



SMARTCURRENT FLEX SOFTWARE GUIDE

System Requirements

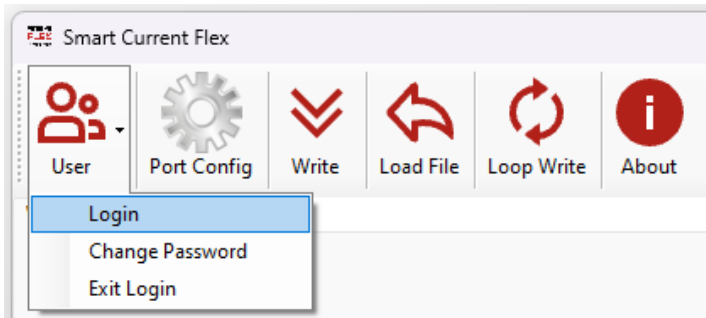
1. Operating System: Windows 7 Service Pack 1 or higher.
2. Software Environment: .NET Framework 4.8
3. Supported Printer Model: Zebra ZD410
4. Programming Tools: KTLD-P-PGMR-1 & Driver Specific Programming Cable (KTLD-P-USB-T4, KTLD-P-USB-RJ9, or KTLD-P-USB-AUX)

Getting Started

1. Download software (.exe file) from <http://keystonetech.com/programmable-driver-software/>
2. Install on local computer.
3. Connect SmartCurrent Flex programmer (KTLD-P-PGMR-1) to computer via USB plug.
4. Open Smart Current Software.
5. Click the **User** icon in the upper left hand corner. Select Login from the drop down menu. See Figure 1.

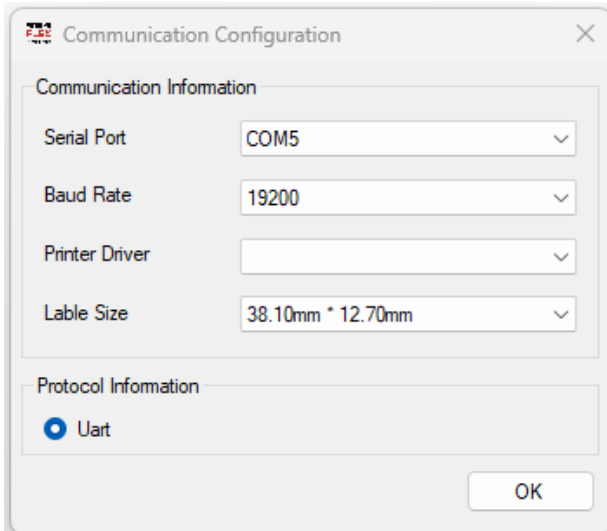
Note: The default password is "Keystone". The password can be changed at any time using the Change Login option and entering the old and new password to confirm.

Figure 1



6. Click the **Port Config** icon from the top menu. The Serial Port option should automatically update to the correct USB port where you have plugged in the programmer (KTLD-P-PGMR-1). Click OK. See Figure 2.

Figure 2



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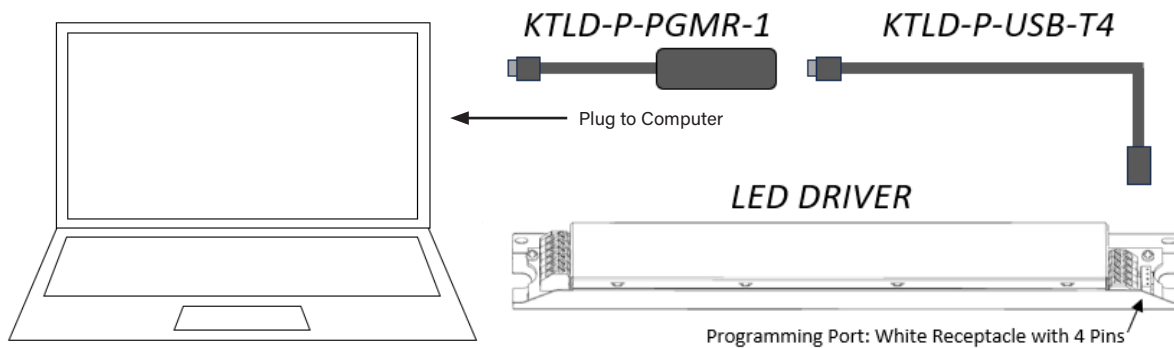
Using the Software

1. Connect the Programmer (KTLD-P-PGMR-1) to the computer by the USB plug.
2. Connect the Programmer to the LED Driver using the Programming Cable. See below table for which Programming Cable to use.

