

GPS-Time Sync Box



Product Introduction

ALG-TECH'S GPS Time Sync Box is a specialized device that provides time/trigger synchronization for acquisition cards. It has the characteristics of stability, reliability, portability, and wide adaptability. After connecting to the acquisition card through the EPG cable, it supports dual mode of internal and external synchronization. Internal synchronization provides 8-channel 10-120Hz signals, while external synchronization can receive external signals. The device integrates GPS access and is suitable for automatic driving synchronization and timing.

Product advantages

GPS precise navigation system

Compatible with PPS/gprmc signals, it can obtain accurate GPS latitude and longitude positioning data.

Accurate synchronization timing

Support seamless integration with PCIE acquisition card to achieve joint timing between PPS and CAN, ensuring timing accuracy within 20 microseconds.

External Trigger

Supports external trigger signal input and has frequency doubling and division functions.

Compatible with PTP master-slave mode

Provide PTP/gPTP master-slave interface, supporting two timing protocols: PTP and gPTP.

Time synchronization source switching

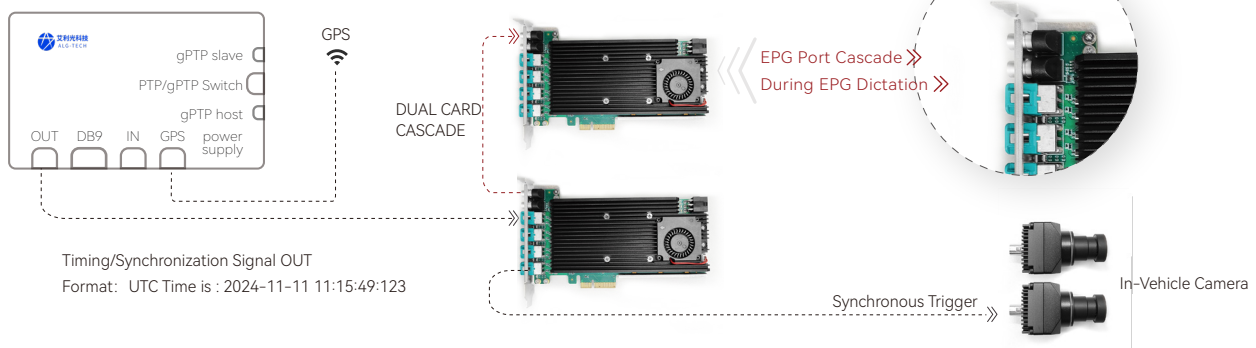
Convenient switching of synchronization time source between GNSS and gPTP/PTP Slave through master-slave mode dip switch of PPS signal.

Multi channel synchronous output

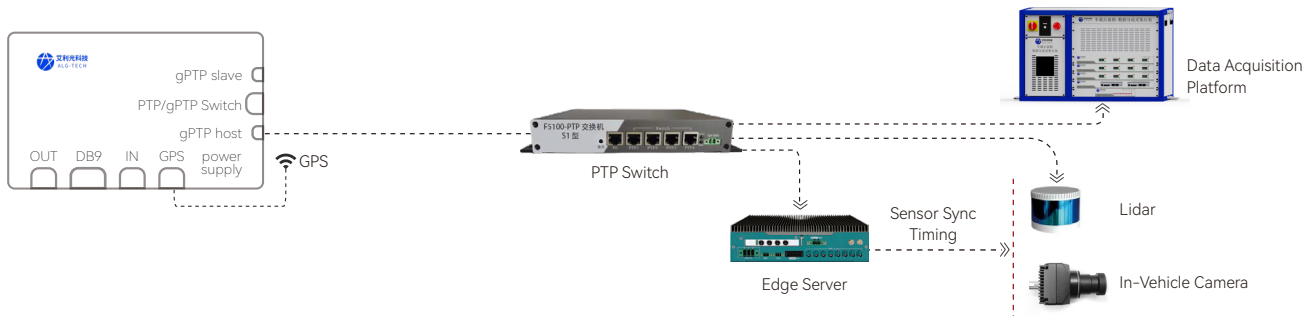
Support 8-channel trigger signal output with different frequencies to ensure synchronization accuracy within 200 nanoseconds.

