPOS programmers:

Prior to performing a firmware update on a scanner, the Scale Service Object should be closed. Failure to follow this step could lead to firmware update failure and an inoperative scanner.

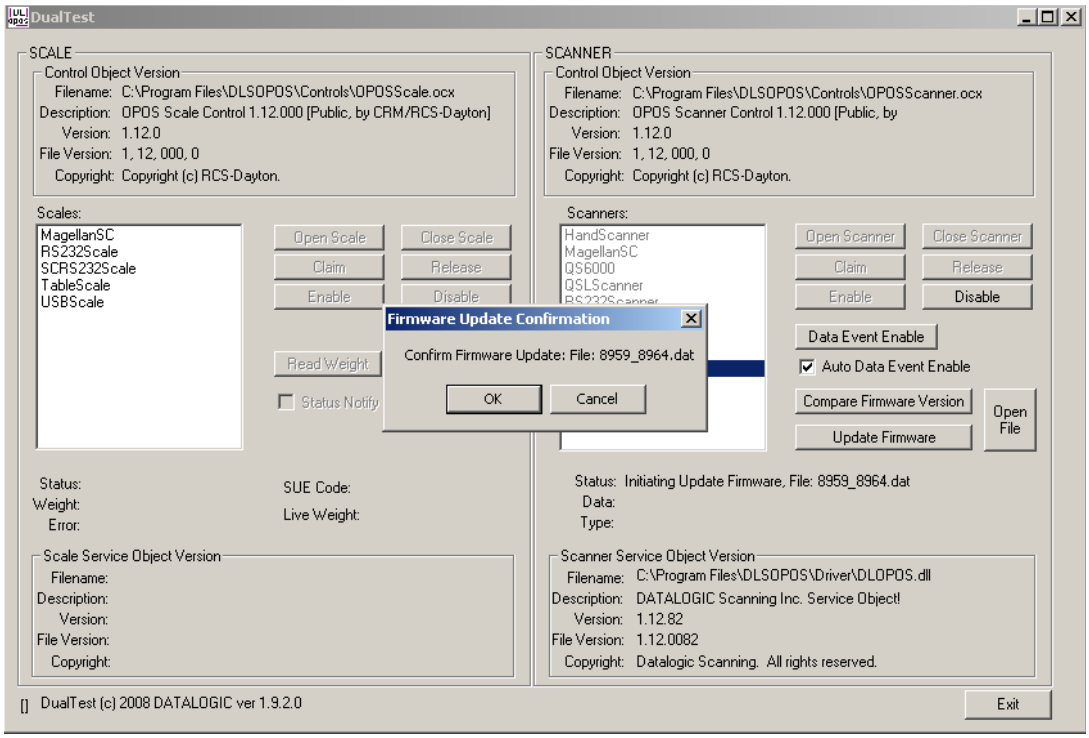
To perform the firmware update, start DualTest and follow the steps in the previous section to Open and Claim the scanner. Then perform the following steps.

1. **`OpenFile`**: Locate the firmware file on your machine or network.

Firmware files are interface and scanner specific and may be obtained from Datalogic Tech Support.

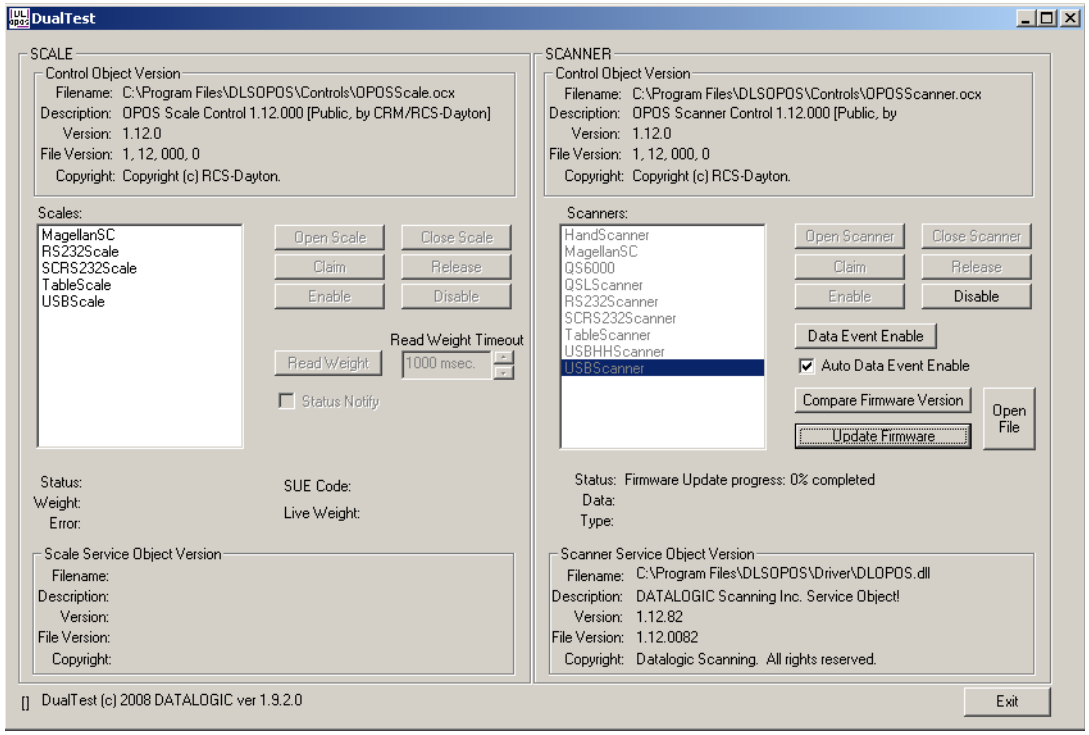


2. Confirm Update Firmware:

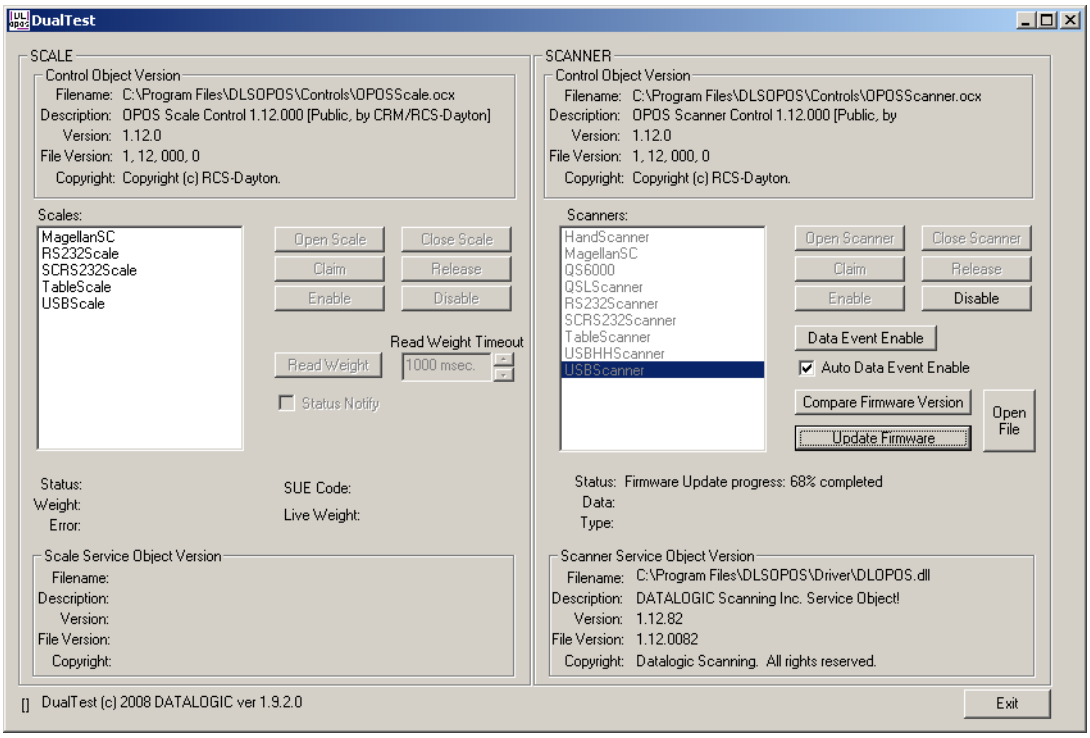


Firmware Update Started

The Status field will update at every 1% of the upload. Depending on the scanner interface and parameters such as baud rate, the update may take from approximately 7 minutes to 40 minutes. DO NOT disconnect the interface cable or power cable from the scanner during the update!

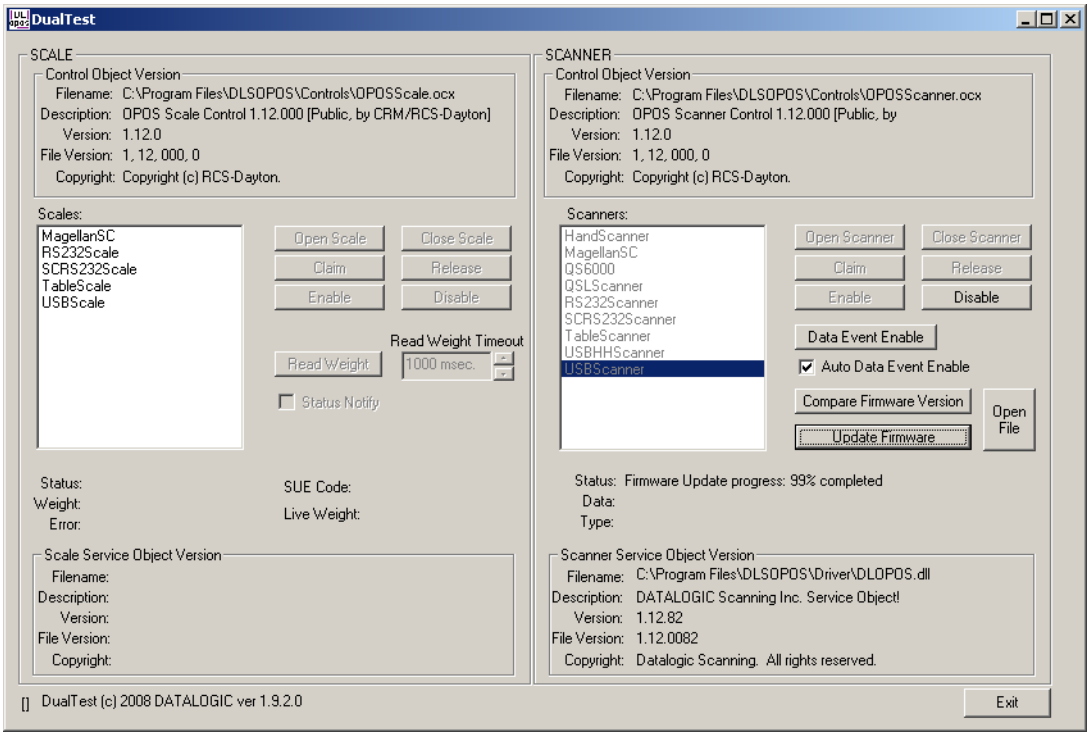


Update in progress, at 68% complete:

