EloOptions and Utilities v6.9.10_TGCS User Guide

Introduction

In the **Elo Touch** driver v6.9.10 install package there is an important configuration file called **EloOptions.ini** in the **Common** subfolder that may be edited for specific needs. Toshiba Global Commerce Solutions (TGCS) has provided a default version that covers most installation needs, but may be edited to modify it for specific setup or operational needs. This file is also loaded into the **Elo Touch Solutions** subfolder of **Program Files** folder by **EloSetup.exe**, such that it may be updated after installation. The **Elo Touch Solutions** subfolder has a number of utilities and library files that are used by the **EloConfig** control panel. But one in particular, **EloDriverDefaults.exe**, is intended for applying certain EloOption parameters. Another important utility for IR touch screens (SurePoint Monitors and SurePOS 500 all-in-one's) is the unintentional touch rejection feature controlled by **IrUTR.exe**. The sections below will describe in detail the various parameters of **EloOptions** and the use of the **EloDriverDefaults** and **IrUTR** utilities. In addition, there are sections on the Digitizer option and considerations relative to cloning images as it applies to touch driver configurations.

EloOptions

The "EloOptions.ini" file provides default setup conditions and a very useful means of establishing the operating characteristics both at installation and for field updates. These values are used to set corresponding Registry values for the **Elo Touch Solutions** and Elo **Device Parameters** entries. For field updates a new **EloOptions** file may be downloaded and applied using the **EloDriverDefaults** utility (see section on EloDriverDefaults).

The EloOptions is divided into a number of different sections:

- [Setup Options]
- [Calibration]
- [Common Settings]
- [Device Default]
- [IR Alignment Params]
- [IR Beam Monitoring]
- [MonitorX Settings]
- [APR Params] (not applicable)
- [Smartset Commands] (not applicable and empty)

There are instructional comments throughout the EloOptions file, but the topics below will elaborate on the various parameters found in the respective sections.

[Setup Options]

These parameters are applied only by the **Setup.exe** execution during driver installation, and form the default setup configuration. These primary setup parameters are in the order listed (details below):

- ForceMouse
- MaxTouch
- MouseMode
- ExternalSpeaker
- MotherboardBeeper
- IRMonitorBeeper
- BeepDuration

- BeepFrequency
- DoubleClickSize
- DoubleClickSpeed
- IrUTR
- IRAutoCalibration
- CustomMapping_1PCap1IR
- IRBeamMonitoring
- IRBeamLogging
- IRBeamStatusScanInterval
- CalibrateWithSilentInstall
- HardwareHandshaking
- MouseExtraInformation
- EdgeAcceelerartion [sic]
- CopyEloCPShortcutToDesktop
- CopyEloAlignmentShortcutToDesktop
- BaseMode

Touch Options: There are features to define the type of touch mode desired, from multi-touch to pointer type operation:

ForceMouse   The driver is enabled to work with multi-touch (gesturing) capability. In that mode (**ForceMouse** = 0) it provides a pass through to the Windows 7/8.1/10 embedded tablet driver and features. For a tablet application the only real need for the driver is for beep on touch or to reconfigure when a mouse click occurs. Otherwise, it is often just as convenient to use the native Windows embedded drivers and forego the Elo driver. But for most Point of Sale (POS) applications, one gets the best performance if the touch screen acts as a pointer/mouse. And of course where RS232 or POSReady 2009, only the pointer/mouse mode is usable. So, by default, TGCS has set the driver to the pointer/mouse mode, by setting the **ForceMouse** to the value 1. A value of 0 causes it to pass through to the Windows digitizer/tablet driver.

MaxTouch   This parameter applies only for the digitizer mode. In digitizer/tablet mode, the touch controller will have some maximum number of simultaneous touches supported, such as 5 or 10 touches. This parameter may be used to reduce the number of reportable simultaneous touches. The default value of 0 means the limitation is established by the controller and not the driver. This setting is ignored if **ForceMouse** is enabled.

