Smartkey Network Software User Manual

I. Introduction

1) All MOONS' S Series Intelligent (0-10V, DALI, DMX) Driver can be programmed through SmartkeyII/ Smartkey A1 and Smartkey Network Software.

   Such as dimming solution, output current value, minimum dimming level, dimming curve, etc.

2) This user manual was written for:

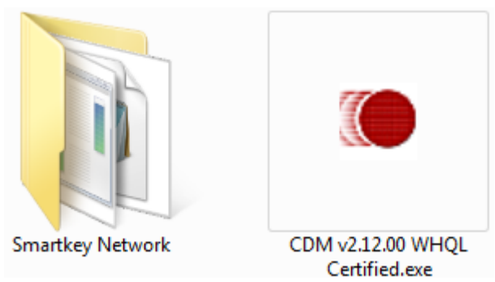
   Smartkey Network Software;

   Smartkey II (Firmware version ≧2.0) that only supports charged mode;

   Smartkey A1 that supports uncharged programming mode and charged programming mode;

   All MOONS' S Series Intelligent (0-10V, DALI, DMX) Drivers;

3) There are two main documents in the software package.



   Folder "Smartkey Network" : the free-install software.

   The file "CDM v2.12.00 WHQL Certified.exe" : the USB driver of Smartkey II.

II. Operating System Requirement

△ Operating system should be senior to Windows 7 (Including Windows 7)

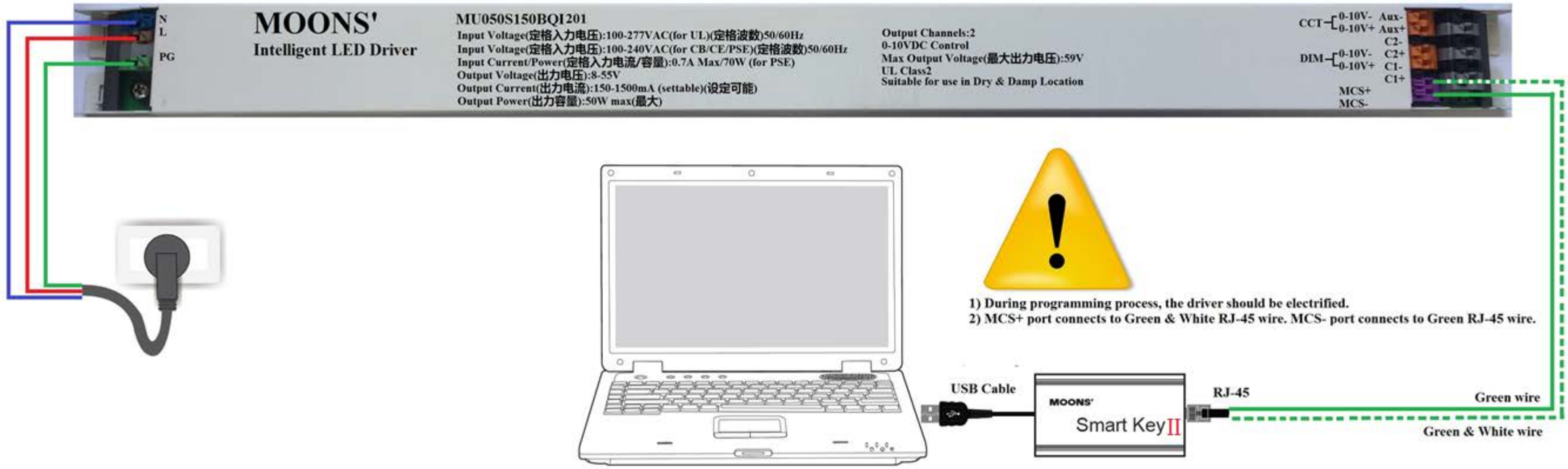
△ .NET Framework version 4.0 or senior version; (.NET Framework is the part of your operating system; It also can be download from the Microsoft official website.)

△ The USB driver of Smartkey II/A1 should be installed on the operating system.

Run “CDM v2.12.00 WHQL Certified.exe” as Administrator right and install the USB driver on your computer.

III. Hardware Wring Connection

All MOONS’ Intelligent Driver can be programmed through MCS±port by Smartkey II/Smartkey A1 and Smartkey Network Software.



