

Product Overview

NB7VQ572M: Differential 4:1 Mux w/Input Equalizer to 1:2 CML Clock/Data Fanout / Translator

For complete documentation, see the data sheet.

The NB7VQ572M is a high performance differential 4:1 Clock / Data input multiplexer and a 1:2 CML Clock / Data fanout buffer that operates up to 7 GHz / 10 Gbps respectively with a 1.8 V, 2.5 V, or 3.3 V power supply. Each INx / INx input pair incorporates a fixed Equalizer Receiver, which when placed in series with a Data path, will enhance the degraded signal transmitted across an FR4 backplane or cable interconnect. For applications that do not require Equalization, consider the NB7V572M, which is pin-compatible to the NB7VQ572M. The differential Clock / Data inputs have internal 50-ohm termination resistors and will accept differential LVPECL, CML, or LVDS logic levels. The NB7VQ572M incorporates a pair of Select pins that will choose one of four differential inputs and will produce two identical CML output copies of Clock or Data. As such, the NB7VQ572M is ideal for SONET, GigE, Fiber Channel, Backplane and other Clock/Data distribution applications. The two differential CML outputs will swing 400mV when externally loaded and terminated with a 50-ohm resistor to VCC and are optimized for low skew and minimal jitter. The NB7VQ572M is a member of the GigaComm™ family of high performance clock products.

Features

- Input Data Rate > 11 Gb/s Typical
- Data Dependent Jitter < 10 ps
- Maximum Input Clock Frequency > 7 GHz Typical
- Random Clock Jitter < 0.8 ps RMS
- Fixed Input Equalization
- Low Skew 1:2 CML Outputs, < 15 ps max
- 4:1 MultiLevel Mux Inputs, accepts LVPECL, CML LVDS
- 175 ps Typical Propagation Delay
- 45 ps Typical Rise and Fall Times
- Differential CML Outputs, 400mV peak-to-peak, typical

For more features, see the data sheet

Applications

- SONET/SDH, Fibre Channel and Gigabit Ethernet Clock/Data Multiplexing and Distribution

End Products

- Servers and Routers

Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V _{CC} Typ (V)	t _{jitter} RMS Typ (ps)	t _{skew} (ps) Max	t _{pd} Typ (ns)	t _R & t _F Max (ps)	f _{max} Clock Typ (MHz)	f _{max} Data Typ (Mbps)	Package Type
NB7VQ572MMNG	Pb-free	Active	Buffer	1	4:2	CML	CML	1.8	0.2	15	0.175	65	7000	11000	QFN-32
	Halide free					LVDS		3.3							
						LVP ECL		2.5							
NB7VQ572MMNR4G	Pb-free	Active	Buffer	1	4:2	CML	CML	2.5	0.2	15	0.175	65	7000	11000	QFN-32
	Halide free					LVDS		1.8							
						LVP ECL		3.3							

For more information please contact your local sales support at www.onsemi.com.

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