



Strobe controller with 4 Channels
Up to 10A per channel (in pulse mode)
Internal trigger up to 1kHz
Pulse width from 1 μ s to continuous mode

Electronics	Connectors	SUBD
	Power supply	24V DC – 5.5A max
	Illumination mode	Continuous or strobe mode
	Power consumption	132W max
Mechanics	Weight	680g
	Width x length x height	56mm x 130mm x 142mm
	Fastener	4X M4 holes on the side of the device
	Material	Black anodized aluminum case
Environment	Working temperature	-5°C - +50°C
	IP code	IP54

Applications



EFFILUX pulse controllers are designed for high throughput vision applications. They can control the power light to create bright flashes of high intensity that will be synchronized with the camera.

The principle is to feed the high-power LED lighting for very short times so as to provide a large amount of light for the time of acquisition.

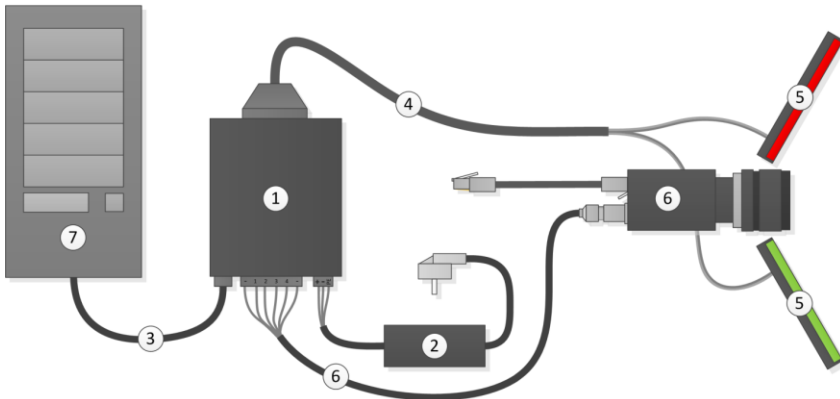
It is important to respect the cycle time to avoid any overheating of the lighting system.

It can control multiple lightings with a single controller (up to 4 channels). The output current can reach up to 1A @ 30V in continuous and 10A @ 200V in strobe mode. In addition, Ethernet and RS232 connectors are available across the range.

EFFILUX also provides cables for these controllers. Feel free to contact us for more information.

Presentation

Example of configuration



- (1) EFFI-IPSC4 Strobe Controller
- (2) Power Supply : 24V DC – 5.5A
- (3) Cable for Ethernet communication
- (4) Cable for powering the illumination (available as accessory)
- (5) LED illumination matching the power output performance of the EFFI-IPSC4 device (The illumination must not be equipped with any additional internal / external control electronics)
- (6) Trigger source (0 – 24V (voltage level for logical "1" is 3V)).
- (7) PC with Microsoft Windows® or Linux 32-/64Bit operating system for the configuration of the device with the software ScLibClient

NB : The EFFI-IPSC4 is not delivered with the different products present on the example

Key benefits and features

- ✓ 4 Output channels
- ✓ Control over Ethernet interface
- ✓ Max current pulse 10A @ 200V per channel
- ✓ Max continuous current 1A @ 30V per channel
- ✓ Pulse width 1µs to 1000ms
- ✓ 4 Trigger inputs, 5V to 24V level
- ✓ 12V – 24V DC power supply
- ✓ 12V – 24V(depends on power supply) DC output for lighthouse cooling fan
- ✓ Analog ID (AID) and AID check mode
- ✓ High frame rates
- ✓ Very small trigger latency ~2 microseconds
- ✓ Improved 10-bit D/A converter for current control

Electronical considerations

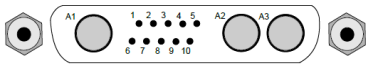
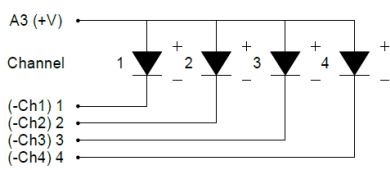


