



LightCharger™ Optical Networking ICs Transimpedance Amplifiers SE1000 Series

Going Light

The advantages of SiGe's silicon-germanium expertise extend to the optical world with the company's exceptional family of LightCharger™ TIAs. SiGe delivers high-speed, fully integrated IC solutions that meet the demands of fibre optic interface modules at a competitive cost.

Looking Sharp

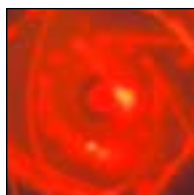
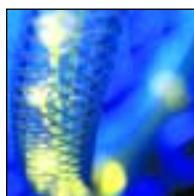
SiGe Semiconductor offers a portfolio of optical networking ICs for high-performance optical transmitter and receiver functions.

Our SE1000 transimpedance amplifiers (TIAs) are designed for low-noise front-end optical receiver systems. Enabling lower component count receiver designs and greater stability,

SiGe TIAs allow developers of fibre-based datacom and telecom solutions to realize cost savings. The unique AGC architecture of SiGe's TIAs offers outstanding sensitivity; low power consumption and among the highest overload capability in the industry.

All in the Family

- SE1000 155 Mb/s TIA
- SE1010 622 Mb/s TIA
- SE1020 1.25 Gb/s TIA
- SE1030 2.5 Gb/s TIA
- SE1040 3.125/3.3 Gb/s TIA
- SE1050 10 Gb/s TIA
- SE1052 12.5 Gb/s TIA



Features

- Portfolio of TIAs covering wide range of data rates
- Low noise
- High overload
- Low power consumption
- High bandwidth
- On-chip gain control and power supply rejection available
- Supplied as bare die

Applications

- SE1000, SE1010: SONET/SDH-based transmission systems, test equipment and modules; OC3/12 fibre optic modules; ATM and FDDI
- SE1020: Gigabit-Ethernet systems, test equipment and modules; Fibre Channel optical systems; fibre optic modules and line termination
- SE1030: SONET/SDH-based transmission systems, test equipment and modules; OC48 fibre optic modules; ATM; Gigabit Ethernet; Fibre Channel

- SE1040: Metro Access optical systems; parallel transmission systems
- SE1050, SE1052: SONET/SDH-based transmission systems, test equipment and modules; OC192 fibre optic modules; 10 Gigabit Ethernet; Fibre Channel

About SiGe Semiconductor

SiGe Semiconductor is a leading global supplier of analog and mixed-signal integrated circuits for next-generation cable, high-speed optical, and wireless access systems. Drawing on the unique advantages of silicon-germanium technology, the company designs and delivers integrated circuits with unparalleled performance and power efficiency. SiGe Semiconductor's components can be found in cable modems, set-top boxes, optical network interfaces, Bluetooth™-enabled portable devices, IEEE 802.11a/b/g WLANs, and cordless telephones.

Specifications

Electrical Characteristics (typical)

Product	Data Rate	Supply voltage (V)	Power Consumption (mW)	Trans Impedance Gain (Ω) (differential)	Noise ($\mu A/\sqrt{Hz}$)	Overload (mA pk-pk)	Bandwidth (Hz)
SE1000	155 Mb/s	5	195	30 k	1.2	2.6	> 150 M
SE1010	622 Mb/s	5	195	11.2 k	2.2	2.6	> 400 M
SE1020	1.25 Gb/s	3.3	110	4 k	5.7	2.6	1.2 G
SE1030	2.5 Gb/s	3.3	170	2.3 k	8.0	2.6	2.4 G
SE1040	3.3/3.125 Gb/s	3.3	110	1.3 k	10.4	2.6	3.3 G
SE1050	10 Gb/s	5	430	1.2 k	14.0	2.3	9.8 G
SE1052	12.5/10 Gb/s	3.3	170	4 k	10.0	2.6	12 G



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