

## Product Overview

### NB7VQ1006M: Fanout Buffer, Equalizer Receiver, 10 Gbps, 1.8 V / 2.5 V, with 1:6 Differential CML Outputs

For complete documentation, see the data sheet.

The NB7VQ1006M is a high performance EQualizer Receiver (signal enhancer) that operates up to 10 Gbps/7.5 GHz with a 1.8 V or 2.5 V power supply. When placed in series with a Data/Clock path, it will enhance the degraded signal transmitted across a FR4 backplane or cable interconnect and output six identical CML copies of the input signal. The EQualizer ENable pin (EQEN) allows the IN/IN inputs to either flow through or bypass the EQualizer section. Control of the EQualizer function is realized by setting EQEN. When EQEN is set Low, the IN / IN inputs bypass the Equalizer. When EQEN is set High, the IN / IN inputs flow through the Equalizer. The default state at start-up is LOW. The differential Data/Clock inputs incorporate a pair of internal 50-ohm termination resistors, in a 100-ohm center-tapped configuration, via the VT Pin and will accept differential LVPECL, CML or LVDS logic levels. This feature provides transmission line termination on-chip, at the receiver end, eliminating external components. The NB7VQ1006M is a member of the PEEQ GigaComm™ family of high performance Data/Clock products.

#### Features

- Maximum Input Data Rate > 10 Gbps
- Maximum Input Clock Frequency > 7.5 GHz
- Backplane and Cable Interconnect Compensation
- Differential CML Outputs, 400 mV Peak-to-Peak, Typical
- Operating Range: VCC = 1.71 V to 2.625 V, GND = 0 V
- -40°C to +85°C Ambient Operating Temperature

#### Benefits

- Higher Data rate
- Higher Data rate
- Longer trace runs
- Design Flexibility
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#### Applications

- Backplane and Cable Interconnect Compensation

#### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V <sub>CC</sub> Typ (V)	t <sub>jitter</sub> MS Typ (ps)	t <sub>skew(o-o)</sub> Max (ps)	t <sub>pd</sub> Typ (ns)	t <sub>R</sub> & t <sub>F</sub> Max (ps)	f <sub>max</sub> Clock Typ (MHz)	f <sub>max</sub> Data Typ (Mbps)	Package Type
NB7VQ1006MMNG		Pb-free Halide free	Active	Signal Driver	1	1:6	CML ECL LVDS	CML	2.5 1.8	0.2	25	0.225	65	7500	10000	QFN-24
NB7VQ1006MMNTXG		Pb-free Halide free	Active	Signal Driver	1	1:6	LVDS CML ECL	CML	2.5 1.8	0.2	25	0.225	65	7500	10000	QFN-24

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