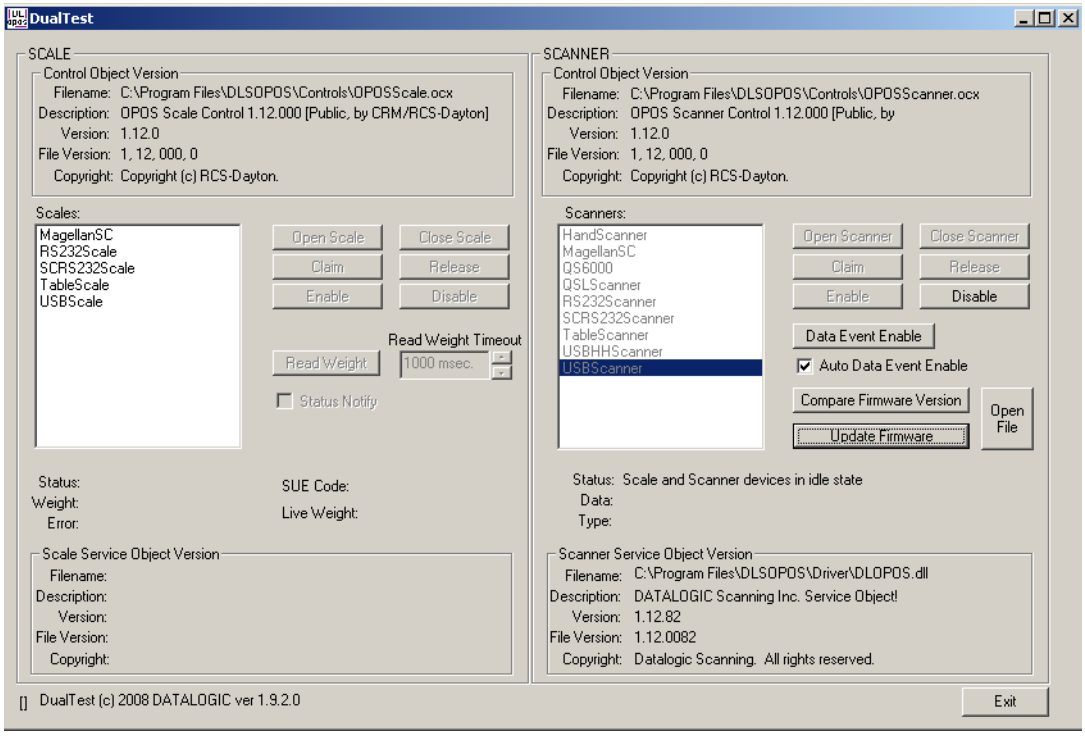


Firmware Update Finished

NOTE that the service will stop at 99% complete until the scanner reboots and comes on line, which may take several seconds.



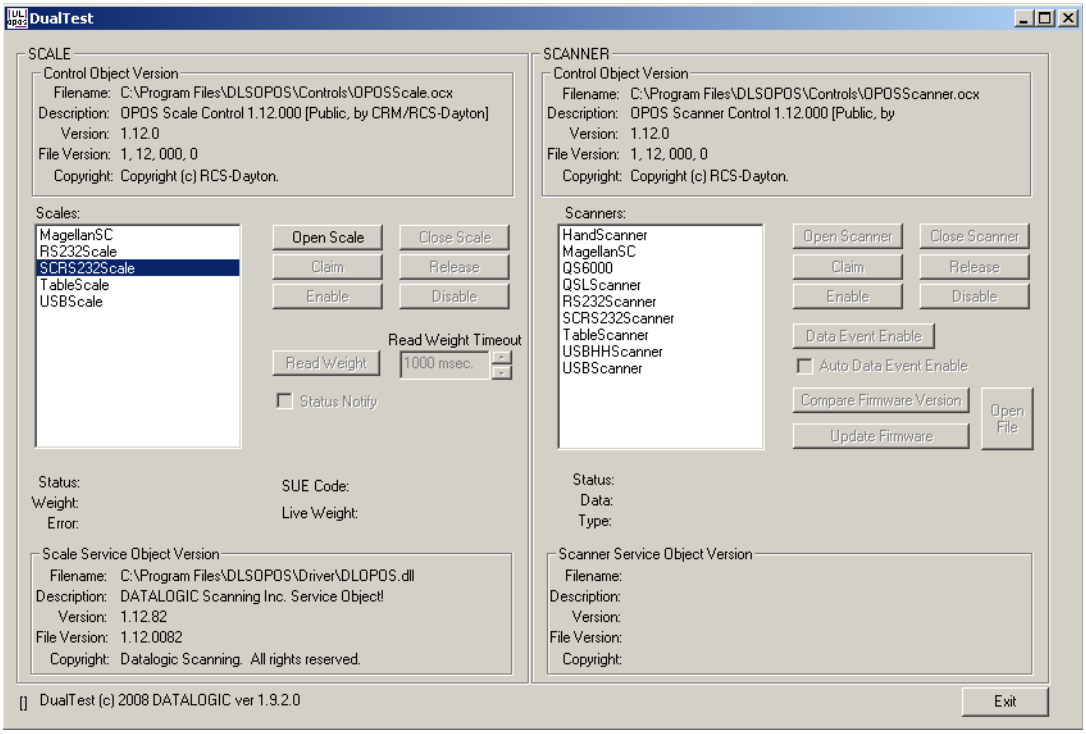
Finalized: The scanner is now back on line and fully operational.



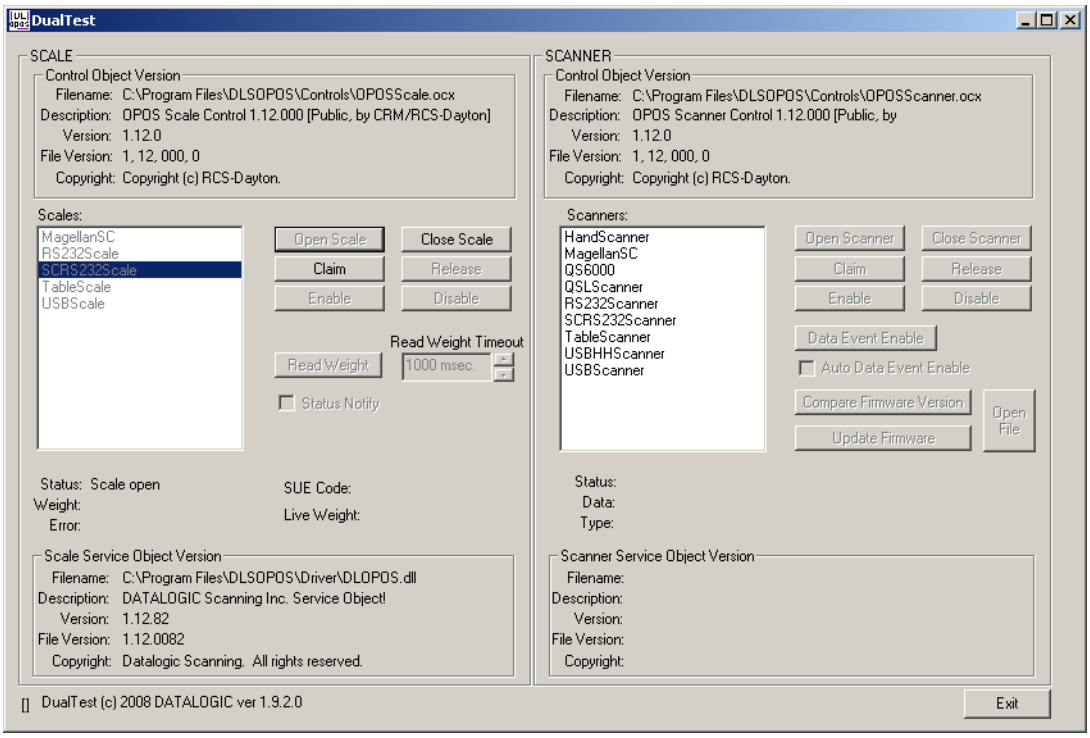
Scale with DualTest

To connect to a Scale, follow these steps after installing the 1.12 OPOS package from Datalogic:

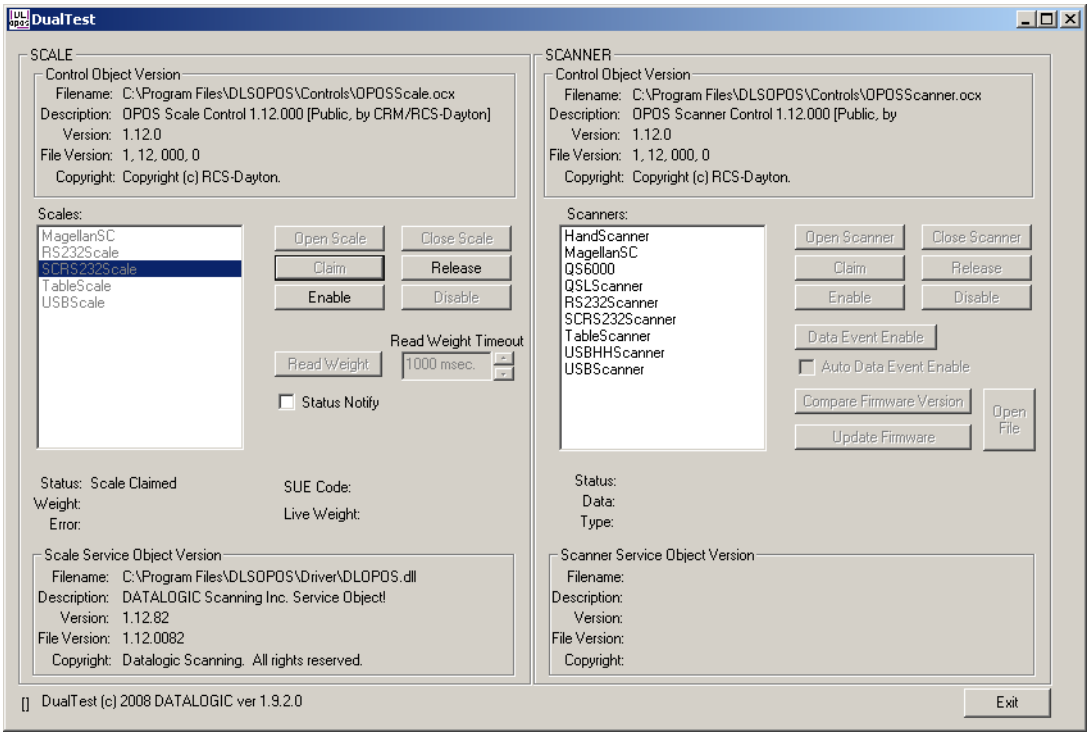
1. Select Device:



