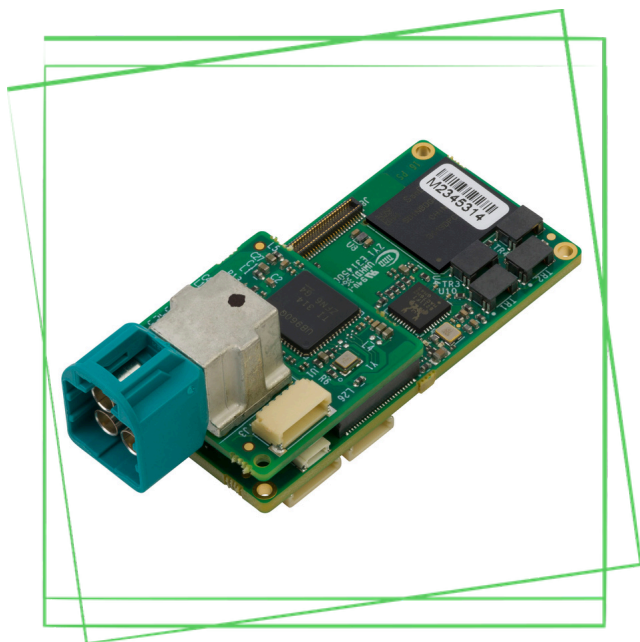


ANT-1776LITE

PRODUCT TECHNICAL SPECIFICATION



Key Features

- Quad-Core ARM® Cortex-A53 Processor, up to 1.8 GHz per core
- H.265/H.264 Encoding + Decoding
- Supports 4 or 8 x CVBS Composite Video Inputs
- Display Output: microHDMI
- USB 3.0 Type-C for raw/compressed recording
- 32gb EMMC Storage
- 2 × Separate UART Serial
- Low latency 100ms
- Adaptive bit rate feature linked to radio RSSI
- NDAA Approved Miniature Design - 50 x 25 mm
- General Purpose I/O (GPIO) for device control

Product Description

The ANT-1776LITE is a high-performance embedded video processing platform designed for multi-channel video acquisition, intelligent edge computing, and advanced surveillance applications.

A key feature of the ANT-1776LITE is its flexible mezzanine architecture, supporting up to two video input mezzanine modules. Each mezzanine can accommodate up to 4 x CVBS video inputs, enabling the system to support a maximum of 8 x simultaneous CVBS channels within a compact embedded platform. This makes it ideal for legacy analogue video integration, mobile surveillance, defence, transportation, and specialist video monitoring applications.

The platform incorporates a powerful multi-stream video engine capable of H.265/H.264 encoding and decoding at up to 1080p60, allowing efficient processing, recording, streaming, and analysis of multiple video sources in real time.

With 32GB of onboard eMMC storage, Gigabit Ethernet, and USB 3.0 Type-C connectivity, the ANT-1776LITE ensures reliable data transfer and network integration. Additional interfaces including microHDMI output, analogue audio, UART, and GPIO provide extensive flexibility for system designers, enabling straightforward integration into a wide range of embedded and OEM applications.

Combining multi-channel CVBS capture, powerful video processing, and versatile connectivity, the ANT-1776LITE provides a compact and scalable solution for modern video-centric embedded systems.

Future mezzanine additions of AHD, HDMI, HD-SDI & LVDS.