Front panel view

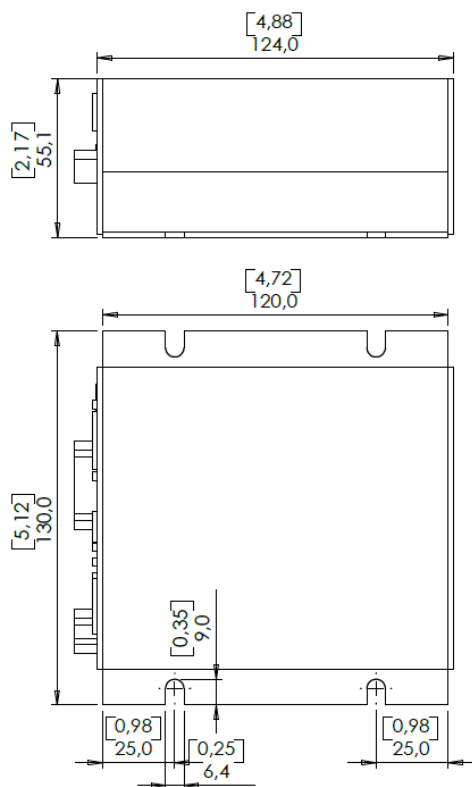


Type	Status
POWER (green) LED	
Solid on	Controller is powered
FAULT (red) LED	
Flashing in specific intervals	System has a failure
Flashing (in combination with STROBE (Yellow) LED)	Controller is starting up, setting controller's IP address, updating firmware. The controller is in reboot mode
STROBE (yellow) LED	
Flashing	Indicates the pulse coming from the IPSC's output. The duration of the LED being turned on depends on the pulse length
Solid on	The controller is either in Continuous or External Switch mode. IPSC is driving outputs with continuous currents
ARMED (yellow) LED	
Solid on	Indicates voltage on output (ready for triggering pulses or in continuous mode)

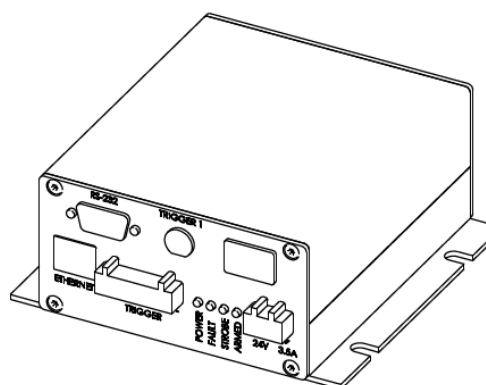
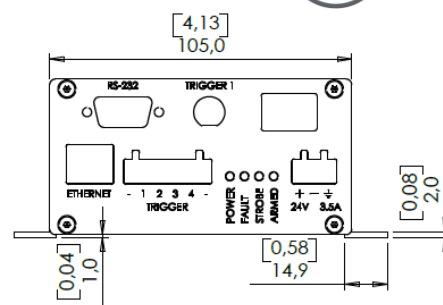
Contact arrangement

Output connector		
Contact arrangement	Number	Designation
 SUBD Male connector	1	-Ch1, Channel 1
	2	-Ch2, Channel 2
	3	-Ch3, Channel 3
	4	-Ch4, Channel 4
	5	Not connected
	6	Not connected
	7	Analog ID
	8	Signal GND (GND for signals 7,9,10)
	9	Trigger Output Digital Signal, 3.3V LVTTTL level
	10	Digital ID (1-Wire EEPROM interface, 3.3V LVTTTL level)
 Connecting scheme for output	A1	12V – 24V DC, max 0.5A (for lighthouse cooling fan)
	A2	Power GND
	A3	+V, Common Output voltage

Mechanical considerations



All dimensions are in mm [inch].



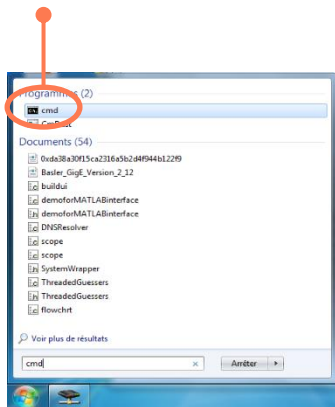
Software

The included software **ScLibClient** allows users to set the LED lighting: current / Running mode / On Time / OFF Time. The software can be downloaded from EFFILUX website (products->accessories).

