



DOWR

White Rabbit GNSS Receiver

High performance GPS grandmaster clock and network time server capable of distributing GPS Time or UTC using White Rabbit networks with sub-nanosecond accuracy over long-distance fiber links (typically hundreds of km).

Built as a **white box solution**, including timing integrity monitoring of the GPS navigation data.

Provides **raw GPS data** for the calculation of a precise antenna position and for legal **traceability to UTC(k)** laboratories.

GPS and White Rabbit come fully calibrated from factory for the provided antenna cable.

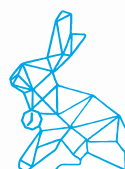
Additionally, the DOWR distributes time to other equipment via **standard protocols** such as PTP, NTP and IRIG-B.



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Technical Specifications / DOWR

GNSS Receiver

Type of receiver All-in-view GPS receiver
GPS L1 C/A

Processor

SoC Xilinx Zynq XC7Z015 with Dual ARM®
Cortex™-A9 MP@ 866MHz

Front Panel

Ethernet Ports 10/100/1000 Base-T RJ45
2x SFP cages (double stack)

IN/OUT 10 MHz
PPS

Back Panel

Ethernet 10/100/1000 Base-T RJ45
RF IN GNSS antenna for L1 signals
USB USB-UART configuration



Physical Specification

Dimension 55 x 115 x 145 mm
Color Black (Metallic)

Certification

Soldering IPC-A-610 Rev E Class 2
Others ISO-9001, ISO-14001, RoHS

Power Supply

Input 12Vdc 1.5A

Environmental Conditions

Temperature -10°C ~ +50°C
Humidity 0% ~ 90% RH

HIGHLIGHTS

- ✓ White-box GPS receiver
- ✓ GPS working modes: Free Position, Fixed Position and Survey-in
- ✓ GPS timing integrity monitoring
- ✓ GPS raw data for the calculation of a precise antenna position for traceability to UTC(k) labs
- ✓ Full GPS and White Rabbit calibration for the provided antenna cable
- ✓ GPS timing error < 15 ns under normal ionospheric conditions (± 2 ns time-pulse jitter)
- ✓ Sub-nanosecond accurate time distribution for long distance networks
- ✓ White Rabbit, IEEE 1588v2 & NTP
- ✓ User-friendly web management interface

Software

OS Linux (Kernel v3.19)

Timing Protocols WR-PTP (next IEEE-1588v2.1 High Accuracy profile)
IEEE 1588 PTPv2, NTP, IRIG-B

Other Protocols SSH, SNMPv3

GPS Timing Integrity Monitoring

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User-Friendly Web Interface

