

ZL4029x

Perfect Timing – Meet Your DB2000 Requirements Today With Microchip's Ultra-Low Jitter, Low-Power Buffers

Summary

The ZL4029x are a family of high-performance, ultra-low jitter, low power 1 to 20 HCSL fanout buffers. The ZL40292 and ZL40294 are fully compliant to the DB2000Q and DB2000QL standard while the ZL40293 and ZL40295 can be used in PCIe Gen 1 through 5 applications requiring a 100 ohm termination. Applications include PCI Express generation 1/2/3/4/5 clock distribution, Intel QPI servers, storage and data centers, switches and routers.



Key Attributes

- Fully compliant with Intel DB2000Q and DB2000QL specification
- 20 low-power push-pull HCSL PCIe outputs
- Ultra-low additive jitter: 15 fs typical
- Supports clock frequencies from 0 to 250 MHz
- Supports 3.3V power supplies
- Embedded Low Drop Out (LDO) voltage regulator provides superior power supply noise rejection
- Maximum output to output skew of 40 ps
- SMBus interface
- Eight OE pins
- Transparent for spread-spectrum clock

Target Applications

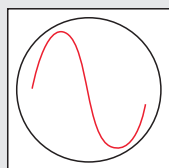
- PCI Express generation 1/2/3/4/5
- Clock distribution
- Intel QPI servers
- Storage and data centers
- Switches and routers

Product Variants

Part Number	Output Frequencies (MHz)	Number of Outputs	Standard	Termination	Jitter (max RMS)	Interfaces	Package	Media
ZL40292 LDG1	Up to 250	20	DB2000Q PCIe Gen 1-5	85Ω	20 fs	8 OE pins+SMBus	72-pin 10 × 10 QFN	Tray
ZL40292 LDF1	Up to 250	20	DB2000Q PCIe Gen 1-5	85Ω	20 fs	8 OE pins+SMBus	72-pin 10 × 10 QFN	T/R
ZL40293 LDG1	Up to 250	20	PCIe Gen 1-5	100Ω	20 fs	8 OE pins+SMBus	72-pin 10 × 10 QFN	Tray
ZL40293 LDF1	Up to 250	20	PCIe Gen 1-5	100Ω	20 fs	8 OE pins+SMBus	72-pin 10 × 10 QFN	T/R
ZL40294 LDG1	Up to 250	20	DB2000QL PCIe Gen 1-5	85Ω	20 fs	8 OE pins+SMBus+SBI	80-pin 6 × 6 GQFN	Tray
ZL40294 LDF1	Up to 250	20	DB2000QL PCIe Gen 1-5	85Ω	20 fs	8 OE pins+SMBus+SBI	80-pin 6 × 6 GQFN	T/R
ZL40295 LDG1	Up to 250	20	PCIe Gen 1-5	100Ω	20 fs	8 OE pins+SMBus+SBI	80-pin 6 × 6 GQFN	Tray
ZL40295 LDF1	Up to 250	20	PCIe Gen 1-5	100Ω	20 fs	8 OE pins+SMBus+SBI	80-pin 6 × 6 GQFN	T/R

<https://www.microsemi.com/product-directory/clock-fan-out-buffers/5516-zl40292-zl40293#overview>

More Clock and Timing products From The Industry's Broadest Timing Portfolio

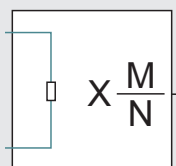
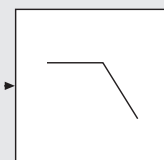


Oscillators

MEMS | Crystal | OCXO | EMXO
TCXO | MCXO | VCXO | VCSO

Jitter Attenuation

Jitter filtering | Clock translation
Any in/any out | Internal EEPROM
Advanced DPLL

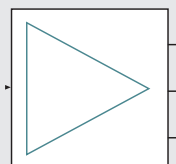
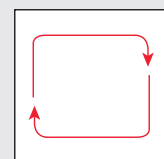


Clock Generation

Low jitter | Low power
Any in/any out | Clock tree on a chip
Integrated MEMS/Xtal resonator

Synchronization

Synchronous Ethernet | IEEE1588
Servo algorithm OTN/GPS PLLS
Firmware and software support



Clock Distribution

Low additive jitter | Any In/Any Out
Fanout buffers | Zero-delay buffers
Dividers | Multiplexers

Complimentary

Logic translators | Cross point switches
Backplane and cable | Skew management
Flip-flop/logic gates