Charged programming method

Uncharged programming method

Dimming Port List (Only for Dual 0-10V driver):

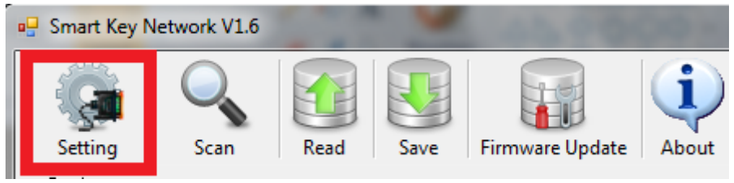
Dimming Solution	Dimming Port
Tunable White	CCT Port: CCT changing; DIM Port: Intensity changing; Channel 1 is connected to Cool LEDs, Channel 2 is connected to Warm LEDs;
Dim to Warm	DIM Port: CCT & Intensity changing; Channel 1 is connected to Cool LEDs, Channel 2 is connected to Warm LEDs;
Solo 0-10V Dimming	DIM Port: Intensity changing;
Dual 0-10V Dimming	CCT Port: control Ch2’s intensity; DIM Port: control Ch1’s intensity;

IV. Guide for programming Intelligent driver.

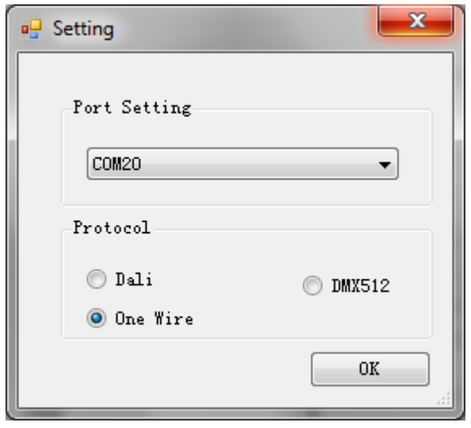
1) Activate software interface.

i) Double Click SmartKeyTool that in the folder “Smartkey Network V1.9”

