

TMC2208 Motor Drive Pin Descriptions

GND	GND	DIR	DIR
VIO	VIO	STEP	STEP
M2B	M2B	CLK	CLK
M2A	M2A	PDN	PDN
M1A	M1A	NC	NC
M1B	M1B	MS2	MS2
GND	GND	MS1	MS1
VM	VM	En	EN

Pin Function

Power Supply

GND Ground

VM Motor Supply Voltage

VIO Logic Supply Voltage

Motor Outputs

M1A Motor Coil 1

M1B Motor Coil 1

M2A Motor Coil 2

M2B Motor Coil 2

Control Inputs

STEP Step-Signal Input

DIR Direction-Signal Input

TMC2208

EN Enable Motor Outputs: GND=on, VIO=off

MS1 Step-Configuration

MS2 Step-Configuration

PDN UART and Auto Power Down Control:

GND=on, VIO=off

CLK Clock Input

DIAG Diagnostics Output



INDEX Index Output

VREF Analog Reference Voltage

BLACK – Power GND
YELLOW +12V Power Supply
RED +5V Power Supply

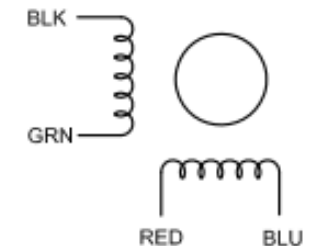
BLACK = A
GREEN = A\
RED = B
BLUE = B\

Stepper Motor & TMC2208 Wiring

TYPE OF CONNECTION (EXTERN)		MOTOR	
PIN NO	BIPOLAR	LEADS	WINDING
1	A —	BLK	A 
2	A\ —	GRN	
3	B —	RED	B 
4	B\ —	BLU	

FULL STEP 2 PHASE-Ex. ,
WHEN FACING MOUNTING END (X)

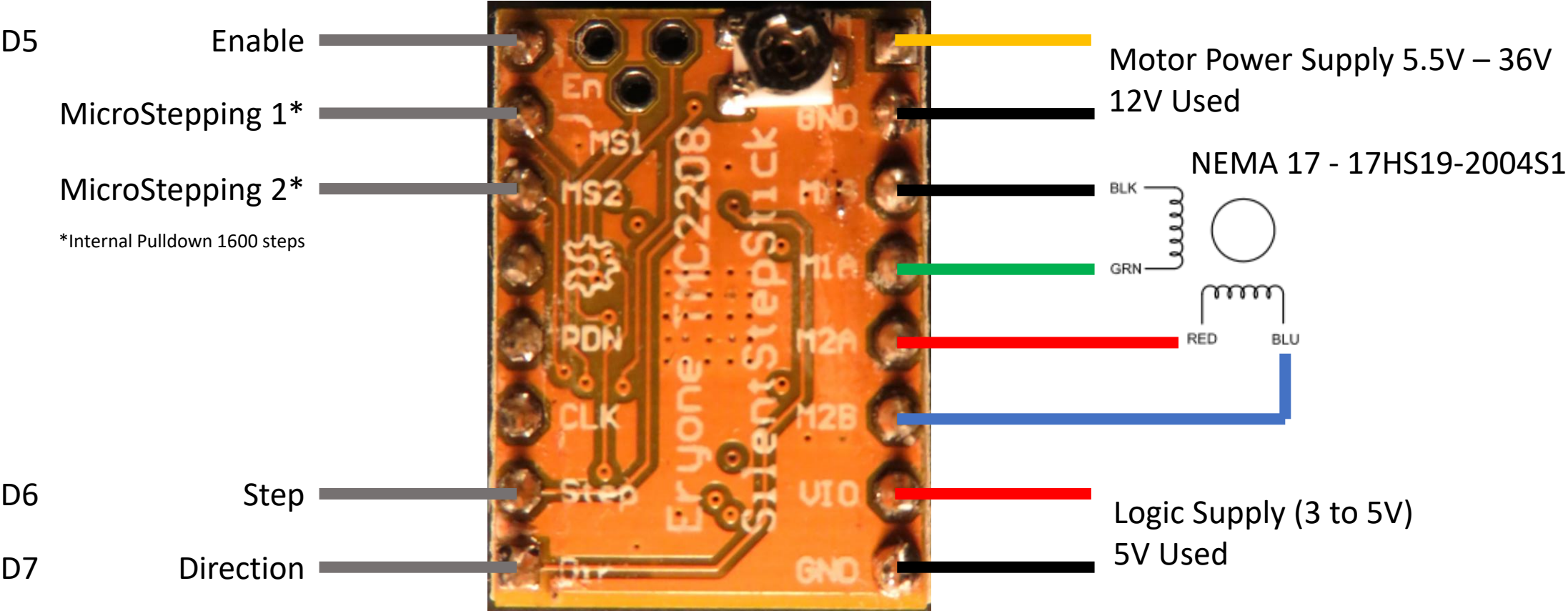
STEP	A	B	A\	B\		
1	+	+	-	-	↓	CCW
2	-	+	+	-		
3	-	-	+	+	↑	CW
4	+	-	-	+		



