

Barix Audio Module

Technical Documentation

Revision	Date	Description	Author
1.0	2005/08/19	Initial Version	MW

Connector Pin-out

All connections to the audio module are made by four, standard 2,54mm spacing, single row pin headers. Even if physical connections are available according to the description, most function need software support (driver's etc.) and might not operate with the standard firmware. J2 is not populated at the moment and it's function is not supported. However it is recommended to keep the space available on the carrier board as future versions of the audio module might have this connector installed.

Connector J1

Pin	Name/Type	Description
1	-RST D	Active low Reset I/O
2	TMR.0 I/B	Timer 0 external input / PIO #11
3	DGND P	Digital Ground
4	PIO30 B	DSTni EX PIO #30
5	PIO29 B	DSTni EX PIO #29
6	PIO25 B	DSTni EX PIO #25
7	PIO24 B	DSTni EX PIO #24
8	PIO17 B	DSTni EX PIO #17
9	PIO8 B	DSTni EX PIO #8
10	DGND P	Digital Ground
11	VIN P	Audio module input Voltage
12	CTS.0 I	UART 0 flowcontrol input
13	RTS.0 O	UART 0 flowcontrol output
14	RXD.0 I	UART 0 receive data
15	TXD.0 O	UART 0 transmit data
16	DGND P	Digital Ground
17	USB- B	USB 1.1 Host Interface negative
18	USB+ B	USB 1.1 Host Interface positive
19	I2CCLK B	I ² C Clock / PIO #31
20	I2CDAT B	I ² C Data / PIO #26

Connector J2

Pin	Name/Type	Description
1	SOC O	I ² S serial clock output
2	SOD O	I ² S serial data output
3	SOI O	I ² S frame indication
4	DGND P	Digital Ground

Connector J3

Pin	Name/Type	Description
1	MICI- AI	Microphone input negative
2	MICI+ AI	Microphone input positive
3	AGND P	Audio Ground
4	INM AI	Mono audio Line input
5	OUTL AO	Left channel audio output
6	OUTR AO	Right channel audio output

Connector J4

Pin	Name/Type	Description
1	TX+ O	PHY level positive Transmit
2	TXCT R	Transmit Transformer center Tap
3	TX- O	PHY level negative Transmit
4	DGND P	Digital Ground
5	RX- I	PHY level negative Receive
6	RXCT R	Receive Transformer center Tap
7	RX+ I	PHY level positive Receive
8	DGND P	Digital Ground
9	LED.3 O	see DSTni EX manual
10	LED.2 O	see DSTni EX manual
11	LED.1 O	see DSTni EX manual
12	LED.0 O	see DSTni EX manual

P = Power

I = Input (audio module is controlled by this signal)

O = Output (audio module drives this signal)

B = Bidirectional

D = Open Drain (pullup resistor on module)

R = Reference level

A = Input or Output belongs to audio domain

Power Supply

The audio module works with a supply voltage of 3.3VDC \pm 5%. The maximum required power is 1.6Watt.

Block diagram

