

Product Overview

NB4N840M: 2 x 2 Crosspoint Switch, Dual, 3.3 V, 3.2 Gb / s, with CML Outputs

For complete documentation, see the data sheet.

The NB4N840M is a high-bandwidth fully differential dual 2 x 2 crosspoint switch with CML inputs/outputs that is suitable for applications such as SDH/SONET DWDM and high speed switching. Fully differential design techniques are used to minimize jitter accumulation, crosstalk, and signal skew, which make this device ideal for loop-through and protection channel switching applications. Internally terminated differential CML inputs accept AC-coupled LVPECL (Positive ECL) or direct coupled CML signals. By providing internal 50 Ohm input and output termination resistor, the need for external components is eliminated and interface reflections are minimized. Differential 16 mA CML outputs provide matching internal 50 Ohm terminations, and 400 mV output swings when externally terminated, 50 Ohm to VCC. Single-ended LVCMOS/LVTTL SEL inputs control the routing of the signals through the crosspoint switch which makes this device configurable as 1:2 fan-out, repeater or 2 x 2 crosspoint switch. The device is housed in a low profile 5 x 5 mm 32-pin QFN package.

Features

- Plugin compatible to the MAX3840 and SY55859L
- Maximum Input Clock Frequency 2.7 GHz
- Maximum Input Data Frequency 3.2 Gb/s
- 225 ps Typical Propagation Delay
- 80 ps Typical Rise and Fall Times
- 7 ps Channel to Channel Skew
- 430 mW Power Consumption
- < 0.5 ps RMS Jitter
- 7 ps PeaktoPeak Data Dependent Jitter
- Power Saving Feature with Disabled Outputs

For more features, see the data sheet

Applications

- OC-3 to OC-48 Line or System Loopback
- Redundant Data Fan-out

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Input/Output Ratio	Channels	Input Level	Output Level	V _{CC} Typ (V)	f _{Max} Typ (MHz)	t _{jitter} Typ (ps)	t _{skew(OO) Max} (ps)	t _{pd} Typ (ns)	Package Type
NB4N840MMNG		Pb-free	Active	2:1	2	CML	CML	2.5	3200	0.15	25	0.225	QFN-32
		Halide free											
NB4N840MMNR4G		Pb-free	Active	2:1	2	CML	CML	2.5	3200	0.15	25	0.225	QFN-32
		Halide free											
NB4N840MMNTWG		Pb-free	Active	2:1	2	CML	CML	2.5	3200	0.15	25	0.225	QFN-32
		Halide free											

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