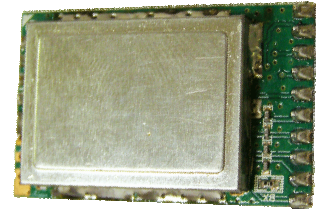


- 5.8GHz Audio & Video Transmitter
- Compact size / Plug and Play Solution
- PLL RF Design
- High output power (100mW under operation voltage 5V)
- Power Output 10dBm/20dBm
- Up to 50m Range
- High Quality video and Stereo audio transmission
- Multi-channel (8 channels for preventing interference)
- Integrated RF & Baseband
- Easy to design-in (Baseband interface and antenna port are drawn out from pitch pins on modules)
- Eval Board Available



Applications

- Wireless Audio/ Video Transmission
- Wireless Security Surveillance

Description

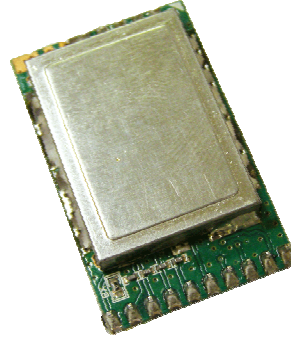
The QuasarUK QVID100 provides an easy to use FM Transmitter for transmission of audio and video signals. Operating in the 2.4GHz ISM band It has multiple user selectable channels

This module provides an easy 'plug and play' solution for audio and video transmission for up to 500metres*)please note that range quoted is Line of Sight – obstructions and interference can reduce this)

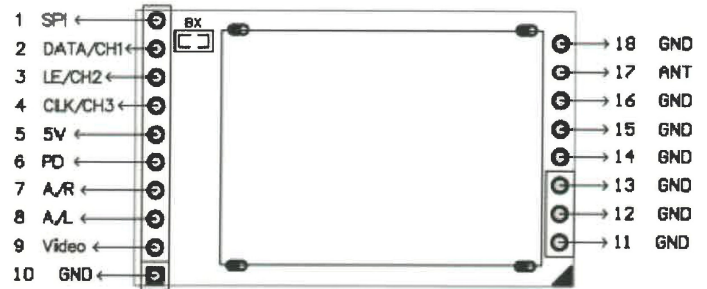
An evaluation board is available to get you up and running with minimal time.

QAV-TX1-58G Transmitter Mono Audio & Video RF Transmitter

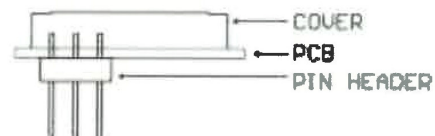
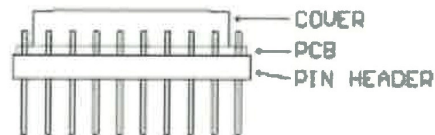
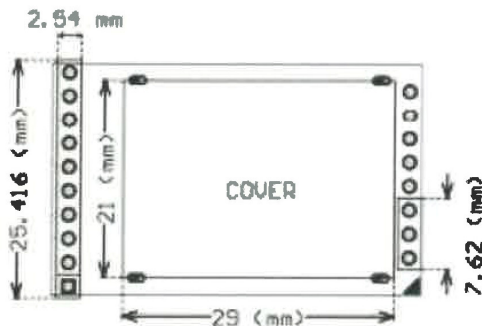
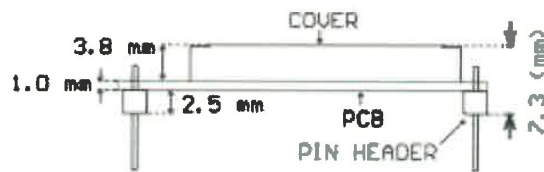
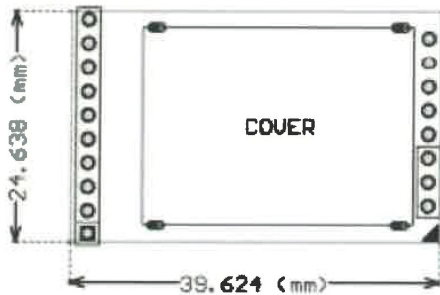
- Video Mod / Demod 50ohm
- RF Antenna O/P 50ohm
- Power Output 20dBm
- 8 Channels between 5725—5875MHz
- Operating Temp range -10 to +60°C