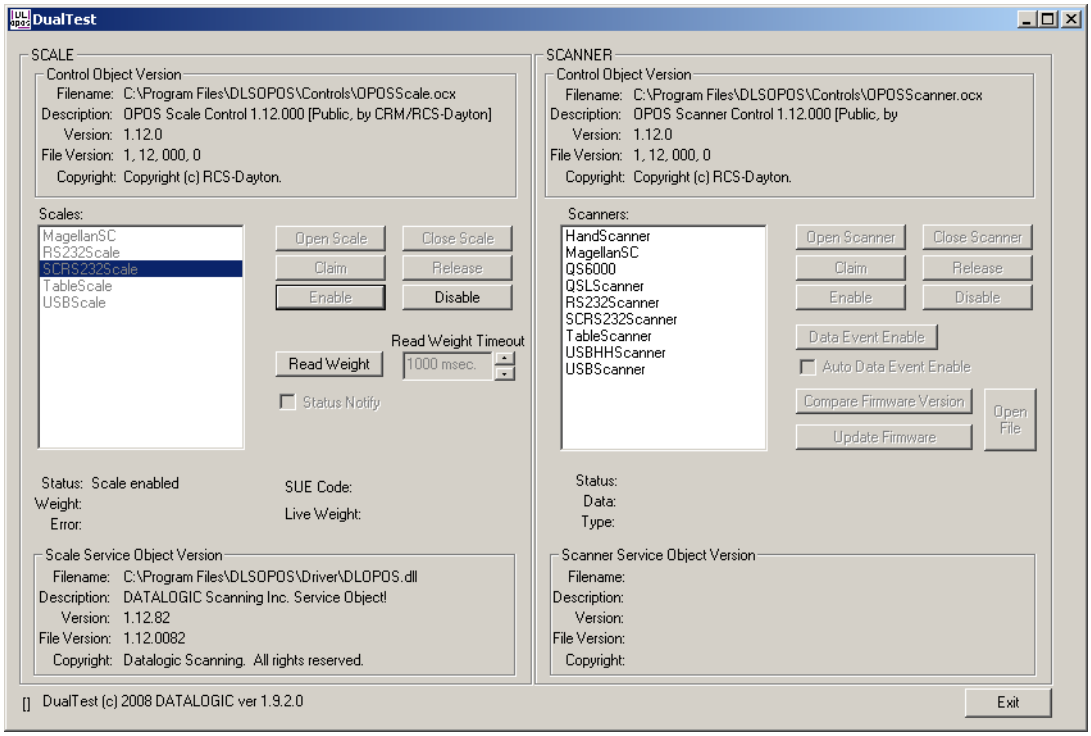
2. Open Scale:



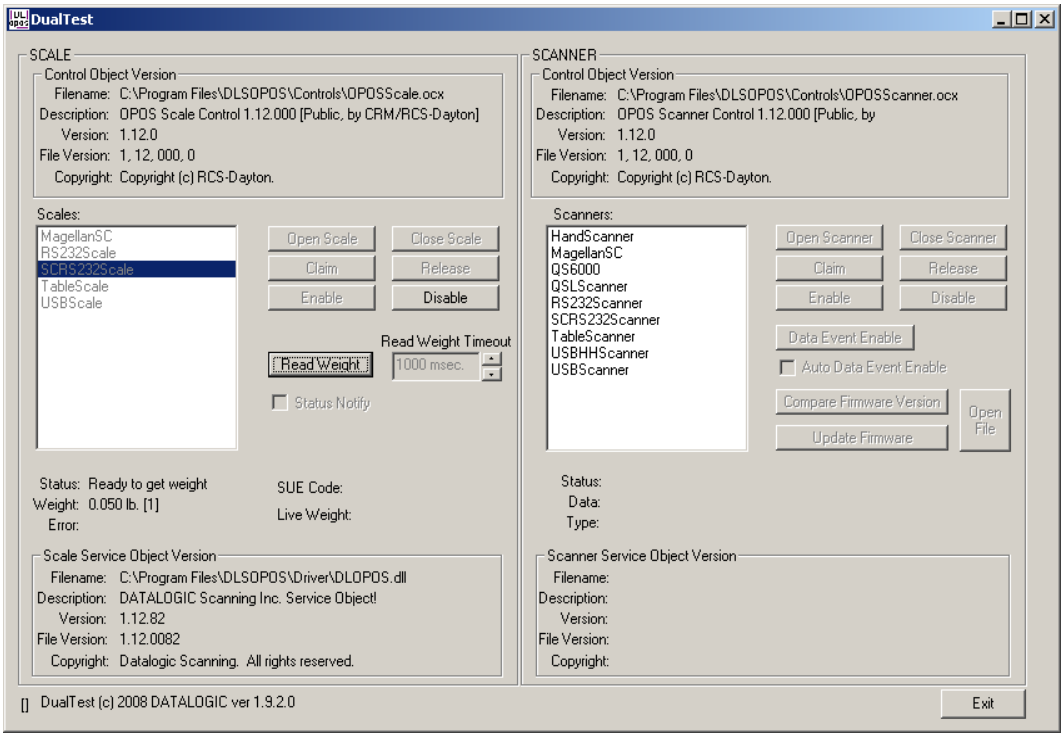
3. Claim:



4. Enable:



5. Read a weight:



Live Weight Display

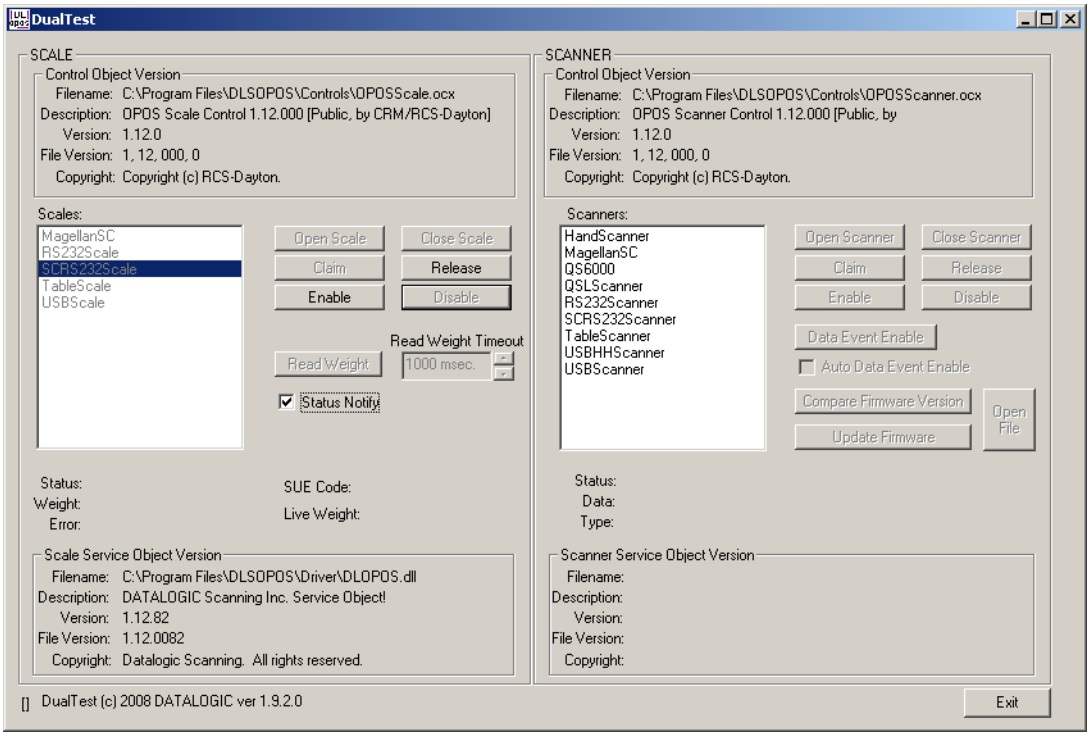
The Datalogic 1.12 OPOS Scale Service Object supports the ability to provide Live Weight Display functionality in accordance with the UPOS Specification (version 1.9 and above). The user's application may be written to take advantage of this capability in the service (see the UPOS specification for details). In addition, the DualTest application bundled with Datalogic's services supports this capability and may be used to demonstrate Live Weight Display function with a Datalogic scanner/scale. The following screen shots represent the steps used to activate Live Weight Display with a scale using DualTest.

IMPORTANT NOTE to OPOS Programmers:

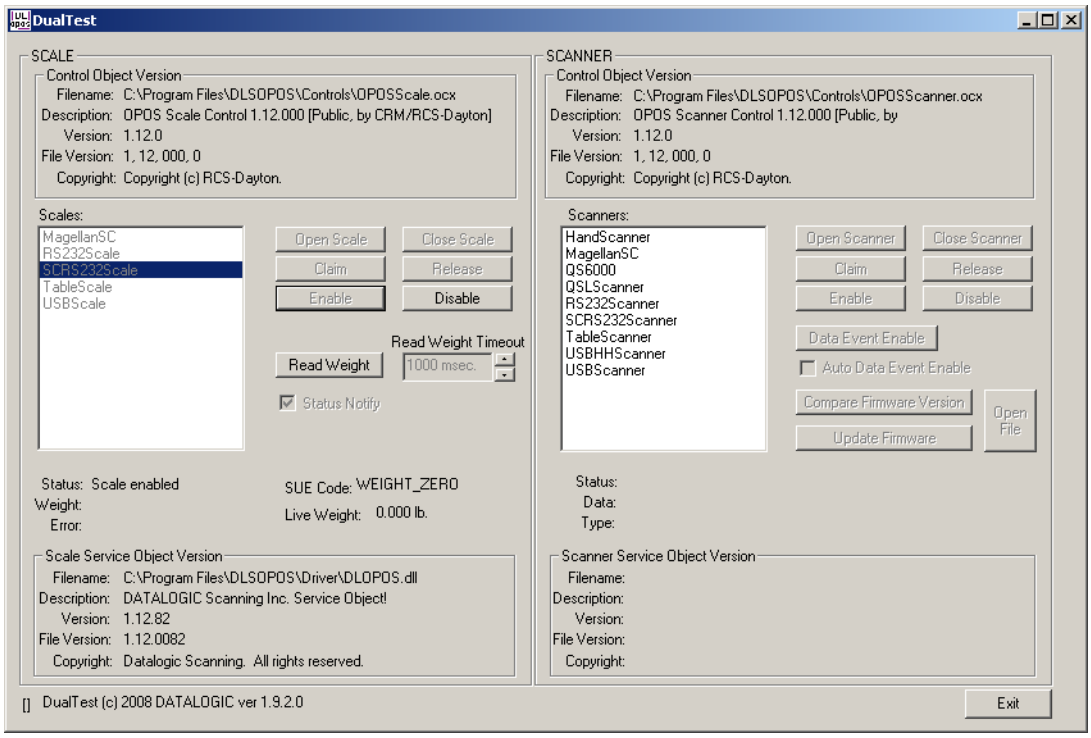
`PIDXScal_StatusNotify` must be set `TRUE` while the scale is NOT Enabled. As per the UPOS specification, setting `PIDXScal_StatusNotify TRUE` after the scale has been Enabled will not activate the Live Weight Display function in the scale service object.