APVD			STEPPER MOTOR	
CHKD				
DRN				
SIGNATURE		DATE	17HS19-2004S1	

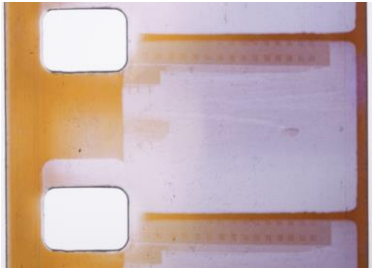
TMC2208 Wiring to Arduino

TYPE OF CONNECTION (EXTERN)		MOTOR	
PIN NO	BIPOLAR	LEADS	WINDING
1	A —	BLK	A
2	A' —	GRN	
3	B —	RED	B
4	B' —	BLU	



Arduino I/O Summary to Stepper

D5	Output	TMC2208 - Stepper - Enable
D6	Output	TMC2208 - Stepper - Step
D7	Output	TMC2208 - Stepper – Direction
+5	Output	TMC2208 – Logic Supply
GND	Output	TMC2208 – Logic Ground



USB

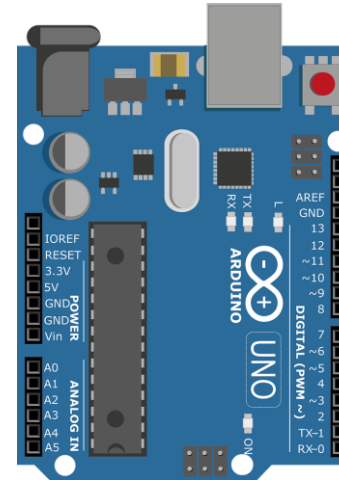


DigicamControl
Arduino Plugin

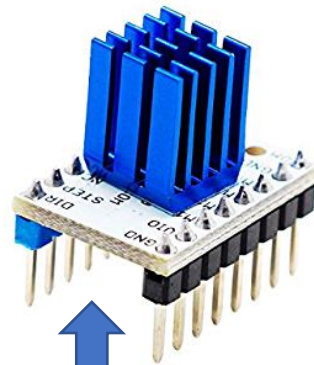
Windows10
Laptop