MouseMode   The default equivalent mouse button action may be set by this parameter. This sets the default "Touch Mode" settings found on the "Touch Screen Properties" tab of the EloConfig utility (see touch screen "User Guide" documents). The acceptable values are:

0   button click (button down followed by an immediate button up) at the moment of touch (click on touch)
1   button click only when the touch is release (click on release)
6   mouse/drag emulation (button down on touch, drag allowed while touch is present, button up when the touch is released)

TGCS has set the default to click on release (value = 1)

Speaker Options: The three speaker options are set as *Off* with a value of 0 (zero) or *On* with a value of 1 (one).

> **ExternalSpeaker**   This is for speakers that are external to the mother/system board (default *Off*)

> **MotherboardBeeper**   This is the beeper/buzzer found on the mother/system board typically used for system alerts (default *On*)

> **IRMonitorBeeper**   This is the local beeper found on the SurePoint IR touch screen monitors. This local beeper is controlled and driven by the IR touch controller. On the TCx Display, the local beep is controlled separately from the touch controller and therefore will be grayed out if detected. Default is *On*.

Speaker Tone: For an external speaker the tone, duration and volume is determined by the audio drivers, audio card amplifier and the speakers employed. The system/monitor beeper tone is determined by the **BeepDuration** and **BeepFrequency** settings below. For the beepers, the volume is not adjustable directly; that is there is a fixed signal magnitude to drive it. However, the beeper does not have a flat frequency response like speakers; that is, there is a considerable variance in volume versus frequency. Most of the beepers used by TGCS have a peak volume output in the 2000-2600 Hz range. TGCS has not changed the frequency and duration from the original Elo settings as it is generally an agreeable sound in most cases. But if higher volume is needed, it is suggested that the frequency be increased.

> **BeepDuration**   Acceptable range is 20 to 500 (ms). Default set to 100.

> **BeepFrequency**   Acceptable range is 500 to 4000 (Hz). Default is 800.

> **Note:** If the frequency is set to lower values, the duration may need to be set higher to get enough cycles give a good tone.

Double Click   Double clicking on an icon by touching is a little different from doing that with a standard mouse. With a standard mouse, the mouse typically does not move when double clicking and the time between the clicks is typically rather short. With the finger, it will typically move a millimeter or two between touches and the time between is typically a little longer than with a standard mouse. The default Windows settings are for the 2nd click to be within an area of the 1st click defined by a box that is 10 pixels square and within 300 ms. The Double Click parameters allow that to be adjusted to better fit the finger double click.

> **DoubleClickSize**   This may range from 25 to 95. Default set to 80.

> **DoubleClickSpeed**   This may range from 200 to 900. Default set to 500.

IrUTR   This parameter is used to preset the TGCS special Unintentional Touch Rejection (UTR) feature as describe in the section on this topic. The acceptable values are:

> 0   Disabled (default)
> 1   Light
> 2   Medium Light
> 3   Medium Hard
> 4   Hard

Auto Calibration: There are preset calibration values for different size IR solutions under the [IR Default Params] section of the file that may be automatically applied to the IR touch screen and forego the manual three

point calibration. This is of considerable convenience and helps maintain consistency from unit to unit. TGCS and Elo have spent considerable energies to establish these preferred calibration values, but may be modified to meet specific needs. To invoke these preset values the **IRAutoCalibration** needs to be set in the **EloOptions** file.

> **IRAutoCalibration**   A value of 1 sets the driver to apply the preset calibration values. A value of 0 will cause the default 3-point manual calibration process to be used when **Calibrate** or **Re-Align** functions are invoked on IR touch screens. TGCS has set this to a value of 1 to use the preset calibration.

CustomMapping_1PCap1IR   Normally to associate two monitors to the appropriate touch screen, the **Calibrate** function must be invoked. This would occur at install and attachment of a monitor. If the primary touch screen is a PCAP (ex: TCxWave) and the attached monitor is IR (SurePoint), then this association may be automated by setting this parameter to 1. The default is 0, meaning that any association must use the standard **Calibrate** operation.

IR Beam Features: Three utility features are available for monitoring the condition of the IR beams on Infrared touch monitors to aid in detecting interference from debris.