Pin	Description	Pin	Description
1	SPI SE	10	Ground
2	CH1 / SPI_DATA	11	Ground
3	CH2 / SPI_LE	12	Ground
4	CH3 / SPI_CLK	13	Ground
5	Supply Voltage 5V	14	Ground
6	Power Down	15	Ground
7	Audio IN R	16	Ground
8	Audio IN L	17	Antenna
9	Video IN	18	Ground



Mechanical Dimensions



Channel Selection

Ch	Tx Frequency (MHz)	Pin 2	Pin 3	Pin 4
1	5733	Open	Open	Open
2	5752	GND	Open	Open
3	5771	Open	GND	Open
4	5790	GND	GND	Open
5	5809	Open	Open	GND
6	5828	GND	Open	GND
7	5847	Open	GND	GND
8	5866	GND	GND	GND

Ch	Tx Frequency (MHz)	Pin 2	Pin 3	Pin 4
1	5705	Open	Open	Open
2	5685	GND	Open	Open
3	5665	Open	GND	Open
4	5645	GND	GND	Open
5	5885	Open	Open	GND
6	5905	GND	Open	GND
7	5925	Open	GND	GND
8	5945	GND	GND	GND

QAV-TX1-58G Electrical Characteristics

Ambient temp = 25°C unless otherwise stated.

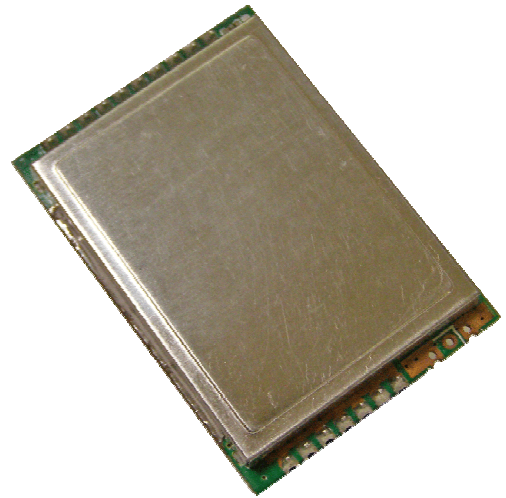
Characteristic	Min	Typical	Max	Dimensions
Supply Voltage	4.9	5.0	5.1	Vdc
Supply Current		300		mA
Transmit Power	18	20	23	dBm*
Audio Sub-Carrier Level		27		dBc
Audio Sub-Carrier L Channel		6.0		MHz
Audio Sub-Carrier R Channel		6.5		MHz
Video Input Level		1.0		Vpk-pk
Video Input Impedance		75		Ohm
Audio Input Level			3.00	Vpk-pk @ 1KHz
Audio Input Impedance		10		KΩ@1KHz
Operating Temperature	-0		+60	°C

RF Layout Notes

- The antenna port impedance is 50 ohm, if your PCB layout package is able to, we suggest you design the track to meet this. If you are unable to we suggest using;
 - 1.25mm-wide microstrip line, impedance 50 ohm - under 0.8mm FR4 PCB;
 - 3mm-wide microstrip line, impedance 50 ohm - under 1.6mm FR4 PCB.
 (Please note that this is merely a suggestion! and should be verified to correct impedance)
- Please note that Microstrip line is a transmission line on PCB with grounded backside.
- The thicker the PCB is, the higher the insertion loss will be!
- At 5.8GHz a quarter wave antenna is only 12mm long, be careful to ensure no spare PCB tracks or connections, as these will be considered as antenna by the transmitter!