PROGRAMMING CABLE	COMPATIBLE DRIVER FAMILY
KTLD-P-USB-T4	Linear Driver (LT1 and LT2 Case)
KTLD-P-USB-RJ9	Compact Drivers (CT1 Case)
KTLD-P-USB-AUX	Micro Case Drivers (MC3 and MC4 Case)

⚠ Note: Do not plug the Programming Cables directly into a computer USB port. This may damage the LED Driver or Computer. Only use the Programming Cables with the Programmer (KTLD-P-PGMR-1).

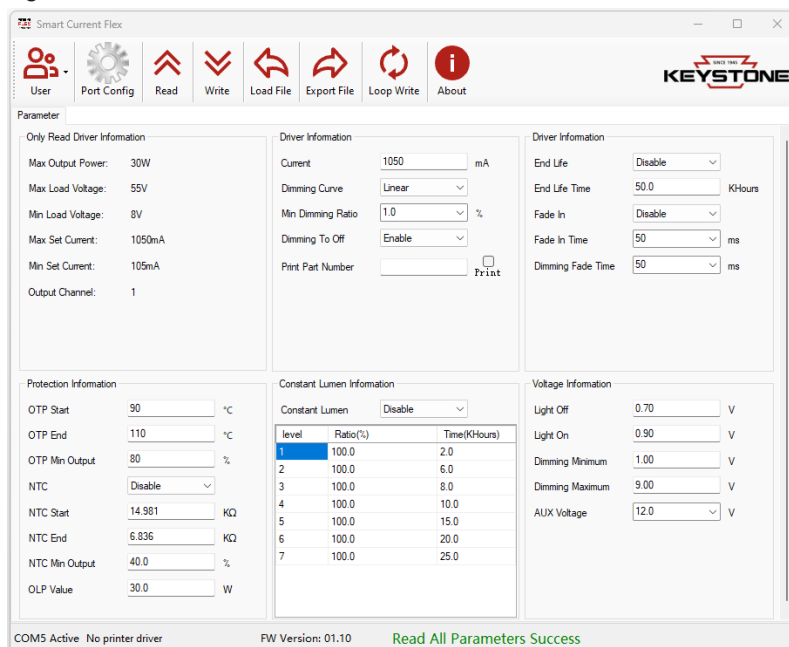
Figure 3



* Connection Diagram above is for Linear Drivers. For Compact Drivers, use KTLD-P-USB-RJ9 and plug into Programming Port on side of compact case. For Micro Case Drivers, use KTLD-P-USB-AUX and plug into Programming Port on the top of the micro case.

3. Click the **Read** icon from the top menu. If successfully connected, the message Read All Parameters Success will be displayed in the bottom right of the window. See Figure 4.