ii) Click Setting

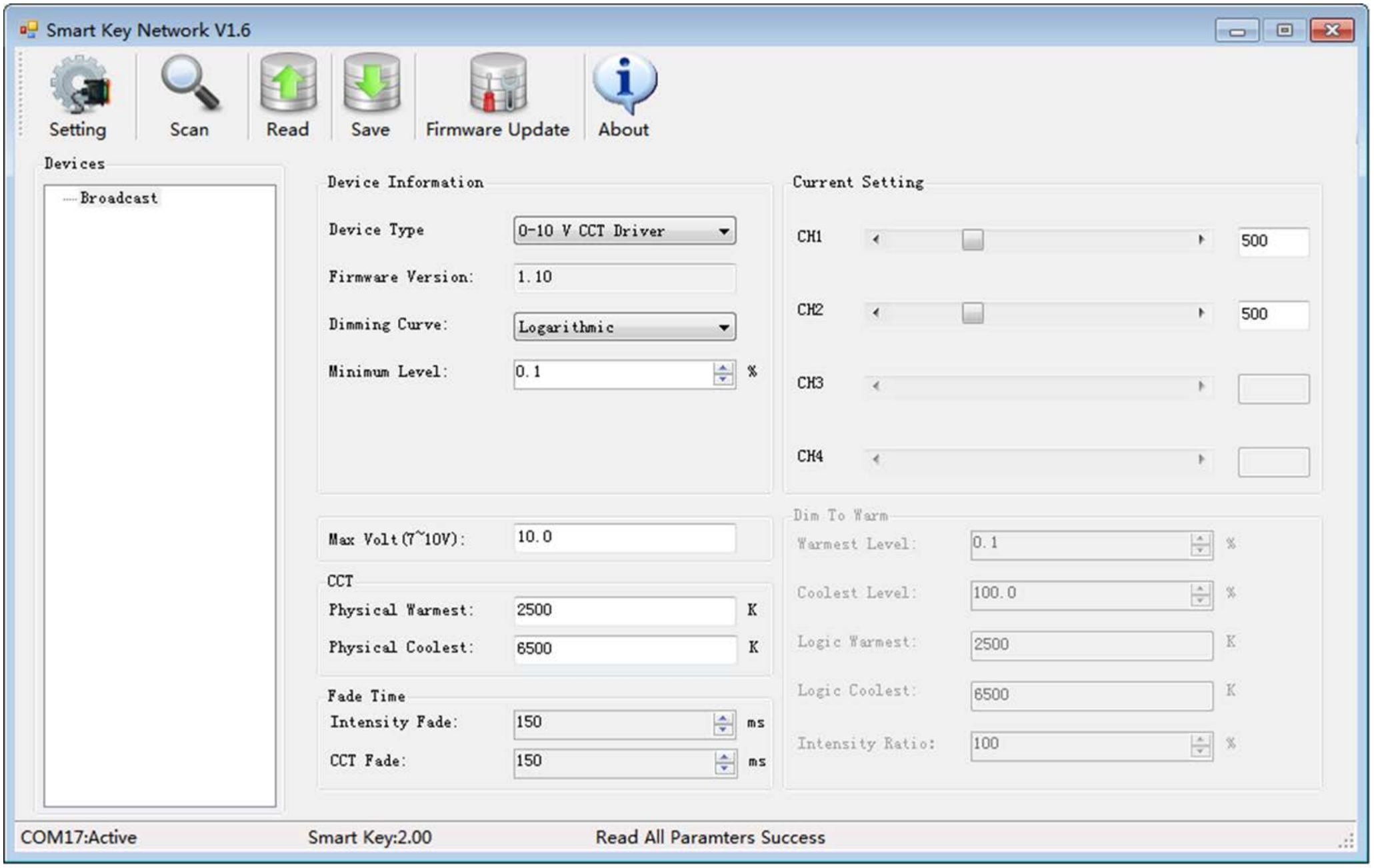


iii) Choose “One Wire” and then Click “OK”



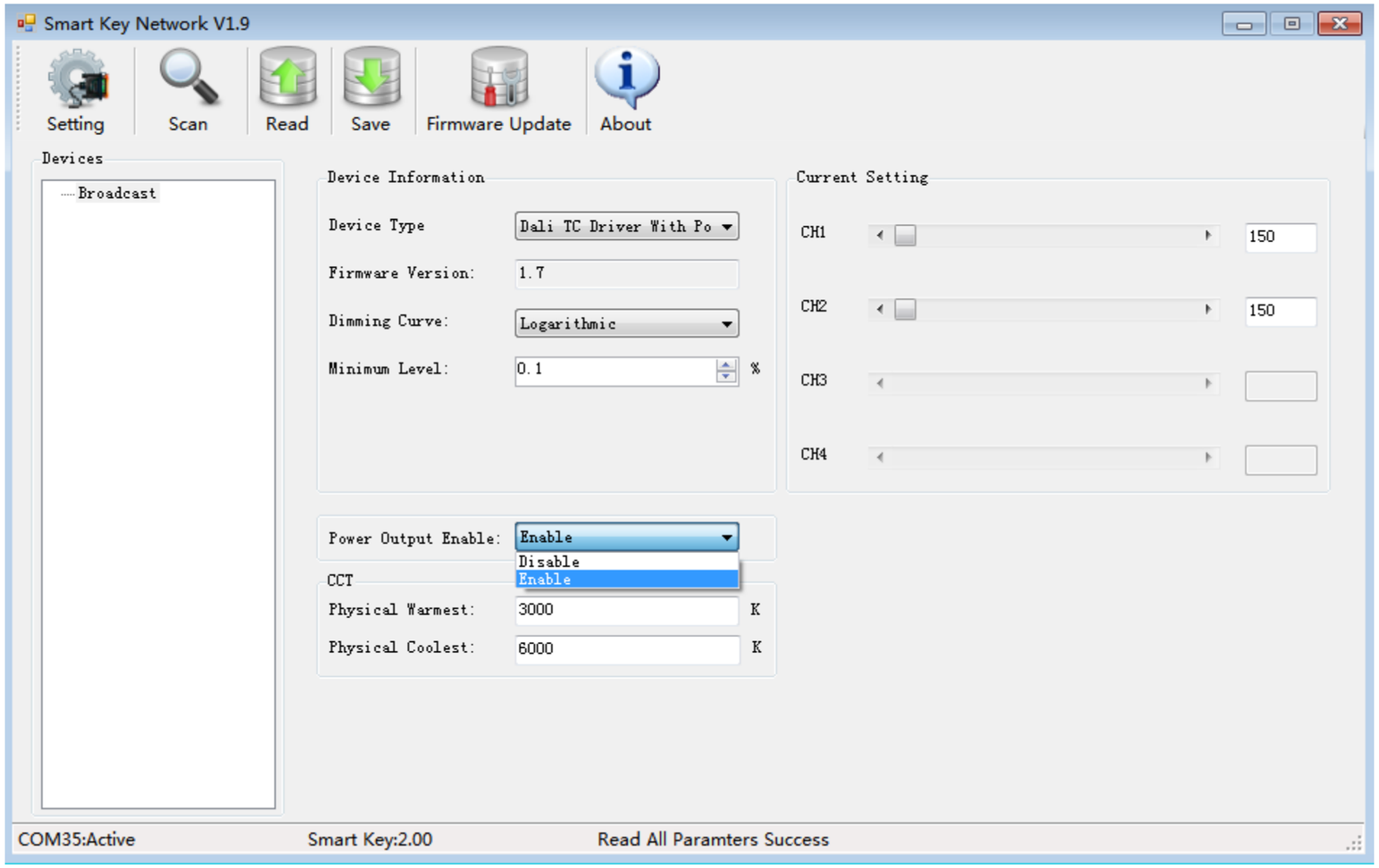
iv) Click “Read” to activate software interface.

