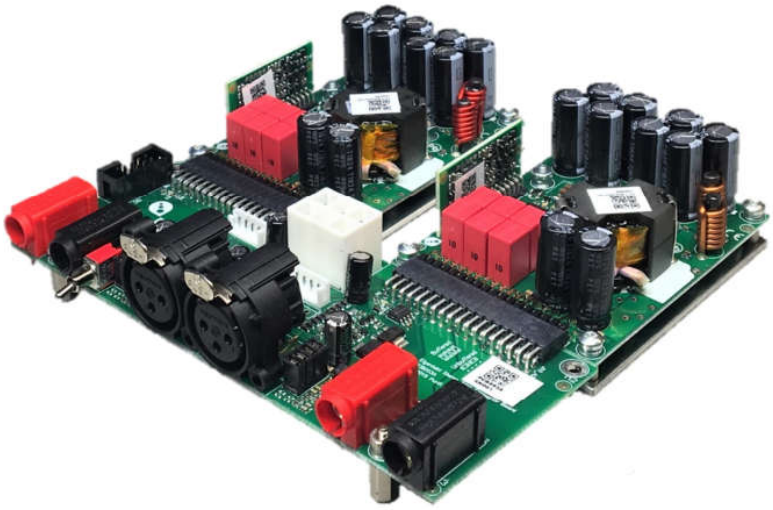
MICRO AUDIO

SMPSIK-PFCR2 & EVAL-1 / EVAL-2

APP NOTE



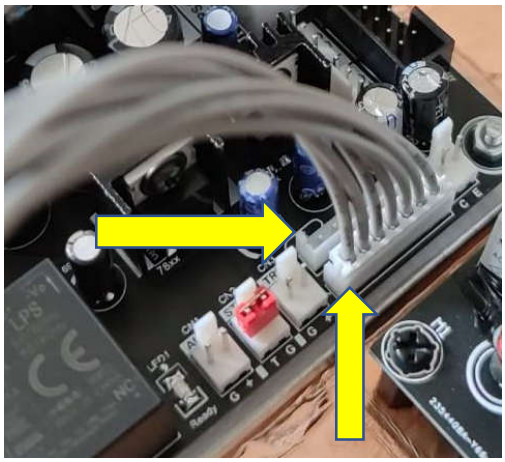
Application Note – Connecting EVAL1 / EVAL2 to SMPS1K-PFCR2

1 Introduction

This application note shows and describes how to wire the PURIFI EVAL1 or PURIFI EVAL2 evaluation kits to the SMPS1K-PFCR2

SMPS1K-PFCR2 has two connectors connected in parallel to feed two Purifi modules based on your configuration, for example in a 3 or 5 or 7 channels configuration or any similar setup.
This connector will handle all signals between the SMPS and the Purifi module

1- AMPON
2- FATAL (DC ERROR)
3- +VUNREG
4- GND
5- -VUNREG



J2 & J4 on the SMPS1K-PFCR2 provides REGULATED voltage ONLY and they are subject to the regulated voltage you are selecting when you order the SMPS. Supplying the Purifi from a regulated voltage is usually better than supplying it from an unregulated voltage.

Connectors J2 & J4

3.3 Aux connector, J4

Pin	Signal	Rating	I/O	Description
1	PSUDIS /AMPON		O I	PSU off control signal (SW Mode), or Amplifier Disable (HW Mode) – *pull low to enable Amp*
2	SDA READY		I O	I2C Data (SW Mode), or Amplifier Ready (HW Mode) – "all good for operation" when high
3	SCL /FATAL		I O	I2C clock (SW Mode), or Amplifier "error/fail" (HW Mode) – *signal goes low on error*
4	+5V		P	5V output (from onboard regulator), 20mA max load. Requires R1 mounted
5	+VUNREG		P	Voltage regulator input, positive rail
6	GND		P	Ground
7	-VUNREG		P	Voltage regulator input, negative rail