IP address

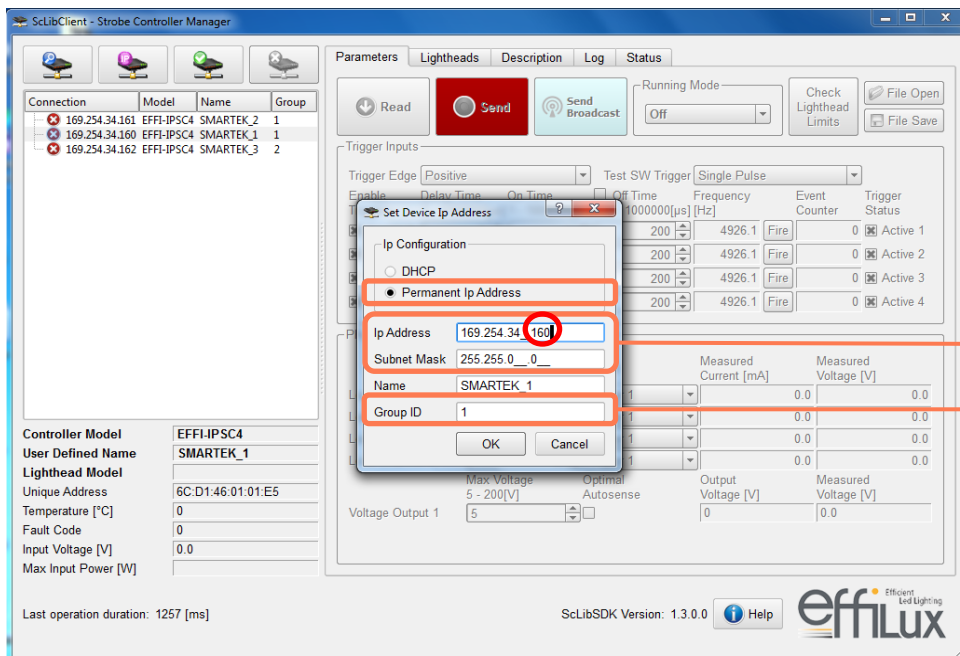
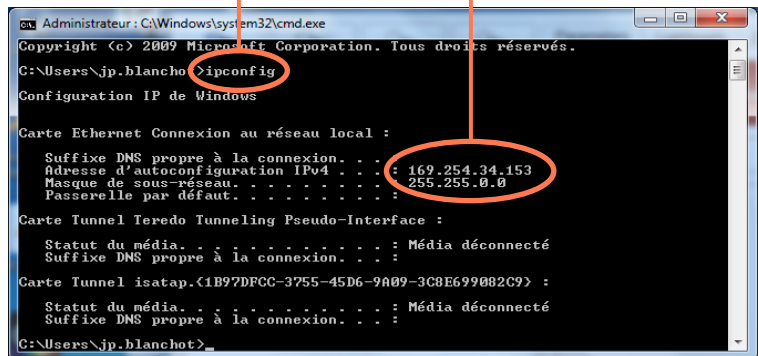
You need to know the PC IP address to connect the EFFI-IPSC4

