

AG02 Product Brief

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AG02 介绍

AG02 集成了 10bit 的视频 ADC 以及 24bit AUADC 和 HDMI 1.3 编码发送模块，支持模拟 VGA 信号转为 HDMI 的无损输出。AG02 视频输入模式最高支持到 1920x1200@60Hz, 支持模拟音频左右声道同时输入。

AG02 可以单芯片实现 VGA 转 HDMI，内部集成 MCU，无需用户任何配置。非常适合各类机顶盒，播放机，展台，摄像机，转换盒等 VGA 接口转为 HDMI 输出。

AG02 功能列表

- 内部集成 MCU，无需用户任何配置。

- 视频输入

内置三通道 10-bit ADC.

ADC 最大模拟采样率高达 192MSPS

支持模拟输入范围：0.45V ~ 1V (P-P)

支持 RGB+HV 信号

自动偏移(offset)/相位(phase)调整

支持输入模式最高达 1920x1200@60

- 音频输入

Line 输入，内置 24bit audio ADC

SPDIF 输入

■HDMI 输出

支持 HDMI 1.3 和 DVI1.0

集成 HDMI 1.3 TMD5 内核 运行速度高达 192MHz

支持 24-bit 色深, 支持分辨率最高 可达 19200x1200@60Hz

支持 CEC 功能和热插拔(Hot Plug)

