北斗邦泰
BDSTAR TIME

T600-BDOCXO NTP TIME SERVER

A High-Security Time Benchmark for Government Cloud, Finance, Power, Data Centers.

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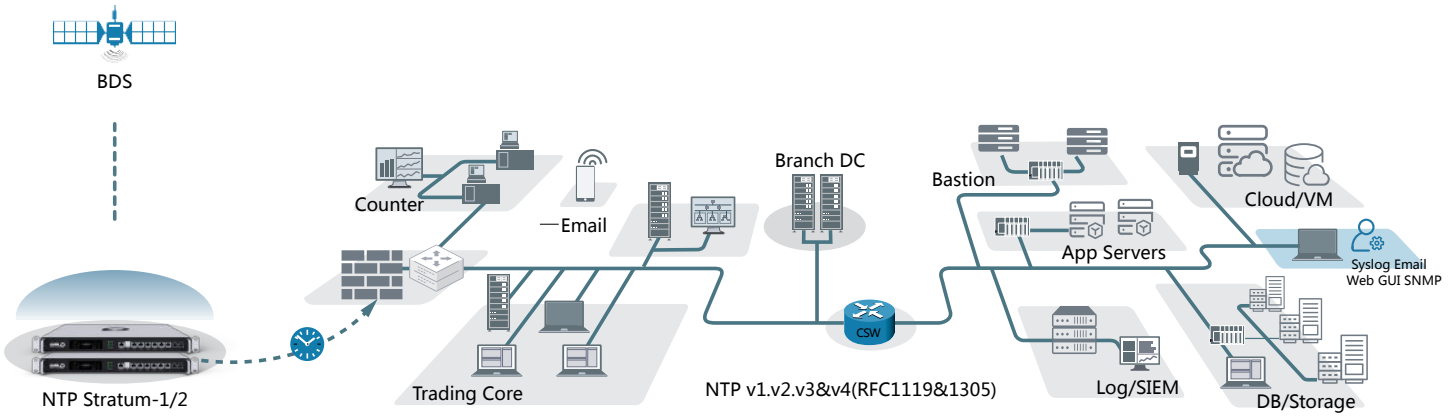
NTP TIME SERVER

T600-BDOCXO



Key Features

+Ultra-high-bandwidth NTP server
+GNSS-referenced Class 1 clock server suitable for critical struture
+Multi-source,time-keeping,redundant,and link-backup capabilities enhance system resilience
+Standard configuration:6×100/1000BASE-T,RJ45.+2×100/1000 BASE-T,SFP.
+Scalable to 25G/40G/100G/200G speeds.
+Can be connected to another NTP server to form a Level2 clock
+Built-in high-precision OCXO with 24 hours-deviation less than 10 microsecond
+Supports SSH,SSL,SCP,SNMP,CustomMIB,HTTPS,Telnet
+Multi-layered security features including encryption,certificates, auditing,firewalls,and firmware updates.
+Fully compatible with IPv4 and IPv6 network environments
+Advanced Anti-jammingand spoofing detection algorithms enhance spoofing resistence.
+Accuracy relative to UTC time reaches the nanosecond level
+MTBF>100,000 hours
+Secure and efficient web-based user interface
+Architectural design compaible with single-power-supply redundant, or DC power supply configurations
+Industrial-grade design to meet requirements for long-term stable operation and field deployment

