

### Key Features

- Quad-Core ARM® Cortex-A53 Processor, up to 1.8 GHz per core
- H.265/H.264 Encoding + Decoding
- Supports 1080p60 Encode/Decode
- Display Output: microHDMI
- Audio: Analog audio (Mic/Line-in and Speaker out)
- USB: USB 3.0 Type-C
- 2× UART
- General Purpose I/O (GPIO) for device control

### Product Description

The ANT-1776LITE board is a high-performance embedded platform designed for intelligent edge applications that demand speed, efficiency, and versatility. Powered by a Quad-Core ARM® Cortex-A53 processor running up to 1.8GHz per core and backed by 6GB of LPDDR4 memory, ANT-1776LITE delivers exceptional processing power for AI, vision, and video applications.

With dual MIPI camera ports and a multi-stream HD video engine supporting H.265/H.264 1080p60 encode and decode, it's built for advanced imaging and real-time video analytics. Whether it's for smart surveillance, robotics, or machine vision, ANT-1776LITE handles demanding workloads with ease.

Featuring 32GB of onboard eMMC storage, USB 3.0 Type-C, and Gigabit Ethernet, it ensures rapid data transfer and seamless connectivity. The inclusion of microHDMI display output, analog audio, and flexible I/O options such as UART and GPIO make integration effortless across a range of embedded environments.

# ANT-1776LITE

## PRODUCT TECHNICAL SPECIFICATION



### Electrical Characteristics

Parameter	Min	Typ	Max	Unit
Main Input Voltage	5*	12	16	V
Power Consumption	-	3.5	-	W
Operating Temp	-40		+85	C
CPU Clock	-	1.6	-	GHz

\* If using USB, the minimum input voltage is 7 volts.

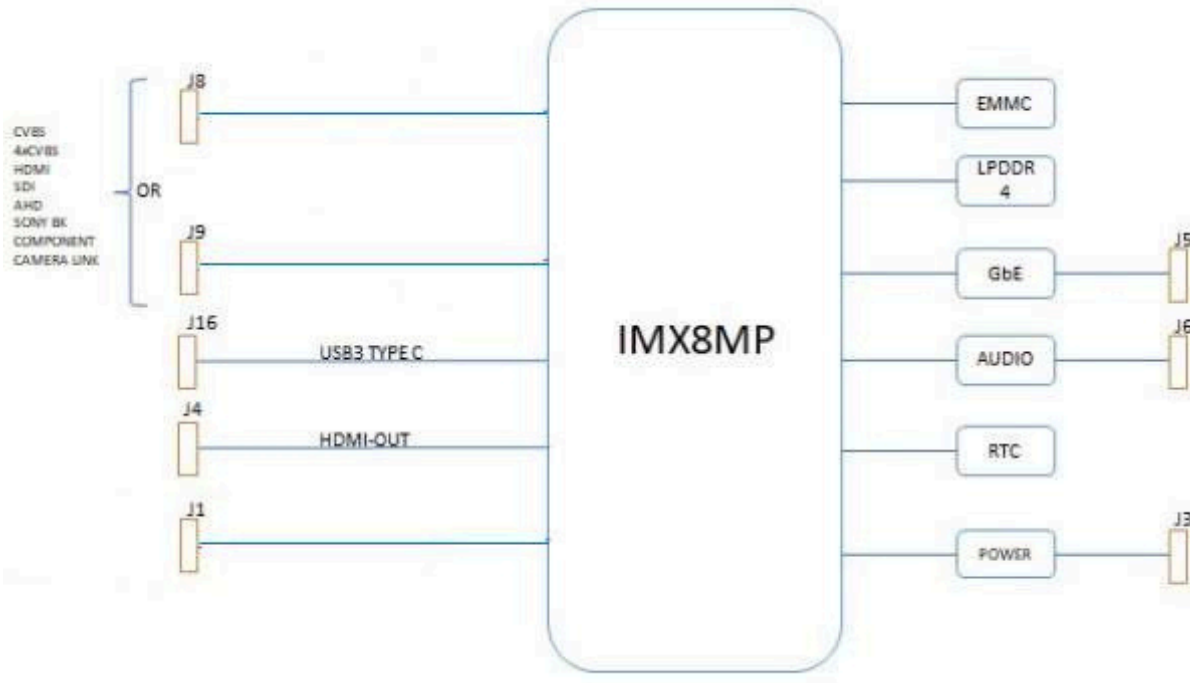
### Connector Details

REF	COMPANY MANUFACTURING	PN	NOTE
J3	JST	SM06B-SRSS-TB	POWER
J11	JST	SM04B-XSRS	Terminal
J5	JST	SM08B-SRSS-TB	ETHERNET
J6	JST	SM05B-SRSS-TB	AUDIO
J16	JAE Electronics	DX07S024JA2R1200	USB30 TYPE C
J1	JST	SM10B-XSRS	UART_USER
J8	Hirose	DF40C-50DP-0.4V	MiPi i/F
J9	Hirose	DF40C-50DP-0.4V	MiPi i/F
J4	JST	SM02B-SRSS	Micro HDMI