ANT-1776LITE

PRODUCT TECHNICAL SPECIFICATION



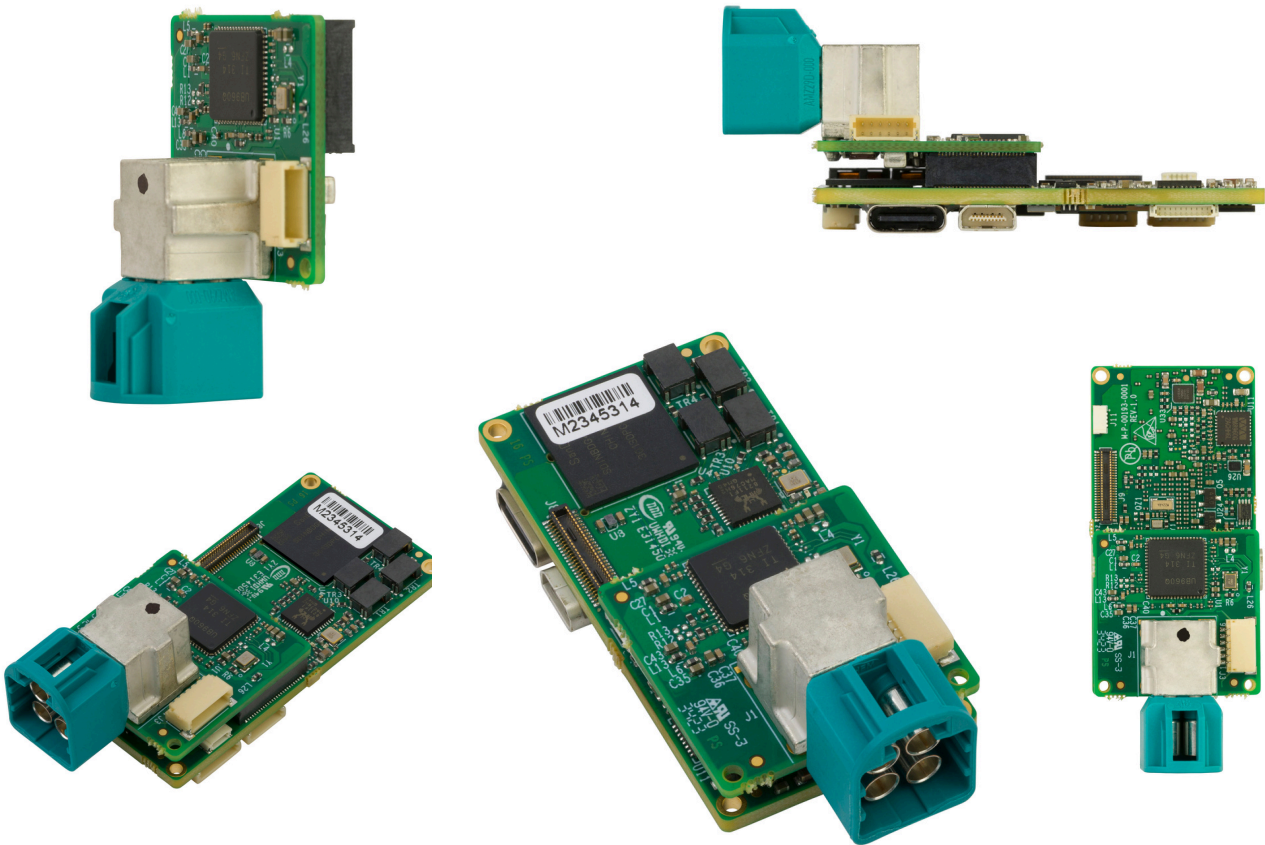
Electrical Characteristics

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 7volts.