> **IRBeamMonitoring**   This is enables a graphic location to appear on the screen when there is an IR beam failure for IR touch screens. IR beam failures may occur due to a hardware issue, or because of debris that is on the screen that blocks the beams. This is a useful feature to alert to the need to clean the screen (and where), including the perimeter lenses. The options are:
>
> 0   Disabled (default)
> 1   Enabled

> **IRBeamLogging**   This enables the logging of IR beam failure events in the Windows Application Events under EloConfig. The options are:
>
> 0   Disabled (default)
> 1   Enabled

> **IRBeamStatusScanInterval**   This sets the time interval between beam status scanning events. The value may range from 10-120 seconds. The default is 20 seconds.

CalibrateWithSilentInstall   By default when running a silent install, there will no calibration process automatically invoked at the end of the installation; that is, it will be completely silent. For any association that may be necessary for dual monitors, then it will need to be invoked manually from the **EloConfig** control panel. If it is desired to have the calibration process invoked automatically where necessary, then this parameter needs to be set to 1. By default it is set to 0.

HardwareHandshaking   For RS232 interfaces, there is an option for hardware handshaking. By default this is disabled (set to value 0) to give greater flexibility for older solutions that do not have hardware handshaking capabilities.

MouseExtraIformation   This may be used by a custom API to distinguish between a standard mouse click and a touch event. This value is the custom ID in HIWORD of the returned value from the Windows API command GetMessageExtraInfo(). It happens only when *ForceMouse* = 1 or with POSReady2009 (XPe). The default value is set to 31

EdgeAcceelerartion [sic] This is a feature to help position the cursor closer to the viewable area for touch solutions that have a bezel, such as IR solutions (SurePoint, SurePOS 500) where placing the finger touch point completely on the edge may be difficult. PCAP solutions (TCxWave, TCx Display) are flat and do not have this issue. The parameter sequence is *speed*, *left*, *top*, *right*, *bottom*. The speed parameter is:

1   = slow
2   = medium
3   = fast

The *left*, *top*, *right*, *bottom* parameter values are the percentage of the width/height on the edges where the cursor will progressively move toward the edge.   An example of a typical entry would be:

EdgeAceelerartion = 2, 4, 4, 4, 4

Which means a medium acceleration in the four outer 4% edges of the touch screen active area.

This parameter has been commented out for setup conditions, as PCAP solutions do not need it and is only optional for IR solutions.

CopyEloCPShortcutToDesktop   This causes the *EloConfig* shortcut icon to be copied to the desktop during installation. By default this is set to enable (value = 1), since there are no system tray icons for the *EloConfig* utility. To disable this, set the value to 0 (zero).

CopyEloAlignmentShortcutToDesktop   This will cause an alignment (*Calibration*) icon to be copied to the desktop during installation. By default this is disabled (value = 0), since the calibration function may be found in the *EloConfig* utility and calibration is automatic in most cases. To enable this, set the value to 1.

BaseMode   This is an Elo internal use parameter and is by default set to 0 (zero) by Elo. Do not change this.

[Calibration]

This section defines user options for whenever the *Calibration* action is invoked. The parameters are in the order listed (details below):

- AutoSizing
- AutoInvokeCalibration
- DriverCalibration
- TargetRadius
- TimeOut
- Transparent
- VerifyCalibration

AutoSizing   This parameter is set to zero and applies only to other Elo controllers not used in TGCS equipment. Do not change this value.

AutoInvokeCalibration   This determines whether the calibration session is automatically invoked if the calibration data is determined not to be valid by the *EloConfig* utility. It is set to value = 1 to automatically invoke the calibration when needed.

DriverCalibration   The touch screen calibration may be determined by two means: the inherent calibration of the touch screen (settings in the controller), or via manually determined calibration values that are stored in the

registry (kernel drivers). Both PCAP and TGCS IR solutions are pre-calibrated and fixed at the factory, and generally need no modifications. In addition, there are preset calibration values in the [IR Alignment Params] section that are by default applied when the Elo driver calibration function is invoked if *IRAutoCalibration* is enabled. So, by default, this parameter is set to 0 (zero) to use the inherent calibration from the hardware (controller settings) or the Elo driver default values. In this case, the *Calibration* process will present a single target on the screen, primarily for association purposes, but will not influence the actual preset accuracy (calibration). This is often called "one point alignment/calibration."