# ANT-1776LITE

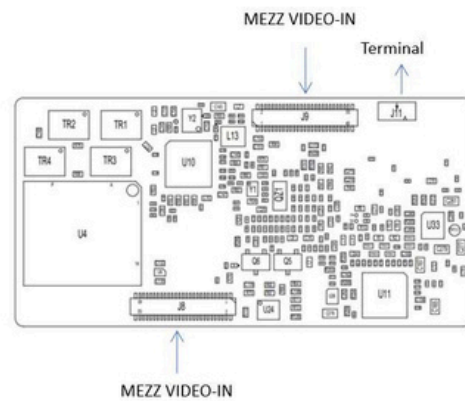
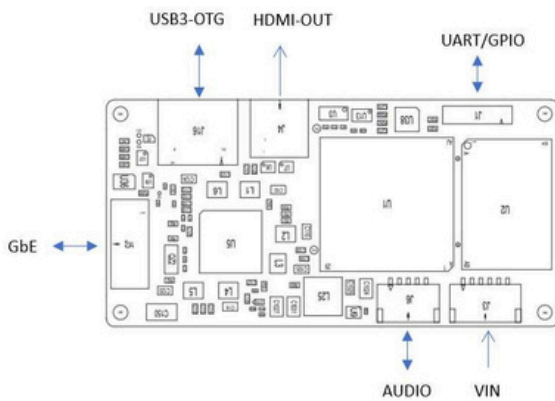
## PRODUCT TECHNICAL SPECIFICATION

### Block Diagram

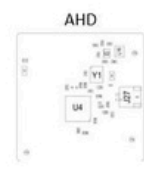
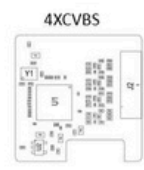
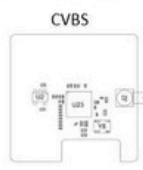
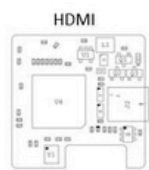
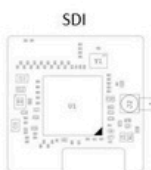


TOP

BOT

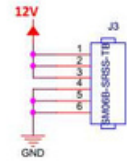


MEZZ VIDEO-IN -OPTIONS

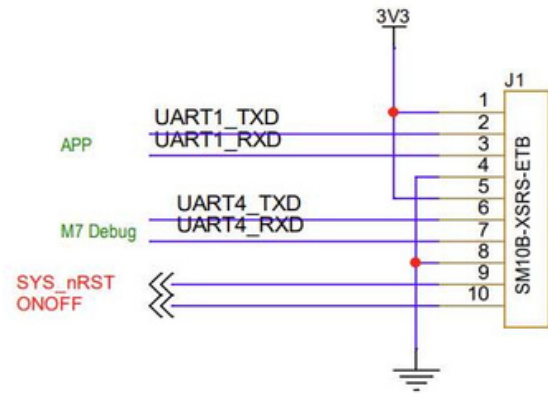


### Pinout

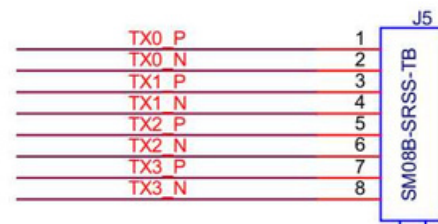
J3 POWER	
Pin Number	Signal
1-3	VIN
4-6	GND



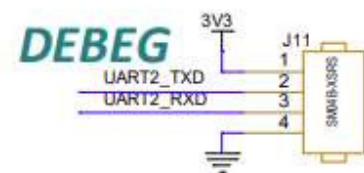
J2UART/GPIO	
Pin Number	Signal
1	3.3V
2	UART1 TX
3	UART1 RX
4	GND
5	3.3V
6	UART4 TX
7	UART4 RX
8	GND
9	Nrst
10	ON/OFF



J5ETHERNET	
Pin Number	Signal
1	TX0_P
2	TX0_N
3	TX1_P
4	TX1_N
5	TX2_P
6	TX2_N
7	TX3_P
8	TX3_N