To demonstrate Live Weight Display, start DualTest and follow the steps to Open and Claim the scale, as described in the previous section. Then perform the following steps:

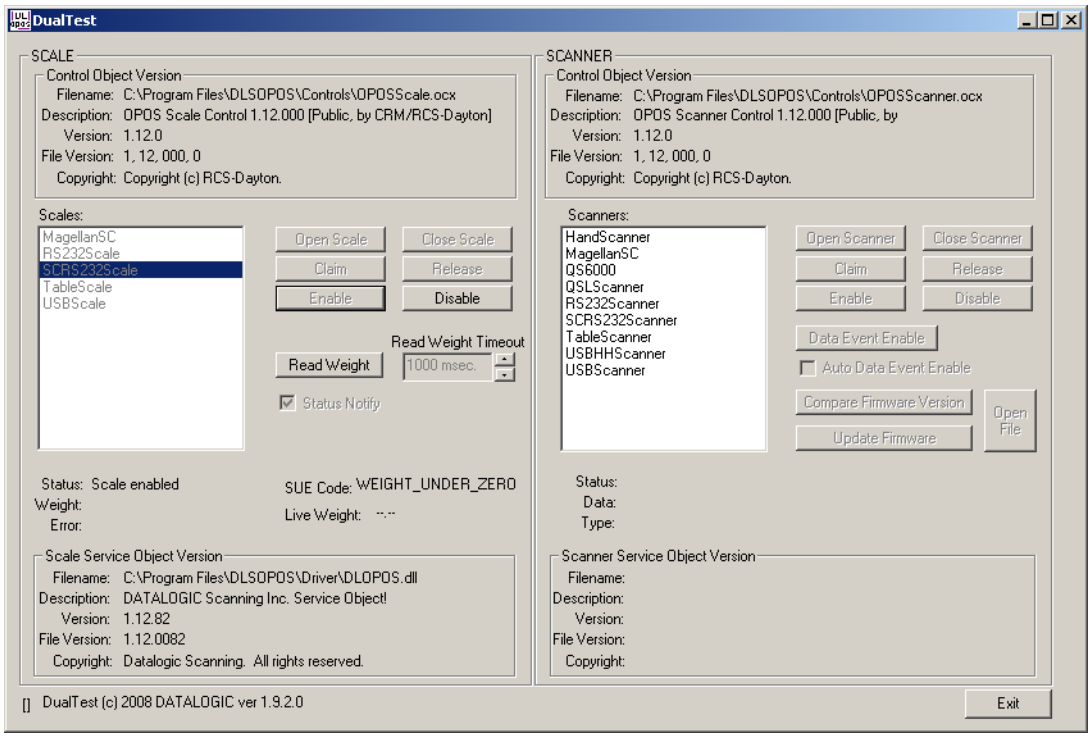
1. Set Status Notify True: Click the "Status Notify" check box.



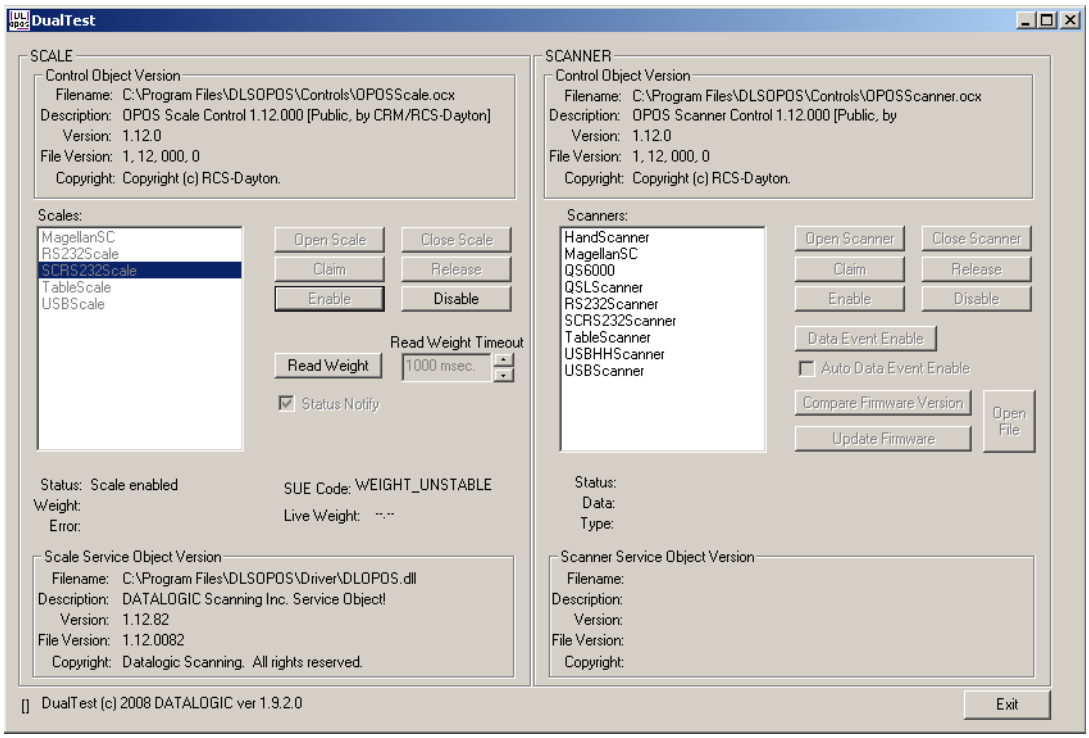
2. Enable: (Live Weight Begins immediately / Zero Weight)



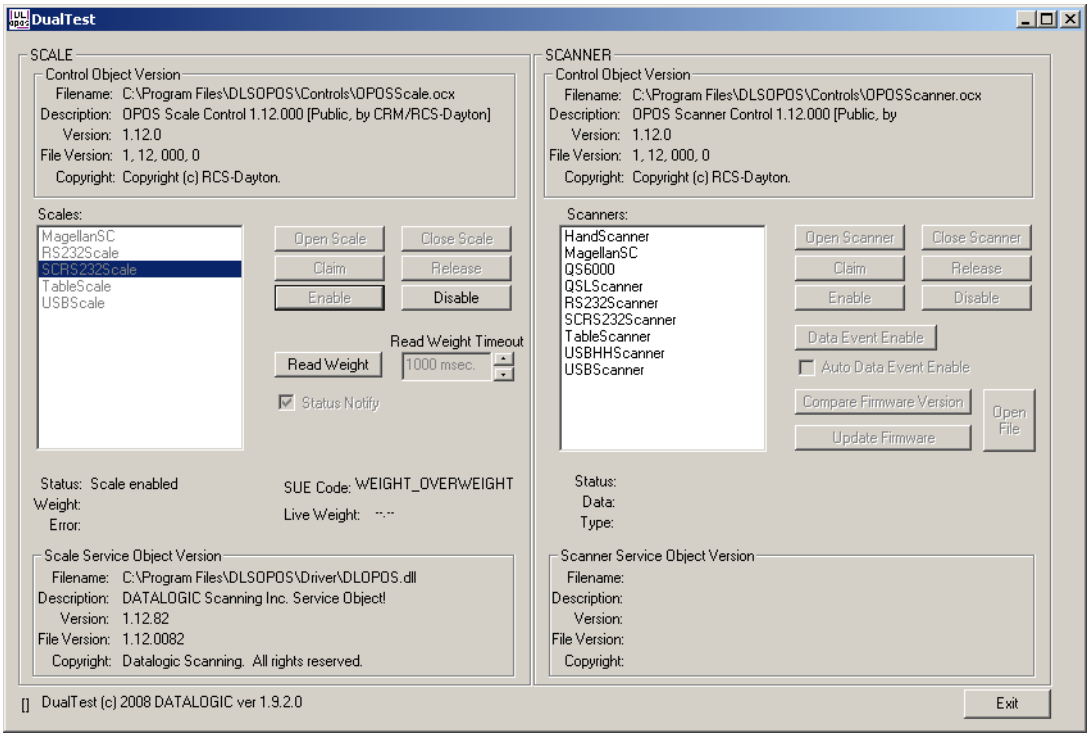
3. Underweight: An under zero condition has occurred.



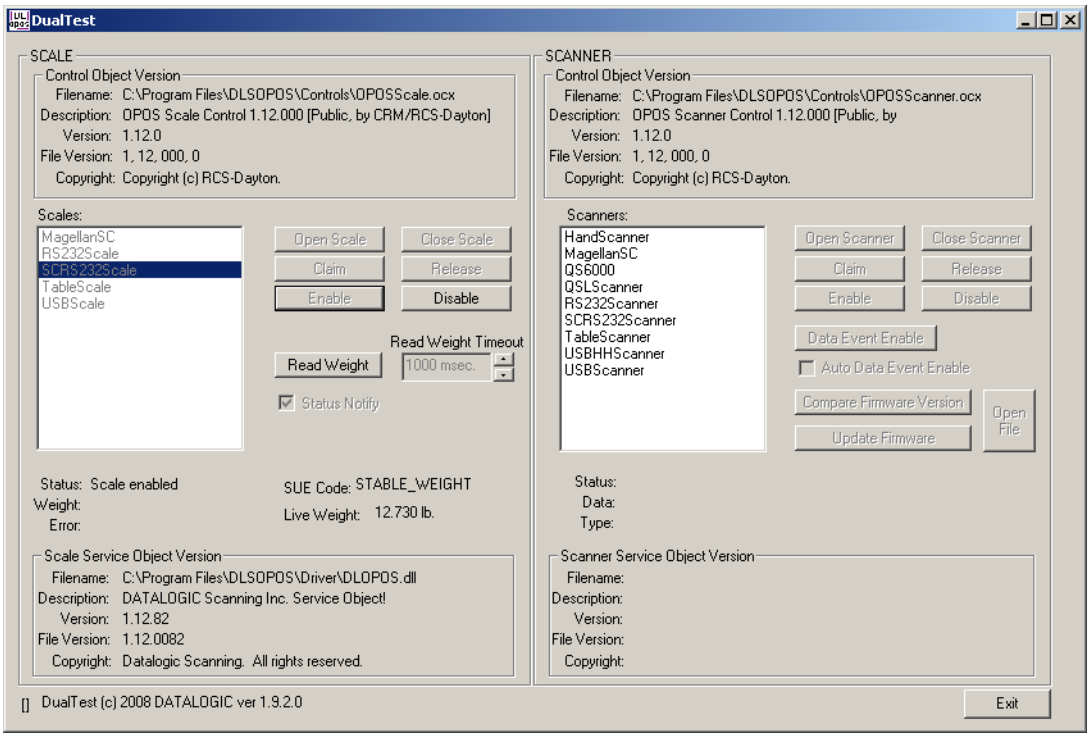
4. In motion: The scale is in motion and has not stabilized.