Where this factory calibration needs to be over ridden, the manual calibration may be applied by setting this parameter to the value of 1. This may be done for setup, or applied after installation by modifying the parameter in the *EloOptions.ini* file located in the folder "\Product Files\Elo Touch Solutions" and running *Calibration* (you may need to modify a copy of the EloOptions.ini file and copy it to the "Elo Touch Solutions" folder using administrative privileges). With *DriverCalibration* enabled (value = 1), the *Calibration* process will present three targets in succession (upper left, lower right, upper right), which must be touched in turn with care to lift the finger from the center of the target for best accuracy. This is often referred to as "three point calibration." Note that the accuracy of the results is dependent on the accuracy of releasing touch from the center of the targets and avoiding the effects of visual parallax in the process.

TargetRadius   This sets the calibration target radius in pixels. The default is set to 40 (pixels).

TimeOut   This parameter (in seconds) determines the amount of time the *Calibration* target will remain on the screen before touching. If the timeout expires (no touch), then the *Calibration* operation will abort or move to the next screen for dual touch screen installations. The TGCS default is set to 10 (seconds).

Transparent   This determines whether the Calibration screen will be transparent or opaque. A value causes the calibration image to be transparent (background application still visible). The TGCs default value is 1 for a transparent effect (the desktop image is visible during the calibration process).

VerifyCalibration   If in digitizer mode (*ForceMouse* = 0), this will run a separate utility TouchPOS.exe at the end of Calibration and is used to validate the accuracy. This only applies for the Digitizer mode. This is not a normally supported mode for TGCS and consequently is disabled (value set to 0). See section on Digitizer Mode.

[Common Settings]

HideCursor   This is an option to hide the cursor. To hide the cursor, then use the value 1 for this parameter. By default it is disabled (value = 0). This is for all cursors, system wide.

LockedConfiguration   A value of 1 will enable only a partial set of user interface options. By default it is set to 0 to enable all user interface options

[Device Default]

The parameters in this section may be applied by running the EloDriverDefaults utility (see section on this utility below) after installation of the driver. The parameter details are described in the Setup Options section. The TGCS default values are given below. They may be edited as necessary.

MaxTouch = 0   (no driver limitation on number of touches in digitizer mode only)

MouseMode = 1   (click on release)

ExternalSpeaker = 0   (no beep on external speaker)

MotherboardBeeper = 1   (beep on motherboard beeper/buzzer)

IRMonitorBeeper = 1   (beep on IR monitor local beeper)

BeepDuration = 100   (each beep lasts 100 ms)

BeepFrequency = 800   (beep frequency at 800 Hz)

EnableTouch = 1   (touch enabled)

EdgeAcceelerartion = 2, 2, 2, 2, 2   (medium speed edge acceleration with 2% of borders)

SelectiveSuspendOn = 0   (turn off "Allow the computer to turn off the device to save power" in Dev Mgr)

[IR Alignment Params]

The preset touch alignment/calibration for the IR solutions (SurePoint, SurePOS 500) are given in a table in the format: MonitorSize|InterfaceType_CalibrationParameters

An example is:

15USB_EloDX=fd1

For each case there are five parameters to be loaded to the Registry:

EloDX
EloDY
OFFSETX
OFFSETY
XYSWAP

Currently there are four Serial (RS232) and three USB sizes in the table:

12SERIAL
15SERIAL
17SERIAL
19SERIAL
10USB
12USB
15USB

These values will be transferred to the registry automatically every time **Calibration** is run on TGCS IR solutions (SurePoint, SurePOS 500) if the **IRAutoCalibration** in the **Setup Options** is set to value 1 (default). These values have been established by extensive testing by Elo and TGCS. However, specific circumstances may exist where other values may be more optimum, and can be edited.

[IR Beam Monitoring]

These values are defined in the [Setup Options] section but these particular values are applied only by the EloDriverDefaults utility (described below). This is useful for changing the IR beam monitoring parameters via remote install. The default values are:

Enable = 1
Logging = 1
ScanInterval = 20

[MonitorX Settings]

There are a number of settings that may be applied separately to each attached touch screen via the EloConfig control panel, by opening the tab for each and making the selection. These may also be applied via a command line by using the EloDriverDefaults (see description of this utility below). This is useful for configuring via remote down loads.   The default parameters that apply are:

[Monitor1]
ExternalSpeaker = 0
MotherboardSpearker = 1
IRMonitorBeeper = 1
MouseMode = 1

[Monitor2]
ExternalSpeaker = 0
MotherboardSpearker = 0
IRMonitorBeeper = 1
MouseMode = 1

The above parameters may be edited to meet specific needs.

