

DP3000E

PTP Grandmaster

DP3000E is a high-performance Grand Master device designed to provide precise frequency, phase and time-of-day synchronization information for LTE/LTE-A networks and other applications. The device is IEEE 1588-2008 (1588V2) standard compliant and uses GNSS timing satellite signal as a primary time reference.

Using Dapu's advanced PTP IC and adaptive timing algorithm. Deploying a centralized Grand Master with full on-path support to deliver high precision synchronization involves lower cost.

DP3000E is highly field-scalable to 512 PTP slaves in unicast mode.

Feature

- Redundant hardware: inputs/outputs clock and power
- Hardware-based packet processing
- User-configurable PTP profiles with IPV4 and IPV6 support
- Supports ITU PTP profiles(G.8275.1,and G.8275.2)
- Synchronous Ethernet support(G.8262)
- Concurrent reception of GPS/QZSS/GLONASS/Beidou
- Management through CLI and DPsync.
- Wireless Ethernet backhaul
- 3G ,4G/LTE,and 5G
- CES
- PON
- Femto cells and small cells
- Gateway clock for industrial IoT applications

Benefits

- Low cost of ownership
- Highly scalable PTP grandmaster supports 512 PTP clients
- Support PTP elements in the network
- Simple,easy manageability
- Gateway clock

Applications

DP3000E

PTP Grandmaster

Specifications

IEEE 1588-2008 PTP

- IEEE1588-2008 (PTP) Grand master.
- Built-in clocks keep holdover, meet the requirements of the wireless system.
- PTP output client capacity: max 512 clients.
- Maximum slaves: 512.
- G.8265.1/2 ,G.8275.1 compliant.
- PTP:L2/L3 unicast or multicast PTP

Synchronous Ethernet :

- Conforms to relevant sections of ITU-T G.8262

GNSS

- GPS/QZSS/Beidou/GLONASS

Frequency Accuracy

- Tracking to GNSS: PRS/PRC quality

Holdover ($\pm 5^{\circ}\text{C}$):

Rubidium : Customerized

OCXO : $<2 \times 10^{-10}$ /day

Time Accuracy

- Tracking to GPS: <20 ns when locked to GPS,

ePRTC-compliant

Holdover ($\pm 5^{\circ}\text{C}$):

Rubidium : Customerized

OCXO : $1.5\mu\text{sec}$ over 24hour

Mechanical Parmater

- Dimensions:44mm(H) x 220 mm(W) x 146 mm(D)
- Weight: 2.2kg

Environmental Specifications

- Operating temperature: 0°C to $+60^{\circ}\text{C}$

- Storage temperature: -40°C to $+85^{\circ}\text{C}$

- Humidity:30% to 80% with condensation

Power

- Supply:96~265VAC or -48VDC(optional)