Click “Save” to program driver’s configuration.



Software Interface

2) Programming DALI driver

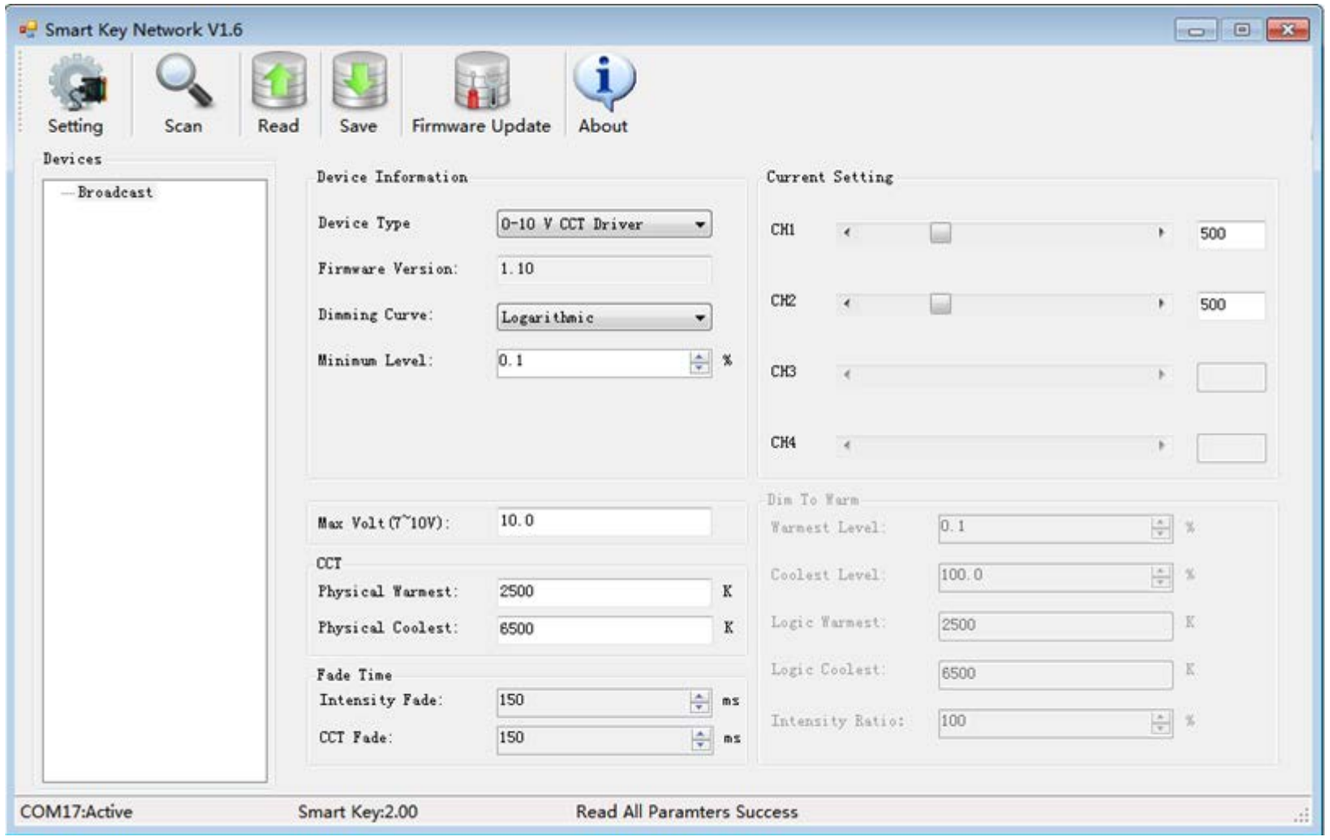


Device Information	
Device Type	Change driver’s type. Solo: use one address to control two channels simultaneously Dual: use two addresses to control two channels respectively DT8 CCT: use one address to achieve tunable white

	DT6 CCT: achieve tunable white through two addresses, one address to control CCT, another address to control intensity.
Firmware Version	The firmware version of driver.
Dimming Curve	Set driver’s dimming curve to be liner or logarithmic.
Minimum Level	Set driver’s minimum dimming level. The valid range of logarithmic dimming curve: 0.1%~100%. The valid range of linear dimming curve: 0.4%~100%, the minimum adjustable unit is 1/254;
Current Setting	
CH1,CH2	Set driver’s output current. In order to achieve accurate CCT range, please keep CH1=CH2.
Power Output Enable	Enable or disable DALI power output on the driver. 15V-100mA.
Physical Warmest, Physical Coolest	Set driver’s CCT range according to fixture. The valid range is 1500~6500K. In order to achieve accurate CCT range, please set driver’s CCT range according to fixture’s actual CCT range.