[APR Parms]

These parameters have been set by Elo for their **Acoustic Pulse Recognition** (APR) technology touch screens. TGCS does not use that technology and therefore does not apply.

[Smartset Commands]

Many of the IR and resistive touch screen solutions from Elo may be given special commands via an Elo protocol called **Smartset**. Those are not used in the TGCS standard products and therefore irrelevant. They are also beyond the scope of this document.

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TGCS Customized Options

The EloOptions file provided in the TGCS build of the driver has several of the parameters modified from the original Elo file to address the most common usage scenarios for TGCS products. The original Elo file may be found in the driver package under the Common folder as the "EloOptions_orig.ini" file. The table below shows the differences between the original Elo parameters and those chosen as TGCS default.

Section	Parameter	Elo Original	TGCS Default	Comments
Setup Options	ForceMouse	0	1	To make the interface a HID Pointer
	MaxTouch	0	0	Use controller default
	MouseMode	6	1	To make the default "click on release"
	ExternalSpeaker	0	0	Unchanged
	MotherboardBeeper	1	1	
	IRMonitorBeeper	1	1	
	BeepDuration	100	100	
	BeepFrequency	800	800	
	DoubleClickSize	80	80	
	DoubleClickSpeed	500	500	
	IrUTR	0	0	
	IrAutoCalibration	0	1	Use alignment parameters below
	CustomMapping_1PCap1IR	0	0	Unchanged
	IRBeamMonitoring	0	0	
	IRBeamLogging	0	0	
	IRBeamStatusScanInterval	20	20	
	CalibrateWithSilentInstall	0	1	Auto align after silent install
	HardwareHandshaking	0	0	Unchanged
	MouseExtraInformation	31	31	
	EdgeAcceelerartion	2,2,2,2,2	2,2,2,2,2	Inactive (commented out)
	CopyEloCPShortcutToDesktop	1	1	
	CopyEloAlignmentShortcutTo Desktop	0	0	Unchanged
	BaseMode	0	0	
Calibration	AutoSizing	0	0	
	AutoInvokeCalibration	0	1	Auto calibration
	DriverCalibration	0	0	Unchanged
	TargetRadius	40	40	
	TimeOut	60	10	Shorter default time-out
	Transparent	1	1	Unchanged
	VerifyCalibration	0	0	

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Section	Parameter	Elo Original	TGCS Default	Comments
Common Settings	HideCursor	0	0	Unchanged
	LockedConfiguration	0	0	
	BorderWarning	0	0	
Device Default	MaxTouch	0	0	
	MouseMode	6	1	"click on release" by default
	ExternalSpeaker	0	0	Unchanged
	MotherboardBeeper	1	1	
	IRMonitorBeeper	1	1	
	BeepDuration	100	100	
	BeepFrequency	800	800	
	EnableTouch	1	1	
	EdgeAcceelerartion	2,2,2,2,2	2,2,2,2,2	
	SelectiveSuspendOn	0	0	
IR Alignment Params	12SERIAL_ELODX	FB2	FB2	Unchanged
	12SERIAL_ELODY	F86	F86	
	12SERIAL_OFFSETX	FFFFFFE6	FFFFFFE6	
	12SERIAL_OFFSETY	FFFFFFFD	FFFFFFFD	
	12SERIAL_XYSWAP	0	0	
	15SERIAL_ELODX	101D	101D	
	15SERIAL_ELODY	FF3	FF3	
	15SERIAL_OFFSETX	FFFFFFC9	FFFFFFC9	
	15SERIAL_OFFSETY	FFFFFFD3	FFFFFFD3	
	15SERIAL_XYSWAP	0	0	
	17SERIAL_ELODX	101D	101D	
	17SERIAL_ELODY	FF3	FF3	
	17SERIAL_OFFSETX	FFFFFFC9	FFFFFFC9	
	17SERIAL_OFFSETY	FFFFFFD3	FFFFFFD3	
	17SERIAL_XYSWAP	0	0	
	19SERIAL_ELODX	101D	101D	
	19SERIAL_ELODY	FF3	FF3	
	19SERIAL_OFFSETX	FFFFFFC9	FFFFFFC9	
	19SERIAL_OFFSETY	FFFFFFD3	FFFFFFD3	
	19SERIAL_XYSWAP	0	0	
	10USB_ELODX	FD1	FD1	
	10USB_ELODY	F3C	F3C	
	10USB_OFFSETX	FFFFFFE9	FFFFFFE9	
	10USB_OFFSETY	FFFFFFE7	FFFFFFE7	
	10USB_XYSWAP	0	0	

