

TL1278P

模块规格书



广州创龙电子科技有限公司

© 2013 Guangzhou Tronlong Electronic Technology Co.,Ltd.

Revision History

Draft Date	Revision No.	Description
2022/12/15	V1.1	1. 新增产品订购型号。 2. 描述优化。
2021/10/20	V1.0	1. 初始版本。

目 录

1 产品简介 4

2 硬件框图 5

3 机械尺寸 6

4 引脚定义 6

5 产品订购型号 7

6 发货清单 7

7 增值服务 8

更多帮助 9

1 产品简介

TL1278P 是一款基于 TI ADS1278 芯片进行设计的 24bit、8 通道、144KSPS 并行采样的 AD 采集模块，与创龙科技 Logos、Spartan-6 等评估板配套使用，可缩短用户开发时间，让产品快速上市。

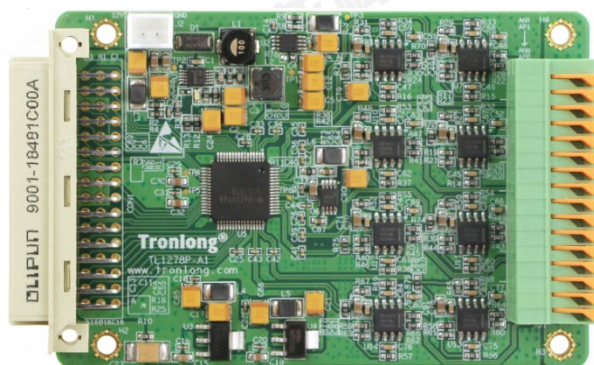


图 1

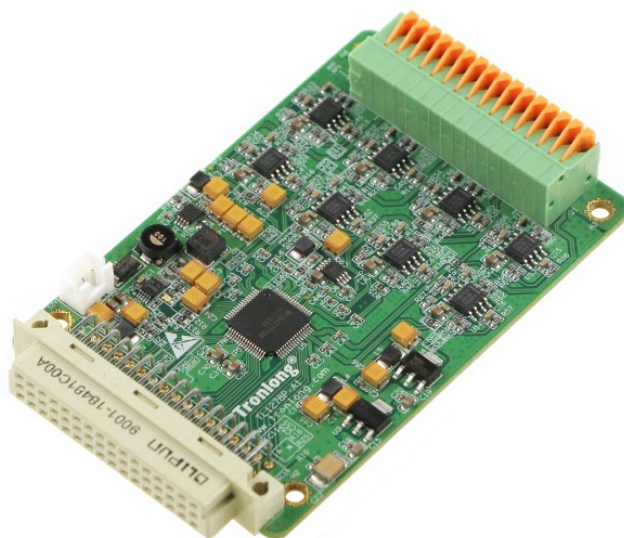


图 2



图 3

因我们的存在，让嵌入式应用更简单

FEATURES	DESCRIPTION
<ul style="list-style-type: none">• Simultaneously Measure Four/Eight Channels• Up to 144kSPS Data Rate• AC Performance:<ul style="list-style-type: none">70kHz Bandwidth111dB SNR (High-Resolution Mode)–108dB THD• DC Accuracy:<ul style="list-style-type: none">0.8µV/°C Offset Drift1.3ppm/°C Gain Drift• Selectable Operating Modes:<ul style="list-style-type: none">High-Speed: 144kSPS, 106dB SNRHigh-Resolution: 52kSPS, 111dB SNRLow-Power: 52kSPS, 31mW/chLow-Speed: 10kSPS, 7mW/ch• Linear Phase Digital Filter• SPI™ or Frame-Sync Serial Interface• Low Sampling Aperture Error• Modulator Output Option (digital filter bypass)• Analog Supply: 5V• Digital Core: 1.8V• I/O Supply: 1.8V to 3.3V	<p>Based on the single-channel ADS1271, the ADS1274 (quad) and ADS1278 (octal) are 24-bit, delta-sigma ($\Delta\Sigma$) analog-to-digital converters (ADCs) with data rates up to 144k samples per second (SPS), allowing simultaneous sampling of four or eight channels. The devices are offered in identical packages, permitting drop-in expandability.</p> <p>Traditionally, industrial delta-sigma ADCs offering good drift performance use digital filters with large passband droop. As a result, they have limited signal bandwidth and are mostly suited for dc measurements. High-resolution ADCs in audio applications offer larger usable bandwidths, but the offset and drift specifications are significantly weaker than respective industrial counterparts. The ADS1274 and ADS1278 combine these types of converters, allowing high-precision industrial measurement with excellent dc and ac specifications.</p> <p>The high-order, chopper-stabilized modulator achieves very low drift with low in-band noise. The onboard decimation filter suppresses modulator and signal out-of-band noise. These ADCs provide a usable signal bandwidth up to 90% of the Nyquist rate with less than 0.005dB of ripple.</p> <p>Four operating modes allow for optimization of speed, resolution, and power. All operations are controlled directly by pins; there are no registers to program. The devices are fully specified over the extended industrial range (–40°C to +105°C) and are available in an HTQFP-64 PowerPAD™ package.</p>
APPLICATIONS <ul style="list-style-type: none">• Vibration/Modal Analysis• Multi-Channel Data Acquisition• Acoustics/Dynamic Strain Gauges• Pressure Sensors	

