

## NB7V58M

# Clock / Data Multiplexer / Translator, 2:1 Differential, 1.8 V / 2.5 V / 3.3 V, with CML Outputs



## Product Overview

For complete documentation, see the data sheet.

The NB7V58M is a high performance differential 2-to-1 Clock or Data multiplexer. The differential inputs incorporate internal 50-ohm termination resistors that are accessed through the VT pin. This feature allows the NB7V58M to accept various logic level standards, such as LVPECL, CML or LVDS. The NB7V58M produces minimal Clock or Data jitter operating up to 7GHz or 10.7Gbps, respectively. As such, the NB7V58M is ideal for SONET, GigE, Fiber Channel, Backplane and other Clock/Data distribution applications. The 16mA differential CML outputs provide matching internal 50-ohm terminations and 400mV output swings when externally terminated with a 50-ohm resistor to VCC. The NB7V58M is offered in a low profile 3mm x 3mm 16-pin QFN package and is a member of the GigaComm family of high performance Clock / Data products. For applications that require equalization, the pin-compatible NB7VQ58M is also available.

## Features

- Maximum Input Data Rate > 10.7 Gb/s
- Data Dependent Jitter < 10 ps
- Maximum Input Clock Frequency > 7 GHz
- Random Clock Jitter < 0.8 ps RMS
- 180 ps Typical Propagation Delay
- 35 ps Typical Rise and Fall Times
- Differential CML Outputs, 400 mV Peak-to-Peak, Typical
- Operating Range: VCC = 1.71 V to 3.6 V with GND = 0 V
- Internal 50-ohm Input Termination Resistors

## Applications

- High Speed Clock or Data Multiplexing

## End Products

- Router

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Input/Output Ratio	Channels	Input Level	Output Level	V <sub>CC</sub> Typ (V)	f <sub>Max</sub> Typ (MHz)	t <sub>Jitter</sub> Typ (ps)	t <sub>skew(OO)</sub> Max (ps)	t <sub>pd</sub> Typ (ns)	Package Type
NB7V58MMNG	10.7149	Pb H	Active	2:1	1		CML		8000	0.2	50	0.18	QFN-16
NB7V58MMNHTBG	10.7149	Pb H	Active	2:1	1		CML		8000	0.2	50	0.18	QFN-16