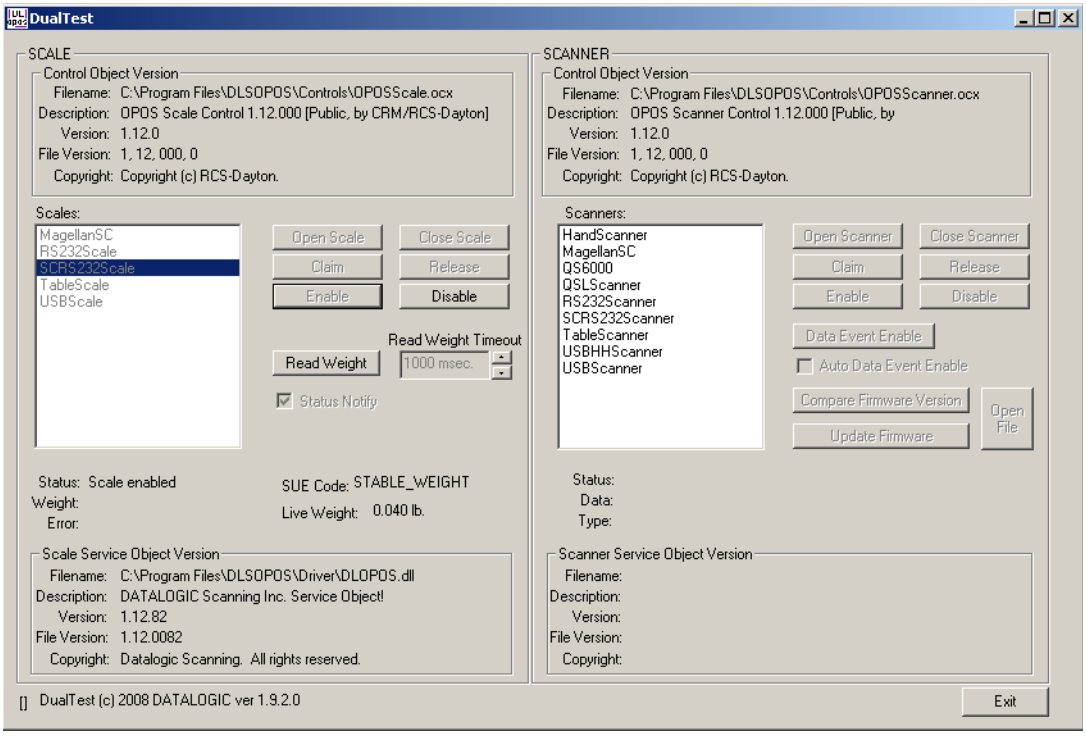
5. Overweight: The scale's weight capacity has been exceeded.



6. Stable Large Weight:



7. Stable Small Weight:



Registry

Windows Management Instrumentation (WMI) Compatible

Datalogic OPOS Service Objects provide WMI-compatible Remote Management for certain scanners when properly configured. For those scanners that support this data gathering capability, the Service Objects must be configured via registry settings to provide scanner data to the WMI data store. There are two registry settings that must be active to pull data from the scanner and provide it to the WMI data store: "**CheckIHSOnClaim**" and "**WMIOnClaim**" must both be set **= 1**. When these settings are active, each time the scanner is "claimed" by an OPOS application, the service will query the scanner and send the information to the WMI data store. Any WMI-data gathering application will then have access to the data. As noted in the registry section below, these settings are defaulted to "active" upon installation. Note that this process may have a small impact upon system performance.

The data provided to the WMI database follows the format as specified in the UPOS specification, Appendix I, "Systems Management Information", which is modeled on the Common Information Model (CIM) from the DMTF. This standard provides a means of Remote Management of Datalogic scanner/scales under the Windows Management Instrumentation process.

OPOS Registry

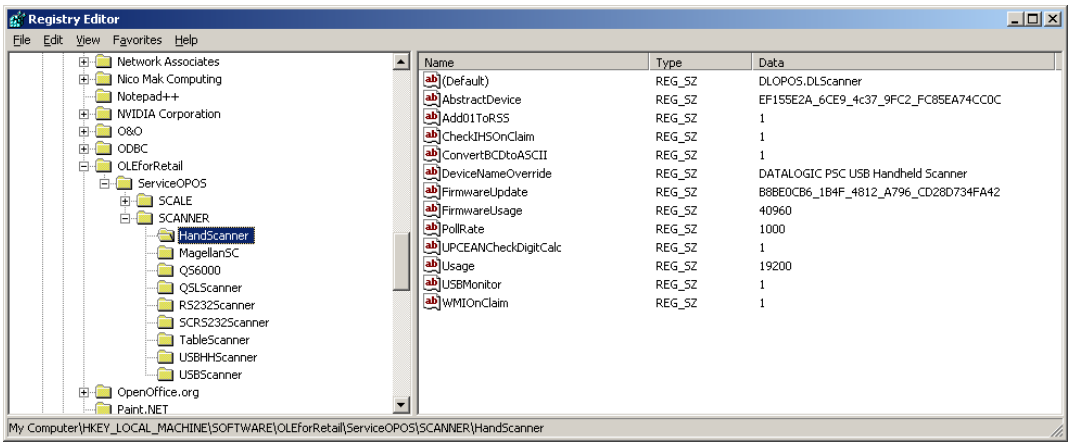
Datalogic OPOS Service Objects use the Windows registry for configuration of the OPOS software. When the OPOS package is installed, the installer creates registry entries under **HKEY_LOCAL_MACHINE\SOFTWARE\OLEforRetail\ServiceOPOS; Scale and Scanner.** Under each UPOS category, there are named entries for each device. Under each name, there are some user-configurable entries that control the operation of the OPOS Service Objects.

Changing items in the registry does not change corresponding items in the scanner. For example, baud rate can be changed in the RS232Scanner registry, but the baud rate in the scanner must be changed via programming label to match the registry entry, or the Service Object will be unable to communicate to the scanner.

Scanner

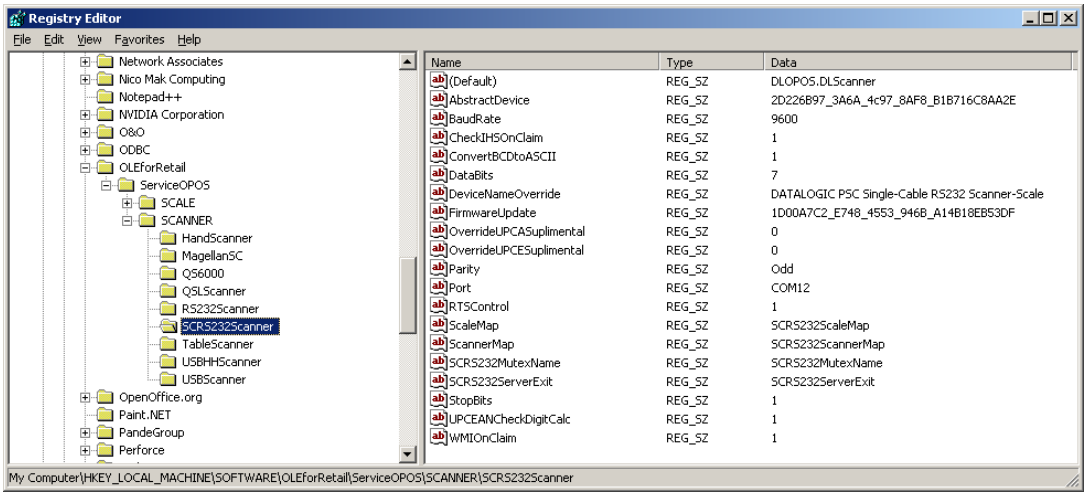
Under **SCANNER** in the registry, there are a number of named entities: **HandScanner**, **MagellanSC**, **QS6000**, and so forth. Note that some of these are duplicates that have been maintained for legacy purposes: for example, "**HandScanner**" and "**USBHHScanner**" refer to the same device (a handheld scanner running OEM USB interface); "**MagellanSC**" is the same as "**SCRS232Scanner**"; "**TableScanner**" and "**USBScanner**" are equivalent; **QS6000** and **RS232Scanner** are equivalent, **QSLScanner** is a unique entry. The following screen shots cover the important user-configurable registry settings for each category of scanner.

HandScanner = USBHHScanner:



- (Default) = **DLOPOS.DLScanner** – this is the default name used by the service. The user should not edit this entry.
- **AbstractDevice** – this represents the GUID and should not be edited by the user.
- **Add01ToRSS** – defaulted to active (1), if the scanner does not return a "01" at the start of a Databar label, the service will add the "01" if this item is active.
- **CheckIHSOnClaim** – defaulted to active (1). When 1, the service will request information-health-statistics data from the scanner each time it is "claimed".
- **ConvertBCDtoASCII** – defaulted to active (1), the service will convert any label sent in BCD format to ASCII.
- **DeviceNameOverride** – this is the name reported by OPOS as the "device name" in the OPOS object. If the user's application is coded to use a certain specific name, the user can insert that name here.
- **FirmwareUpdate** – Firmware endpoint GUID, user should not modify this entry.
- **FirmwareUsage** – this is the USB "usage" for the firmware endpoint, in decimal (the USB spec defines this in hexadecimal). User should not modify this entry.
- **Pollrate** – this is the period, in milliseconds, that the service polls the scanner for connection.
- **UPCEANCheckDigitCalc** – defaulted to active, the service will calculate the check digit for a UPC/EAN label if it is not present on the scanner interface, and append this to the data in the ScanDataLabel property.
- **Usage** – this is the USB "usage" for the scanner device. (The USB spec defines this in hexadecimal). User should not modify this entry.
- **USBMonitor** – defaulted to active, the service will periodically ensure that the scanner and host "enable" state is the same.
- **WMIOnClaim** – defaulted to active, the service will compile WMI data upon "claim" of the device. This may slow down the claim process slightly.

MagellanSC = SCRS232Scanner



Common fields as per Handheld scanner above; in addition the following fields are:

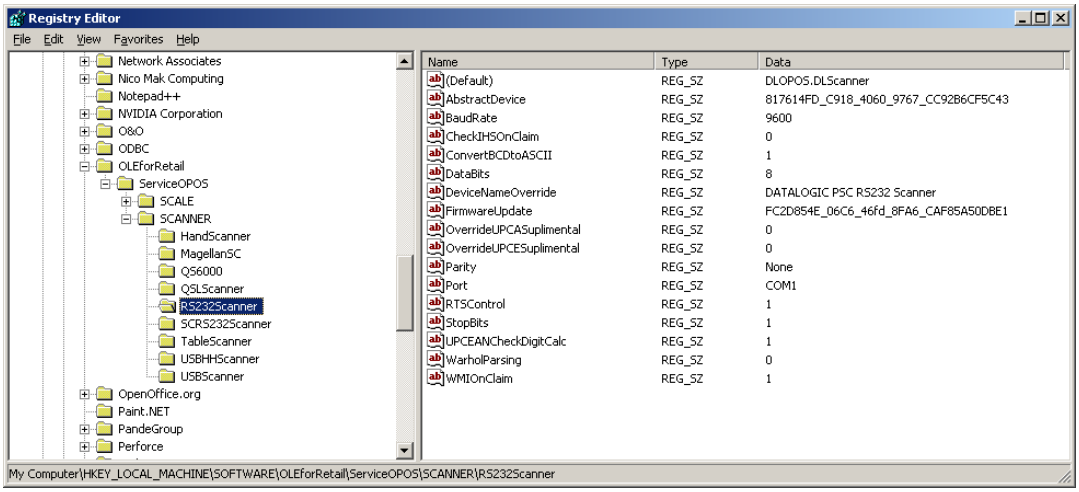
- **`BaudRate`** – default to 9600.

CAUTION

Changing this value REQUIRES changing the scanner to a matching value – failure to do so will result in failure to communicate!