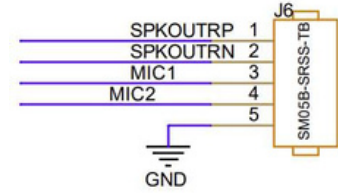
J11 Terminal	
Pin Number	Signal
1	3V3
2	TXD
3	RXD
4	GND



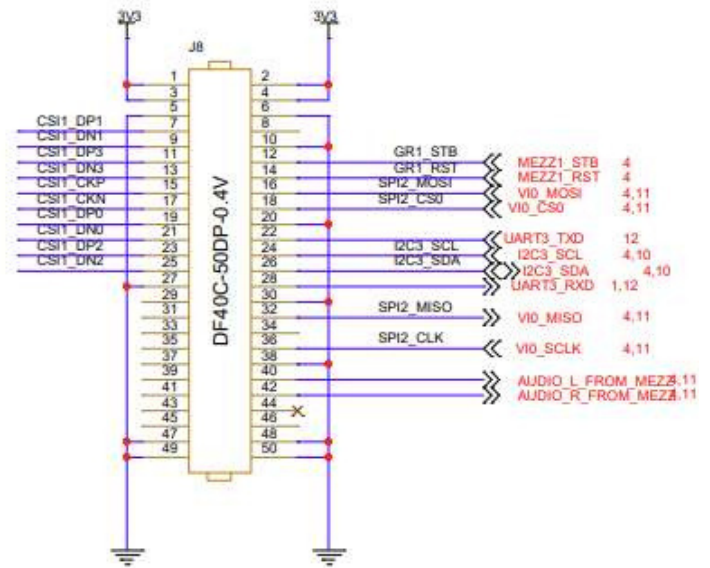
# ANT-1776LITE

## PRODUCT TECHNICAL SPECIFICATION

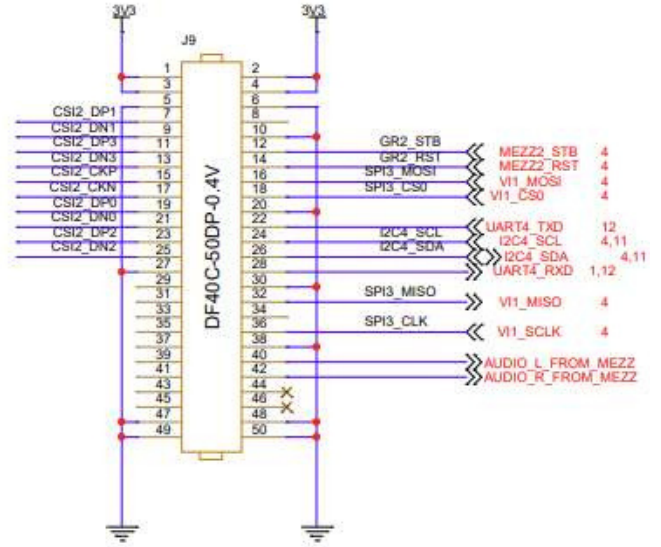
J6 AUDIO	
Pin Number	Signal
1	SPEAKER_P
2	SPEAKER_N
3	MIC1
4	MIC2
5	GND



J8 MiPi -1			
Pin Number	Signal	Pin Number	Signal
1	3.3V	2	3.3V
3		4	
5	GND	6	GND
7	DP1	8	---
9	DN1	10	GND
11	DP3	12	STB
13	DN3	14	RST
15	CLKP	16	MOSI
17	CLKN	18	CS0
19	DP0	20	GND
21	DN0	22	UART3 TX
23	DP2	24	I2C3 SCL
25	DN2	26	I2C3 SDA
27	GND	28	UART3 RX
29	---	30	GND
31	---	32	MISO
33	---	34	---
35	---	36	---
37	---	38	SPI CLK
39	---	40	GND
41	---	42	LINE IN-L
43	---	44	LINE IN-R
45	---	46	---
47	---	48	---
49	GND	50	GND



J9 MiPi-2			
Pin Number	Signal	Pin Number	Signal
1	3.3V	2	3.3V
3	GND	4	GND
5	DP1	6	---
7	DN1	8	GND
9	DP3	10	STB
11	DN3	12	RST
13	CLKP	14	MOSI
15	CLKN	16	CS0
17	DP0	18	GND
19	DN0	20	UART4 TX
21	DP2	22	I2C4 SCL
23	DN2	24	I2C4 SDA
25	GND	26	UART4 RX
27	---	28	GND
29	---	30	MISO
31	---	32	---
33	---	34	---
35	---	36	---
37	---	38	SPI CLK
39	---	40	GND
41	---	42	LINE IN-L
43	---	44	LINE IN-R
45	---	46	---
47	GND	48	---
49	---	50	GND



### Mounting

The overall dimensions of the ANT-1776LITE board are 50x25mm.