USB



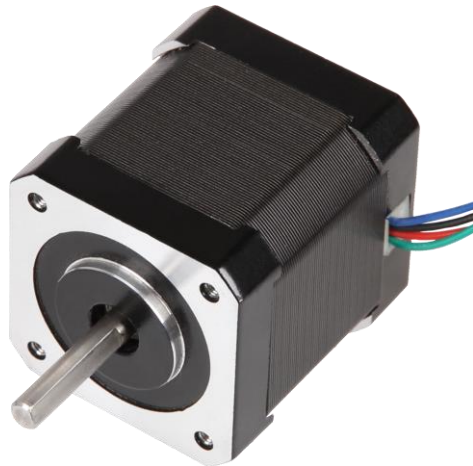
Arduino



TMC2208
Stepper Driver



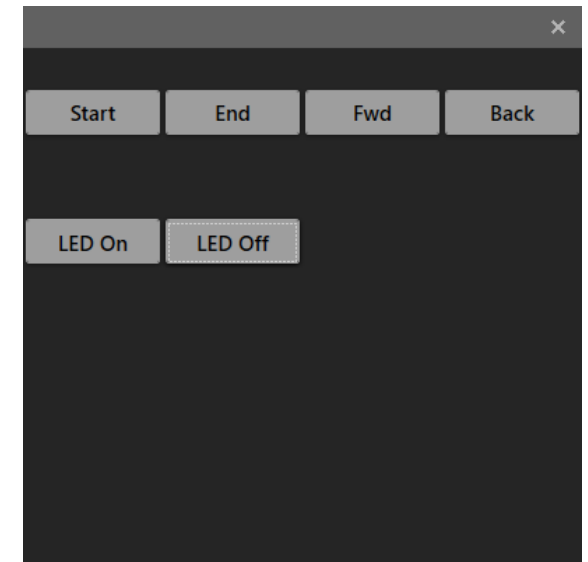
ATX Motor Power Supply



NEMA17
Stepper Motor

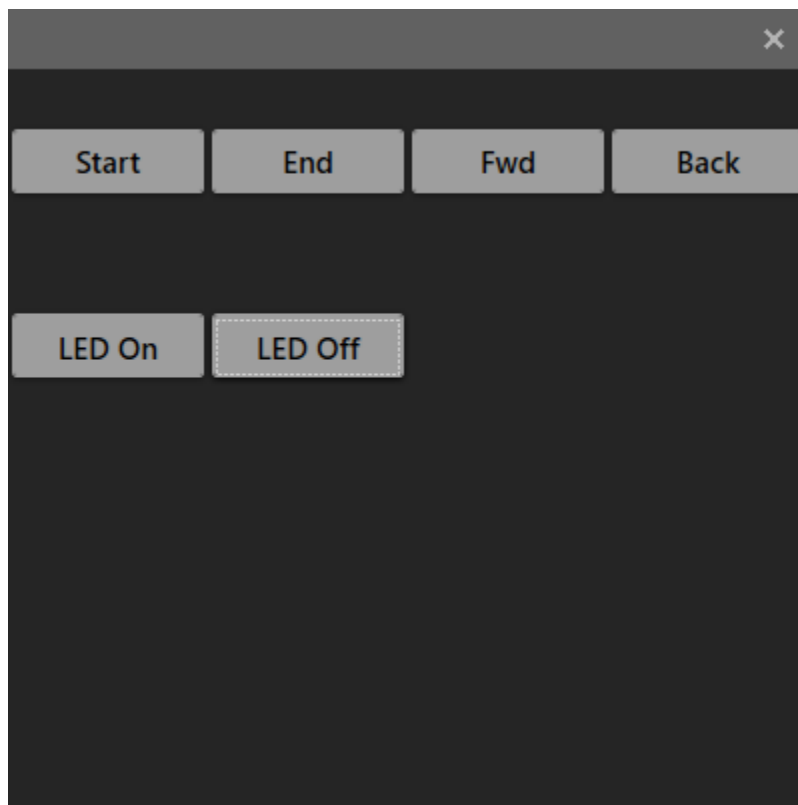


Advance Film

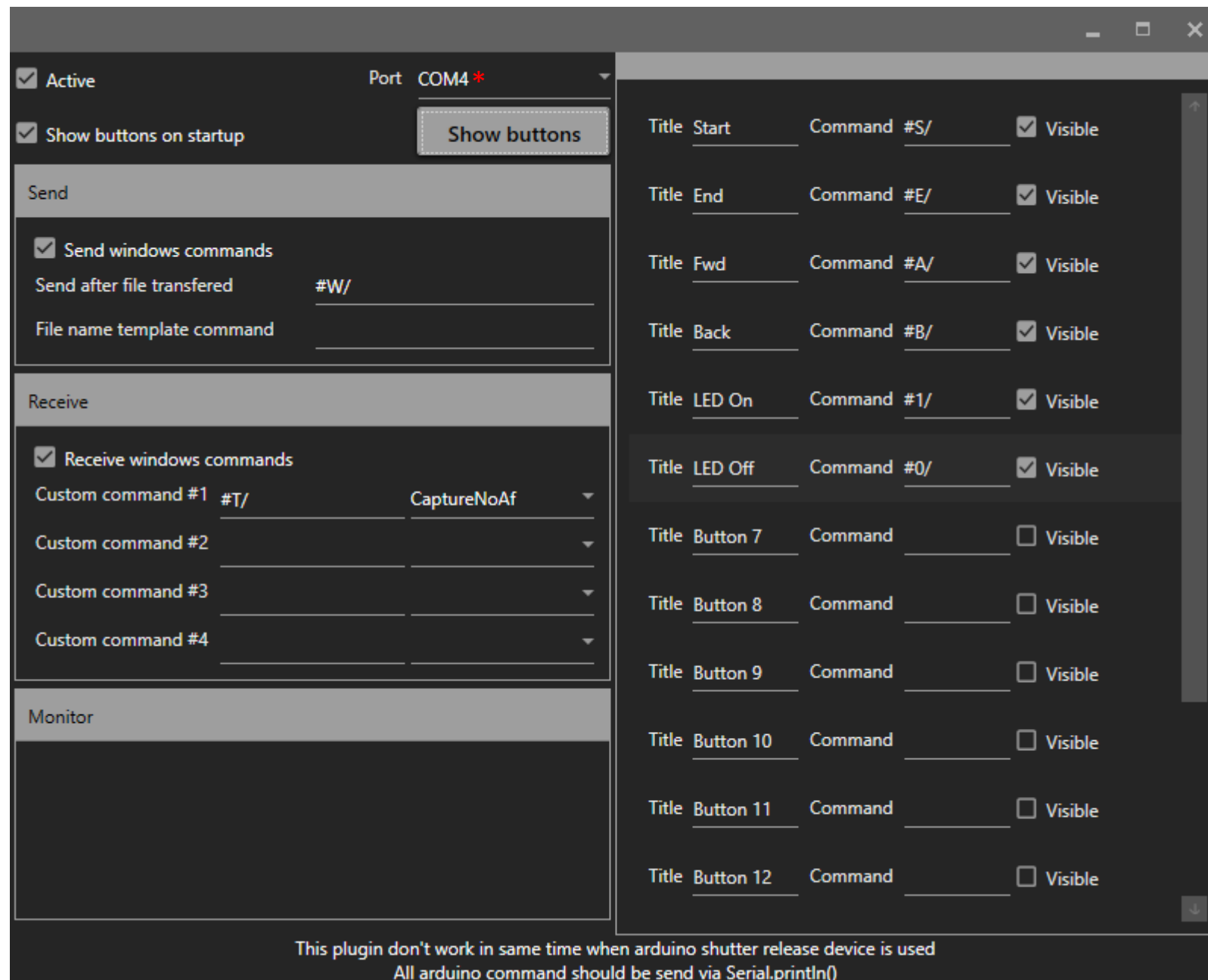


DigicamControl

Arduino Plug-in Settings



* Port required may change depending on the COM used by Arduino.





D3200 (3314072)



Mode

M

Iso

200

Shutter speed

1/60

Aperture

0.0

White Balance

Flash

Exposure Comp.

0.0

Compression

RAW

Metering Mode

Center-weighted meterin

Focus Mode

MF (hard)

Image Size

6016x4000

Burst Number

1

Still Capture Mode

Quiet shooting

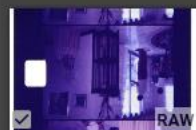
Flash

Normal synchronization

Battery

Transfer

1.Save to PC only



F: f/0
Iso: 200
E: 1/40 s
FL: 0.0 mm
EB: 0 EV



F: f/
Iso:
E:
FL:
EB:



F: f/
Iso:
E:
FL:
EB:



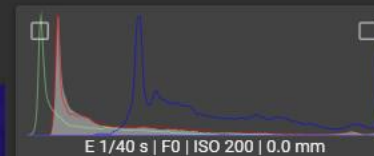
F: f/
Iso:
E:
FL:
EB:



F: f/
Iso:
E:
FL:
EB:



F: f/
Iso:
E:
FL:
EB:



E 1/40 s | F0 | ISO 200 | 0.0 mm

Preview



Session

F2021 (2461)

M:\DCC\8MM\F002-2021

Capture Name

Capture

Series

0

Auto Export Plugins

+ Add plugin

Presets

0/2461

digiCamControl



Camera connected
D3200 (3314072)

