SmartSet command strings for commonly requested controller setup changes

SmartSet commands can change the configuration of Elo SmartSet controllers, which include almost all modern AccuTouch and IntelliTouch controllers.

Note: There is a 64 bit Windows-based utility called eloview.exe that allows configuring and sending commands. Look for “eloview controller utility” or keyword eloview.exe.

This document is for sending serial command strings either with a serial terminal emulator or by embedding commands in the multi-touch driver’s elosetup.ini file.

Hex strings can be sent with a serial terminal emulation program. Be sure to send the NVRAM write command (second page) to permanently store the setup in the controller’s on-board memory. When using a serial terminal emulator, the commands must be 10 bytes long (55 hex is added at the front of the command and a dummy 00 byte is added to the end (where the checksum will be).

SmartSet commands can also be sent by the multi-touch driver (ver 6.9.x) when it loads. To do this, simply put the command strings in the [SmartSet commands] section of the elosetup.ini file, preceded by a command label and the = sign. Examples are listed in each section below (the command labels are suggestions; they can be any text). Important note: For versions 6.9.20 and earlier the SmartSet strings had to be in decimal format, not hex. After 6.9.20 they need to be in hex format. Also, when sending commands via the driver’s elosetup.ini file, the commands are 8 bytes long, not 10. Up to 100 commands can be sent, only one per line. Each byte (number) must be separated by ONE space. For ver 6.9.21 and later versions that use hex numbers, do NOT put "0x" in front of a hex number. One last important note: Any Smartset commands to be executed from the ini file MUST be added to elosetup.ini BEFORE installing Elo package. After that they will be sent every time the driver loads.

Enable scaling (MODE! command)
Serial string: 0x55 0x4d 0x00 0x87 0x08 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: EnableScaling = 77 0 135 8 0 0 0 0
6.9.21 and earlier elosetup.ini command: EnableScaling = 4d 00 87 08 00 00 00 00

Enable calibration (MODE! command)
Serial string: 0x55 0x4d 0x00 0x87 0x04 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: EnableCalibration = 77 0 135 4 0 0 0 0
6.9.21 and later elosetup.ini command: EnableCalibration = 4d 00 87 04 00 00 00 00

Invert X-axis (SCALE! command, invert axis) (Requires Enable scaling command first)
Serial string: 0x55 0x53 0x53 0x01 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: InvertX = 83 83 1 0 0 0 0 0
6.9.21 and later elosetup.ini command: InvertX = 53 53 01 00 00 00 00 00

Invert Y-axis (SCALE! command, invert axis) (Requires Enable scaling command first)
Serial string: 0x55 0x53 0x53 0x02 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: InvertY = 83 83 2 0 0 0 0 0
6.9.21 and later elosetup.ini command: InvertY = 53 53 02 00 00 00 00 00

Invert both axes (SCALE! command, invert axis) (Requires Enable scaling command first)
Serial string: 0x55 0x53 0x53 0x03 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: InvertXandY = 83 83 3 0 0 0 0
6.9.21 and later elosetup.ini command: InvertXandY = 53 53 03 00 00 00 00 00

Swap axes (CALIBRATE! command, swap flag) (Sets Portrait orientation) (Requires Enable calibration command first)
Serial string: 0x55 0x43 0x53 0x02 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: SwapXYaxes = 67 83 2 0 0 0 0 0
6.9.21 and later elosetup.ini command: SwapXYaxes = 43 53 02 00 00 00 00 00

Set X-axis 0-4095 (CALIBRATE! command) (Requires Enable calibration command first)
Serial string: 0x55 0x43 0x58 0x00 0x00 0xFF 0x0F 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: FullRangeX = 67 88 0 0 255 15 0 0
6.9.21 and later elosetup.ini command: FullRangeX = 43 58 00 00 FF 0F 00 00

Set Y-axis 0-4095 (CALIBRATE! command) (Requires Enable calibration command first)
Serial string: 0x55 0x43 0x59 0x00 0x00 0xFF 0x0F 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: FullRangeY = 7 89 0 0 255 15 0 0
6.9.21 and later elosetup.ini command: FullRangeY = 43 59 00 00 FF 0F 00 00

Emulate 140 data (EMULATE! command) (sets 4-byte data packet)
Serial string: 0x55 0x45 0x01 0x00 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: Emulate140 = 69 1 0 0 0 0 0 0
6.9.21 and later elosetup.ini command: Emulate140 = 45 01 00 00 00 00 00 00

Emulate 4002 data (EMULATE! command) (sets 6-byte data packet, Z= 0 on untouch)
Serial string: 0x55 0x45 0x01 0x06 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: Emulate4002 = 69 1 6 0 0 0 0 0 6.9.21 and later
6.9.21 and later elosetup.ini command: Emulate4002 = 45 01 06 00 00 00 00 00

Set SmartSet data (EMULATE! command) (sets 8-byte SmartSet data packet)
Serial string: 0x55 0x45 0x01 0x04 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: SmartSetDataFormat = 69 1 4 0 0 0 0 0
6.9.21 and later elosetup.ini command: SmartSetDataFormat = 45 01 04 00 00 00 00 00
(Would only be necessary if any controller to be used is suspected of having been set to emulate an older format)

Write to NVRAM (NVRAM! command)
Serial string: 0x55 0x4e 0x01 0x07 0x00 0x00 0x00 0x00 0x00 0x00
6.9.20 and earlier elosetup.ini command: SaveToNVRAM = 78 1 7 0 0 0 0 0
6.9.21 and later elosetup.ini command: SaveToNVRAM = 4e 01 07 00 00 00 00 00