Application Instructions

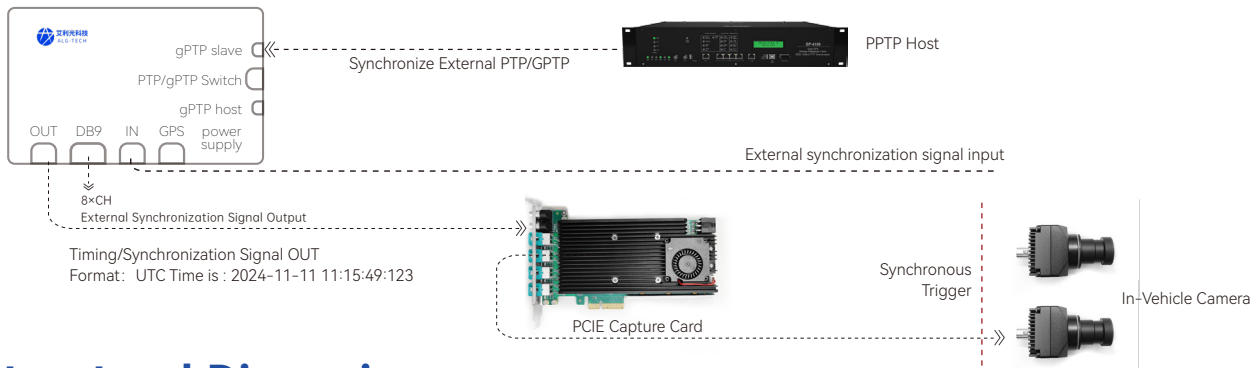
◆ PCIE Data Acquisition Card GPS Timing | Bypass Synchronization Triggered



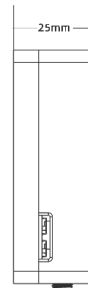
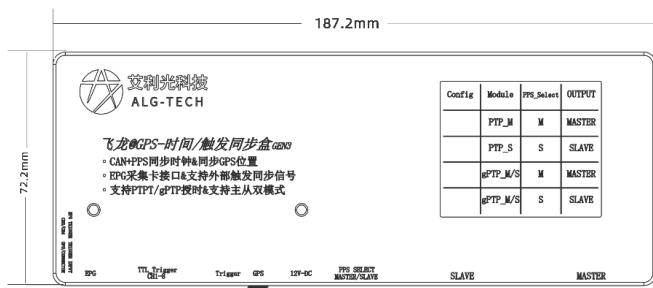
◆ Collecting Host GPS Timing | Sensor Synchronization Trigger | PTP/gPTP Time Synchronization



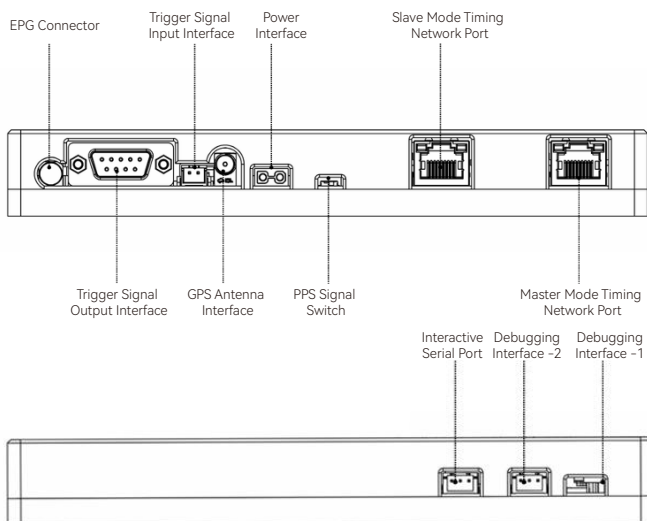
◆ PTP Slave模式 | 外触发同步



Structural Dimensions



Interface Definition



Product Parameters

Type		CS300-A	CS300-B
Timing Accuracy	Timing Accuracy	≤20us	
	External Trigger Input	10/20/30fps	
	Frequency Division Output	2ch-10/20/30/40fps	
	Number Of Channels	8-Channel	
Output Mode	Output Mode	PTP Master mode/Slave mode	GPTP Master mode/Slave mode
	Supported Protocols	PPS/AMP/PTP	PPS/AMP/PTP/gPTP
	Physical Interface	RJ45	
	Ethernet	10M/100M Adaptive	10M/100M/1000M Adaptive
Agreement	Agreement	IEEE1588-2008(PTPV2), IP4,TCP,HTTP, UDP	IEEE1588-2008(PTPV2), IEEE802.1AS(gPTP),NTP, IP6,IP4,TCP, UDP, Ethernet 802.3
	Number of Channels	1-Channel	
	level	TTL	
	pulse width	> 100ms	
active level	active level	Low level: 0V, High level: 3.3V	
	PPS Accuracy	Clear weather ≤ 20ns, indoor ≤ 500ns, shaking ± 11ns	
	Navigation System	GPS & GLONASS, GPS, GLONASS, Beidou, Galileo	
	Signal Frequency Band	72个u-blox M8 Engine Channel GPS LIC/A, SBAS LIC/A, OZSS LIC/A, OZSSLI SAIF, GLONASS LIOF, BeiDou BL, Galileo EIB/C	

Shenzhen Aili-Light Technology Co., Ltd

Tel: 0755-27218150

Business: sales@aili-light.com

Web: www.aili-light.com

Add: Zone 82, Halyu Community, Xin'an Street, Bao an District, Shenzhen City



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