☒ Active

Port COM4

☒ Show buttons on startup

Show buttons

Send

☒ Send windows commands

Send after file transfered

#W/

File name template command

Receive

☒ Receive windows commands

Custom command #1

#T/

CaptureNoAf

Custom command #2

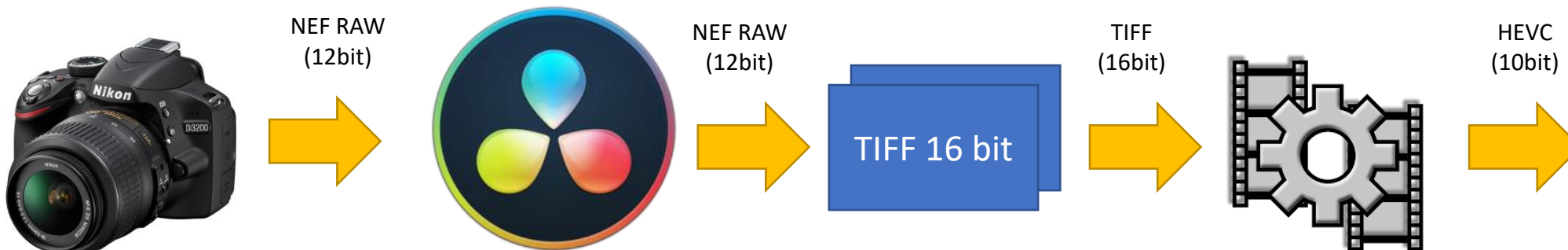
Custom command #3

Custom command #4

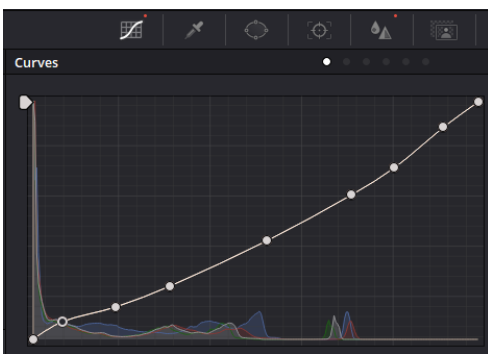
Monitor

Title Start Command #S/ ☒ VisibleTitle End Command #E/ ☒ VisibleTitle Fwd Command #A/ ☒ VisibleTitle Back Command #B/ ☒ VisibleTitle LED On Command #1/ ☒ VisibleTitle LED Off Command #0/ ☒ VisibleTitle Button 7 Command ☐ VisibleTitle Button 8 Command ☐ VisibleTitle Button 9 Command ☐ VisibleTitle Button 10 Command ☐ VisibleTitle Button 11 Command ☐ VisibleTitle Button 12 Command ☐ Visible

This plugin don't work in same time when arduino shutter release device is used
All arduino command should be send via Serial.println()



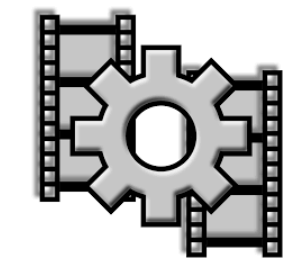
Input NEF RAW (12bit)
No frame rate change
Project Settings
Input Color Space sRGB
Output Color Space Rec.709 Gamma 2.4
Convert Clip from 16/18 to 24 FPS
Crop to 3840 x 2160