Figure 4

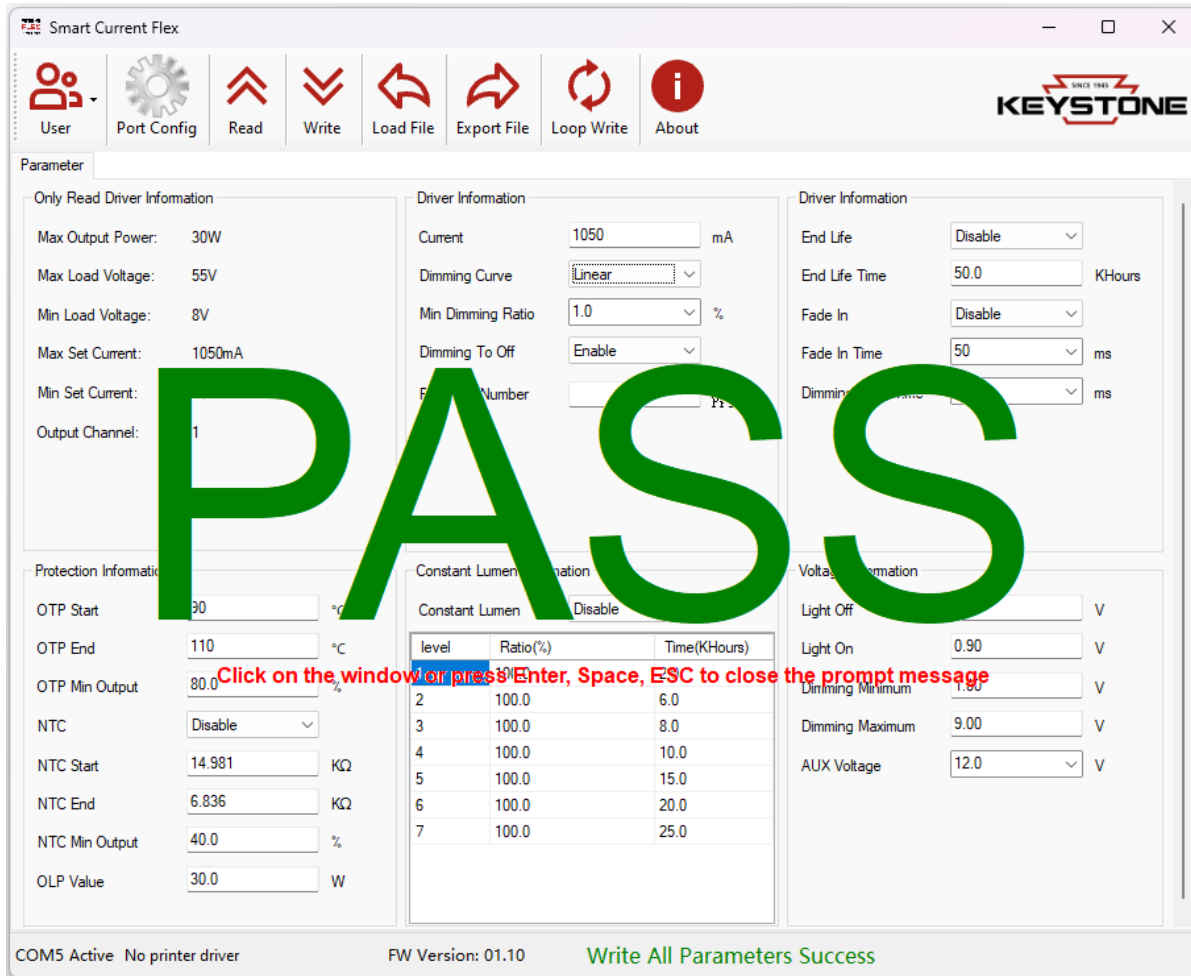




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4. Programmable settings may now be entered or changed to desired values. See Table 1 for full list of programmable settings and descriptions.
5. Once programmable settings are configured as desired, click the **Write** icon from the top menu. If successful, the message PASS will be displayed across the window and a chime sound will play to indicate proper programming has occurred. The message Write All Parameters Success will also be displayed in the bottom right corner of the window. See Figure 5.

Figure 5



6. Unplug the Programming Cable from the Programming Port. The LED Driver is now programmed.
7. Insert the next driver for programming. Driver parameters will remain unchanged from previous settings, unless manually changed.
8. If the same driver model number is connected one after another, the **Write** function will continue to program each driver with the same settings. If a different driver model number is connected, the **Write** function will fail and display the message Target Driver Information Error. When changing driver models, the new driver must be **Read** first, before configuring and programming any settings.



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Additional Features

Auto-Program Mode

Keystone SmartCurrent Flex Software features an auto-programming mode to quickly program drivers, without needing to click the **Write** icon every time. To enable this mode:

1. Connect the first driver to the Programmer.
2. Configure desired settings.
3. Click **Loop Write** on the top menu. The software will now initiate a **Write** function every 3 seconds.
4. For each successful programming, the software will display the PASS message and play the chime sound. For each failed programming attempt, the software will display the error and play no sound.
5. To end the auto-programming mode, click **Stop Loop Write** in the top menu.

Save and Load Configuration Files

Keystone SmartCurrent Flex Software allows users to save new driver settings and load previously saved settings.

To Save Configuration File

1. Once settings have been updated to desired values, click **Export File** in the top menu.
2. A new Save As window will pop up and prompt the user to select the save location, name the file, and save as a .cfg file type.
3. Once the location and file name are entered, click Save.

To Load Configuration File

1. To load previously saved settings. Click on **Load File** from the top menu.
2. Locate the saved configuration file desired, select, and click Open.
3. The saved settings will be loaded in all applicable fields.



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TABLE 1: DETAILED DESCRIPTION OF FEATURES

Driver Information (See Figure 6)

SETTING NAME	DESCRIPTION
Current ❶	Set Output Current, mA, Range is 10%-100% of Max Output Current.
Dimming Curve ❷	0-10V Dimming Input to Output Current Relationship
Min Dimming Ratio ❸	Minimum Dimming Value as a Percentage of the Set Current ❶
Dimming to Off	Enable: LED Driver will dim to off, no light produced. Disable: LED Driver will dim to minimum output, minimum light produced.
Dimming Fade Time	Duration of Fade during Dimming
Print Part Number	Part Number to be Printed on Label by Connected/Compatible Printer
End Life*	Enable or Disable End Life Function Once End Life Time is reached, LED Driver will turn on at 10% power for 10 minutes. This feature is meant to communicate to end user that End Life has been reached.
End Life Time*	Set Time after which End Life feature will activate. End Life must be Enabled.
Fade In*	Enable: LED Driver will slowly rise to set output current at turn on. Disable: LED Driver will turn on to set output current immediately at turn on.
Fade In Time*	Duration of Fade In Event, Fade In must be Enabled.

