



Comprehensive & Precision Timing Solution Expert



# CT-DZ600B *Time & Frequency Sync Server*

*Digital TV & Digital Radio synchronization server*

**DATASHEET**

## The DZ600B Time & Frequency Sync Server

receives both GPS and BDS satellite signal simultaneously, provides up to 8 x 1PPS , 8 x10MHz low phase noise frequency and Serial outputs, is a time and frequency synchronization server widely used in broadcast and television industry as well as telecom, transportation, finance and other fields.



### Key Features

- ◆ High-performance GPS & BDS clock
- ◆ Automatically switch to another when one type satellite tracking failed
- ◆ Up to 8 x 10MHz low phase noise outputs  
UP to 8 x 1PPS TTL outputs
- ◆ Excellent holdover performance, high time & frequency accuracy, even if satellite signal is lost.
- ◆ Meets the Digital TV, Digital Radio industry demands.
- ◆ No need configuration when failure of power or reinstallation, only need normal electricity and connect the antenna
- ◆ Nanosecond time accuracy to UTC
- ◆ Supports time/date and status display
- ◆ 3 years limited warranty





### GPS RECEIVER:

Frequency: 1575.42 MHz (L1 Band)  
 Sensitivity: Acquisition <-160dBW  
 Tracking <-163dBW  
 Acquisition: Hot Start < 2min  
 Cold Start < 20min  
 Tracking: Hot Start ≥ 1 Satellite  
 Cold Start ≥4 Satellite  
 Time Accuracy: ≤±200ns (RMS to UTC)

### BDS RECEIVER:

Frequency: 1561.098 MHz ±2.046MHz  
 Sensitivity: -157.6dBW  
 Time Accuracy: ≤±100ns (RMS to UTC)

### ANTENNA:

Frequency: 1575.42MHz  
 Bandwidth: min. 20MHz  
 Impedance: 50 ohm  
 Gain: 30dB±2dB  
 5 +/- 0.5V (25mA max)  
 Operation Temp. : - 40°C ~ +85°C Antenna  
 Cable: 30m low-loss cable by default

### FRONT PANEL:

LED indicators (Status):  
 Power, Working, GPS/BDS ,Track, Sync  
 Keypad: Enter, ESC, Right, Left, Up, Down  
 Display: LCD Screen

### REAR PANEL:

1 x Antenna connector, 2x RS232 port  
 8 x 10MHz outputs, 8 x 1PPS TTL outputs  
 1 x Power switch & jack

### OUTPUTS:

#### 10MHz output

Interface: 8xBNC connector, Sine wave  
 Frequency Accuracy:  
 < 5E-13 (Lock of GPS/BDS, 24hrs AVG)  
 < 1E-10 (Loss of GPS/BDS after 24 hrs locked)  
 Frequency Stability:  
 < 1E-11 (100ms)  
 < 5E-12 (1s)  
 < 8E-12 (10s)

#### Phase Noise:

< -95 dBc/Hz@1Hz  
 < -125 dBc/Hz@10Hz  
 < -140 dBc/Hz@100Hz  
 < -150 dBc/Hz@1KHz  
 < -155 dBc/Hz@10KHz

Amplitude: 12±1dBm

Output Impedance: 50 ohm

#### 1PPS output

Interface: 8xBNC connector, TTL  
 Time Accuracy: < 30ns ( RMS to UTC )  
 Time rising edge: < 10 ns  
 Pulse width: 500ms  
 Holdover Accuracy:  
 < 1µs (after 1 hr); < 5µs (after 4 hrs)  
 < 15µs(after12hrs); < 24µs(after 24 hrs)

Amplitude: 4.5±0.5V

Output Impedance: 50 ohm

#### Serial output (monitoring info)

Interface: 2 x DB-9 connector, Female, RS232  
 Baud Rate: 9600  
 Data bits: 8 Stop bits: 1  
 FH Time Accuracy: ≤5ms  
 Message format : BCD Code

**POWER:**

AC: 176V~264V, 50±1Hz  
Power Draw: Boot: 15W ;  
Stable: 30W(100% output)

Operation Temperature: -10°C ~ +50

Storage Temperature: -25°C ~ +85°C

Humidity: < 95%non-condensing

Atmospheric Pressure: 86kPa ~ 106kPa

**Electricity preheating time: 12 minutes**

**DEVICE RELIABILITY:**

MTBF: ≥45000h

Lift Time: about 25 years

**PACKING INFO.:**

431(W)×240(L)× 44.45(H), 19"/1U rack

Packing Size: 565×540×210(mm)

Packing Weight: ≤7KGS(with 30m ant. cable)

**APPLICATION:**