3) S Series Dual 0-10V driver has four dimming solutions.

i) Tunable White (0-10V CCT Driver)



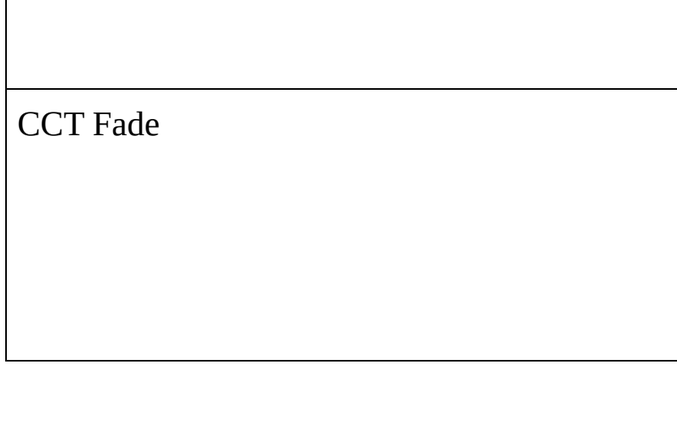
The Color Temperature & Intensity tuning can be achieved by MOONS' Dual 0-10V Driver & Standard 0-10V dimmer; 0-10V dimming Channel (A)——Color Temperature Tuning; 0-10V dimming Channel (B)——Intensity Changing

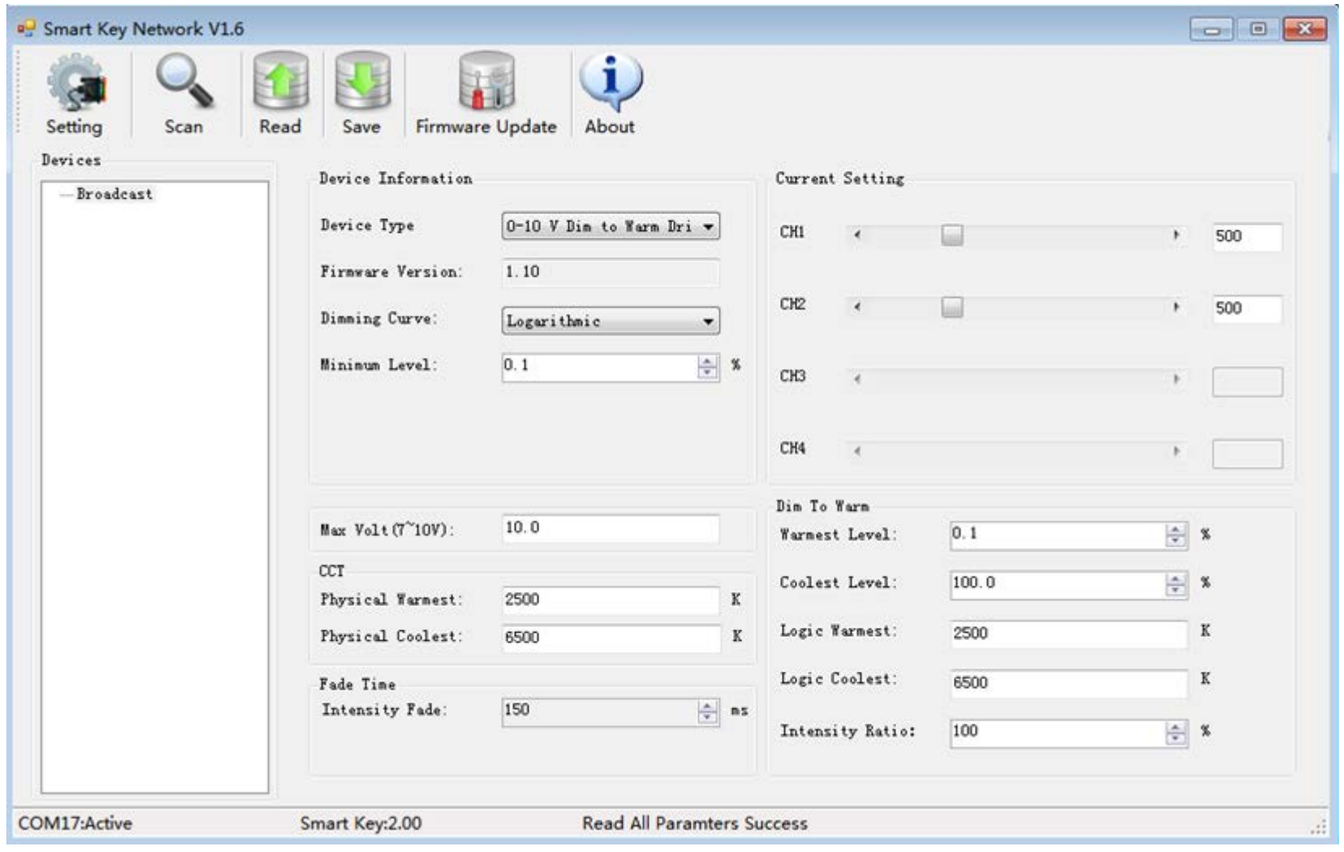
Device Information	
Device Type	Change driver’s dimming solution.
Firmware Version	The firmware version of driver.
Dimming Curve	Set driver’s dimming curve to be liner or logarithmic.

