



PS8722 / PS8725 USB 3.0 Dual-Channel Unidirectional Repeaters

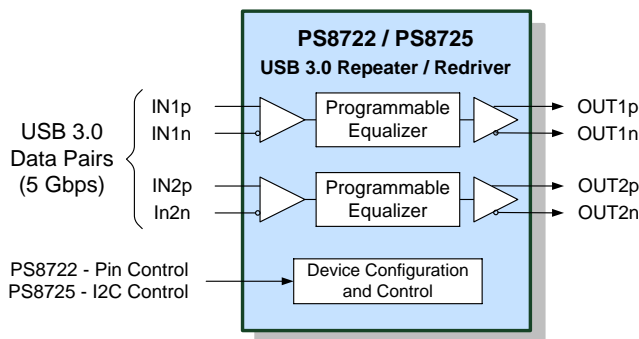
Product Brief

PS8722A, PS8722B, PS8725A, PS8725B

KEY FEATURES

- Unidirectional dual-channel USB 3.0 redriver (5.0Gbps)
- Supports Low Frequency Periodic Signaling (LFPS) with fast LFPS enter/exit time
- Programmable equalizers enable performance optimization
- Supports full USB 3.0 power management with additional automatic power saving functions
- Supports hot plug with Automatic Receiver Detect
- Integrated 50Ω termination resistors on inputs and outputs
- Programmable output de-emphasis levels
- Flexible device programming and control options:
 - Pin-strapped control for PS8722
 - Local I2C control for PS8725
- Low power consumption
- Single Power Supply:
 - 1.5V for PS8722A/PS8725A
 - 3.3V for PS8722B/PS8725B
- In-Line signal connection pins for flow-through PCB layout
- 3x3mm 20-pin TQFN Halogen free RoHS Package
- 0° to 85°C operating temperature range
- ESD: Human Body Model at 8 kV & IEC 6100-4-2, 5kV Direct Pin Zapping

BLOCK DIAGRAM



GENERAL DESCRIPTION

The PS8722 and PS8725 are two-channel, unidirectional USB 3.0 repeater/redriver devices. The on-chip programmable equalization and driver circuits provide signal reconditioning for long media link applications. The unidirectional configuration enables device placement flexibility; for example one device can be applied to the receive channels near a dual-port USB 3.0 host, and another device to the transmit channels near the USB 3.0 connector.

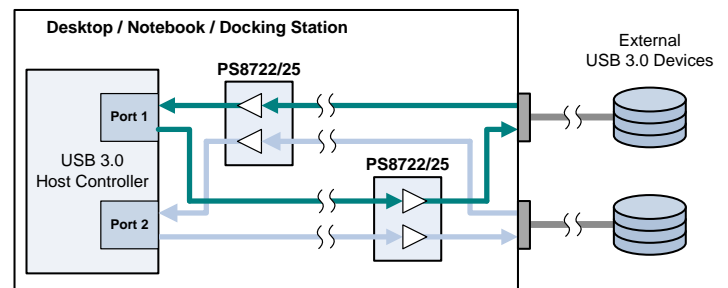
The PS8722A and PS8725A use a single 1.5V supply and offer the lowest power consumption available. The PS8722B and PS8725B use a single 3.3V supply.

In addition to supporting full USB 3.0 power management, an additional automatic power saving mode can be enabled that suspends device operation between data packets, reducing power consumption by as much as 90%. Automatic USB device plug/unplug or enable/disable is detected through Rx termination sensing.

APPLICATIONS

- Desktop and laptop computers
- Docking stations
- Servers
- Workstations
- Data storage systems

TYPICAL SYSTEM APPLICATION



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