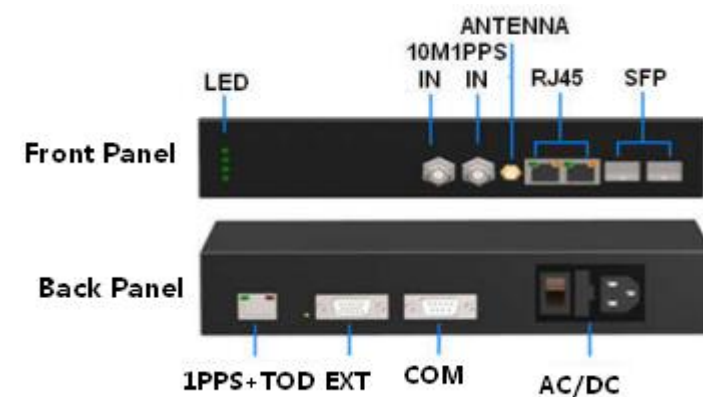
- Power consumption:-9 to 20W typical

LEDs

- Run,Gnss,Alarm and PTP status

DP3000E PTP Grandmaster

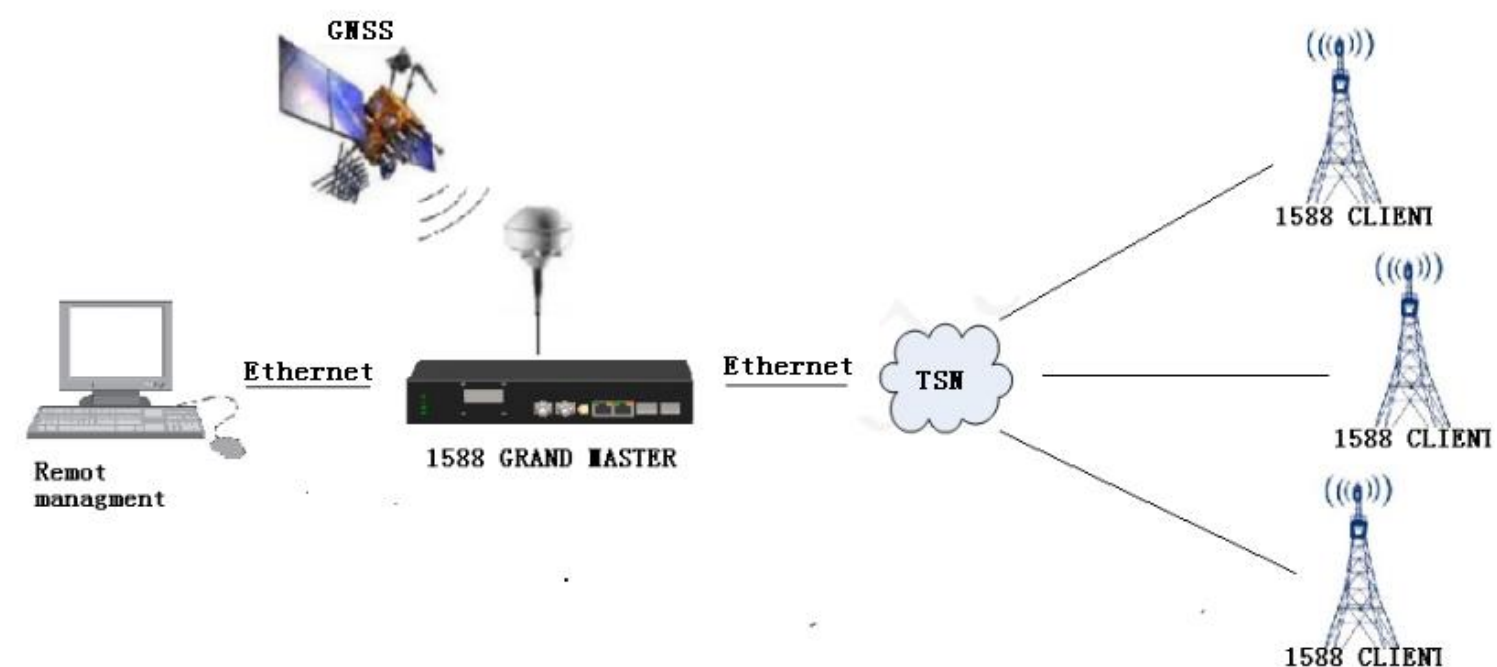
Interface



- GNSS receiving antenna(SMA)
- Two-way Ethernet port;
- Two-way SFP port
- 2X IEEE1588 PTP 100Base-TX & 1000Base-T with SyncE(RJ45)
- 2X IEEE1588 PTP 1000Base-X with SyncE (SFP)
- 10MHz Frequency standard output(BNC)
- 1PPS standard output(BNC)
- 1PPS + TOD output(RJ45)
- COM port for configuration

- EXT port for TOD,10MHz,1PPS and other frequency outputs/inputs, support extensions

Typical block



Typical wireless application utilizing the DP3000E Grandmaster Clock with fully redundant, carrier-class architecture to provide precise timing and frequency for remote base stations over a packet-based Ethernet network infrastructure.