

CT3000

Modular NTP Server

Description

CT3000 is a high-performance and large-capacity NTP time server developed based on ARM architecture. It can be widely used in various scale network time-checking applications of users in enterprises, education, government, military, postal services, railways, finance and other industries.

CT3000 designed with a compact 1U chassis, with a LCD and control buttons in front panel that you can get some basic information of this device. For the rear panel, CT3000 has 2 AC power supplier modules on both sides, and 4 functional slots in the middle area, you can choose NTP,PTP,RS422 or IRIG-B functional modules as per your request. CT3000 also has an embedded WEB GUI, customers can control and manage CT3000 through this WEB GUI easily.

Product View



CT3000 Front view



CT3000 Rear view

Slot Layout



CT3000 Slot layout

Key Features

- 19-inch, 1U design.
- Precise timing accuracy, NTP adopts hardware time stamp;
- Support GNSS, NTP time correction;
- Ultra-high punctuality capability, supporting OCXO or rubidium clock;
- Support multi-slot board interchange;
- Support port binding and dual card binding functions;
- Support panel button operation;
- Support dual-machine redundant configuration;
- Each PTP port support 500 PTP clients at 128PPS;
- Support NTP, optical port, RS422, 10GE, PTP and other outputs;
- Support sub-clock timing and management functions;
- Support WEB management, with NTP client online monitoring function.

Network Protocols

- NTP (v1, v2, v3, v4)
- IEEE1588v2
- SNTP (v4)
- HTTPS
- IPv4/IPv6
- FTP / SFTP
- SYSLOG
- SSH/SCP

Standard Compliance

- IEEE 1588v2 (PTP)
- RFC 1059 (NTPv1),
- RFC 1119 (NTPv2)
- RFC 1305 (NTPv3)
- RFC 5905 (NTPv4)
- RFC 4330(SNTPv4).


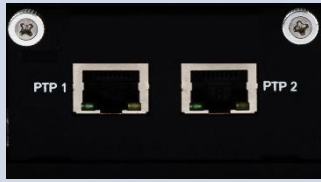
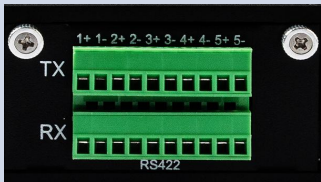

Security

- Configuration settings backup and restore
- High level of security: HTTPS, SSHv2
- Supervision possible via syslog
- Field upgrades via SFTP

Management

- IP configuration by front panel buttons.
- Local configuration and supervision Information available via CLI(RS232).
- Time status is available on the alphanumeric front display.
- Firmware upgrade via FTP or SFTP.

Output Card description

	NTP Card	PTP Card
Card Type		
Features	4 * RJ45 ports; NTP capacity \geq 15000 clients/s	2* RJ45 ports; 500 PTP clients at 128PPS
	RS422 Card	Optical Card
Card Type		
Features	5* RS422 ports;	4* Optical port(IRIG-B);

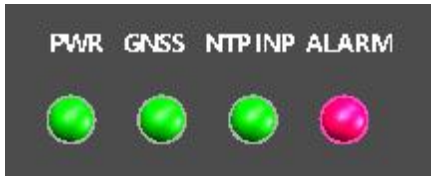
Input

- 2* GNSS inputs(optional);
- 1* CDMA input(optional);
- 1* NTP input;
- 1* DCLS(optical) input;
- 1* 1PPS+Tod input;
- 1* ETH(network management) input.

Output

- Up to 16 NTP outputs;
- Up to 8 PTP outputs;
- Up to 20 RS422 outputs;
- Up to 16 IRIG-B(optical) outputs;
- 1*10MHz output;
- 1*1PPS output.

LED Indication



4 LEDs on the front panel, they used for indicate device status as following:

LED	Description
PWR	Green on: Power on Green off: Power off
GNSS	Green on: GNSS Normal Green off: GNSS abnormal
NTP INP	Green on: NTP Locked Green off: NTP Unlocked
ALARM	Red Flash: Alarm Existed Red on: Holdover Output

Accuracy

Timing Accuracy:

- - 1PPS: $\leq 50\text{ns}$ (Locked with GNSS)
- - NTP: $\leq 5\mu\text{s}$

Holdover Accuracy:

- - OCXO Version: $\leq 20\mu\text{s}$ (24h)
- - Rubidium Version: $\leq 1\mu\text{s}$ (24h)

GNSS Receiver Features

- GNSS satellites status
- Configurable SNR, Elevation
- User-configurable antenna cable delay compensation
- Voltage to antenna +3~5VDC
- Antenna connector SMA-F (50ohm)
- Multi -band, Multi-constellation 128-channel GNSS receiver
- GNSS (L1C/A L2C), GNSS (B1I, B2I) two concurrent GNSS constellations

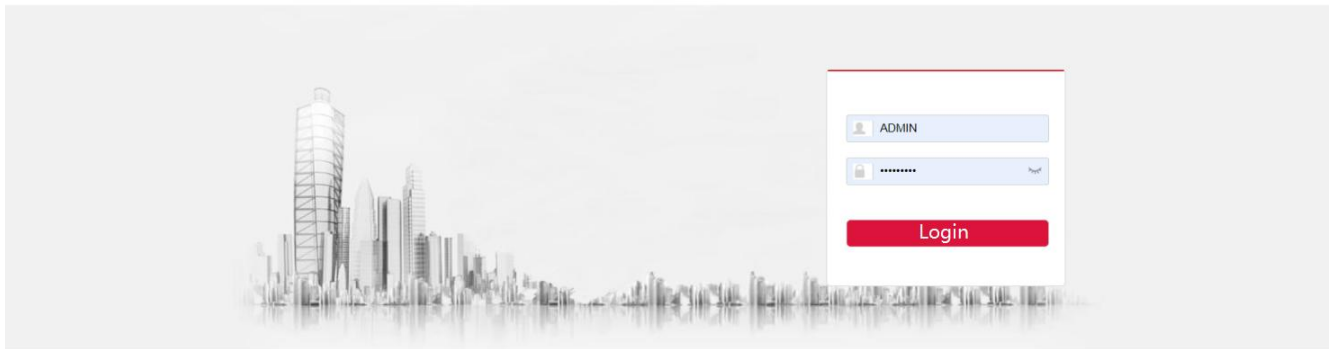
Environmental

- Dimensions: 483×300×44mm(1U)
- Operating temperature (ambient): -10 ~ +60°C
- Storage temperature: -50~+85°C
- Humidity: 0 ~ 95% (without condensation)

Power Supply

- Dual AC Power: 100 ~ 240V AC (47 ~ 63Hz) with over-voltage and over-current protection
- Power consumption: less than 40W

WEB System



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The WEB system of CT3000 support:

- Device Overview: You can see all the basic information of connected devices;
- Device Function: You can configure all ports of connected devices;
- Alarm: You can view and manage all alarms of connected devices;
- Log: You can view and check logs of connected devices;
- Device Backup: You can reboot and backup firmware of connected devices.

Application in Network

- NTP timing solution in smart city;
- NTP/PTP timing solution in data center;
- NTP/PTP timing solution in smart grid;
- NTP timing solution in schools and hospitals.

