

Product Overview

NB7V586M: Input Mux - 2:1 Differential, 1.8 V, Clock / Data Fanout Buffer - 1:6 CML, 1.2 V / 1.8 V

For complete documentation, see the data sheet.



The NB7V586M is a differential 1-to-6 CML Clock/Data Distribution chip featuring a 2:1 Clock/Data input multiplexer with an input select pin. The INx/INxb inputs incorporate internal 50-ohm termination resistors and will accept differential LVPECL, CML, or LVDS logic levels. The INx/INxb inputs and core logic are powered with a 1.8 V supply. The NB7V586M produces six identical differential CML output copies of Clock or Data. The outputs are configured as three banks of two differential pair. Each bank (or all three banks) have the flexibility of being powered by any combination of either a 1.8 V or 1.2 V supply. The 16 mA differential CML output structure provides matching internal 50-ohm source terminations and 400 mV output swings when externally terminated with a 50-ohm resistor to VCCOx. The 1:6 fanout design was optimized for low output skew and minimal jitter and is ideal for SONET, GigE, Fiber Channel, Backplane and other Clock/Data distribution applications operating up to 6 GHz or 10 Gb/s typical. The VREFAC reference outputs can be used to rebias capacitor-coupled differential or single-ended input signals. The NB7V586M is offered in a low profile 5mm x 5mm 32-pin Pb-Free QFN package.

Features

- Maximum Input Data Rate > 10 Gb/s Typical
- Data Dependent Jitter < 10 ps
- Maximum Input Clock Frequency > 6 GHz Typical
- Random Clock Jitter < 0.8 ps RMS, Max
- Low Skew 1:6 CML Outputs, 30 ps Max
- 2:1 MultiLevel Mux Inputs
- 175 ps Typical Propagation Delay
- 50 ps Typical Rise and Fall Times
- Differential CML Outputs, 330 mV PeaktoPeak, Typical
- Operating Range: VCC = 1.71 V to 1.89 V; VCCOx = 1.14 V to 1.89 V

For more features, see the data sheet

Applications

- SONET, SDH, Fibre Channel, Gigabit Ethernet clock / Data distribution

End Products

- Servers, Routers, Networking, Instrumentation

Part Electrical Specifications

Product	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
NB7V586MMNG	Pb-free	Active	2:1	1	CML	CML	1.8	6000	0.2	30	0.175	QFN-32
	Halide free				LVDS							
					ECL							
NB7V586MMNR4G	Pb-free	Active	2:1	1	LVDS	CML	1.8	6000	0.2	30	0.175	QFN-32
	Halide free				ECL							
					CML							

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