1. Type « cmd »



2. Type « ipconfig »

3. IP Address



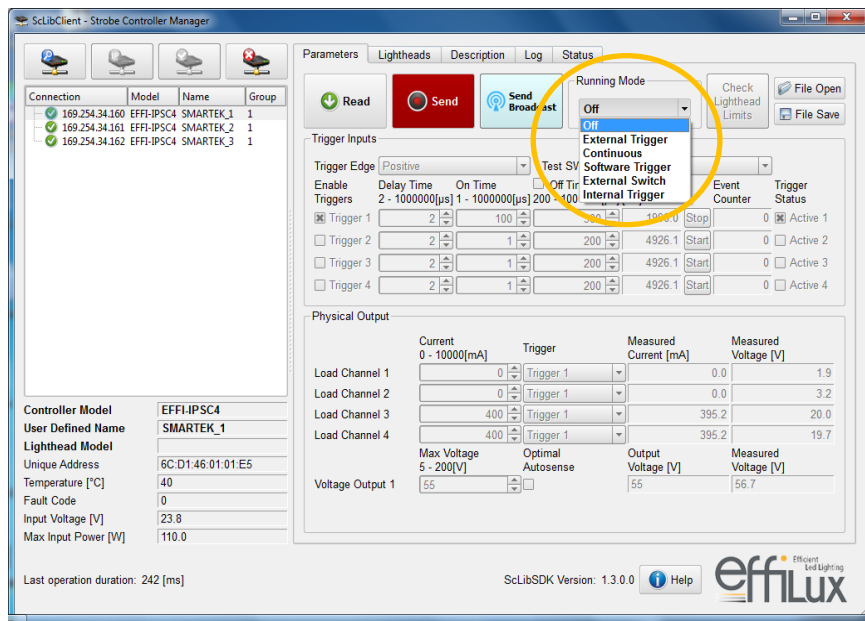
169.254.34.153
255.255.0.0

IP Address : /!\ Change the last number

Choose group : from 0 (without group) to 254

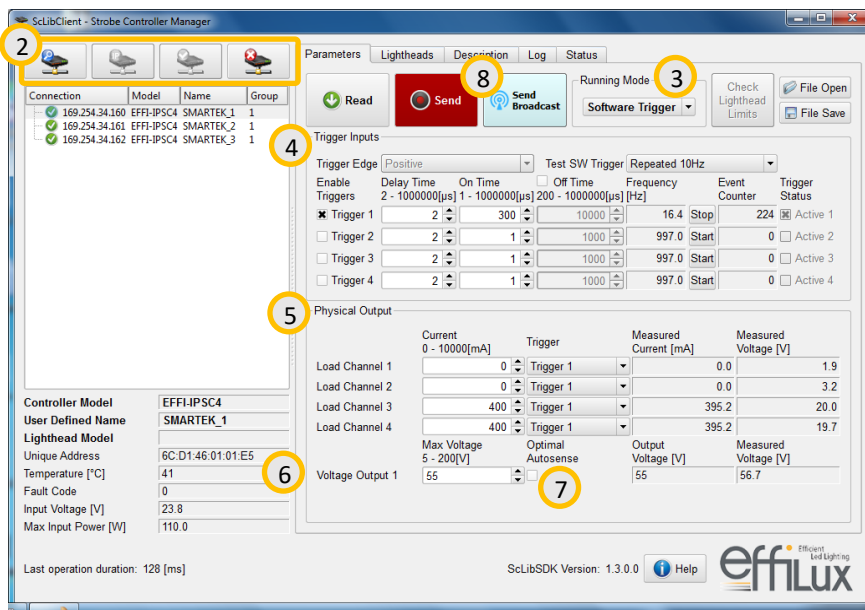
Running mode

You can choose the running mode



Running Mode	Trigger setting by the software
Off	OFF
External Trigger	« On Time » + « Trigger Edge » + External trigger
Continuous	Continuous
Software Trigger	« On Time » + « Test SW Trigger »
External Switch	Full external setting by GBF
Internal Trigger	« On Time » + « Off Time »

Settings



1. Connect the EFFI-IPSC4
2. Allocate IP address (last number different for each EFFI-IPSC4 + indicate « group ID »)
3. Choose running mode
4. Indicate Trigger setting
5. Indicate current for each channel
6. Indicate Voltage output
7. Do not check « Optimal Autosense »
8. « Send broadcast »
9. To switch off : Choose « Running mode » : OFF, then « Send Broadcast »

Send settings

After you have configured setting, you need to send the setting to the LED Lighting

Save setting

File Open

File Save

Read state of IPSC4

Read

Send setting

Send to IPSC4 selected

Send

Send to a group of IPSC4

Send Broadcast

ScLibClient

Broadcast new params?

Yes No

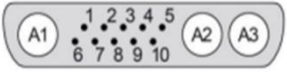
Success

Broadcast successful

OK

Accessories (to be purchased separately)



SUBD / M8 CONNECTOR 4 CONTACTS (For EFFI-RING)				
2m: EFFC-CAB-M8-SUBD-FM-4-DD-L2				
5m: EFFC-CAB-M8-SUBD-FM-4-DD-L5				
Designation	Cable color	SUBD Contact arrangement (Male)	M8 Contact arrangement (Female)	EFFI-RING
+Vcommon	Brown		A3	1 : 6*U _{LED} (common)
GND Channel 1	White		1	2 : GND Red/UV
GND Channel 2	Blue		2	3 : GND Blue/White
GND Channel 3	Black		3	4 : GND Green/IR
SUBD / M8 CONNECTOR 4 CONTACTS (For EFFI-LASE / EFFI-Sharp)				
2m: EFFC-CAB-M8-SUBD-FM-3-DD-L2				
5m: EFFC-CAB-M8-SUBD-FM-3-DD-L5				
Designation	Cable color	SUBD Contact arrangement (Male)	M8 Contact arrangement (Female)	EFFI-Lase / EFFI-Sharp
V+	Blue		1	3 : V+
GND Channel 1	Black		A3	4 : GND
SUBD – Direct control				
2m: EFFC-CAB-M8-SUBD-M-BW-D-L2				
5m: EFFC-CAB-M8-SUBD-BW-5-D-L5				
10m: EFFC-CAB-M8-SUBD-BW-5-D-L10				
Designation	Cable color	SUBD Contact arrangement (Male)	Bare wire	
+Vcommon	Brown		A3	1
GND Channel 1	White		1	2
GND Channel 2	Blue		2	3
GND Channel 3	Black		3	4

SUBD / M8 CONNECTOR 8 CONTACTS / (For EFFI-LASE-V2)							
2m : EFFC-CAB-M8-SUBD-FM-8-DD-L2 5m : EFFC-CAB-M8-SUBD-FM-8-DD-L5							
Cable color	SUBD Contact arrangement (Male)		Designation	M8 Contact arrangement (Female)		With MX1 / LX1	With MX2
White		1	GND Channel 1		1	-V _{LED}	-V _{LED} n°1 (Z2)
Brown		A3	+Vcommon		2	+V _{LED}	+V _{LED} n°1 (Z2)
Green		2	GND Channel 2		3	n.c.	-V _{LED} n°2 (Z1)
Yellow		A3	+Vcommon		4	n.c.	+V _{LED} n°2 (Z1)
Grey		3	GND Channel 3		5	n.c.	-V _{LED} n°3 (Z3)
Pink		A3	+Vcommon		6	n.c.	+V _{LED} n°3 (Z3)
Blue		n.c.	n.c.		7	-TH Thermistor	-TH Thermistor
Red		n.c.	n.c.		8	+TH Thermistor	+TH Thermistor