VirtualDub2
Supports 16bit/pixel
FFMPEG / x265



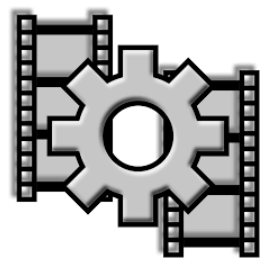
UN50NU7100FXZA



VirtualDub2
Supports 16bit/pixel



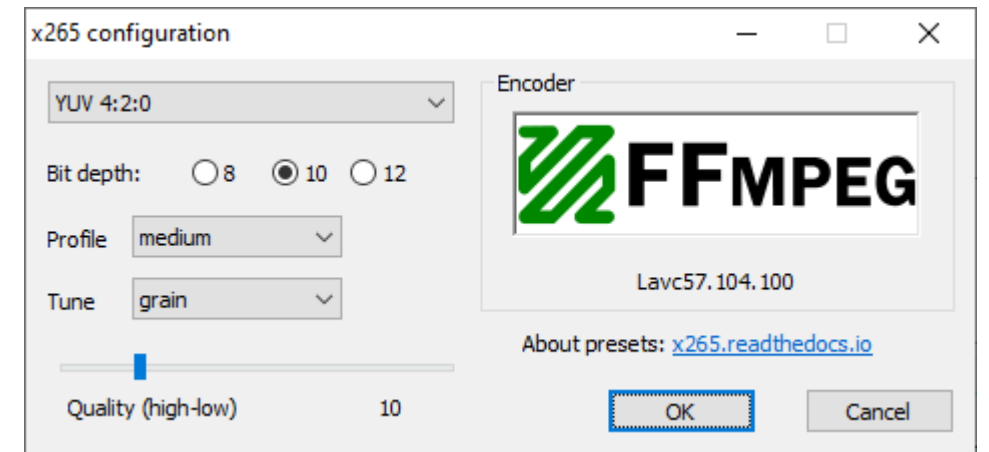
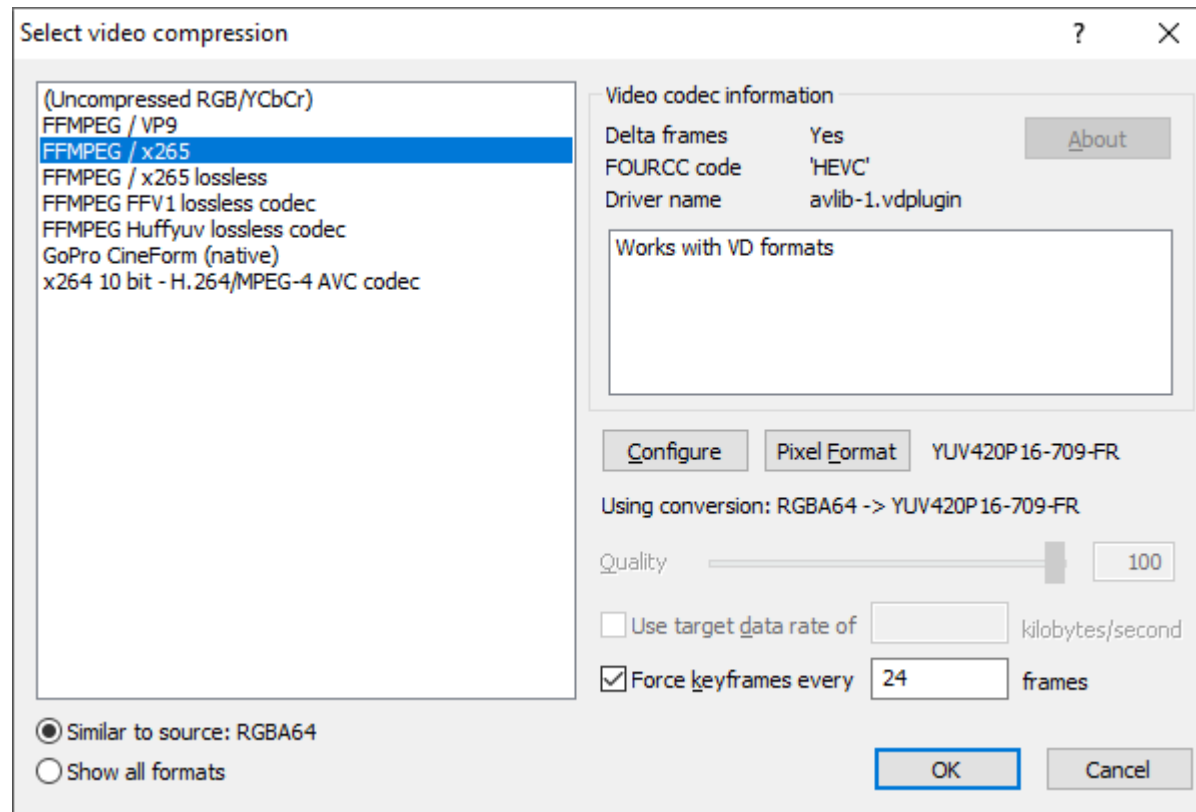
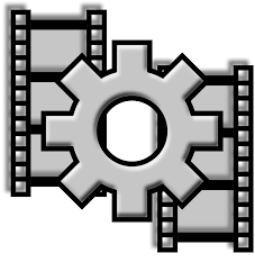
NeatVideo
(with VirtualDub2)
Limits bit depth to 8



VirtualDub2
Deshaker
Limits bit depth to 8



Resolve Free Version
Limits compressed
outputs to 8 bit



SAMSUNG

UN50NU7100FXZA