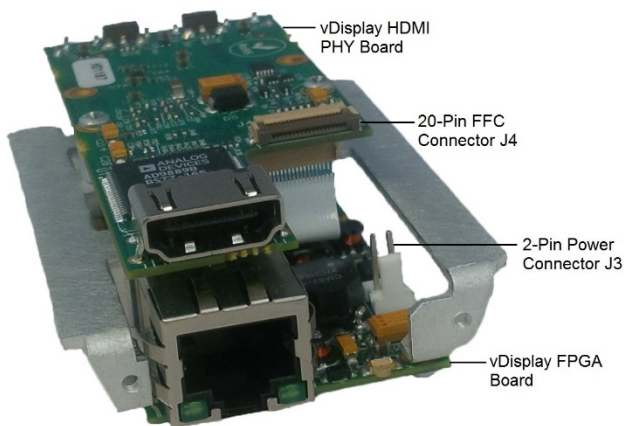


# vDisplay HDI-Pro External Frame Grabber OEM Board Power Connectors

## Application Note

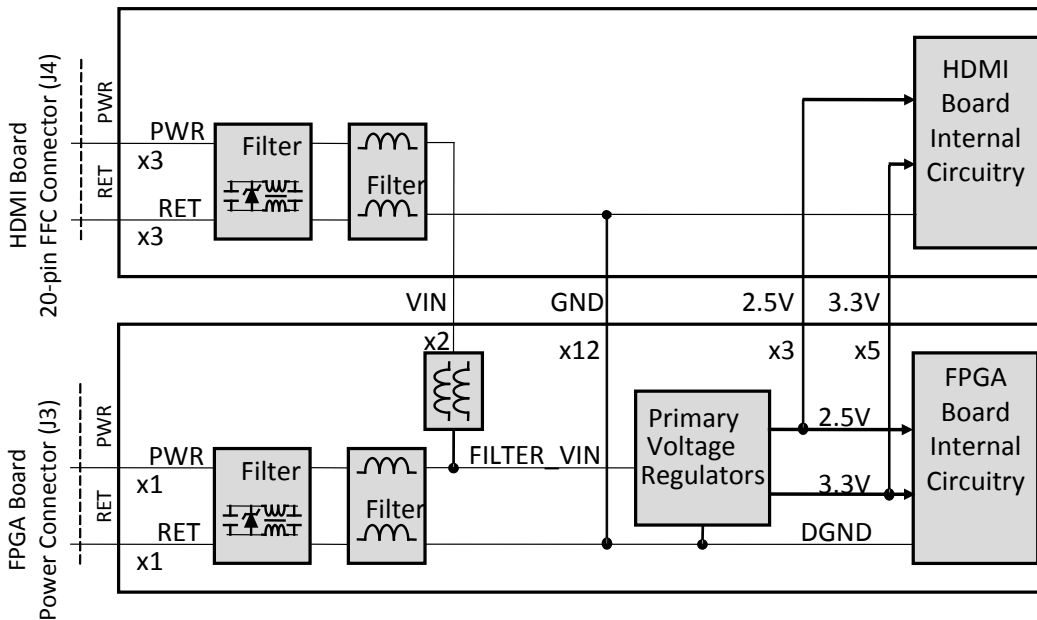
Pleora Technologies' vDisplay HDI-Pro External Frame Grabber is provided as an enclosed unit and as an OEM board set. This document provides information about the two connectors on the OEM board set, shown in the image below, through which you can supply the vDisplay with power.



You can supply power to the vDisplay HDI-Pro External Frame Grabber through either of the two connectors, described in the following sections, but you must not supply power through both connectors at the same time.

## Power Connection Scheme

The power connection scheme of the vDisplay HDI-Pro External Frame Grabber is shown in the following illustration.



## 20-Pin FFC Connector – J4

The 20-pin FFC connector, located on the vDisplay HDMI PHY board, receives power through a connected flat flex cable attached to a 12-pin GPIO circular connector. If power is supplied through the 20-pin FFC connector, the EMI filtering is applied to the power; you do not have to supply additional filtering.