Protection Information (See Figure 7)

SETTING NAME	DESCRIPTION
OTP Start (A)	Temperature where LED Driver begins to reduce power. Set Range: 50 - 115 C
OTP End (B)	Temperature where LED Driver reaches OTP Minimum Output. Set Range 50-115 C, Must be at least 5 C higher than OTP Start.
OTP Min Output (C)	Derated Output Once OTP End Temperature is reached.
OLP Value	Set Power during Overload Protection event.
NTC*	Enable or Disable External NTC Function This temperature protection method requires use of an external NTC resistor to sense temperature at the resistors location.
NTC Start*	Resistance where LED Driver begins to reduce power.
NTC End*	Resistance where LED Driver reaches NTC Minimum Output
NTC Min Output*	Derated Output Once NTP End Resistance is reached.

Constant Lumen Information*

SETTING NAME	DESCRIPTION
Constant Lumen	Enable or Disable Constant Lumen function. Constant Lumen function allows for the LED Driver to increase output current over time to compensate for the aging or derating of the LEDs (L70). Current can only be increased up to the maximum set current.
Level 1	Set Output Current Ratio (%) to take effect at 1st Set Time (Khours)
Level 2	Set Output Current Ratio (%) to take effect at 2nd Set Time (Khours)
Level 3	Set Output Current Ratio (%) to take effect at 3rd Set Time (Khours)
Level 4	Set Output Current Ratio (%) to take effect at 4th Set Time (Khours)
Level 5	Set Output Current Ratio (%) to take effect at 5th Set Time (Khours)
Level 6	Set Output Current Ratio (%) to take effect at 6th Set Time (Khours)
Level 7	Set Output Current Ratio (%) to take effect at 7th Set Time (Khours)

*Compact & Linear Models Only

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Voltage Information (See Figure 6)

SETTING NAME	DESCRIPTION
Light Off ④	Voltage Setting where LED Driver will no longer output any current. Dimming to Off must be Enabled.
Light On ⑤	Voltage Setting where LED Driver will turn on from Off State. Dimming to Off must be Enabled.
Dimming Minimum ⑥	Voltage Setting at which Min Dimming Ratio ③ is reached.
Dimming Maximum ⑦	Voltage Setting at which Set Current ① is delivered.
AUX Voltage	Set AUX Output Voltage from 12 - 24V, in 2V increments. Applicable to CR Models Only

Figure 6

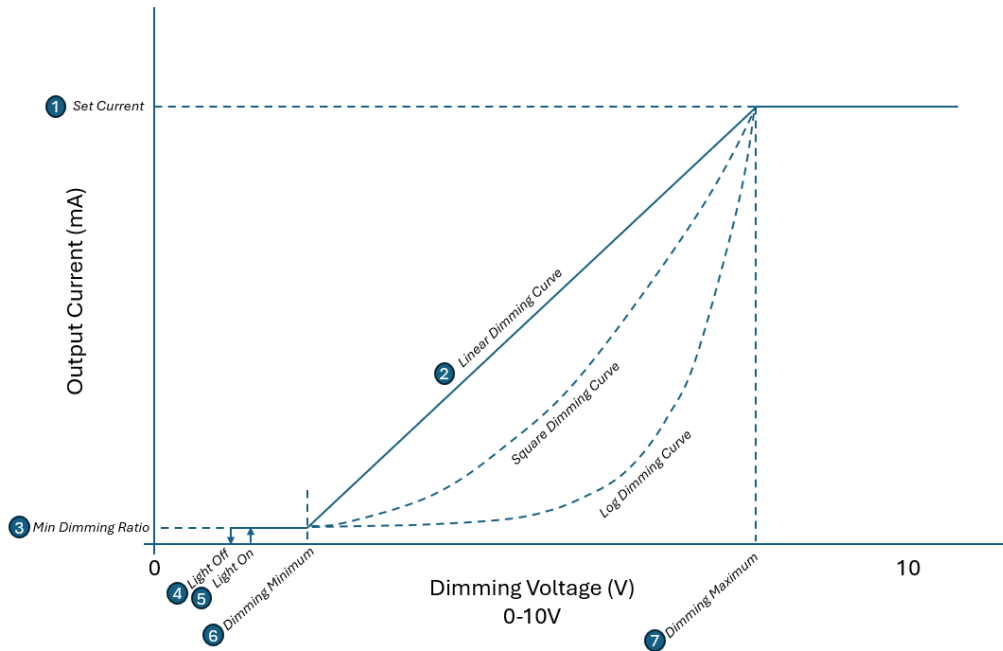


Figure 7