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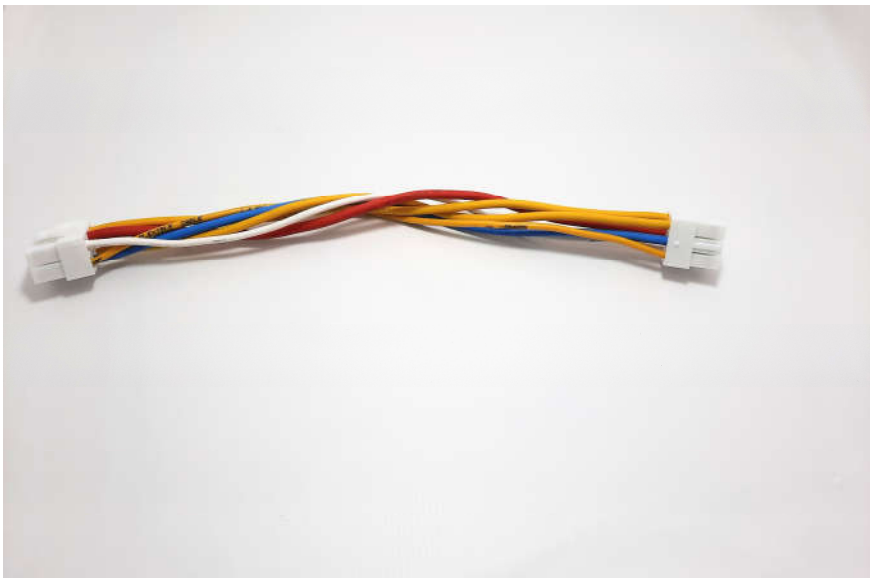
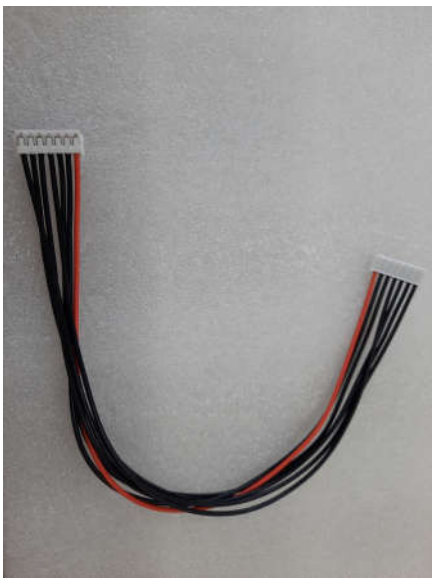
Cables needed are shown below with the part numbers for them



VLP-06V wiring harness



B7B-EH-A wiring harness

Cables needed to complete your setup in stereo configuration (One SMPS + Capacitors PCB + Purifi EVAL1 or EVAL2 is:-

- VLP-06V wiring harness (QTY 2)
- B7B-EH-A wiring harness (QTY 1) BASED ON YOUR CONFIGRATION

VLP-06V
https://www.digikey.com/en/products/detail/jst-sales-america-inc/VLP-06V/1883066

SVF-61T-P2.0
https://www.digikey.com/en/products/detail/jst-sales-america-inc/SVF-61T-P2-0/1159334?s=N4IgTCBcDaIMoDUBiBaAbARgCooApgDoAGAAgAoBhAeQDkaS4qKBpAUSxIwBYUwiBBAOoBxEhQBKASQCyuElkk0AlCAC6AXyA

