

PTS-30M

3U rack mounting high-precision time servers



» Overview

PTS-30M high precision time server supports dual channels to receive GPS/BDS/GLONASS satellite signals, redundant power inputs, Rubidium clock for reliable time holdover, various and a high number of time output signals, meeting precise time synchronization requirements in the fields of power, transportation, etc.

» Key Features

3U 19 inch rack mounting time server

Support dual satellite channels (GPS, BDS, GLONASS Optional)

Time synchronization accuracy up to 50ns

Support IRIG-B, IEEE1588 used as time source

Support integrated TCXO or OCXO for time holdover

Support max 8 slots for time output modules

Support 1PPS,IRIG-B-DC/AC,Serial time coding,NTP,IEEE 1588 V2.0,contact,etc time signal output

Support safe and reliable multi-source selection algorithm to guarantee time output accuracy

Support 5.7inch LCD touch-screen for operation

Support redundant power modules

» Product Specifications

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-Satellite Receiver and Antenna

Receiving Sensitivity of Receiver Locking Sensitivity < -160dBm

Tracking Sensitivity < -167dBm

Locking Time < 0.5min (Warm Boot), < 10min (Cold Boot)

Time Accuracy of Receiver Better than 20ns (1PPS, relative to UTC)

Receiving Antenna Sensitivity \leq -163dBm

-Time Accuracy

1PPS Fiber \leq 60ns

TTL \leq 60ns

Differential level \leq 0.5 μ s

Contact \leq μ s

IRIG-B Fiber \leq 60ns

TTL \leq 60ns

AC \leq 20 μ s

Differential level \leq 0.5 μ s

Serial Data RS232 \leq 5ms

RS485 \leq 5ms

NTP \leq 50 μ s

PTP \leq 50ns

-LED

Power LED 3.3V/5V/12V

Running LED RUN

Alarm LED A1/A2

-Holdover Accuracy

TCXO 55 μ s per hour

OCXO 6 μ s per 24h

RB. atomic clock 2 μ s per 24h

-Input Interface

Satellite SAT1: BNC connector (5V DC)

SAT2: BNC connector (5V DC)

Fiber FI1: ST-850nm MM (IRIG-B-DC)

FI2: ST-850nm MM (IRIG-B-DC)

-Network Interface

Type 1 2×10/100Base-TX RJ45 ports

Type 2 4×10/100Base-TX RJ45 ports

Type 3 2×1000Base-X SFP slot, 10/100/1000Base-T(X) Combo ports

Type 4 2×1000Base-X SFP slot, 10/100/1000Base-T(X) Combo ports + 2×10/100Base-TX RJ45 ports

-Output Interface

TTL (Terminal) Terminal connector, 1PPS/1PPM/1PPH or IRIG-B (DC)

TTL (BNC) BNC connector, 1PPS/1PPM/1PPH or IRIG-B (DC)

Fiber ST connector, 1PPS/1PPM/1PPH or IRIG-B (DC)

Serial Data (Terminal) RS232, 1PPS/1PPM/1PPH or serial TOD

RS485, 1PPS/1PPM/1PPH, IRIG-B or serial TOD

IRIG-B AC (Terminal) Terminal connector, IRIG-B (AC) signal

Contact (Terminal) Terminal connector, 1PPS/1PPM

-Power Supply

Power Input 110-220VAC/DC(85-264VAC/85-300VDC), 47-63Hz

Single/Dual power input(s)

Power Terminal 5-pin 5.08 mm-spacing plug-in terminal block

Power Alarm Support

Status Alarm Support

-Physical Characteristics

Housing Metal

Cooling Natural cooling, fanless

Protection Class IP40

Dimensions(WxHxD) 483 × 135 × 280mm

Weight 5.5kg

Mounting 3U 19 inch rack mounting

-Environmental Limits

Operating temperature -20°C to +70°C

Storage temperature -30°C to +80°C

Ambient Relative Humidity 5% to 95% (non-condensing)