Section	Parameter	Elo Original	TGCS Default	Comments
IR Alignment Params	12USB_ELODX	FD1	FD1	Unchanged
	12USB_ELODY	F3C	F3C	
	12USB_OFFSETX	FFFFFFE9	FFFFFFE9	
	12USB_OFFSETY	FFFFFFE7	FFFFFFE7	
	12USB_XYSWAP	0	0	
	15USB_ELODX	FD1	FD1	
	15USB_ELODY	F3C	F3C	
	15USB_OFFSETX	FFFFFFE9	FFFFFFE9	
	15USB_OFFSETY	FFFFFF37	FFFFFFE7	
	15USB_XYSWAP	0	0	
IR Beam Monitoring	Enable	1	1	Unchanged
	Logging	1	1	
	ScanInterval	20	20	
Monitor1	ExternalSpeaker	0	0	Unchanged
	MotherboardBeeper	1	1	
	IRMonitorBeeper	1	1	
	MouseMode	1	1	
Monitor2	ExternalSpeaker	0	0	Unchanged
	MotherboardBeeper	0	0	
	IRMonitorBeeper	1	1	
	MouseMode	1	1	
APR Params	AprSetCount	…	…	Unchanged (not used)
	AprParamCount	…	…	
	Gaming	…	…	
	General	…	…	
	POS	…	…	
	Signature	…	…	
	Current	…	…	
Smartset				Blank (not used)

Applying the Settings (EloDriverDefaults)

Some of the parameters in the *EloOptions* file are applied at setup, particularly those under the sections:
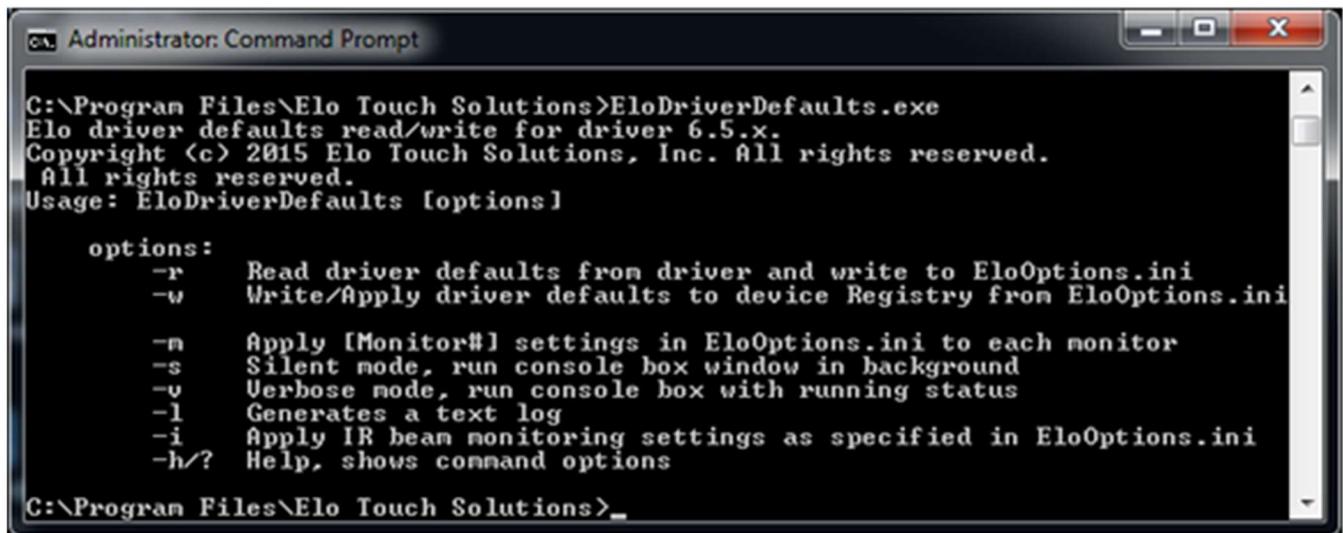
> [Setup Options]
> [Common Settings]

