

## Product Overview

### NB3W800L: 3.3 V 100/133 MHz Differential 1:8 HCSL Compatible Push-Pull Clock ZDB/Fanout Buffer for PCIe

For complete documentation, see the data sheet.

The NB3W800L is a low-power 8-output differential buffer that meets all the performance requirements of the DB800ZL specification. The NB3W800L is capable of distributing the reference clocks for Intel® QuickPath Interconnect (Intel QPI & UPI), PCIe Gen1/Gen2/Gen3/Gen4, SAS, SATA, and Intel Scalable Memory Interconnect (Intel SMI) applications. A fixed, internal feedback path maintains low drift for critical QPI applications.

### Features

- 8 Differential Clock Output Pairs @ 0.7 V
  - Low-power NMOS Push-pull HCSL Compatible Outputs
  - Output-to-output Skew <50 ps
  - Input-to-output Delay Variation <100 ps
  - PCIe Phase Jitter: Gen3 <1.0 ps RMS, Gen4 <0.5ps RMS
  - QPI 9.6GT/s 12UI Phase Jitter <0.2 ps RMS
  - Individual OE Control; Hardware Control of Each Output
  - PLL Configurable for PLL Mode or Bypass Mode (Fanout Operation)
  - 100 MHz or 133 MHz PLL Mode Operation; Supports PCIe Gen 1, Gen 2, Gen 3, Gen 4, and QPI & UPI Applications
  - Selectable PLL Bandwidth; Minimizes Jitter Peaking in Downstream PLL's
- For more features, see the data sheet

### Applications

- Industrial
- Networking
- Computing
- Consumer
- PCIe Gen 1, Gen 2, Gen 3, Gen 4

### End Products

- Desktop
- Notebook
- Switches / Routers
- Servers
- Automated Test Equipment

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V <sub>CC</sub> Typ (V)	t <sub>jitter</sub> <sup>R</sup> MS Typ (ps)	t <sub>skew(o-)</sub> Max (ps)	t <sub>pd</sub> Typ (ns)	t <sub>R</sub> & t <sub>F</sub> Max (ps)	f <sub>max</sub> Clock Typ (MHz)	f <sub>max</sub> Data Typ (Mbps)	Package Type
NB3W800LMNG		Pb-free Halide free	Active	Buffer	1	1:8	HCSL	HCSL	3.3		50	0	87.5	100 133.33		QFN-48
NB3W800LMNTXG		Pb-free Halide free	Active	Buffer	1	1:8	HCSL	HCSL	3.3		50	0	87.5	100 133.33		QFN-48

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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