- **`DataBits`** – default to 7, same caveat as for baud rate.
- **`OverrideUPCASuplimental`** – default not active; can be used in certain circumstances to differentiate label+addon from label only packet. This setting would rarely need user modification.
- **`OverrideUPCESuplimental`** – default not active; can be used in certain circumstances to differentiate label+addon from label only packet. This setting would rarely need user modification.
- **`Parity`** – defaults to Odd to match scanner default on SC RS232 interface, same caveat as for baud rate.
- **`Port`** – defaults to COM1. User can change as needed to match system com port.
- **`RTSControl`** – defaulted to active. Service will set CTS line active at the host port and leave it set high.
- **`ScaleMap`** – name used internally by SC Service, user should not modify.
- **`ScannerMap`**- name used internally by SC Service, user should not modify.
- **`SCRS232MutexName`** — name used internally by SC Service, user should not modify.
- **`SCRS232ServerExit`** - name used internally by SC Service, user should not modify.
- **`StopBits`** – defaulted to 1, same caveat as for baud rate.

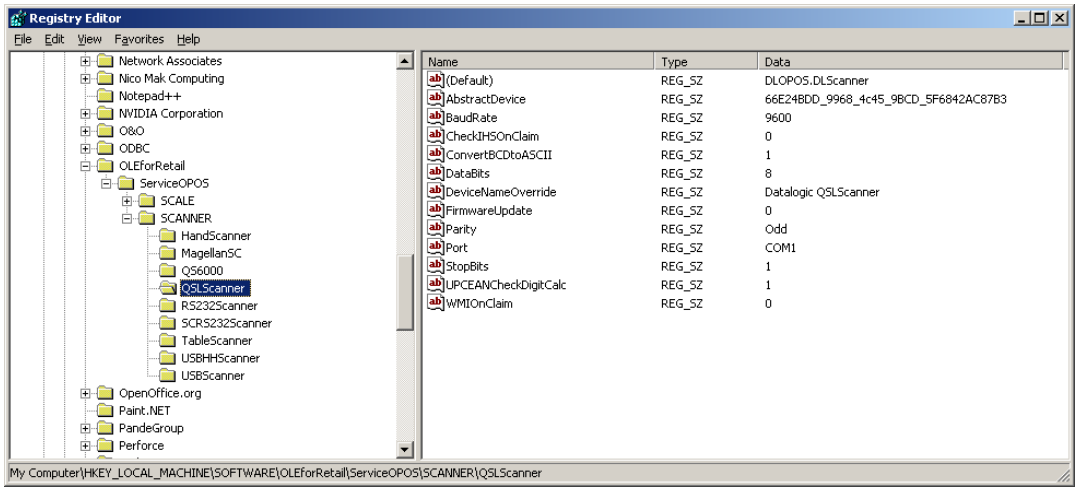
RS232Scanner = QS6000



Common fields as above; in addition the following field is:

- **`WarholParsing`** – defaults to not active. When using a QD21xx, QD23xx, PD71xx, or GD41xx handheld scanner, the user should set this to active and select the "**`RS232 OPOS`**" interface in the scanner programming guide. This setting enables correct identification of Label Ids from the scanner through the Service Object.

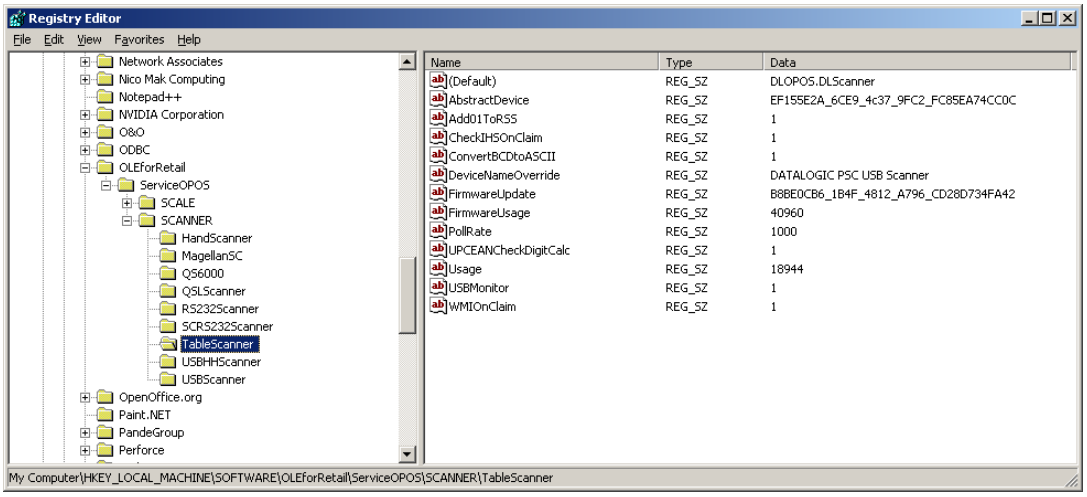
QSLScanner



There are no unique fields for this scanner, but some of the settings default to different values because of limited capabilities:

- **`FirmwareUpdate`** – defaults to 0; this device cannot be updated by the service.
- **`CheckIHSOnClaim`** – defaults to 0; this device does not support commands needed to determine scanner health and status.

TableScanner = USBScanner

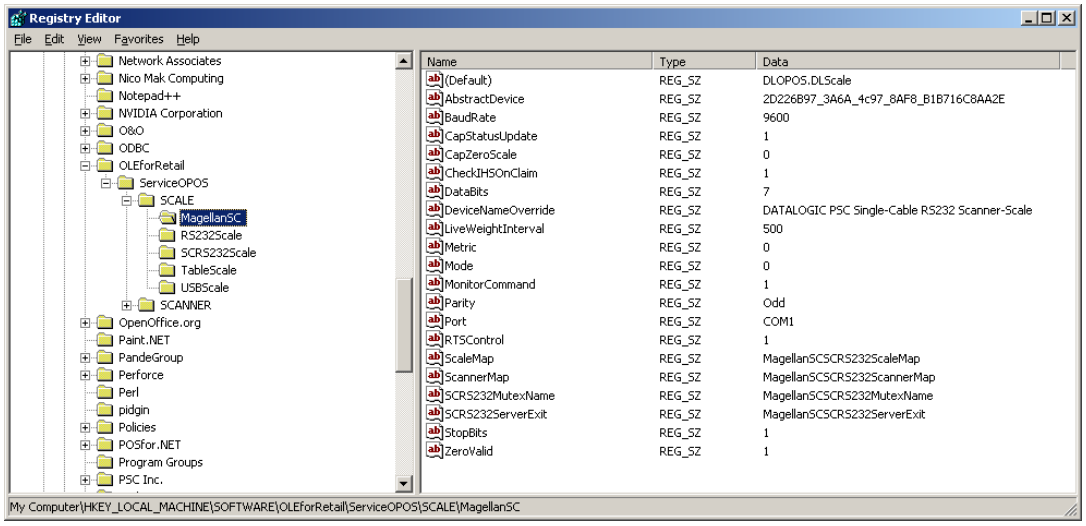


Settings are identical to **`USBHHScanner/HandScanner`**, except that **`Usage = 18944`** (4A00 hex), and **`DeviceNameOverride = "…USB Scanner"`**

Scale

Under the **`SCALE`** in the registry, there are five named entities. Some are redundant and have been maintained for legacy applications. The following screen shots cover the important user-configurable settings for each category of scale.

MagellanSC = SCRS232Scale



IMPORTANT NOTE: COM port settings for this scale device are identical to the corresponding scanner names; this is because the two devices share the same COM port and must use the same communication parameters. The same caveats apply to changing these values in the registry and scanner/scale – the settings must match.

- **CapStatusUpdate** – defaulted to 1, this indicates that the scale service is capable of supplying Status Update events as per the UPOS **Live Weight Display** description in the scale section of the UPOS spec.
- **CapZeroScale** – defaulted to not active. The Single Cable scale does not support host zeroing of the scale.
- **LiveWeightInterval** – default to 500; this is the poll rate in milliseconds that the scale service polls the scale for weight in the case of **Live Weight Display** enabled.

The user should never set this value below 250 msec.

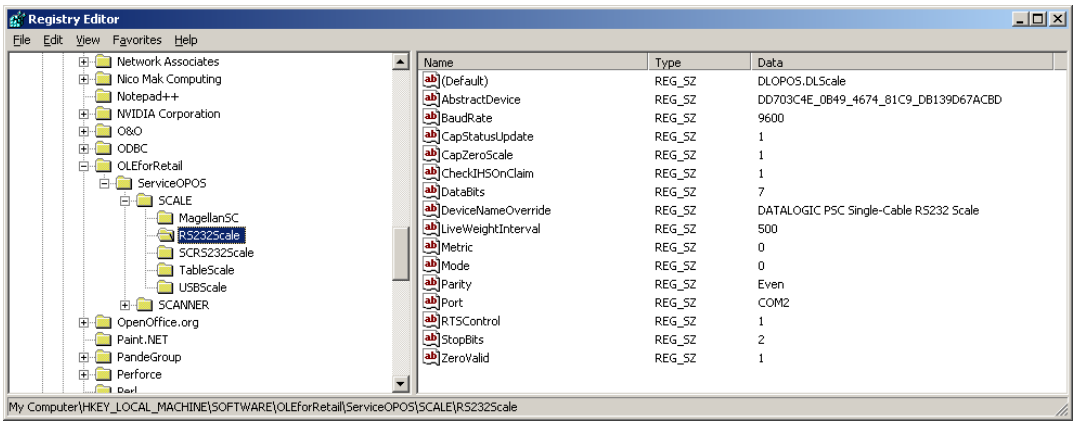
- **Metric** – defaulted to 0. This setting controls the type of Weight Request sent to the scale by the service; the default is English Weight Request. The user can set this to 1 to obtain Metric weights.

CAUTION

The scanner/scale must be programmed to the same data type or weight requests will fail.

- **ZeroValid** – defaulted to Active. When active, the service will deliver a stable zero weight as a valid weight to the host. When set to 0, the service will follow the pre-1.13 UPOS specification and not deliver zero as a valid weight (this setting is used by some customers to maintain a live weight display outside of the UPOS specification).

RS232Scale



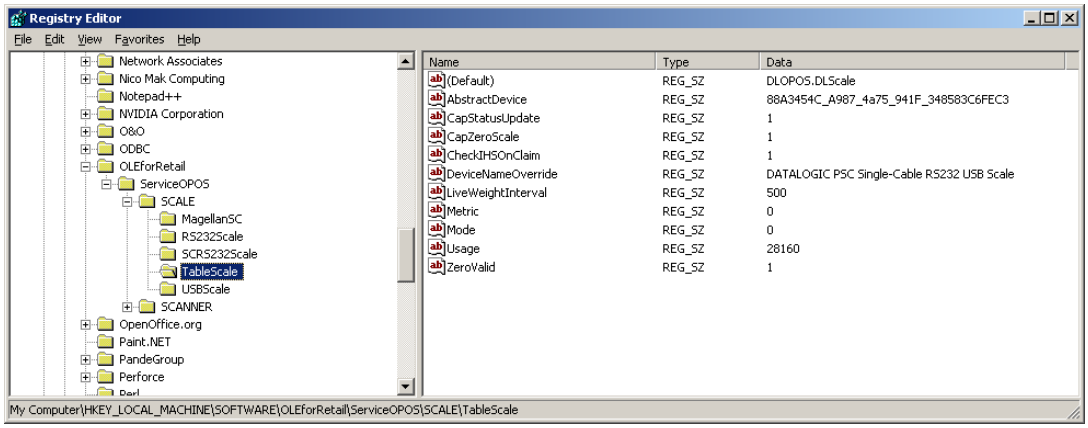
- **CapZeroScale** – defaulted to Active, the scale service can zero the scale through the interface.

