Valid Trigger/IO and Encoder wiring for the allPIXA evo 1.0

The Machine-Control interface of the allPIXA evo provides following combinations for external triggering with or without usage of an encoder.
It's possible to connect either two differential signal pairs or two single ended wires to control the camera.

Customers have the choice of using RS422 or SingleEnded for FrameActive/FrameStart, LineStart and Encoder.

X12: Machine-Control Interface at the allPIXA evo housing (15pole HD-DSUB connector)

Pin	Gen<I>Cam	Signal	Level	Remark
1	Line1	Enc0P	RS422	Input only
2	Line2	Enc1P	RS422	Input only
3	Line3	IO0P	LVCMOS	Input only single ended
4	---	RT	RS485	2LightController XLC4
5	---	---	---	
6	Line1	Enc0N	RS422	N-channel of line1
7	Line2	Enc1N	RS422	N-channel of line2
8	Line4	IO1N	LVCMOS	Input only single ended
9	---	RTN	RS485	2LightController XLC4
10	---	---	---	
11	---	GND	GND	
12	---	---	---	
13	---	GND	GND	
14				
15				

LVCMOS: 3,3V

GND-connection is necessary for stable operation

Valid external Trigger and IO/Encoder combinations:

➔ Line1 and Line2 are differential inputs

- FrameActive = Line2 (Low/High active) + LineStart = Line1
- FrameActive = Line2 (Low/High active) + LineStart = OFF (camera internal line control)
- FrameActive = Line2 (as Peakholder) + LineStart = Line1
- FrameActive = Line2 (as Peakholder) + LineStart = Encoder and Encoder0=Line1

➔ Line3 and Line4 are single ended inputs.

- FrameActive (Line3/4) + LineStart =OFF (camera internal line control)
- FrameActive = Line3 + LineStart = Line4
- FrameActive = Line3 + LineStar t= Encoder and EncoderA=Line4
- FrameActive=Off + LineStart = Line4
- FrameActive=Off + LineStart = Encoder and EncoderA=Line4

Note:
If FrameActive, FrameStart and LineStart is set to OFF then the camera will work in freerun operating mode with the configured predefined parameters e.g. image width, height, ..