



## Cutting-edge PCIe 5.0 Redriver

Phison PS7151 is a linear redriver IC solution designed to unleash the full potential of high speed signal transmissions in the PCIe 5.0 era. The design enables a 4-channel signal relay point that offers programmable equalization with flexible output swing and flat gain over a variety of physical mediums. In addition, PS7151 performs high frequency boosting with minimal channel-to-channel cross-talks, additive jitters, and return losses comparable to a passive component in real-world action, making it highly dependable across diverse applications.



### Application

Server / NAS / HPC

PC Motherboard / Gaming Console

Hardware Accelerator

### Product Features

#### High Range of EQ Boosting and Linearity

PS7151 offers up to 20dB of EQ boosting range with an excellent maximum linear output range of up to 1200mV in terms of peak-to-peak voltage (Vpp) measurements. With flexible output swinging, PS7151 transmits and receives signals with outstanding accuracy and minimal disturbances.

#### Independent Multi-Band Compensation

PS7151 supports a unique I2C mode for multi-band independent compensation adjustments. This allows system engineers to independently tune parameters for cables or PCB traces to achieve the best compensation for signal attenuation.

#### PCI-SIG Compliant PCIe Redrivers

Having gone through extensive, rigorous root complex and endpoint interoperability testing at the PCI-SIG Compliance Workshop, PS7151 is fully compliant with PCI-SIG standards and regulations with inclusion on the PCI-SIG Integrators List.

#### “PHiTUNE” Automatic EQ Tuning Tool

Phison’s patented software tool automatically configures the initial gain parameters suited for the targeted development environment before signal results get collected for continued search of optimized settings with AI technology.

# Redriver

PS7151

Features	Specifications
Interface	<ul style="list-style-type: none"><li>- PCIe 5.0</li><li>- Backward compatible with existing PCIe generation transfer rates</li><li>- Also compatible with DP, SAS, SATA, and XFI</li></ul>
Channel Count	<ul style="list-style-type: none"><li>- 4 channels</li></ul>
Function	<ul style="list-style-type: none"><li>- Pure Redriver</li></ul>
Package	<ul style="list-style-type: none"><li>- FCLGA 40</li></ul>
Body Size	<ul style="list-style-type: none"><li>- 6.0 mm x 4.0 mm</li></ul>
Supply Voltage	<ul style="list-style-type: none"><li>- 3.3V</li></ul>
Max EQ Boosting Range	<ul style="list-style-type: none"><li>- 0 ~ 20dB @ 16GHz</li></ul>
Max Output Linear Range	<ul style="list-style-type: none"><li>- 1200mVppd</li></ul>
Operating Junction Temperature	<ul style="list-style-type: none"><li>- Operating range: -40 ~ 125 °C</li><li>- Storage range: -40 ~ 125 °C</li></ul>
PCIe Protocol Participation	<ul style="list-style-type: none"><li>- Protocol unaware</li></ul>
"PHiTUNE" Auto EQ Tuning	<ul style="list-style-type: none"><li>- Support</li></ul>



THE DATA WITHIN THIS SPECIFICATION IS SUBJECT TO CHANGE BY PHISON WITHOUT NOTICE. PERFORMANCE NUMBERS MAY VARY BASED ON SYSTEM CONFIGURATION AND TESTING CONDITIONS.

COPYRIGHT © 2025 PHISON ELECTRONICS, ALL RIGHTS RESERVED.

Find more information and resources at: [phisonblog.com](https://phisonblog.com) and [phison.com](https://phison.com)