Overview

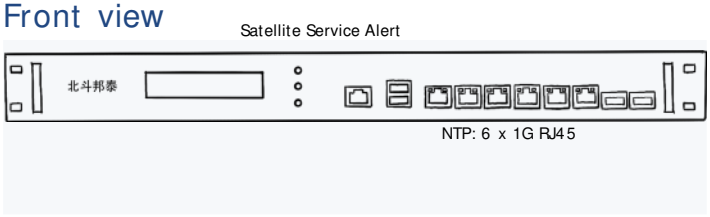
The T600-BDOCXO NTP network time server supports the NTP/SNTP network synchronization protocol and provides high-precision, large-capacity, and high-security network timing services for critical infrastructure. The equipment adopts a industrial motherboard platform, adapts to the linux operating system, supports isolated deployment of business network and management network, and independent configuration and routing strategies of multiple network ports. It also supports link redundancy and automatic failover (such as bonding Active-Backup) and dual-machine hot standby/heartbeat detection to ensure continuous and reliable timing services. The system consists of a GNSS receiving unit, a local clock taming and punctuality unit (OCXO), network timing and interface output module, unified operation and maintenance management unit and power supply/alarm module. It Supports concurrent reception of multiple constellations (GPS/QZSS, GLONASS, Beidou, GALILEO, etc.), and has a built-in high-performance OCXO to achieve Holdover punctuality after lock loss and continuously output a stable time benchmark. The system has anti-interference/anti-spoofing capabilities, supports anomaly detection and alarm, multi-source comparison, timing quality assessment and lock-out strategy. When the reference source is abnormal, it automatically enters timekeeping and locks smoothly after recovery.

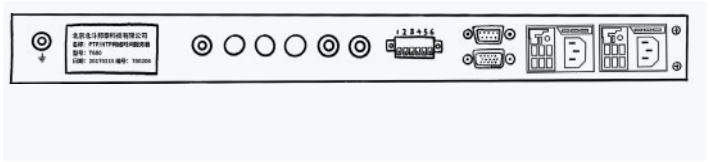
For security and operations, the device supports HTTPS/certificates,hierarchical permissions, audit logs, alarms, firewalls and password policies; it provides a safe and efficient Web unified management interface, supports configuration, monitoring, alarm and log management, and can be connected to the upper network management through SNMP/custom MIB to achieve remote upgrades and batch monitoring. The device supports time/frequency outputs such as TOD, 10MHz, 1RIG-B, and 1PPS, and supports logging, USB upgrade/export, and dry contact alarms. It is suitable for scenarios such as government affairs, national defense, finance, electric power, communications, data centers, and industrial automation.

Main functions

+ Provides a unified time reference for servers, switches,work stations, and terminal devices
+ Web-based management interface supporting parameter configuration , monitoring, alerts, and log management
+Tiered permissions, audit trails for critical operations, and log traceability to meet compliance and internal controlre quirements
+ Security configurations including HTTPS/certificates, passwords, firewalls, and alarm integration
+ Heartbeat detection and same-IP mutual backup for rapid primary-to standby switching and business continuity
+ Supports bonding to enhance link reliability and network availability
+ Supports remote upgrades, remote maintenance, and policy deployment to reduce operational costs
+ SNMP and custom MIB integration with network manage systems for batch monitoring and alarm aggregation