QAV-RX1-58G Audio & Video RF Receiver

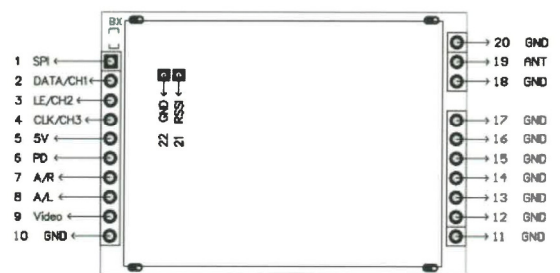
- Video Mod / Demod 50ohm
- RF Antenna I/P 50ohm
- PLL Synthesizer 8 Channels
- Operating Temp range -10 to +60°C



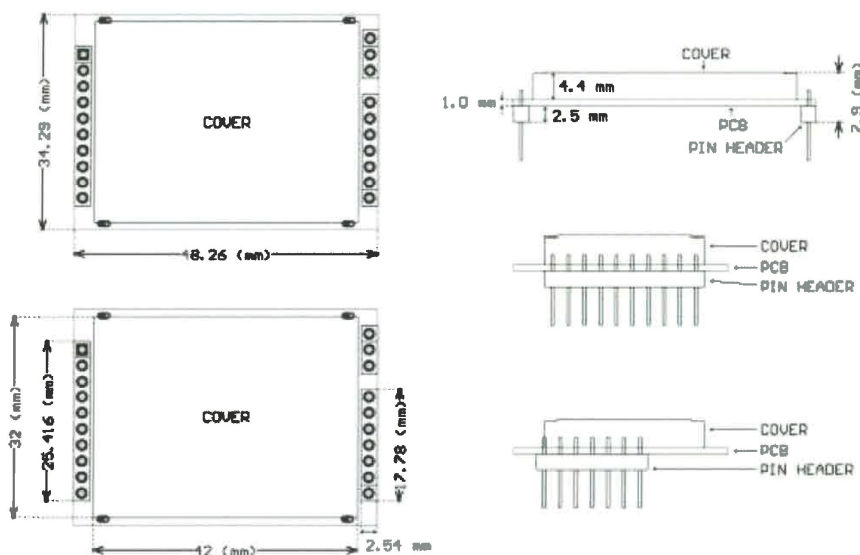
QVID100R-58G Pin Assignments

Pin	Description	Pin	Description
1	SPI SE	12	Ground
2	CH1 / SPI DATA	13	Ground
3	CH2 / SPI LE	14	Ground
4	CH3 / SPI_CLK	15	Ground
5	Supply Voltage 5V	16	Ground
6	Power Down	17	Ground
7	Audio OUT R	18	Ground
8	Audio OUT L	19	Antenna
9	Video OUT	20	Ground
10	Ground	21	RSSI
11	Ground	22	Ground

5.8GHz RX MOD Pin Assignment



Mechanical Dimensions





Audio / Video RF Modules 5.8GHz

Channel Selection

Ch	Rx Frequency (MHz)	Pin 2	Pin 3	Pin 4
1	5733	Open	Open	Open
2	5752	GND	Open	Open
3	5771	Open	GND	Open
4	5790	GND	GND	Open
5	5809	Open	Open	GND
6	5828	GND	Open	GND
7	5847	Open	GND	GND
8	5866	GND	GND	GND

Ch	Rx Frequency (MHz)	Pin 2	Pin 3	Pin 4
1	5705	Open	Open	Open
2	5685	GND	Open	Open
3	5665	Open	GND	Open
4	5645	GND	GND	Open
5	5885	Open	Open	GND
6	5905	GND	Open	GND
7	5925	Open	GND	GND
8	5945	GND	GND	GND

QAV-RX1-58G Electrical Characteristics

Ambient temp = 25°C unless otherwise stated.

Characteristic	Min	Typical	Max	Dimensions
Supply Voltage	4.9	5.0	5.1	Vdc
Supply Current		200		mA
Input Level	-85		-10	dBm
Sensitivity		-80		dBm
Video Output Level	0.8	1.0	1.2	Vpk-pk* Note1
Video S/N Ratio	40			dB *Note 2
Audio Output Level			3.00	Vpk-pk @ 1KHz
Audio Freq Response	50		15K	Hz
Audio S/N Ratio	47	50	53	dB
Operating Temperature	-10		60	°C

Notes

1. Modulation signal 75% Colour Bar 75Ω Load
2. 100KHz 1Vp-pSine Wave

QAV Evaluation Boards

- RF Transmission Evaluation
- Direct Phono Connectors
- Range Testing
- Target Environment Testing
- Antenna Evaluation

