Americas

Atlanta - 678-957-9614
Austin - 512-257-3370
Boston - 774-760-0087
Chicago - 630-285-0071
Cleveland - 216-447-0464
Dallas - 972-818-7423
Detroit - 248-848-4000
Houston - 281-894-5983
Indianapolis - 317-773-8323
Los Angeles - 949-462-9523
New York - 631-435-6000
Phoenix - 480-792-7200
Santa Clara - 408-961-6444
Toronto - 905-673-0699

Europe

Austria - Wels - 43-7242-2244-39
Denmark - Copenhagen - 45-4450-2828
France - Paris - 33-1-69-53-63-20
Germany - Munich - 49-89-627-144-0
Italy - Milan - 39-0331-742611
Netherlands - Drunen - 31-416-690399
Spain - Madrid - 34-91-708-08-90
UK - Wokingham - 44-118-921-5869

Asia/Pacific

Australia - Sydney - 61-2-9868-6733
China - Beijing - 86-10-8569-2100

Asia/Pacific (Continued)

China - Chengdu - 86-28-8665-5511
China - Chongqing - 86-23-8980-9588
China - Hangzhou - 86-571-8792-8115
China - Hong Kong SAR - 852-2943-5100
China - Nanjing- 86-25-8473-2460
China - Qingdao - 86-532-8502-7355
China - Shanghai - 86-21-5407-5533
China - Shenyang - 86-24-2334-2829
China - Shenzhen - 86-755-8864-2200
China - Wuhan - 86-27-5980-5300
China - Xiamen - 86-592-2388138
China - Xian - 86-29-8833-7252
China - Zhuhai - 86-756-3210040
India - Bangalore - 91-80-3090-4444
India - New Delhi - 91-11-4160-8631
India - Pune - 91-20-3019-1500
Japan - Osaka - 81-6-6152-7160
Japan - Tokyo - 81-3-6880-3770
Korea - Daegu - 82-53-744-4301
Korea - Seoul - 82-2-554-7200
Malaysia - Kuala Lumpur - 60-3-6201-9857
Malaysia - Penang - 60-4-227-8870
Philippines - Manila - 63-2-634-9065
Singapore - 65-6334-8870
Taiwan - Hsin Chu - 886-3-5778-366
Taiwan - Kaohsiung - 886-7-213-7840
Taiwan - Taipei - 886-2-2508-8600
Thailand - Bangkok - 66-2-694-1351

03/25/14



Microchip Technology Inc. • 2355 West Chandler Blvd. • Chandler, AZ 85224-6199

www.microchip.com

The Microchip name and logo, the Microchip logo, and MPLAB are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies. © 2014, Microchip Technology Incorporated, Printed in the U.S.A. All Rights Reserved. 03/14

DS50002318A



PIC32 Audio Codec Daughter Board – AK4642EN Information Sheet

Thank you for purchasing a PIC32 Audio Codec Daughter Board – AK4642EN. This information sheet provides important information that will help you successfully use the daughter board as quickly as possible.

This daughter board is designed specifically to be used with the PIC32 Bluetooth® Audio Development Kit (DV320032); however, it can also be used with other Microchip development hardware.

For more information about this daughter board, please visit: http://www.microchip.com.

Features

The PIC32 Audio Codec Daughter Board – AK4642EN is a high-performance stereo codec board for selected PIC32 hardware development platforms. This board features the AKM AK4642EN stereo codec, which includes built-in microphone and headphone amplifiers. This board is suitable for adding audio input and output capabilities to the PIC32 Bluetooth Starter Kit, and as previously mentioned, it is compatible with the PIC32 Bluetooth Audio Development Kit.

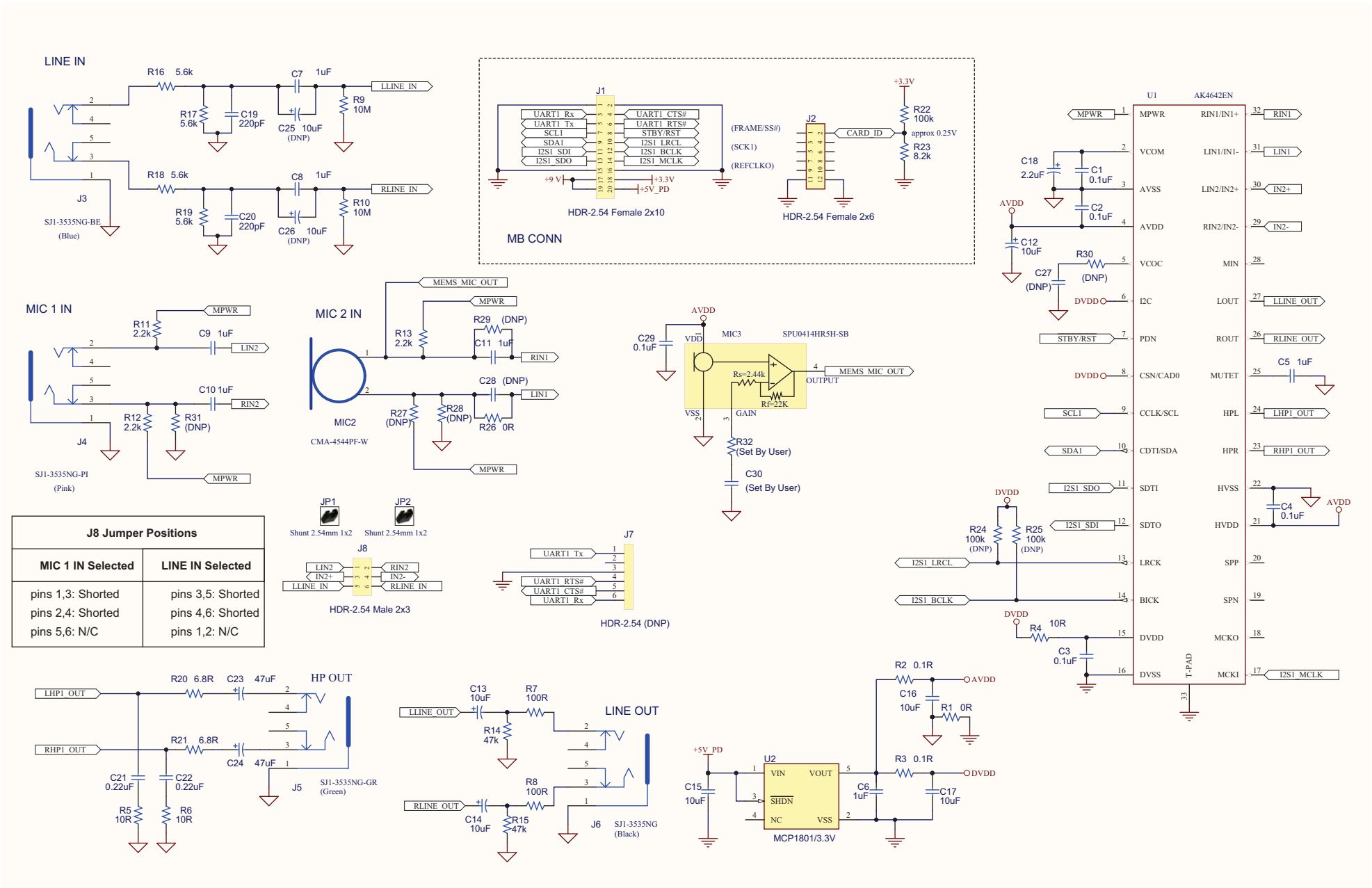
The PIC32 Audio Codec Daughter Board – AK4642EN features include:

- AK4642EN Codec
- MCP1801 Power Regulator
- On-board MEMs Microphone
- 3.5 mm Inputs and Outputs:
  - Line in
  - External Mic in
  - Line out
  - Headphone out

Additional Information

For more information on drivers and examples, please visit:

- www.microchip.com/pic32btsuites
- www.microchip.com/harmony


LINE IN
R16 5.6k
C7 1uF
LLINE_IN
R17 5.6k
C19 220pF
C25 10uF (DNP)
R9 10M
R18 5.6k
C8 1uF
RLINE_IN
R19 5.6k
C20 220pF
C26 10uF (DNP)
R10 10M
J3
SJ1-3535NG-BE (Blue)
MB CONN
J1
UART1_Rx
UART1_Tx
SCL1
SDA1
I2S1_SDI
I2S1_SDO
UART1_CTS#
UART1_RTS#
STBY/RST
I2S1_LRCL
I2S1_BCLK
I2S1_MCLK
(FRAME/SS#)
(SCK1)
(REFCLKO)
+9 V
+3.3V
+5V_PD
HDR-2.54 Female 2x10
J2
CARD_ID
+3.3V
R22 100k
approx 0.25V
R23 8.2k
HDR-2.54 Female 2x6
U1
AK4642EN
MPWR
VCOM
AVSS
AVDD
VCOC
I2C
PDN
CSN/CAD0
SCL1
SDA1
I2S1_SDO
I2S1_SDI
I2S1_LRCL
I2S1_BCLK
DVDD
DVSS
SDTI
SDTO
LRCK
BICK
MCKO
MCKI
T-PAD
RIN1/IN1+
LIN1/IN1-
LIN2/IN2+
RIN2/IN2-
MIN
LOUT
ROUT
MUTET
HPL
HPR
HVSS
HVDD
SPP
SPN
RIN1
LIN1
IN2+
IN2-
LLINE_OUT
RLINE_OUT
LHP1_OUT
RHP1_OUT
I2S1_MCLK
C18 2.2uF
C1 0.1uF
C2 0.1uF
C12 10uF
R30 (DNP)
C27 (DNP)
C5 1uF
C4 0.1uF
R24 100k (DNP)
R25 100k (DNP)
R4 10R
C3 0.1uF
MIC 1 IN
R11 2.2k
C9 1uF
LIN2
C10 1uF
RIN2
R12 2.2k
R31 (DNP)
J4
SJ1-3535NG-PI (Pink)
MIC 2 IN
MEMS_MIC_OUT
R13 2.2k
R29 (DNP)
C11 1uF
RIN1
C28 (DNP)
LIN1
R27 (DNP)
R28 (DNP)
R26 0R
MIC2
CMA-4544PF-W
C29 0.1uF
MIC3
SPU0414HR5H-SB
Rs=2.44k
Rf=22K
GAIN
R32 (Set By User)
C30 (Set By User)
JP1
JP2
Shunt 2.54mm 1x2
Shunt 2.54mm 1x2
J8
HDR-2.54 Male 2x3
J7
HDR-2.54 (DNP)
J8 Jumper Positions
MIC 1 IN Selected
LINE IN Selected
pins 1,3: Shorted
pins 2,4: Shorted
pins 5,6: N/C
pins 3,5: Shorted
pins 4,6: Shorted
pins 1,2: N/C
HP OUT
R20 6.8R
C23 47uF
R21 6.8R
C24 47uF
C21 0.22uF
C22 0.22uF
R5 10R
R6 10R
J5
SJ1-3535NG-GR (Green)
LINE OUT
C13 10uF
R7 100R
R14 47k
R8 100R
C14 10uF
R15 47k
J6
SJ1-3535NG (Black)
U2
VIN
VOUT
SHDN
NC
VSS
MCP1801/3.3V
C15 10uF
C6 1uF
C17 10uF
R2 0.1R
C16 10uF
R1 0R
R3 0.1R