The [Calibration] parameters are invoked any time a "calibration" action is applied. Likewise, the [IR Alignment Params] are applied any time a calibration action is invoked if in the *Setup Options* the *IRAutoCalibration* is enabled.

The *EloDriverDefaults* utility may be used to apply the parameters in sections:

> [Device Default]
> [IR Beam Monitoring]
> [MonitorX]

The *EloDriverDefaults.exe* utility that is found in the "\Program Files\Elo Touch Solutions" folder must be run from a CMD prompt with administrator privileges. If no command parameter is given, the following will be displayed, showing the various options:

The most important will be the "-w" and "-m" commands. To apply the [Device Default] parameters, use the "-w" command, for the [MonitorX] parameters the "-m" command and for the [IR Beam Monitoring] parameters the "-i" command. A typical scenario would be a need to update the settings remotely. In that case, one could download a new EloOptions file with the changes in the [Device Default] section for common parameter changes, in the [MonitorX] section for any unique parameters for separately attached screens and in the [IR Beam Monitoring] section for the Beam Monitoring function. Then copy the file to the "Elo Touch Solutions" subfolder in "Program Files" folder (will need administrative privileges). Finally open a CMD window with administrative privileges to the "Elo Touch Solutions" subfolder and run:

EloDriverDefaults.exe –w   to apply the new common parameters from:
       [Device Default]

The system may need to be rebooted for the default registry entries to take effect.

If necessary, run:
       EloDriverDefaults.exe –m   to apply the specific parameters to each screen from:
          [Monitor1]
          [Monitor2]

Also, if necessary, run
       EloDriverDefaults.exe –I   to apply the IR Beam Monitoring parameters from:
          [IR Beam Monitoring]

The system may need to be rebooted for the IR Beam Monitoring parameters to be applied.

The action may be logged under **Elo Touch Solutions** in **ProgramData** system folder by using the "-l" parameter. The verbose presentation of the steps on the screen may be done using the "-v" command, and a silent version may be commanded using the "-s" command. The commands may be concatenated, except that "-w," "-m," "-I" and "-r" may not be used together, and "-v" and "-s" may not be used together.

A more advanced command is the "-r" which may be used to update the [Device Default] section of the EloOptions file based on the current EloConfig control panel settings for the first device. This is useful for creating a custom set-up of the driver.   This command also copies the control panel modified setup to global registry entries so that they may be automatically applied to newly attached screens when they are first enumerated.

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Unintentional Touch Rejection (IrUTR)

The IR Touch solutions from TGCS (*SurePoint* Monitors and *SurePOS 500* all-in-ones) have a feature to minimize the effects of unintentional touches, such as those that could occur with clothing articles, jewelry, or even large insects. All of those unintended touch objects could break the IR beams and register a touch. To eliminate those effects the TGCS IR Touch solutions have an impact sensor built into the touch solution that may be used to detect a deliberate touch by combining the impact force of an intentional touch with the breaking of the IR beams at the same time. This feature is controlled by the IR touch controller and configured by either the GUI user interface *IrUTR.exe* found in the *Elo Touch Solutions* folder (*Program Files*), or via the preset parameter *IrUTR* in the *Setup Options* section of the *EloOptions.ini* file.