■支持自动模式检测

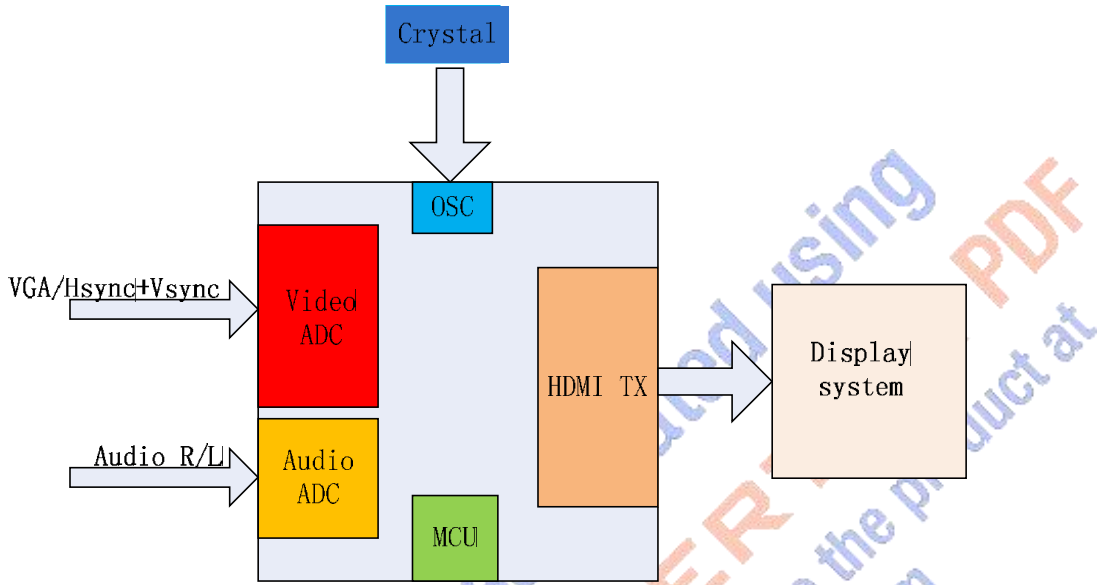
■封装

6mmX6mm 48pin plastic QFN

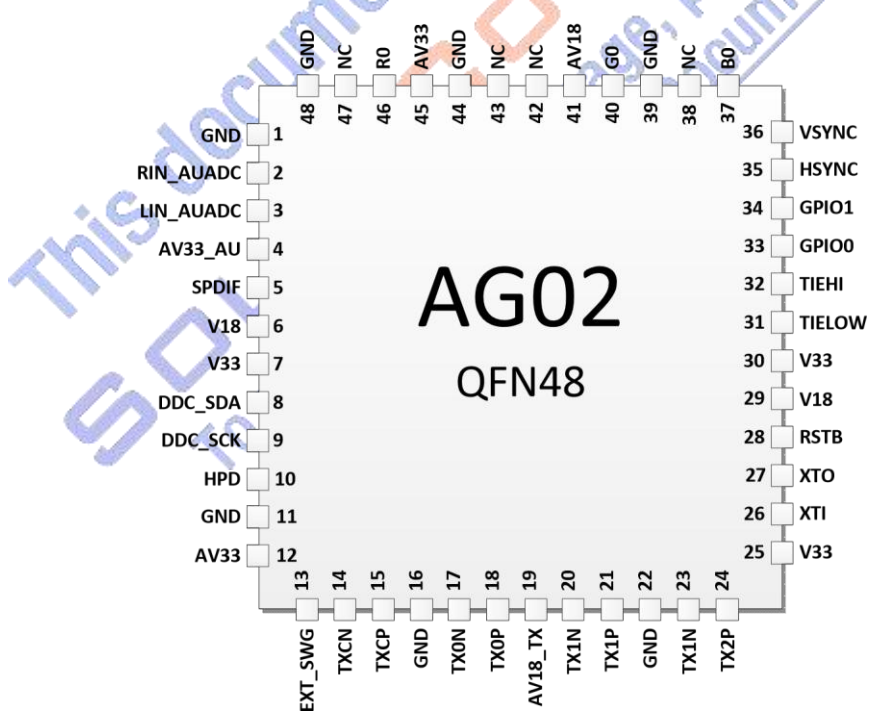
3.3V/1.8V 电源供应

PB-free 和 RoHS 认证

AG02 系统应用示意图



AG02 Pin Diagram



AG02 Pin Description

Pin #	Pin Name	Type	Description
1	GND	Power	Ground
2	RIN_AUADC	Input	Audio R channel input
3	LIN_AUADC	Input	Audio L channel input
4	AV33_AU	Power	Audio 3.3v power
5	SPDIF	Input	Spdif input
6	V18	Power	Core 1.8v power
7	V33	Power	IO 3.3v power
8	DDC_SDA	Bidirectional	DDC data channel
9	DDC_SCK	Bidirectional	DDC clk channel
10	HDP	Input	Hot plug detect
11	GND	Power	Ground
12	AV33	Power	HDMI power 3.3v
13	EXT_SWG	Bidirectional	2K resitor to GND
14	TXCN	Output	HDMI clk negative output
15	TXCP	Output	HDMI clk positive output
16	GND	Power	Ground
17	TX0N	Output	HDMI channel-0 negative output
18	TX0P	Output	HDMI channel-0 positive output
19	AV18_TX	Power	HDMI 1.8v power
20	TX1N	Output	HDMI channel-1 negative output
21	TX1P	Output	HDMI channel-1 positive output
22	GND	Power	Ground
23	TX2N	Output	HDMI channel-2 negative output
24	TX2P	Output	HDMI channel-2 positive output
25	V33	Power	IO 3.3v power
26	XTI	Output	crystal connector
27	XTO	Output	crystal connector
28	RSTB	Input	chip reset. 0=reset
29	V18	Power	Core 1.8v power

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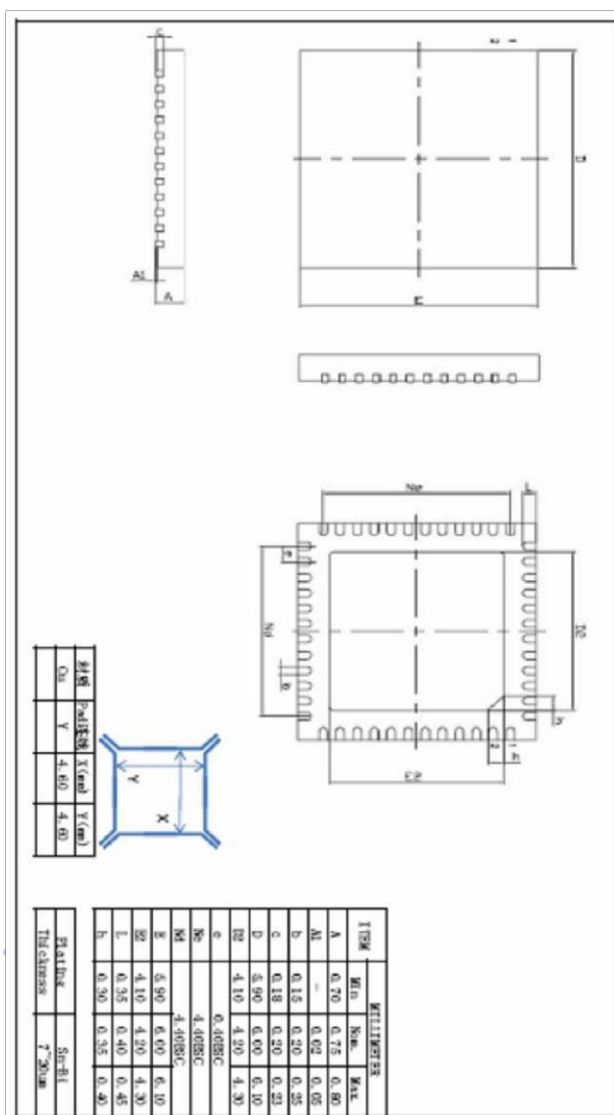
30	V33	Power	IO 3.3v power
31	TIELOW	Input	Tie to ground
32	TIEHI	Input	Tie to 3.3v power
33	GPIO0	Input	Tie to ground
34	GPIO1	Input	Tie to ground
35	HSYNC	Input	Video hsync
36	VSYNC	Input	Video vsync
37	B0	Input	Analog Video Input
38	NC	Floating	
39	GND	Power	Ground
40	G0	Input	Analog Video Input
41	AV18	Power	Video ADC 1.8v power
42	NC	Floating	no connect
43	NC	Floating	no connect
44	GND	Power	Ground
45	AV33	Power	Video ADC 3.3v power
46	R0	Input	Analog Video Input
47	NC	Floating	no connect
48	GND	Power	Ground

Electrical Characteristics

	Min	Typ	Max	Max current
AV33_AU,V33,AV33,	2.97	3.3	3.63	220mA
V18,AV18_TV,AV18	1.62	1.8	1.98	150mA
Ta	-20	--	85	--
store	-40	--	125	--

AG02 PACKAGE DIMENSION

QFN48



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