VD1, VDA1, VD2, VDA2 are 2.5VDC
VD3, VDA3 are 3.3VDC

PCB #1 – This board plugs onto a BBB and connects to PCB#2 using two shielded Cat8 ethernet cables. Zo = 100 Ohm.

GPIO Pins Connection

P3
BeagleBone Black Header
GND
+5VD
C81 0.1uF
C82 0.1uF
BCK
LRCK
R86 10K
R87 10K
CLK_Select
DSD_On
MCK_In
Mute
Data_DSD1
Data_DSD2

FB19 BLM18PG121SN1D
FB22 BLM18PG121SN1D
C83 1uF
C86 0.1uF
C89 1uF
C92 0.1uF
U48 SN65LVDS1
U49 SN65LVDS1

FB25 BLM18PG121SN1D
FB27 BLM18PG121SN1D
C98 1uF
C99 0.1uF
C100 0.1uF
C103 0.1uF
C104 0.1uF
C105 1uF
U45 ADN4654
VDD1
VDD2
LDO
Isolation Barrier
DIN1+
DIN1–
DIN2+
DIN2–
DOUT1+
DOUT1–
DOUT2+
DOUT2–
GND1
GND2
R99 100
R100 100

FB21 BLM18PG121SN1D
FB24 BLM18PG121SN1D
FB28 BLM18PG121SN1D
C88 1uF
C90 0.1uF
C94 1uF
C96 0.1uF
C97 0.1uF
C106 0.1uF
C107 0.1uF
C108 1uF
U43 SN65LVDS2
U46 ADN4655
R97 100
R101 100
R91 100
R92 100
J19A Wuerth_7499151120

FB20 BLM18PG121SN1D
FB23 BLM18PG121SN1D
FB26 BLM18PG121SN1D
C87 1uF
C84 0.1uF
C93 0.1uF
C95 1uF
C101 0.1uF
C102 1uF
U42 ADuM130D
U44 FIN1047M
VIA
VIB
VIC
NC
DISABLE1
VOA
VOB
VOC
DIN1
DIN2
DIN3
DIN4
DOUT1+
DOUT1–
DOUT2+
DOUT2–
DOUT3+
DOUT3–
DOUT4+
DOUT4–
EN
R88 100
R89 100
R90 100
R95 100
R96 100
R98 100
R94 100
R95 100
R130 100
J19B Wuerth_7499151120

SN65LVDS1/SN65LVDS2
https://www.ti.com/lit/ds/symlink/sn65lvds2.pdf
ADN4654/ADN4655
https://www.analog.com/media/en/technical-documentation/data-sheets/ADN4654-4655-4656.pdf
ADuM130D
https://www.analog.com/media/en/technical-documentation/data-sheets/ADuM130D_130E_131D_131E.pdf
FIN1047M
https://www.onsemi.com/pub/Collateral/FIN1047-D.pdf
FIN1048M
https://www.onsemi.com/pub/Collateral/FIN1048-D.pdf
SN74LVC1G17
https://www.ti.com/lit/ds/symlink/sn74lvc1g17.pdf
SN74LVC1G125
https://www.ti.com/lit/ds/symlink/sn74lvc1g125.pdf
SN74LVC1G126
https://www.ti.com/lit/ds/symlink/sn74lvc1g126.pdf
Wuerth 7499151120
https://www.we-online.de/katalog/datasheet/7499151120.pdf

Sheet: /BBB_Side/
File: BBB_Side.sch
Title: B2V – Part 1
Size: A3 | Date: September 1, 2020 | Rev: 0.2
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