Connector Details

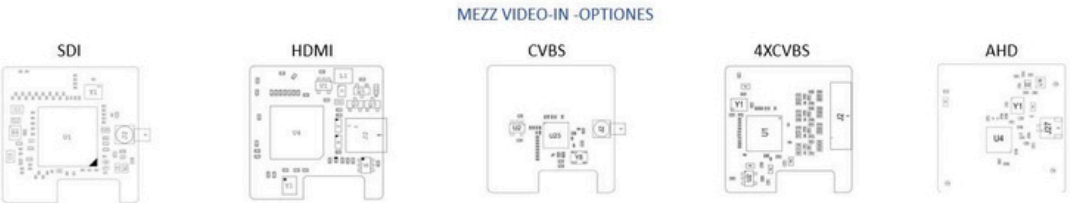
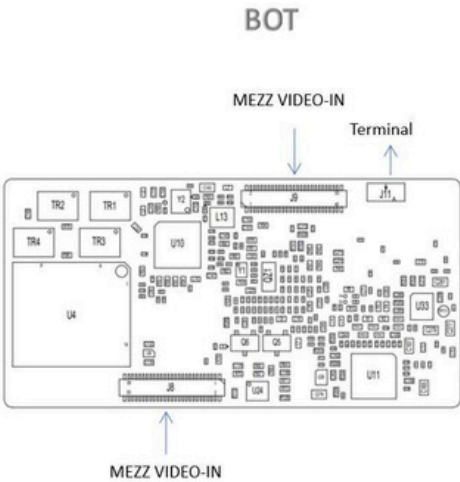
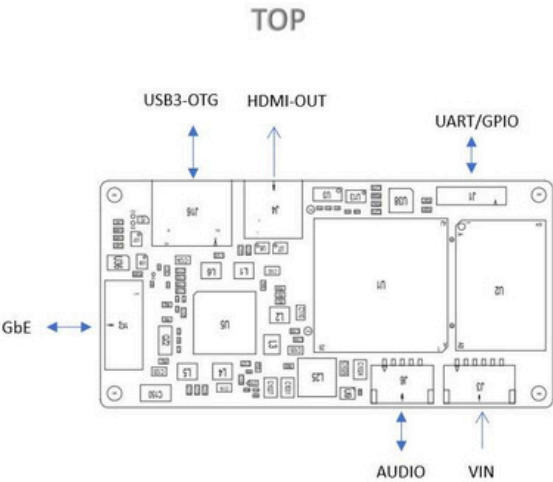
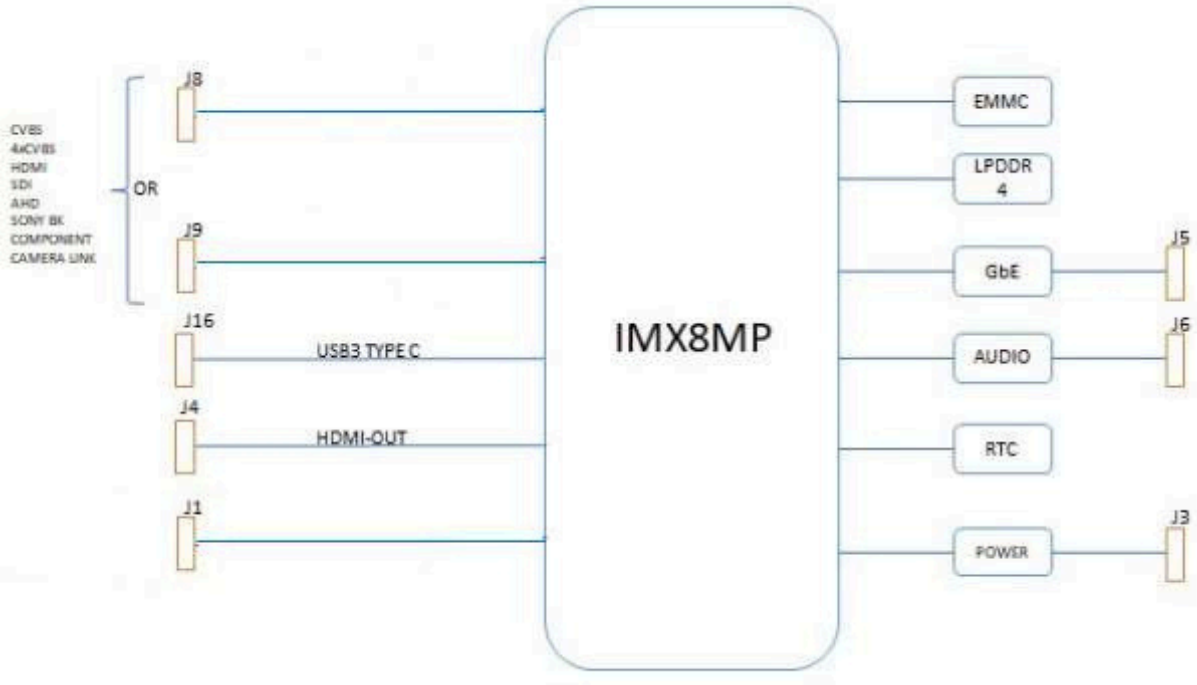
REF	COMPANY	MENUFACTURING	PN	NOTE
J3		JST	SM06B-SRSS-TB	POWER
J11		JST	SM04B-XSRS	Terminal
J5		JST	SM08B-SRSS-TB	ETHERNET
J6		JST	SM05B-SRSS-TB	AUDIO
J16		JAE Electronics	DX07S024JA2R1200	USB30 TYPE C
J1		JST	SM10B-XSRS	UART_USER
J8		Hirose	DF40C-50DP-0.4V	MiPi i/F
J9		Hirose	DF40C-50DP-0.4V	MiPi i/F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