Minimum Level	Set driver’s minimum dimming level. The valid range of logarithmic dimming curve: 0.1%~100%. The valid range of linear dimming curve: 0.4%~100%, the minimum adjustable unit is 1/254;
Current Setting	
CH1,CH2	Set driver’s output current. In order to achieve accurate CCT range, please keep CH1=CH2.
Max Volt (7~10V)	Set the voltage of dimming signal at 100% intensity & coolest CCT. e.g. If the driver’s max volt is set to be 8V. The driver will keeps 100% intensity as long as the dimming signal’s voltage ≧8V. The driver will keeps coldest CCT as long as the dimming signal’s voltage ≧8V.
CCT	
Physical Warmest, Physical Coolest	Set driver’s CCT range according to fixture. The valid range is 1500~6500K. In order to achieve accurate CCT range, please set driver’s CCT range according to fixture’s actual CCT range.
Fade Time	
Intensity Fade	Set the fade time of intensity changing. The Valid range is 150~1000 ms, the minimum adjustable unit is 50ms.

	If the value is set to be 800ms, driver will cost 800ms to achieve intensity B from intensity A.
CCT Fade	Set the fade time of CCT changing. The Valid range is 150~1000 ms, the minimum adjustable unit is 50ms. If the value is set to be 500ms, driver will cost 500ms to achieve CCT B from CCT A.

ii) Dim to Warm (0-10V Dim to Warm Driver)



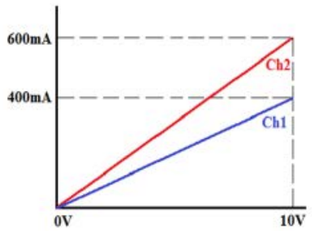


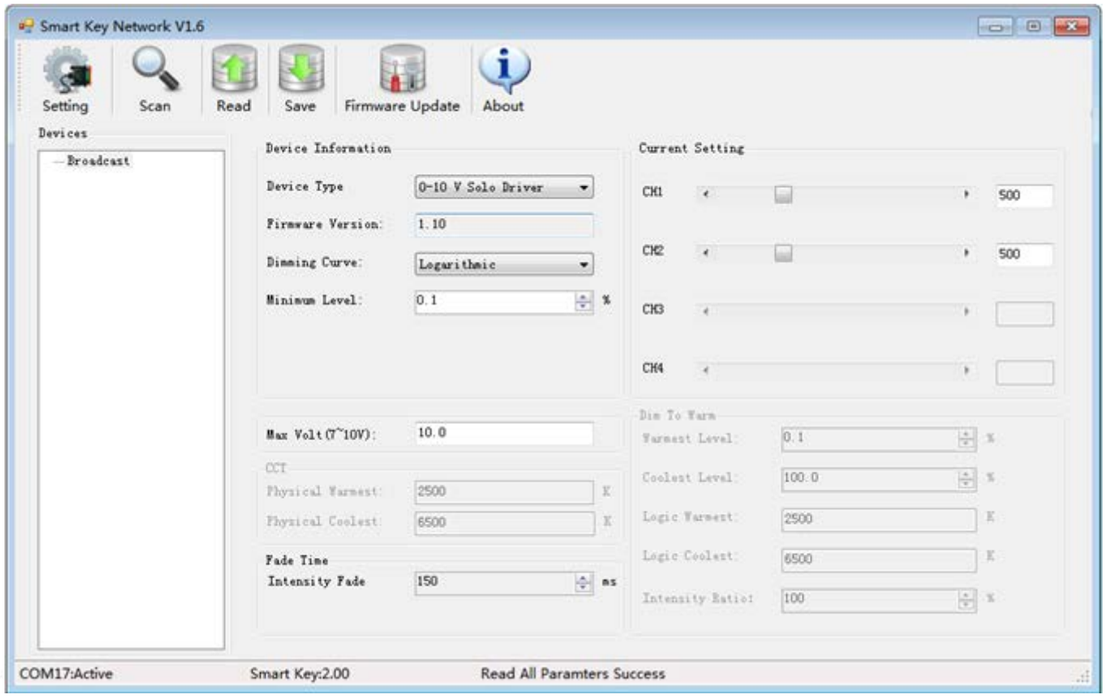
Dimming like incandescent light bulb, change a luminaire’s color temperature when dimmed.