-Quality Assurance

MTBF 50000hrs

Warranty 5 years

-Approvals

CE

-Standard

DL/T 1100.1-2018

IEC 60068-2-78

IEC 61000-4-2

IEC 61000-4-4

IEC 61000-4-5

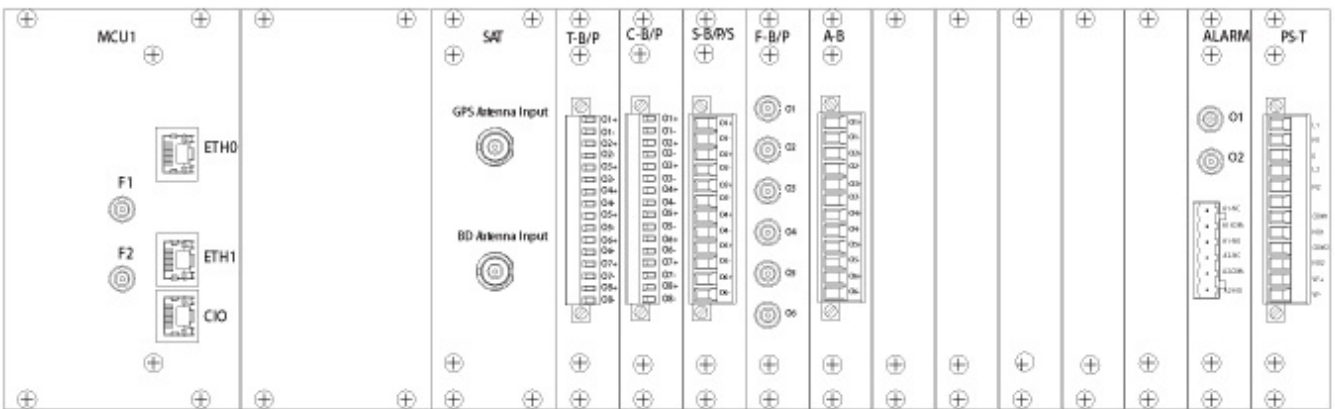
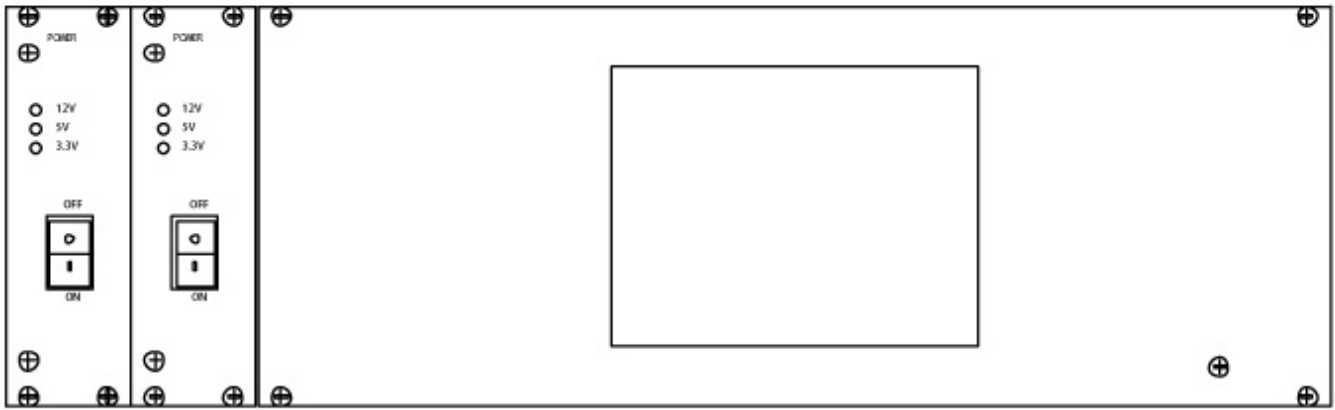
IEC 61000-4-8

IEC 61000-4-9

IEC 61000-4-10

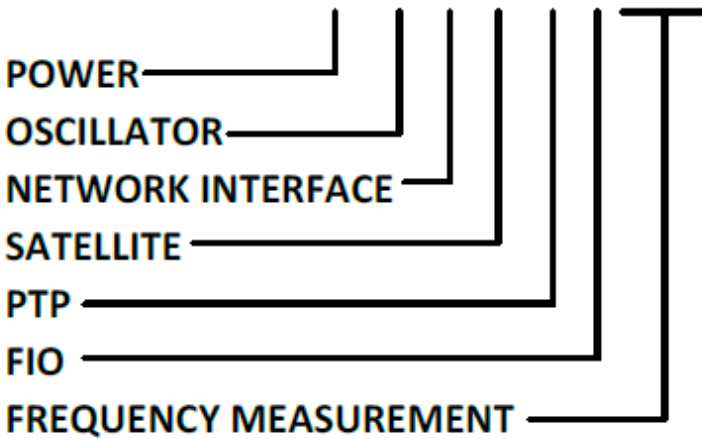
IEC 61000-4-12

 **Mechanical Drawing**



Ordering Information

PTS-30M-C-DDDDDDDDXXXXXXXXXXXX-XX



POWER	
1	110-220VAC/DC Single
2	110-220VAC/DC Dual
OSCILLATOR	
1	TCXO (<55µs/1h)
3	OCXO (<6µs/24h)
NETWORK INTERFACE	
1	2 × 10/100Base-TX