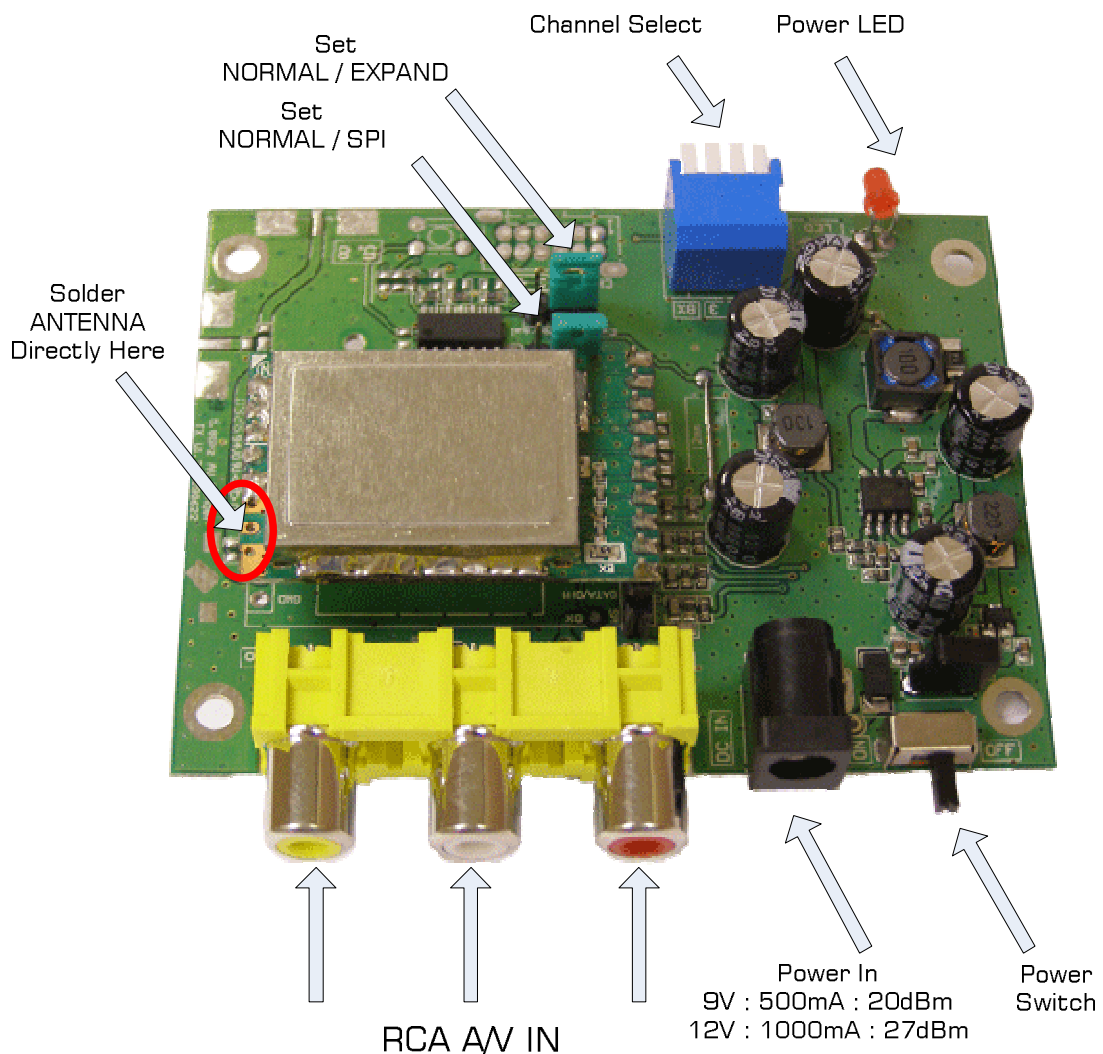
This Evaluation boards directly accepts the QVID Module and provides a ready made application platform to enable an easy to use Audio/Video Link for evaluation and testing.