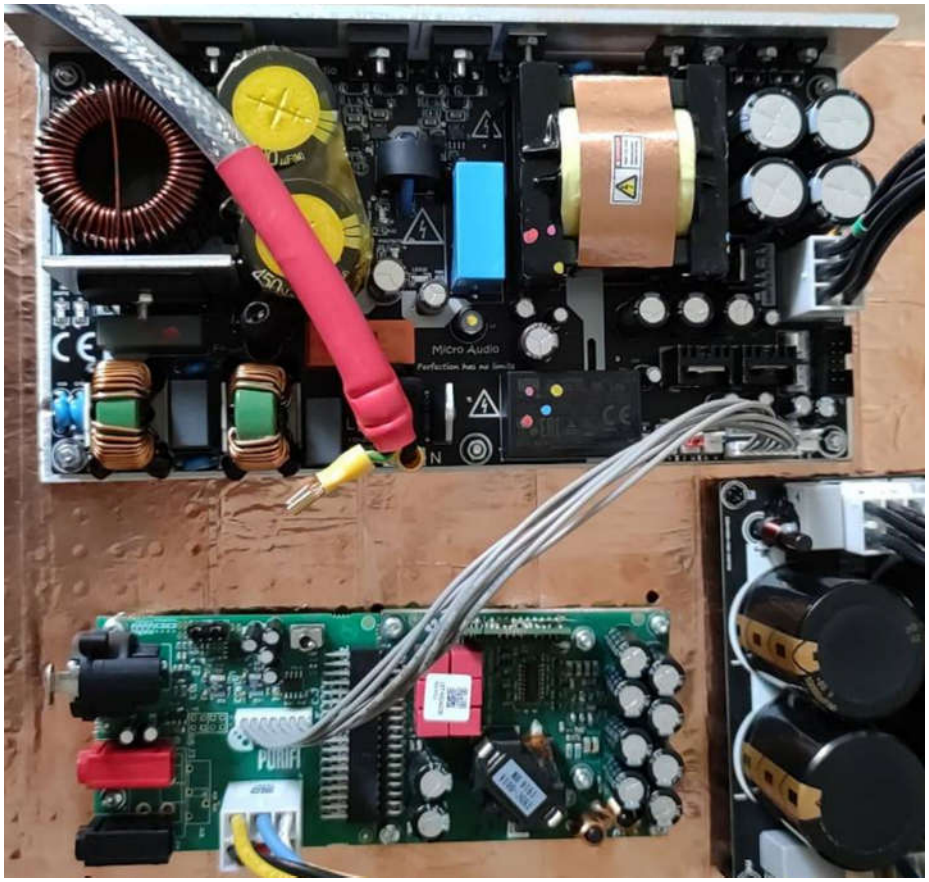
EHR-7
https://www.digikey.com/en/products/detail/jst-sales-america-inc/EHR-7/527229

ASEHSEH22K305
https://www.digikey.com/en/products/detail/jst-sales-america-inc/ASEHSEH22K305/6009480

Application Note – Connecting EVAL1 / EVAL2 to SMPS1K-PFCR2

Wiring and connecting the amplifier to the SMPS1K-PFCR2 is seamless because its pin to pin compatible with Purifi amplifiers

Just connect it as shown below and power up, it will work without any effort or worrying about the wiring hassle



⚠ WARNING ⚠

You will destroy your entire setup if YOU

1- Wired the connectors incorrectly.
2- Swapped any pin with the other somehow.

Cables are available at the store READY MADE and TESTED.

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SMPS1K-PFCR2 connector pinout

J2				
Connector	Pin number	Type	Function	Notes
J2.1	1	Output	VDR+	Positive bootstrap driver voltage
J2.2	2	Output	**HV+**	Positive supply rail
J2.3	3	**GND**	**GND**	Ground
J2.4	4	Output	VDR-	Negative bootstrap driver voltage
J2.5	5	Output	**HV-**	Negative supply rail
J2.5	6	**GND**	**GND**	Ground

Purifi power connector pinout

EVAL1, J1		
Pin	Signal	Description
1	VDR	Gate Drive Supply, referenced to -VP
2	+VP	Power Stage Supply, positive rail
3	GND	Ground
4	VDR-	Power Stage Supply, negative rail
5	-VP	Power Stage Supply, negative rail
6	GND	Ground

SMPS1K-PFCR2 & Purifi are pin to pin compatible

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Full example showing the wiring of one channel of Purifi amplifier and the SMPS1K-PFCR2 and the extra capacitors PCB with all cables needed as an EXAMPLE