- **Port** – defaulted to COM2. The user can select the desired COM port for their system.

This MUST be a different COM port than the associated Scanner port.

- **BaudRate** – defaulted to 9600. The user should not change this setting, as the scale baud rate is NOT configurable.
- **DataBits** – set to 7. The user should not change this setting, as the scale data bits are NOT configurable.
- **Parity** – set to Even. The user should not change this setting, as the scale parity is NOT configurable.
- **StopBits** – set to 2. The user should not change this setting, as the scale stop bits are NOT configurable.

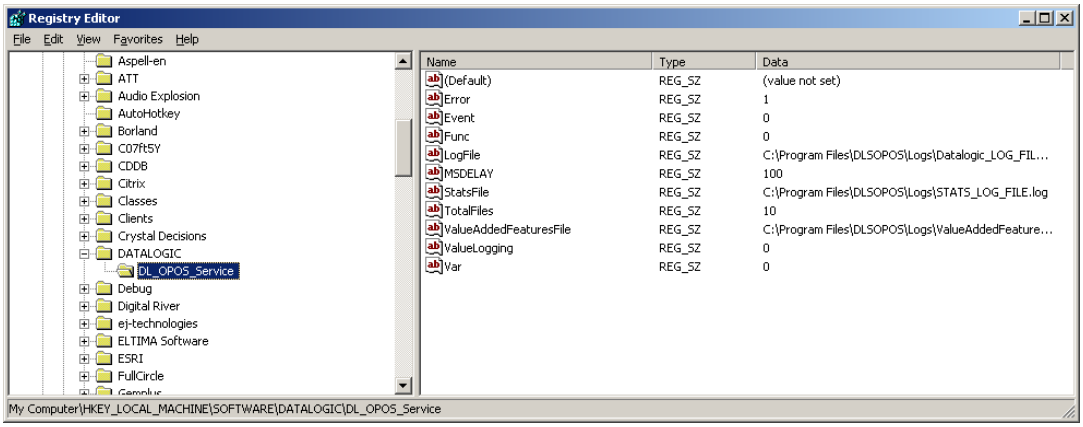
TableScale = USBScale



Logging

The DLS Service Objects have the ability to log various data items to a file for reporting, troubleshooting, and monitoring. The logging level is controlled by registry settings under the location **HKEY_LOCAL_MACHINE\SOFTWARE\DATALOGIC\DL_OPOS_SERVICE**.

By default, only Error logging is turned on upon installation. If desired, the user can log various reporting levels by turning on settings.



The location of log files is shown under the **LogFile** name; the default path is as shown above. Total number of log files is defaulted to 10. Note that when all logging features are turned on, the logs will become very large. Logging should normally be left in the "error" mode only to conserve system resources.

Levels

Error – defaulted Active; logs only OPOS errors.

Event – defaulted Off; if set active, the service will log OPOS events.

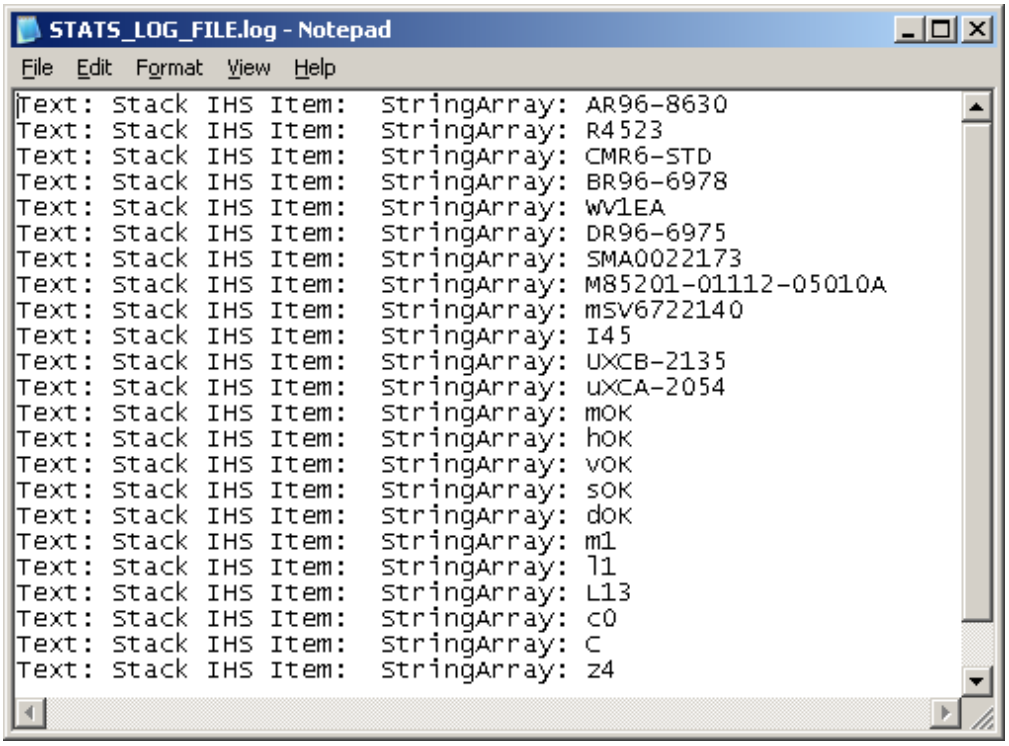
Func – defaulted Off; if set active, the service will log all function entry/exit.

Var – defaulted Off; if set active, the service will log variable values.

Additional Logging

The DLS OPOS Service Object can also create two additional logs. A "**StatsFile**" is created every time the scanner is "**claimed**", provided the "**CheckIHSOnClaim**" control is set to active in the scanner registry. This file holds the result of the latest "**info-health-statistics**" call to the scanner, and is overwritten upon each "**claim**". This file holds information about the scanner that may be of interest to customers, and is similar to the UPOS Statistics data. Entries such as scanner software revision, S/N, hours-on, number of labels scanned, system health, and additional information can be found in this log.

An example is shown in the following screen shot:



Some DLS scanners can report additional **`Value Added Features`**, provided that 1) this feature is turned on in the scanner, 2) the scanner interface is OEM USB, 3) the "**`ValueLogging`**" registry entry is set to 1 (active). When all of the above are true, additional information related to bar code scanning performance and scanner usage is logged to the file listed under the "**`ValueAddedFeaturesFile`**" registry entry. For more information on this feature, contact DLS Tech Support.

Developers Guide

OPOS service objects export a uniform interface; however there may be slight differences between the same types of devices from different vendors and models. Queries of OPOS properties reveal these differences. Below listed properties, methods, and events are DATALOGIC device specific return values. Other DATALOGIC service objects with different interfaces may produce slightly different results. Developers are advised to consider all error conditions in designing an application.

Scanner Properties:

Common Properties:

AutoDisable:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

BinaryConversion:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

CapCompareFirmwareVersion:

Returns **TRUE** (also depends on the firmware and model of the scanner).

CapPowerReporting:

Returns **OPOS_PR_NONE**

CapStatisticsReporting:

Returns **TRUE** (also depends on the firmware and the model of the scanner).

CapUpdateFirmware:

Returns **TRUE** (also depends on the firmware and model of the scanner).

CapUpdateStatistics:

Returns **FALSE**.

CheckHealthText:

Internal HCheck: will return health string

External HCheck: not supported

Interactive HCheck: not supported

This property is empty before the first call to the **CheckHealth** method.

Claimed:

Returns **TRUE** after Claim method has been called. **FALSE** otherwise.

DATALOGIC devices are exclusive. It is recommended that a program keep the device **Claimed** as long as the application is running.

DataCount:

Returns the number of Data Events Queued.

DataEventEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

DeviceEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

FreezeEvents:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

OpenResult:

Returns **0**.

PowerNotify:

Returns **OPOS_PN_DISABLED** or **OPOS_PN_ENABLED**.

PowerState:

Returns **OPOS_PS_ONLINE**.

If the communication channel if having difficulties, an **OPOS_E_NOHARDWARE** will be returned on calls that send and receive data from the scanner.

ResultCode:

Returns result of last operation.

ResultCodeExtended:

Returns **0**

State:

Returns

OPOS_S_CLOSED

OPOS_S_IDLE

OPOS_S_ERROR

DeviceServiceDescription:

Returns a descriptive string depending on the interface and device type.

DeviceServiceVersion:

Returns **101200XX**. where **XX** is the minor version.

PhysicalDeviceDescription:

Returns a descriptive string depending on the interface and device type.

PhysicalDeviceName:

Returns a descriptive string depending on the interface and device type.

Device Specific Properties:

DecodeData:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

ScanData:

Holds the raw scanned data received from the scanner.

ScanData property always has bar code data when a DataEvent is fired. For Tabletop scanners, the bar code data may be sent across the USB interface as uncompressed Binary Coded Decimal (BCD), depending upon scanner configuration and bar code type.

ScanDataLabel:

Holds the scanned and decoded data from the scanner if **DecodeData** property is **TRUE**. If the decoded data did not contain a check digit, the scanner service will add the check digit to **ScanDataLabel** for EAN/UPC bar codes.

Contains data if **DecodeData** is **TRUE**.

ScanDataType:

Returns scanned data type of the most recent label from the scanner.

Returned value is one of **SCAN_SDT_XXXX** constants, where **XXXX** is the type of the label. Refer to OPOS Scanner header file for the numerical values.

Contains label type if **DecodeData** is **TRUE**.

Label type as reported on scanner interface — the scanner assigns a label type identifier and sends this with the label data across the interface. The Service Object translates this into one of the OPOS defined label types. For the RS-232 interface, the scanner configuration must be correctly set for the Service Object to properly identify label type.

Scanner Methods:

Common Methods:

Open:

Returns

OPOS_SUCCESS

OPOS_E_NOSERVICE

OPOS_E_NOEXIST

OPOS_E_ILLEGAL

Close:

Returns **OPOS_SUCCESS**

ClaimDevice:

Returns

OPOS_SUCCESS

OPOS_E_NOSERVICE

OPOS_E_ILLEGAL

OPOS_E_CLAIMED

This call will activate the communication with the device. **DATALOGIC** devices are exclusive. It is recommended that a program keep the device **Claimed** as long as the application is running.

CheckHealth:

OPOS_CH_INTERNAL is supported.

OPOS_CH_EXTERNAL is not supported.

OPOS_CH_INTERACTIVE is not supported.