Note: For the explanation of Device Information, Current Setting, CCT, Fade Time, please refer to i) Tunable White (0-10V CCT Driver)

Logical CCT Rang ≤ Physical CCT Range	
Dim to Warm	
Warmest Level	The intensity level of corresponding warmest CCT.
Logical Warmest	The warmest CCT driver can achieve. The valid range: 1500~3200K.
Assume that the warmest level is set to be 10%, warmest is set to be 2200K. **The driver will keep CCT at 2200K as long as the intensity is≦10%.**	
Coolest Level	The intensity level of corresponding coolest CCT.
Logical Coolest	The warmest CCT driver can achieve. The valid range: 1500~3200K.
Assume that the coolest level is set to be 80%, coolest is set to be 2700K. **The driver will keep CCT at 2700 as long as the intensity is ≧80%.**	
Intensity Ratio	Intensity Ratio=Warmer LED’s power ÷Cooler LED’s power
Max Volt (7~10V)	Set the voltage of dimming signal at 100% intensity. e.g. If the driver’s max volt is set to be 8V. The driver will keeps 100% intensity as long as the dimming signal’s voltage ≧8V.

iii) Solo 0-10V Dimming (0-10V Solo Driver)

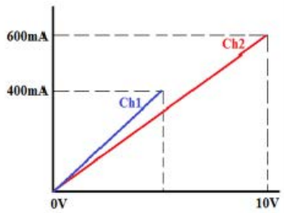


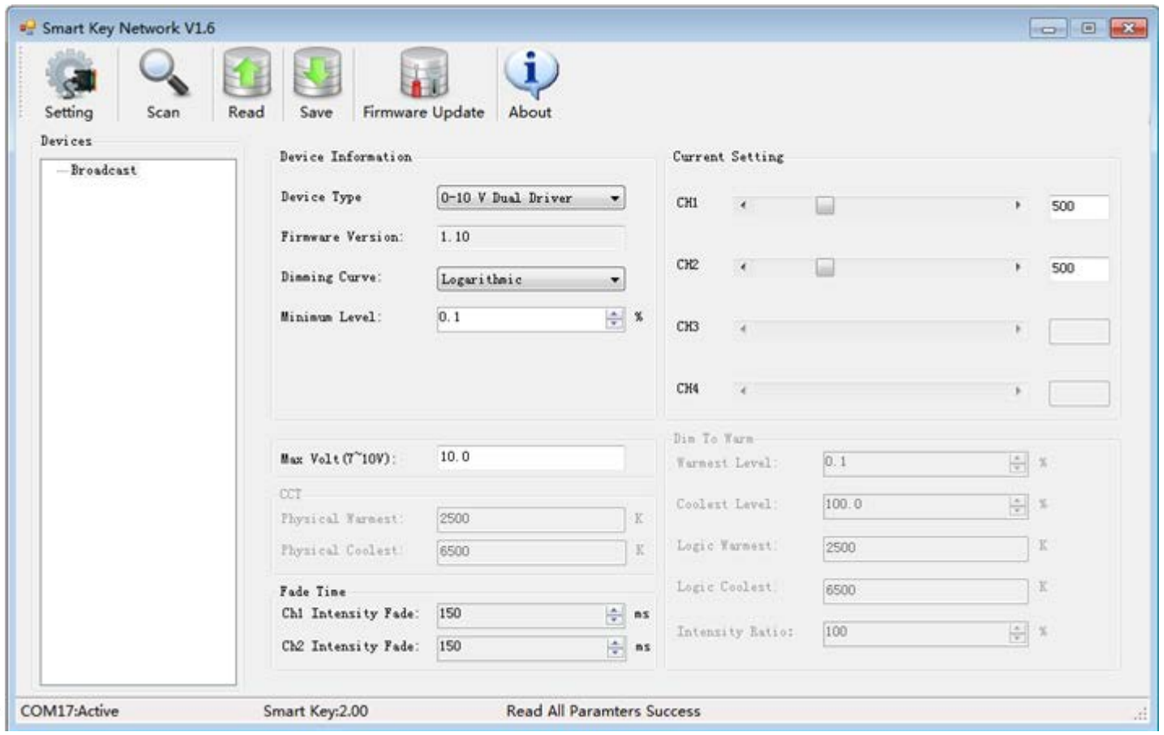


Setting different current value of each output channel, perform broadcast dimming by single 0-10V dimming signal.

