# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

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# **Clock & Data Recovery Solutions**

#### **OVERVIEW**

gennum

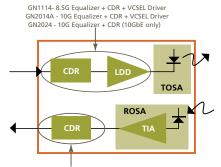
Gennum's world-class expertise in the design of high-performance clock and data recovery (CDR) ICs offers best-in-class performance in the key areas of power consumption, receiver sensitivity, output jitter and jitter tolerance. Leveraging Gennum's ClearEdge<sup>\*\*</sup> technology, our innovative, low power CDRs provide the industry's best jitter performance which is a key advantage in designing next-generation optical transceivers, copper cable interconnect and backplane interconnect applications. Additionally, Gennum's CDRs operate without a reference clock and use a single 3.3V supply, minimizing system and module costs.

#### **KEY BENEFITS**

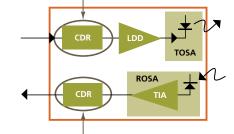
- Only single 3.3V supply needed
- Lowest power CDRs in the industry
- No reference clock required
- · Jitter budget reset inside module enables robust interconnect
- · Highly integrated IC reduces power consumption and board space requirements
- 4mm X 4mm QFN packages
- · Low jitter generation for SONET applications

# 8.5/10G SFP+ PRODUCTS

# **10G XFP PRODUCTS**



GN1113 - 8.5G Limiting Amplifier + CDR GN2023 - 10G Limiting Amplifier + CDR (10GbE only) GN20045 - 10G Equalizer + CDR (SONET, 10GbE, 10GFC) GN2014A - 10G Equalizer + CDR + VCSEL Driver GN2024 - 10G Equalizer + CDR (10GbE only)



GN2003S - 10G Limiting Amplifier + CDR (SONET, 10GbE, 10GFC) GN2013A/C - 10G Limiting Amplifier with Slice Level Adjust + CDR GN2023 - 10G Limiting Amplifier + CDR (10GbE only)

### SOLUTIONS FOR SFP+ AND XFP MODULES

SFP+ is a critical emerging optical module form factor and Gennum's CDRs offer a "plug and play" experience to speed time to market for next generation designs. Using a CDR to clean the signal within a module improves the robustness of the link and eases the high-speed performance requirements of the host ASIC. The benefits of a dedicated CDR help to deliver unprecedented 10Gbps performance with SFP+ modules.

XFP optical modules are developing strong momentum in the marketplace. Gennum's second generation CDRs have achieved excellent performance in SONET, Ethernet and Fibre Channel applications through improved jitter generation, jitter transfer and jitter tolerance. All of this has been achieved with expanded data rate coverage to 11.3Gb/s and significantly reduced power consumption.

### **CDR PRODUCT PORTFOLIO**

PRODUCT NAME	DESCRIPTION	TYPICAL APPLICATIOIN
GN2003S	9.95-11.3 Gb/s CDR with Limiting Amp Input	SONET, Receive
GN2004S	9.95-11.3 Gb/s CDR with Equalizer Input	SONET, Transmit
GN2023	9.95-10.52 Gb/s CDR with Limiting Amp Input	Ethernet, Receive
GN2024	9.95-10.52 Gb/s CDR with Equalizer Input	Ethernet, Transmit
GN2013A	9.95-11.3 Gb/s CDR with Limiting Amp Input and Slice Level Adjust	SONET, Receive, Long Range
GN2014A	9.95-11.3 Gb/s CDR with Equalizer Input and VCSEL Driver	Ethernet, Transmit
GN1113	8.5 Gb/s CDR with Limiting Amp Input*	Fibre Channel, Receive
GN1114	8.5 Gb/s CDR with Equalizer Input and VCSEL** Driver	Fibre Channel, Transmit

\* Pin for pin compatible with GN2023 \*\* Pin for pin compatible with GN2014A

### SUITE OF DATA COMMUNICATION SOLUTIONS

Beyond CDRs, Gennum offers a comprehensive suite of backplane interconnect and optical transceiver ICs including laser drivers, equalizers, SerDes, and transimpedance amplifiers (TIAs) for high speed data communication and telecommunication applications.



LEARN MORE: URL: WWW.GENNUM.COM EMAIL: INFO@GENNUM.COM PHONE: (905) 632-2996

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