Precision Timing and Synchronization Server

CL-1070

Introduction

The CL-1070 is a time server with high accuracy. The input clock signal can be from GPS, IEEE1588V2 or CMCC 1PPS+TOD. And output the relevant 1PPS signal and TOD information by SYNC OUT port and CMCC OUT port. This three type of clock signal sources can be auto-switched according to the set priorities, or can be switched manually by PC operation interface. When using IEEE1588V2 or CMCC 1PPS+TOD as clock source, this time server calculates the phase difference between the clock source and GPS with accuracy of 1PPS, and output the result to monitoring PC as the reference for time compensation.

Specifications

IEEE1588V2 parameters
- Meet IEEE1588-2008/PTP V2.0 unicast, multicast, broadcast protocol, be compatible with PTP V1.0 protocol, Support NTP/SNTP V1.0-V4.0 protocols.
- Support IP6, IP4, TCP, UDP, DHCP, HTTP, Telnet, SNMP, FTP, TFTP, Daytime, Syslog protocols.
- Support 10/100 adaptive network, hardware time stamp, Real Time multi-tasking Operation System.
- the timing accuracy is less than 70ns in the heavy traffic complex network, less than 200ns by the ordinary multistage switch. average 30ns for normal network, less than 20ns for point-to-point network.
- After the main clock has been locked in the network, it will take 10-60 minutes to get 100ns timing accuracy and take 2 hours to export timing accuracy stably.

CMCC parameters
- Meet the requirements of "China Mobile Specification for 1PPS+TOD Time Interface for Precision Time Synchronization".

Environmental Characteristics
- Operating Temperature : -20°C to +60°C
- Storage Temperature : -40°C to +85°C
- Humidity : <95% non-condensing

Power Supply
- Power Supply: -32 to 72VDC
- Power consumption: <15W

Mechanical
- 19'/1U chassis, other sizes are optional

Features of GPS Receiver

Receiver: 50-Channel GPS L1 (1575.42MHz)
Type: C/A code, high precision automatic
Survey-in timing mode
Frequency band: L1(1575.42MHz)
Tracking code: C/A
Tracking capability: 12 Satellites
Sensitivity: Tracking/Navigation -160dBm
Re-acquisition -160dBm
Acquisition cold start -148dBm
Timing accuracy: RMS 30 ns
99% < 60 ns
Granularity 21 ns
Compensated 15 ns
GPS Antenna: Active