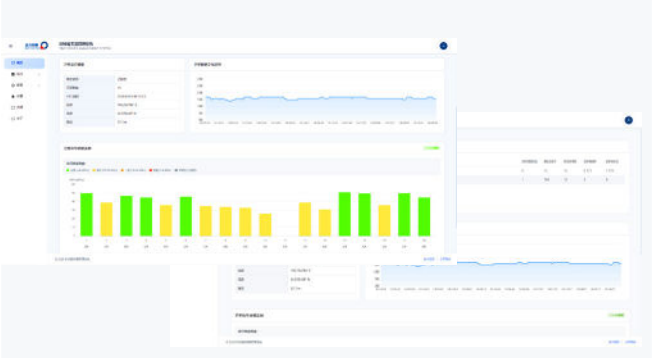
Front view

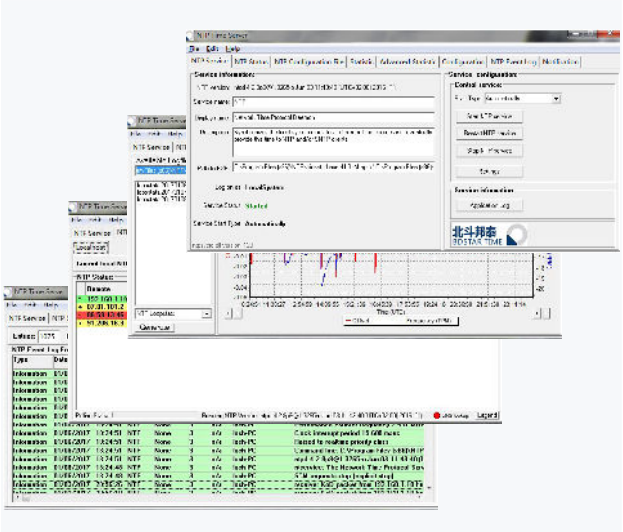


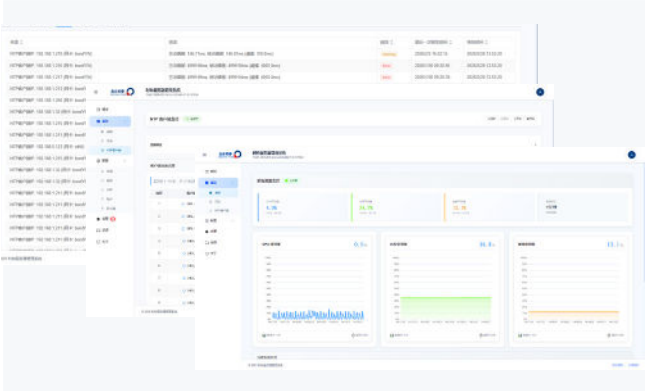


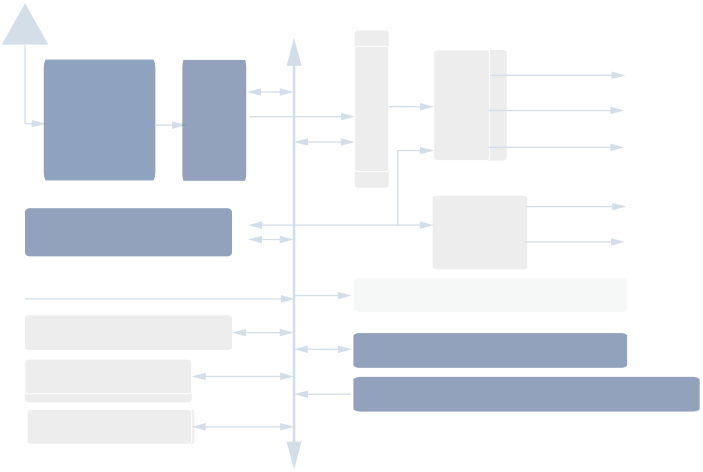
Software Performance

Time Server Management System









Monitoring Targets and Information Dimensions

Satellite: UTC/Locked, Number of Visible Satellites Trend Chart + Single-Satellite Signal Quality, Position/Altitude
Timing: Reference source/synchronization status, server time, deviation/jitter, hierarchy/status
Client: Client List, Passive/Active Deviation + Periodic Statistics, Filter/ Paginate/Export
Resources: CPU/Memory/Disk Health and Trends, Critical Threshold Alerts

Configuration capabilities

Network: Multiple network ports with independent configuration; IPv4/IPv6, DNS, MTU, static routing
Redundancy: bonding (Active-Backup / 802.3ad), primary-standby/link aggregation modes, etc.
Time Synchronization: NTP Source/Priority, Polling Parameters, Access Control (Whitelist/Policy)
Security: HTTPS/certificates, password policies, user role-based permissions, basic firewall policies
Services: Management of service startup, shutdown, and auto-startup for NTP, SSH, SNMP, and other

Alarm Center

Alarm Dashboard: Level/Time/Duration
Alarm Items: Loss of Lock, Iess Number of Satellites, Client Deviation Threshold (Graded)
Notifications: Interface alerts, email, Syslog; supports historical data and silent mode

Log Auditing and Resource Center

Log Auditing: Online viewing and retention of login, alert, time sync/satellite, and system operation logs
Resource Center: Centralized downloads of MIBs and documentation, supporting network administrator integration and on-site troubleshooting
Export Capabilities: Key lists and history can be exported for easy delivery and archiving