ANT-1776LITE

PRODUCT TECHNICAL SPECIFICATION

Block Diagram

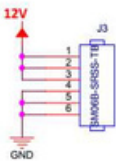


ANT-1776LITE

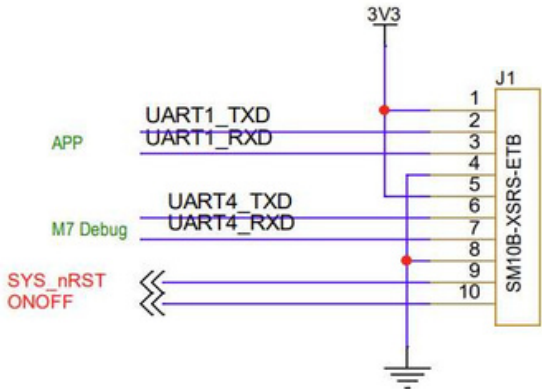
PRODUCT TECHNICAL SPECIFICATION

Pinout

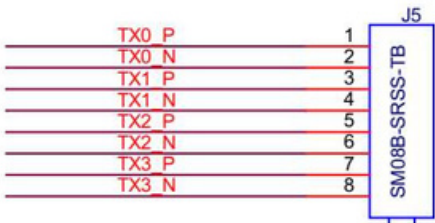
J3 POWER	
Pin Number	Signal
1-3	VIN
4-6	GND



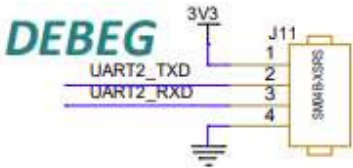
J2UART/GPIO	
Pin Number	Signal
1	3.3V
2	UART1 TX
3	UART1 RX
4	GND
5	3.3V
6	UART4 TX
7	UART4 RX
8	GND
9	Nrst
10	ON/OFF



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



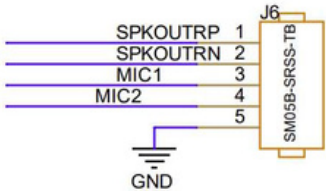
J11 Terminal	
Pin Number	Signal
1	3V3
2	TXD
3	RXD
4	GND



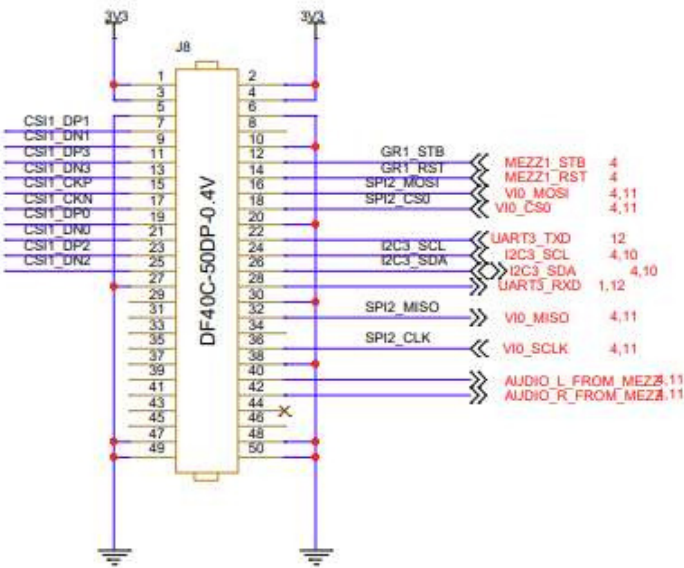
ANT-1776LITE

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	3.3V
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



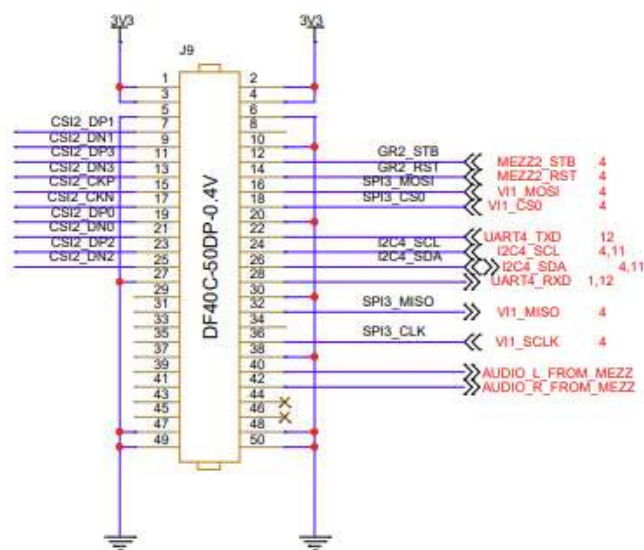
ANT-1776LITE

PRODUCT TECHNICAL SPECIFICATION



ANTRICA
encoders | decoders

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.