The default is to disable the function (IrUTR = 0), which will use the native IR touch performance.   For most users this is perfectly adequate and provides the very soft touch characteristic of IR that many users prefer. But if unintentional touches are suspect, then one of the other settings would be recommended. The enabled settings have different sensitivity levels, from light touch to hard touch required to detect a valid touch. It is recommended to start with the light touch setting (IrUTR = 1), as this retains much of the preferred light touch characteristics of the native IR touch solution, but does provide some protection against unintentional touches by requiring the touch to have some minimal touch impact at the same time as the IR beams are broken (concurrent touch detection). Depending on the source of the unintentional touch, the intended touch impact force may need to be higher to distinguish it from the unintended events. For that, the higher settings are provided, with progressively higher touch impacts (harder touches) required to register a valid touch. The settings may be any of the following:

Setting	IrUTR value	Comment
Disable	0	Default condition (native IR touch)
Light touch	1	Recommended first try (very light impact required)
Medium Light touch	2	A little harder than the light touch case
Medium Hard touch	3	A bit harder (for more troubling cases)
Hard touch	4	Only for the most problematical cases (fairly hard touch required)

Digitizer/MultiTouch Mode

The *Elo Touch* driver may be configured to work with the tablet features of Win 7/8.1/10, by setting the *ForceMouse* value to 0 (zero) in the *EloOptions.ini* file before installing the driver. If the *MouseMode* is set to *Mouse emulation*, then the touch will perform much like it would with the native Windows drivers; that is, flicks and other gestures may be configured via the Windows *Control Panel/Hardware and Sound/Pen and Touch*, and multiple simultaneous touches could be used. If the beeper is enabled, it will sound whenever there is a click (Windows causes a click when the touch is released). One can force a single touch mode by clicking on the *Single Touch Mode* in the *Touch Screen Properties* panel of the *EloConfig* utility. Other options are to set the screen to *Click on touch* or *Click on release* to get similar operation if the *ForceMouse* were enabled. Although not fully tested by TGCS, it is something that could be explored if one wanted one attached screen for gesture applications, but wanted the other screen as a single touch application only. Other potential use cases would be gesture based applications with a system beeper active or a different click option from the Windows default.

EloOptions and Utilities v6.9.10_TGCS User Guide

Cloning Setup Considerations

When preparing a master OS image for cloning, some preparations may be required for the driver to apply any custom setup features for the USB touch screens. When the driver is first installed, the [Setup Options] are stored in both global registry entries (…\services\EloTouchscreen\DriverDefaults\UserDefinedData) and registry entries for the currently enumerated touch screens (…\Enum\USB\...\DeviceParameters). When changes are made to the setup options from the control panel, only the registry entries for DeviceParameters for the currently enumerated touch screens will be changed. The global entries remain unchanged from what was in the EloOptions file. This is by design to give more flexibility to setup each attached screen for individually unique operating characteristics.

When cloning, the effect is the same as attaching a new screen. That is, the global parameters will be applied, not the modified parameters from the control panel GUI. So, before cloning, the master image needs to have the global registry entries updated to the optimized settings achieved via the control panel GUI. There are two ways to do that:

Command Line
This will update the relevant global registry entries that will provide default values for newly attached screens
1. Open a CMD window with administrator privileges (open as administrator)
2. Run "\Program Files\Elo Touch Solutions\EloDriverDefaults - w" (this will apply the control panel settings to the global registry entries)
3. Reboot to be sure the registry is fully updated

EloOptions.ini file
This will update all global registry entries (most complete solution)
1. Open a CMD window with administrator privileges (open as administrator)
2. Run "\Program Files\Elo Touch Solutions\EloDriverDefaults - r" (this will put the control panel settings into the [Device Default] section of the "EloOptions.ini file")
3. Copy the "\Program Files\Elo Touch Solutions\EloOptions.ini" file to the Elo driver install package "\Common" folder (for example: "\Drivers\Touch\Common")
4. Edit the "EloOptions" copying the parameter values found in the [Device Default] section to the corresponding locations in the [Setup Options] section
5. Annotate (comment about the change in the header) and save the edited EloOptions.ini file
6. Uninstall the Elo driver ("Uninstall" option from the "Control Panel")
7. Reboot to be certain the registry is reset
8. Re-install the Elo driver ("EloSetup.exe")

Now each time the image is cloned, it should apply all the optimized settings to all attached screens.

Known Limitations

EloDriverDefaults –r   always sets the MouseMode = 0 in the [Device Default] section. This section needs to be manually edited.