Product Overview

NB3V8312C: 1-TO-12 LVCMOS/LVTTL

For complete documentation, see the data sheet

Product Description

The NB3V8312C is a high performance, low skew LVCMOS fanout buffer which can distribute 12 ultra-low jitter clocks from an LVCMOS/LVTTL input up to 250 MHz. The 12 LVCMOS output pins drive 50Ω series or parallel terminated transmission lines. The outputs can also be disabled to a high impedance (tri-stated) via the OE input, or enabled when High. The NB3V8312C provides an enable input, CLK_EN pin, which synchronously enables or disables the clock outputs while in the LOW state. Since this input is internally synchronized to the input clock, changing only when the input is LOW, potential output glitching or runt pulse generation is eliminated. Separate VDD core and VDDO output supplies allow the output buffers to operate at the same supply as the VDD (VDD = VDDO) or from a lower supply voltage. Compared to single-supply operation, dual supply operation enables lower power consumption and output-level compatibility. The VDD core supply voltage can be set to 3.3 V, 2.5 V or 1.8 V, while the VDDO output supply voltage can be set to 3.3 V, 2.5 V, or 1.8 V, with the constraint that VDD >/= VDDO.

Features

- VDD core supply voltage can be set to 3.3 V, 2.5 V or 1.8 V
- VDDO output supply voltage can be set to 3.3 V, 2.5 V, or 1.8 V, with the constraint that VDD >/= VDDO
- 250 MHz Maximum Clock Frequency
- Accepts LVCMOS, LVTTL Clock Inputs
- 12 LVCMOS Clock Outputs
- 150 ps Max. Skew Between Outputs
- Temp. Range 40C to +85C
- 32pin LQFP and QFN Packages
- Synchronous Clock Enable

Applications

- Networking
- Telecom
- Storage Area Networks

End Products

- Servers
- Routers
- Switches

Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V_{CC} Typ (V)	$t_{JitterRMS}$ Typ (ps)	$t_{skew(o-o)}$ Max (ps)	t_{pd} Typ (ns)	t_R & t_F Max (ps)	f_{max} Clock Typ (MHz)	f_{max} Data Typ (Mbps)	Package Type
NB3V8312CFAG	Pb-free Halide free	Active	Buffer	1	1:12	LVCMOS LVTTL	LVCMOS	1.8 2.5 3.3	0.03	150	1.5	700	250		LQFP-32
NB3V8312CFAR2G	Pb-free Halide free	Active	Buffer	1	1:12	LVCMOS LVTTL	LVCMOS	1.8 2.5 3.3	0.03	150	1.5	700	250		LQFP-32
NB3V8312CMNG	Pb-free Halide free	Active	Buffer	1	1:12	LVCMOS LVTTL	LVCMOS	1.8 2.5 3.3	0.03	150	1.5	700	250		QFN-32
NB3V8312CMNR4G	Pb-free Halide free	Active	Buffer	1	1:12	LVCMOS LVTTL	LVCMOS	1.8 2.5 3.3	0.03	150	1.5	700	250		QFN-32

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