Note: For the explanation of Device Information, Current Setting, Max Volt, Fade Time, please refer to i) Tunable White (0-10V CCT Driver)

iv) Dual 0-10V Dimming (0-10V Dual Driver)





Dim each channel to different intensity by dual 0-10V dimming signal individually.

Note: For the explanation of Device Information, Current Setting, Max Volt, Fade Time, please refer to i) Tunable White (0-10V CCT Driver)

4) Programming DMX driver

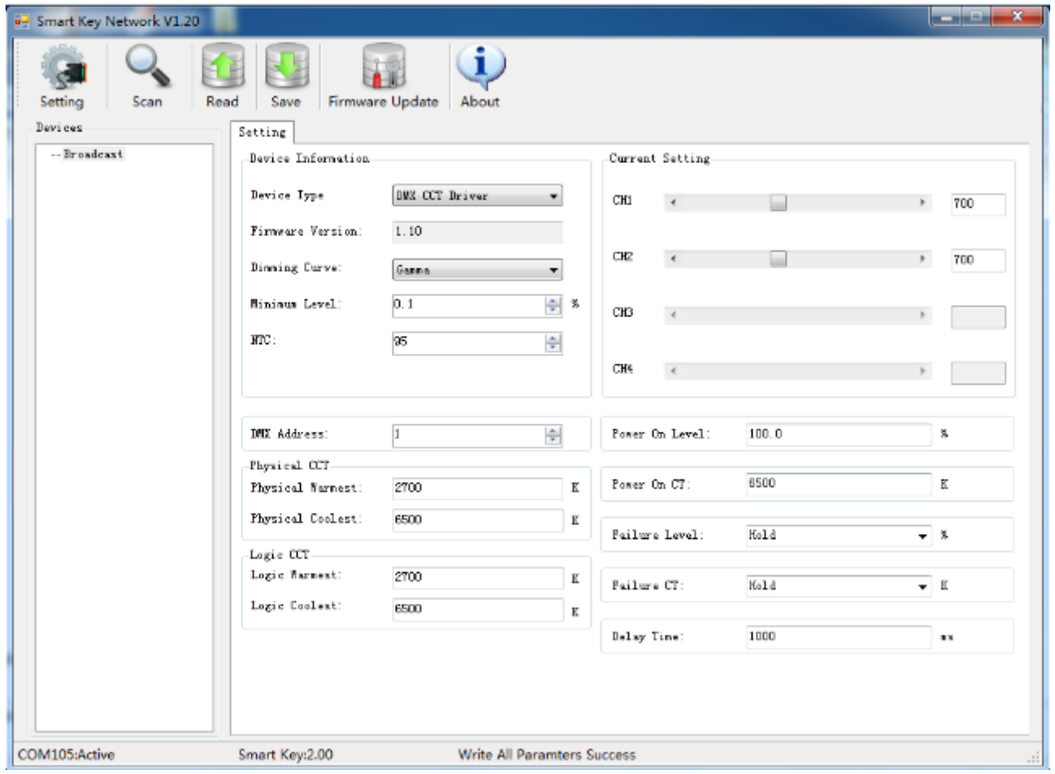
There are three dimming solutions in the DMX 2 channels driver:

DMX CCT: achieve tunable white through two DMX addresses, one address to control CCT, another DMX address to control intensity.

DMX Solo: use one address to control two channels simultaneously.

DMX Dual: use two addresses to control two channels respectively.

DMX CCT mode



Device Type	Change driver’s dimming mode: Solo, Dual, CCT
Firmware Version	Check driver’s firmware version
Diming Curve	Chang driver’s dimming curve: Linear or Gamma

Minimum Level	Set the minimum dimming level: 0.1~100%
NTC	Set the temperature value of NTC.
DMX Address	Set driver’s start address
Current Setting	Set driver’s output current value
Physical CCT	Set the physical CCT range according to fixture’s actual color temperature.
Logic CCT	Set the logic CCT range according to actual requirement. Notes: the Logic CCT range ≤ the Physical CCT range
Power on level	The intensity the driver outputs, when there is no dimming signal during starting process.
Power on CCT	The CCT the driver achieves, when there is no dimming signal during starting process.
Failure level	The intensity the driver outputs, when the driver loses the dimming signal. Hold means the driver will keep the previous intensity level when the driver loses the dimming signal. The valid range: 0~100%, Hold.
Failure CCT	The CCT the driver outputs, when the driver loses the dimming signal. Hold means the driver will keep the previous CCT level when the driver loses the dimming signal. The valid range: logic CCT range, Hold.
Delay time	Set the time to trigger “Failure level” and “Failure time” mode.

DMX Solo mode, DMX Dual mode: please refer to above list.