图 4

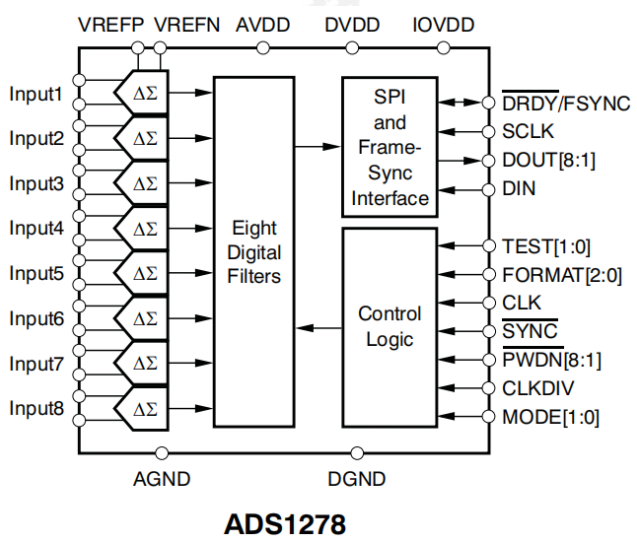


图 5

2 硬件框图

因我们的存在，让嵌入式应用更简单

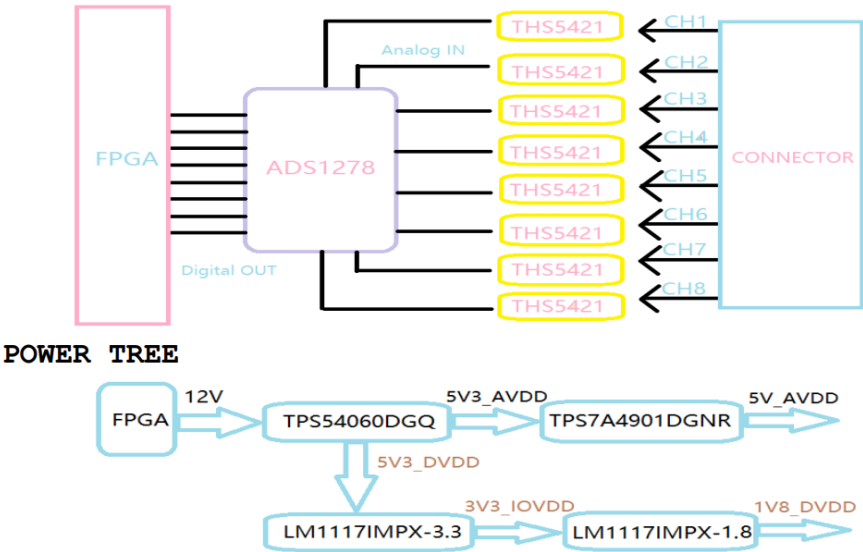


图 6

3 机械尺寸

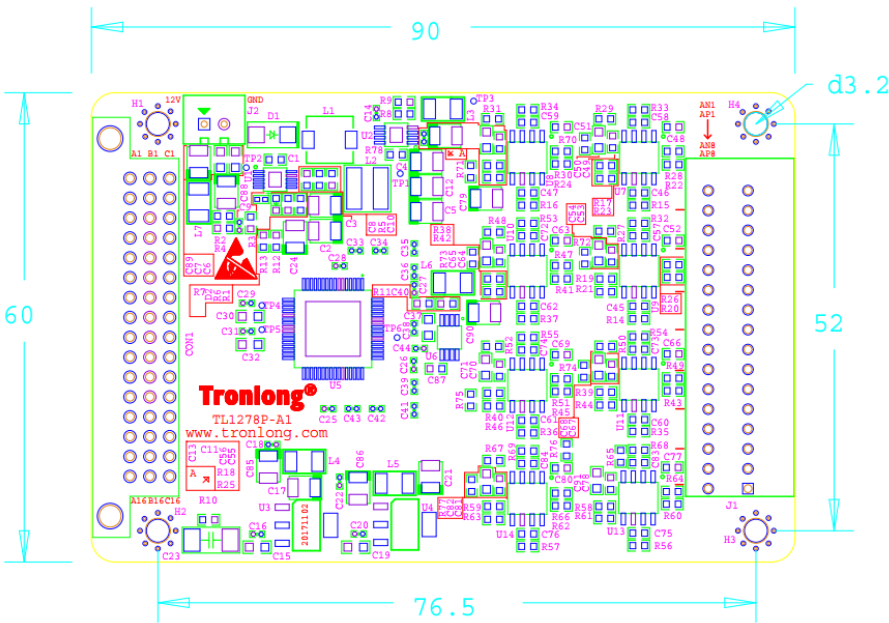


图 7

4 引脚定义

因我们的存在，让嵌入式应用更简单

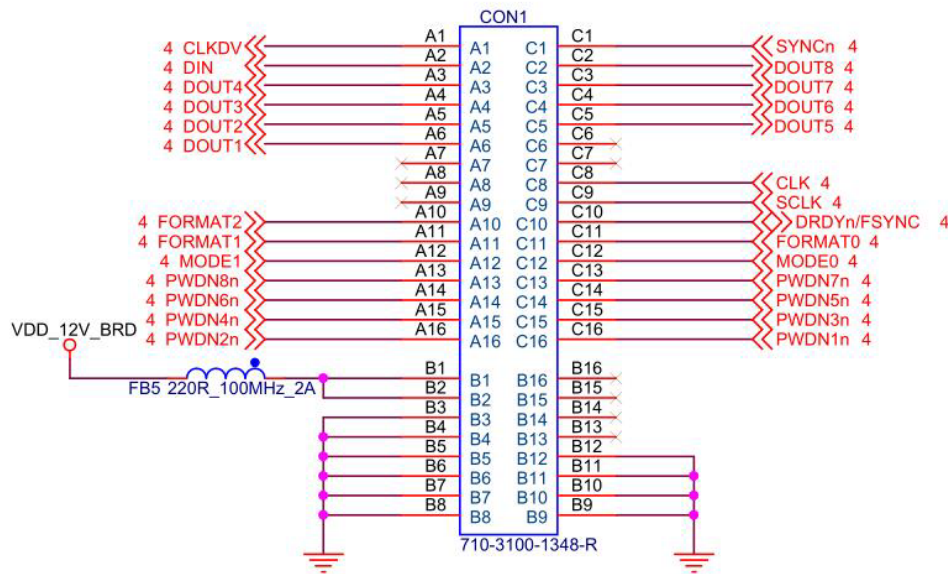


图 8 CON1 接口引脚定义

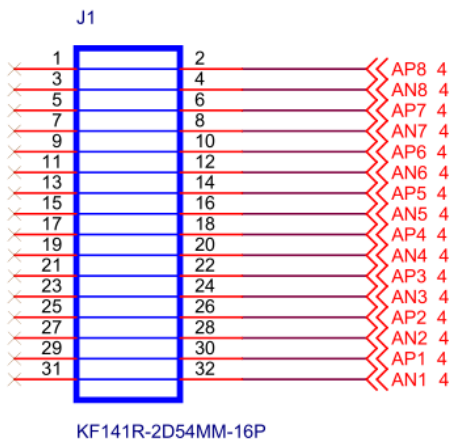


图 9 J1 接口引脚定义

5 产品订购型号

表 1

产品名称	订购型号
TL1278P 模块	TL1278P-A1

6 发货清单

因我们的存在，让嵌入式应用更简单

表 2

名称	数量	备注
TL1278P 模块	1 个	/
资料光盘	1 套	赠品

7 增值服务

- 主板定制设计
- 核心板定制设计
- 嵌入式软件开发
- 项目合作开发
- 技术培训

更多帮助

销售邮箱: sales@tronlong.com

技术邮箱: support@tronlong.com

创龙总机: 020-8998-6280

技术热线: 020-3893-9734

创龙官网: www.tronlong.com

技术论坛: www.51ele.net

官方商城: <https://tronlong.tmall.com>