The following table provides the pinout information for the 20-pin FFC connector.

Table 1: 20-Pin Power Connector Pinout

Pin	Name	Function	Type
1	RET	RET	Power Return
2	RET	RET	Power Return
3	RET	RET	Power Return
4	PWR	PWR	Power Return
5	PWR	PWR	Power Return
6	PWR	PWR	Power Return
7	DGND_FLTRD	GND	Ground
8	N/C	N/C	
9	N/C	N/C	
10	N/C	N/C	
11	N/C	N/C	

Table 2: 20-Pin FFC Power Connector Pinout (Continued)

Pin	Name	Function	Type
12	N/C	N/C	
13	N/C	N/C	
14	N/C	N/C	
15	N/C	N/C	
16	N/C	N/C	
17	N/C	N/C	
18	N/C	N/C	
19	N/C	N/C	
20	DGND_FLTRD	GND	Ground

## 20-Pin FFC Power Connector Components

The following tables provide a detailed description of the 20-pin FFC power connector components, and include the name of the manufacturer, the part number, and information about the mating connector.

Table 3: 20-Pin FFC Power Connector Components

Part Description	Part number
FFC connector, 20-pin, 0.5 mm pitch	Hirose Electric FH12-20S-0.5SH(55)

Table 4: 20-Pin FFC Power Connector Mating Components

Part Description	Part number
FFC cable, 20-pin, 0.5 mm pitch, length as required by your design	Parlex (a Johnson Electric Company) <a href="http://www.parlex.com">www.parlex.com</a> 050R20-XXXXB A, where XXXX is the length of 0001 to 9999 in mm

## 2-Pin Power Connector – J3

The 2-pin power connector, located on the vDisplay FPGA board, receives power through a connected external power supply. If power is supplied through the 2-pin power connector, you must supply EMI filtering to the power.



Because of the 2-pin power connector's location on the FPGA board, it can collect noise and then transport the noise over power wires. You must provide EMI filtering through the use of your own ferrite core if you power the vDisplay External Frame Grabber through the 2-pin power connector.

## 2-Pin Power Connector Components

The following tables provide a detailed description of the 2-pin power connector, and include the name of the manufacturer, the part number, and information about the mating connector.

Table 5: 2-Pin Power Connector Components

Part Description	Part number
2-pin header (with pins)	Tyco Electronics 644874-2

Table 6: 2-Pin Power Connector Mating Components

Part Description	Part number
2-pin shell (with sockets)	Molex 22-01-3027
Crimp sockets (quantity 2)	Molex 08550102

## 2-Pin Power Connector Pinout

The following image and table provide the pinout information for the 2-pin power connector.

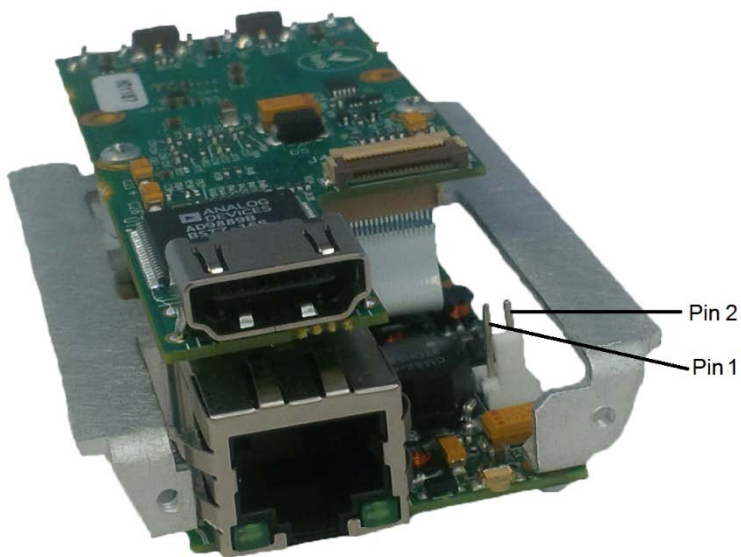


Table 7: 2-Pin Power Connector Pinout

Pin	Description
1	PWR
2	RET

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