7	2 × 1000Base-X SFP slot, 10/100/1000Base-T(X) Combo ports, 2×10/100Base-TX RJ45 ports
SATELLITE	
1	GPS
2	GPS/BDS (Dual-Mode)
3	GPS/GLONASS (Dual-Mode)(Customizable)
4	GPS+GPS (Dual-channel)
5	GPS+BDS (Dual-channel)
6	GPS+GLONASS (Dual-channel)(Customizable)
PTP	
1	PTPv2 (ETH0/ETH1)
FIO	
0	N/A
1	FI1 (ST 850nm MM) + FI2 (ST 850nm MM)
FREQUENCY MEASUREMENT	
00	N/A

TIME OUTPUT MODULE (max 8pcs for 8 slots)

PTS-30M-OUT-PPS-TTL-TB	Output module with terminal connector for 8 outputs of TTL PPS
PTS-30M-OUT-PPS-TTL-BNC	Output module with 5 BNC ports for TTL PPS
PTS-30M-OUT-PPS-850-FO	Output module with 6 ST 850nm fiber ports for PPS
PTS-30M-OUT-PPS-1310-FO	Output module with 6 ST 1310nm fiber ports for PPS
PTS-30M-OUT-PPS-485-TB	Output module with terminal connector for 8 outputs of RS485 PPS
PTS-30M-OUT-CONTACT-TB	Output module with terminal connector for 8 outputs of PPS/PPM contact
PTS-30M-OUT-IRIG-TTL-TB	Output module with terminal connector for 8 outputs of TTL IRIG-B (DC)
PTS-30M-OUT-IRIG-TTL-BNC	Output module with 5 BNC ports for TTL IRIG-B (DC)
PTS-30M-OUT-IRIG-850-FO	Output module with 6 ST 850nm fiber ports for IRIG-B (DC)
PTS-30M-OUT-IRIG-1310-FO	Output module with 6 ST 1310nm fiber ports for IRIG-B (DC)
PTS-30M-OUT-IRIG-485-TB	Output module with terminal connector for 8 outputs of RS485 IRIG-B (DC)
PTS-30M-OUT-IRIG-AC-TB	Output module with terminal connector for 6 outputs of IRIG-B (AC)
PTS-30M-OUT-PPS-232-TB	Output module with terminal connector for 6 outputs of RS232 PPS
PTS-30M-OUT-TOD-232-TB	Output module with terminal connector for 6 outputs of RS232 TOD
PTS-30M-OUT-TOD-485-TB	Output module with terminal connector for 8 outputs of RS485 TOD

SOFTWARE

PTS-30M-S11	WEB + SNMP
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ANTENNA

PTS-ANT-GPS-BDS-TNC	GPS/BDS, TNC Female Connector
PTS-ANT-GPS-BDS-N	GPS/BDS, N Female Connector
PTS-ANT-GPS-BDS-GLN_TNC	GPS/BDS/GLONASS, TNC Female Connector
PTS-ANT-GPS-BDS-GLN_N	GPS/BDS/GLONASS, N Female Connector
PTS-ANT-CABLE-15	Coaxial Cable (15 meters) (N Male to BNC Male Connector)
PTS-ANT-CABLE-30	Coaxial Cable (30 meters) (N Male to BNC Male Connector)
PTS-ANT-CABLE-50	Coaxial Cable (50 meters) (N Male to BNC Male Connector)
PTS-ANT-CABLE-80	Coaxial Cable (80 meters) (N Male to BNC Male Connector)
PTS-ANT-CABLE-100	Coaxial Cable (100 meters) (N Male to BNC Male Connector)
PTS-ANT-AMPLIFIER	Antenna Amplifier (BNC Female to Male Connector)

PTS-ANT-LIGHTING	Lighting Arrester (BNC Female to Male Connector)
PTS-ANT-BNC-J/BNC-K-30cm	Lightning protection device feeder 30 centimeters
PTS-ANT-MOUNT-BASE	Base Mount accessory for antenna
PTS-ANT-MOUNT-HOOP	Hoop Mount accessory for antenna

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