Returns

OPOS_SUCCESS

CheckHealthText property will hold the text result of this method call.

ClearInput:

Returns

OPOS_SUCCESS

OPOS_E_DISABLED

OPOS_E_NOTCLAIMED

DirectIO:

Returns

OPOS_SUCCESS

OPOS_E_NOTCLAIMED

OPOS_E_OFFLINE

OPOS_E_ILLEGAL

Please refer to Appendix A for supported DirectIO functions.

ReleaseDevice:

Returns **OPOS_SUCCESS**, **OPOS_E_ILLEGAL**, or **OPOS_E_NOTCLAIMED**.

This call will deactivate the communication with the device.

ResetStatistics:

Returns **OPOS_E_ILLEGAL**

DATALOGIC service objects do not support reset statistics.

RetrieveStatistics:

Returns

OPOS_SUCCESS

OPOS_E_NOHARDWARE

OPOS_E_DISABLED

OPOS_E_NOTCLAIMED

OPOS_E_ILLEGAL

Results of the **RetrieveStatistics** call are written to the OPOS Log and returned as per the OPOS spec.

Supported statistics are:

- Device category
- Manufacturer
- Model number
- Serial Number
- Firmware revision
- Interface type
- Power on time
- Number of label scans

UpdateStatistics:

Returns **OPOS_E_ILLEGAL**

DATALOGIC OPOS Scanner service object does not support update statistics.

Device Specific Methods:

None.

Scanner Events:

Common Event:

DataEvent:
This event fires when a label is forwarded from scanner.

DirectIOEvent:
Not supported.

ErrorEvent:
Not used.

StatusUpdateEvent:
Not implemented.

Device Specific Events:
None.

Scale Properties:

Common Properties:

AutoDisable:
Returns **`TRUE`** or **`FALSE`** depending on the previous **`SetProperty`** call.

BinaryConversion:
Returns **`TRUE`** or **`FALSE`** depending on the previous **`SetProperty`** call.

CapCompareFirmwareVersion:
Returns **`FALSE`**.

CapPowerReporting:
Returns **`OPOS_PR_NONE`**.

CapStatisticsReporting:
Returns **`FALSE`**.

CapUpdateStatistics:
Returns **`FALSE`**.

CapUpdateFirmware:
Returns **`FALSE`**.

CheckHealthText:
`Internal HCheck`: not supported, will return **`OPOS_E_ILLEGAL`**.

External HCheck: not supported.

Interactive HCheck: not supported.

Claimed:

Returns **TRUE** after Claim method has been called. **FALSE** otherwise.

DATALOGIC devices are exclusive. It is recommended that the device be claimed and continue to be claimed thru-out a session.

DataCount:

Returns **Number of Data Events Queued**.

DataEventEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

DeviceEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

FreezeEvents:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

OpenResult:

Returns **0**.

PowerNotify:

Returns **OPOS_PN_DISABLED** or **OPOS_PN_ENABLED**.

PowerState:

Returns **OPOS_PS_ONLINE**.

If the communication channel if having difficulties, an **OPOS_E_NOHARDWARE** will be returned on calls that send and receive data from the scale.

ResultCode:

Returns result of last operation.

ResultCodeExtended:

Returns extended result if the last operation produced an **OPOS_E_EXTENDED**. Otherwise this value is considered invalid.

State:

Returns

OPOS_S_CLOSED

OPOS_S_IDLE

OPOS_S_ERROR

DeviceServiceDescription:

Returns a descriptive string depending on the interface and device type.

DeviceServiceVersion:

Returns **10120XXX** where **XXX** is the minor version.

PhysicalDeviceDescription:

Returns a descriptive string depending on the interface and device type.

PhysicalDeviceName:

Returns a descriptive string depending on the interface and device type.

Device Specific Properties:

CapDisplay:

Returns **TRUE**.

TRUE is returned regardless of a remote display being connected to the scanner/scale or not.

CapDisplayText:

Returns **FALSE**.

FALSE is returned regardless of a remote display being connected to the scanner/scale or not.

CapPriceCalculating:

Returns **FALSE**.

CapStatusUpdate:

Returns **TRUE**.

CapTareWeight:

Returns **FALSE**.

CapZeroScale:

Returns **TRUE**.

AsyncMode:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

MaxDisplayTextChars:

Returns **0**.

MaximumWeight:

Returns **15000** in metric mode.

Returns **30000** in pound mode.

ScaleLiveWeight:

Updated if **LiveWeight** is enabled.

StatusNotify:

If **CapStatusUpdate** is **TRUE**, the application can set **StatusNotify** to either **SCAL_SN_DISABLED** or **SCAL_SN_ENABLED**.

SalesPrice:

Returns **0** currency.

TareWeight:

Returns **0**.

UnitPrice:

Returns **0** currency.

WeightUnit:

Returns **SCAL_WU_KILOGRAM** in metric mode.

Returns **SCAL_WU_POUND** in pound mode.

Scale Methods:

Common Methods:

Open:

Returns

OPOS_SUCCESS

OPOS_E_NOSERVICE

OPOS_E_ILLEGAL

Close:

Returns **OPOS_SUCCESS**.

ClaimDevice:

Returns

OPOS_SUCCESS

OPOS_E_NOSERVICE

OPOS_E_ILLEGAL

OPOS_E_CLAIMED

This call will activate the communication with the device. **DATALOGIC** devices are exclusive. It is recommended that a program keep the device **Claimed** as long as the application is running.

CheckHealth:

OPOS_CH_INTERNAL is not supported.

OPOS_CH_EXTERNAL is not supported.

OPOS_CH_INTERACTIVE is supported.

Returns

OPOS_SUCCESS

OPOS_E_NOTCLAIMED

OPOS_E_DISABLED

OPOS_E_ILLEGAL

CheckHealthText property will hold the text result of this method call.

ClearInput:

Returns

OPOS_SUCCESS

OPOS_E_DISABLED

OPOS_E_NOTCLAIMED

DirectIO:

Returns

OPOS_E_NOTCLAIMED

OPOS_E_OFFLINE

OPOS_E_ILLEGAL

Please refer to Appendix A for supported DirectIO functions.

ReleaseDevice:

Returns **OPOS_SUCCESS**.

OPOS_E_ILLEGAL if the device has not been claimed.

This call will deactivate the communication with the device. It is recommended that a program keep the device Claimed until an application quits.

ResetStatistics:

Returns **OPOS_E_ILLEGAL**

DATALOGIC OPOS Scale service objects do not support reset statistics.

UpdateStatistics:

Returns **OPOS_E_ILLEGAL**.

DATALOGIC OPOS Scale service objects do not support update statistics.

Device Specific Methods:

GetSalesPrice:

Returns **0**

Not implemented

GetUnitPrice:

Returns **0**

Not implemented

SetUnitPrice:

Returns **OPOS_E_ILLEGAL**

Not implemented

DisplayText:

Returns **OPOS_E_ILLEGAL**

ReadWeight:

Returns

OPOS_SUCCESS

OPOS_E_EXTENDED

OPOS_E_TIMEOUT

CANCELLED

OPOS_E_NOTCLAIMED

OPOS_E_DISABLED

OPOS_E_OFFLINE

OPOS_E_ILLEGAL

OPOS_E_FAILURE

OPOS_E_BUSY

OPOS_E_NOHARDWARE

If the result is **OPOS_SUCCESS** valid weight is returned.

If the result is **OPOS_E_EXTENDED** extended status will return either **OPOS_ESCAL_OVERWEIGHT** or **OPOS_ESCAL_UNDER_ZERO** in result code extended.

If the result is **OPOS_E_TIMEOUT** there was not valid settled weight on the platter before the timeout. **Weight** and the **ExtendedStatus** values are invalid.

The Weight Unit entry in the Registry must match the Scale configuration (Metric or English). See the Registry Description section in this Guide starting on 17.

ZeroScale:

Returns

OPOS_SUCCESS

OPOS_E_NOHARDWARE

OPOS_E_OFFLINE

OPOS_E_DISABLED

OPOS_E_NOTCLAIMED

Scale Events:

Common Event:

DataEvent:

Used for asynchronous weight requests

DirectIOEvent:

Not supported

ErrorEvent:

Used if a cancel weight is called during an asynchronous weight request

StatusUpdateEvent:

Supported as per **LiveWeightDisplay** as documented in the UPOS specification.

Device Specific Events:

None

Appendix A: DirectIO Command Support

DirectIO name	IO number	Scanner			Scale		
	Interface	RS232 Std	RS232 SC	OEM USB	RS232 Std	RS232 SC	OEM USB
LEGACY SCANNER for backwards compatibility							
SCANNER_RESET	1	●					
SCANNER_BEEP	2	●					
SCANNER_NOT_ON_FILE	3	●					
LEGACY SCANNER DirectIO for backwards compatibility							
SCALE_STATUS	1				●		
SCALE_SELFTEST	2				●		
RS232 SC, OEM USB, RS232 Std SCANNER/SCALE							
HARD_RESET	1		●			●	
SCANNER_STATUS	2						
SWITCH_READ	3		●				
NOT_ON_FILE	4	●	●	●			
DISABLE_WITH_RED_LIGHT	5		●				

DirectIO name	IO number	Scanner			Scale		
	Interface	RS232 Std	RS232 SC	OEM USB	RS232 Std	RS232 SC	OEM USB
RS232 SC, OEM USB, RS232 Std SCANNER/SCALE (cont.)							
SC_SCALE_STATUS	6					●	
SCALE_MONITOR	7					●	
DISPLAY_DATA	8		●			●	
DISPLAY_STATUS	9		●			●	
ENABLE_TONE	10		●				
BEEP_GOOD_TONE	11	●	●	●			
SOFT_POWER_DOWN	12		●			●	
DISABLE_TONE	13		●				
ENTER_TOAD_MODE	14		●				
READ_PACESETTER	15		●				
RESET_PACESETTER	16		●				
ENABLE_PACESETTER	17		●				
DISABLE_PACESETTER	18		●				
SOFT_RESET	19		●				
RETRIEVE_DEVICE_IDENTIFIER_RECORD	20	●	●	●		●	
RETRIEVE_DEVICE_EXTENDED_STATUS_RECORD	21	●	●	●		●	
RETRIEVE_DEVICE_HEALTH_RECORD	22	●	●	●		●	

DirectIO name	IO number	Scanner			Scale		
	Interface	RS232 Std	RS232 SC	OEM USB	RS232 Std	RS232 SC	OEM USB
NCR Scanner DirectIO for compatibility							
SCANNER_TONE	500		●				
SCANNER_RESET	501		●				
SCANNER_STATUS	502		●				
SCANNER_READROM	503						
SCANNER_ROM_VERSION	504		●				
SCANNER_PACESETTER	505		●				
SCANNER_DIRECT	506						
SCANNER_NOT_ON_FILE	507						
NCR Scale DirectIO for compatibility							
SCALE_STATUS	600					●	
SCALE_READROM	601						
SCALE_ROM_VERSION	602					●	
SCALE_LIVE_WEIGHT	603					●	
SCALE_DIRECT	604						
SCALE_WEIGHT_DELAY	605						

Some DirectIo calls may not be supported by the scanner/scale firmware.

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