



WHITE RABBIT Z16

It is the reliable **precise time fan-out for White Rabbit distribution** on 1G Ethernet-based networks.

The WR-Z16 is a standalone device with 16 SFP connectors which provides **sub-nanosecond accuracy** time over plug-and-play fiber links.

The WR-Z16 provides very precise **IEEE 1588 (PTP)** in all its optical interfaces and supports **NTP** interoperability. Picosecond-level frequency distribution is available through **digital clock**.

The WR-Z16 incorporates **failover mechanisms** which combine **multi-source** redundancy and **holdover** capabilities to ensure continued operation.



Technical Specifications / WR-Z16

System On-Chip	
SoC	Xilinx Zynq 7000 series
CPU	Dual ARM® A9 MP@ 1 GHz
Memory	<ul style="list-style-type: none"> 512 MB DDR3 (32-bit bus) 16GB SD Card
Timing	
Multi-sources	<p>Failover mechanism to ensure continuous operation by switching over several timing sources in case of failure:</p> <ul style="list-style-type: none"> White-Rabbit (accuracy <1ns) External references (GNSS, AC)
PTP IEEE 1588-2008	<p>Supported Profiles:</p> <ul style="list-style-type: none"> Default G.8265.1^[1] G.8275.1^[1] IEEE C37.238-2011^[1] <p>up to 16 clients</p>
NTP	NTP v2, v3 & v4
Holdover (optional)	<p>Accuracy (learning 3 days from GNSS)</p> <ul style="list-style-type: none"> < 100ns @ 4h < 500ns @ 8h < 1.5us @ 24h
Management	
OS	Linux (Kernel v4.9 & buildroot)
Control	<ul style="list-style-type: none"> CLI & Web-GUI: HTTP(s)
Authentication	<ul style="list-style-type: none"> RADIUS TACACS+
Monitoring	<ul style="list-style-type: none"> SNMPv3 (SNMPv2) + Traps Smart-Alerts
Network	<ul style="list-style-type: none"> SSHv2 (OpenSSH 7.8) + SFTP/SCP DHCP LLDP Rsyslog
Physical Specification	
Dimension	431 mm x 44 mm x 330 mm
Color	White (Metallic)
Certifications	ROHS, FCC, CE
Environmental Conditions	
Temperature	-10°C ~ +50°C
Humidity	0% ~ 90% RH

HIGHLIGHTS

- ✓ Sub-nanosecond time accuracy
- ✓ 16 optical timing ports for WR/PTPv2
- ✓ Multi-source time references
- ✓ Distance range over 80 km using fiber
- ✓ Linux OS
- ✓ Datacenter Optimized design
- ✓ Failover mechanisms
- ✓ Holdover capability
- ✓ Extended monitoring and management
- ✓ Redundant hot swappable power supply & fans
- ✓ Health monitoring

Front Panel



UART	RS232 Serial (RJ45 connector)
Ethernet	2x 100/1000 Base-T RJ45
SFP Ports	16x 1GbE for timing distribution (WR/PTPv2 selectable)
Clocks I/O	<p>4x SMA connectors (3V @50Ω, TTL compatible):</p> <ul style="list-style-type: none"> 10MHz OUT (LVTTTL) PPS OUT (LVTTTL) PPS IN (LVTTTL) 10MHz IN (TTL/CMOS/ECL/clipped sine)

Back Panel Modules



Power Supply	<p>2x Redundant & Hot-swappable</p> <ul style="list-style-type: none"> 100-240VAC, 50-60 Hz 50W (max. 80W)
Fan	<p>2 x Swappable fan modules Airflow: blowing out</p>

[1]: License not included in default package