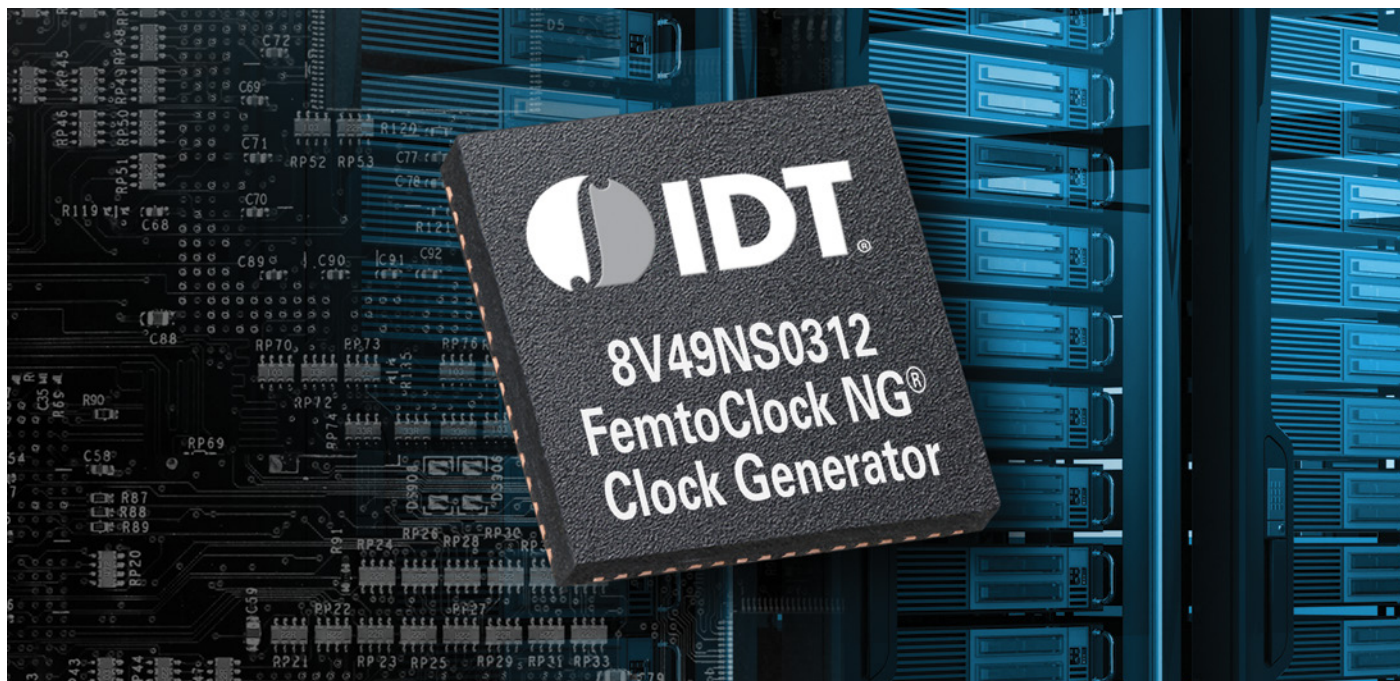# 8V49NS0312 FemtoClock® NG
12-Output Clock Generator

FEATURES

- 12 total outputs: 11 differential and one LVCMOS on three integer dividers and one integer or FracN

- Low phase jitter: < 100fs RMS phase jitter, 12 kHz to 20MHz

- Output frequencies from 10.91MHz up to 2.5GHz differential, 250MHz LVCMOS

- Flexible input options
  – 10 to 50 MHz fundamental mode crystal
  – Reference input from 5MHz to 1GHz

- Flexibility
  – One Time Programmable (OTP) non-volatile memory
  – Register programmable through I²C

- Select configurations may be set via control input pins with no need for serial port access

- LVCMOS compatible I²C serial interface for additional configurations either alone or in combination with the control input pins

- 9 x 9 mm 64-VFQFN package

The 8V49NS0312 is a highly flexible 12-output clock generator offering RMS phase jitter performance of less than 100 fs for demanding applications. Three integer dividers and a fourth divider that can function in either integer or fractional mode provide 11 differential and one LVCMOS outputs. When paired with an external crystal, the 8V49NS0312 generates high performance timing geared towards the communications and datacom markets, especially for those applications demanding extremely low phase noise, such as 10, 40 and 100GE. The 8V49NS0312 delivers an optimum combination of high clock frequency and low phase noise performance, combined with high power supply noise rejection (PSNR).

Flexibility and ease of programmability allow the device to be used in a variety of clock trees while reducing engineering effort. The 8V49NS0312 is programmable through an I²C interface and also supports I²C master capability for configuration via an external EEPROM. IDT's Timing Commander™ software tool provides fast and easy reconfiguration of the devices to ease development and speed time to market.

The 8V49NS0312 is offered in a lead free 64-VFQFN package and is designed to operate across full industrial temperature range.

TARGET APPLICATIONS

- 10, 40, 100G Optical Transport Network (OTN)

- Ethernet

- Communications and networking end equipment

- Wavelength-division Multiplexing (WDM)

- Core/Metro Routers

To request samples, download documentation, or learn more visit:
idt.com/8V49NS0312