The purpose of this board is to assist the engineer in achieving a wireless audio and video link

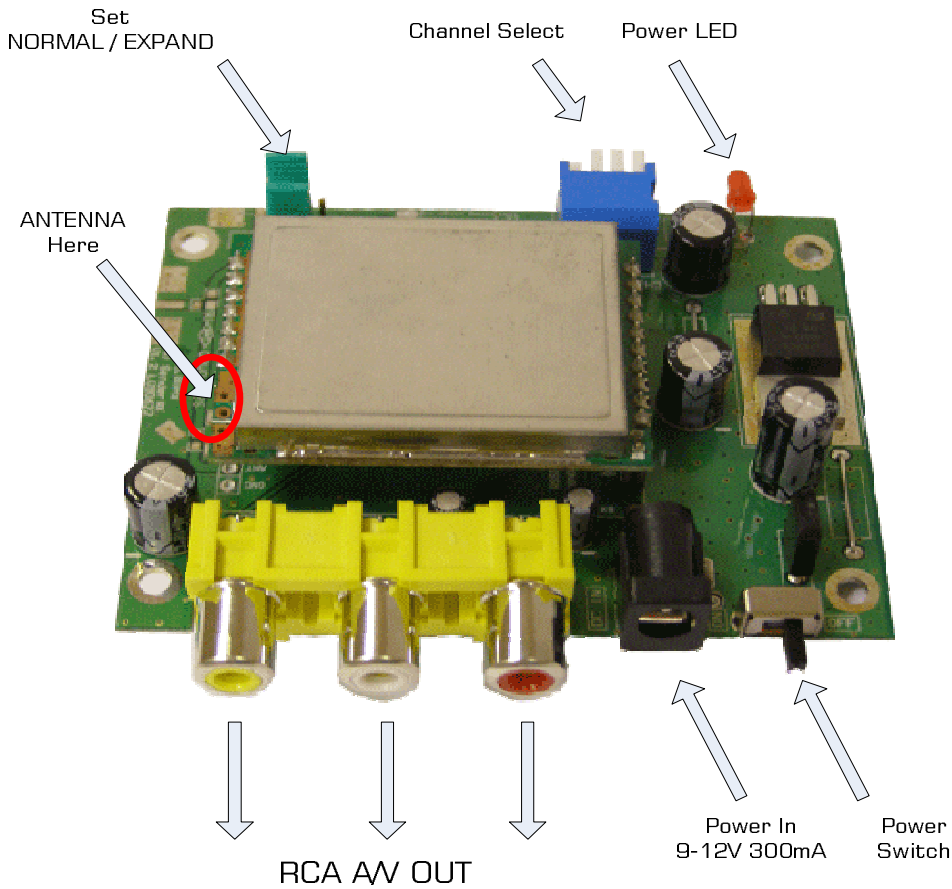
This board requires only a Power supply and an input device such as a camera and microphone.

Connections to the eval board are standard Phono connectors and the board has a standard 2.5mm Jack socket for power. Please note these eval boards are supplied separately without the modules.

QAV-TX1-EVAL Transmitter Evaluation Board



QAV-RX1-EVAL Receiver Evaluation Board



Jumper Link Setting

	Normal	SPI
Normal	8 ch in-Band	8 ch in-Band
Expand	8 ch in-Band	16 ch in-Band

Channel Selection 1 = Switch UP, 0 = Switch Down

8 Channel In-Band		
Ch	Tx Frequency (MHz)	Switch
1	5733	0000
2	5752	0001
3	5771	0010
4	5790	0011
5	5809	0100
6	5828	0101
7	5847	0110
8	5866	0111

16 Channel Out-Band					
Ch	Tx Frequency (MHz)	Switch	Ch	Tx Frequency (MHz)	Switch
1	5733	0000	9	5700	1000
2	5752	0001	10	5680	1001
3	5771	0010	11	5660	1010
4	5790	0011	12	5640	1011
5	5809	0100	13	5620	1100
6	5828	0101	14	5600	1101
7	5847	0110	15	5580	1110
8	5866	0111	16	5560	1111



Audio / Video RF Modules 5.8GHz

Part Numbers

Part Number	Description	Range** (Metres)
QAV-TX1-58G	AV Transmitter Module Stereo 100mW	
QAV-RX1-58G	AV Receiver Module	
QAV-TX1-EVAL	Eval Board for AVT100S Stereo Version	
QAV-RX1-EVAL	Eval Board for AVR	
PSU-12V1AIN-IP	12V 1A Power Supply for Eval Boards 110-230Vac IP67	

**Range stated is optimum, direct line of sight. In worst conditions this can be reduced by over 50%

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Audio / Video RF Modules 5.8GHz

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