

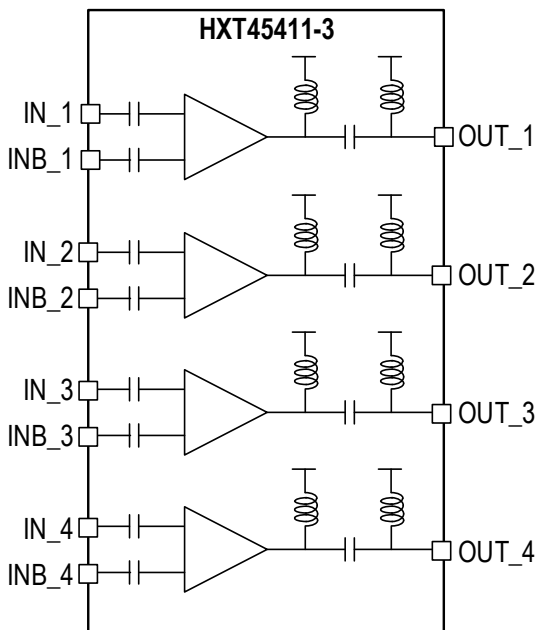
HXT45411-3

4 × 112Gbps Linear EML Driver

The HXT45411-3 is a quad-channel linear EML driver array, which is a member of Renesas’ family of Optical Receiver Transmitter Array (ORTA) products. Combining the HXT45411-3 driver with an EML array or a group of discrete EMLs enables designs for compact linear transmitters for the next generation of 400G/800G optical transceivers.

The HXT45411-3 is a low-power, high-performance, quad-channel linear driver, designed for 4x112Gbps PAM4 EML-based transceivers. The HXT45411-3 is a small form-factor (SFF) packaged surface mount device (SMD) with differential inputs and single-ended outputs consisting of 4x56Gbaud broadband amplifier channels, each capable of driving a linear output voltage of 2.0V<sub>PP</sub>, suitable for 4λ 400G PAM-4 applications.

Block Diagram



Features

- Data rate up to 56 Gbaud per channel for PAM-4 applications
- Low power consumption of 250mW per channel
- > 45GHz bandwidth
- Built-in Bias-T and internal high-frequency chokes
- > 10dB dynamic range of gain control
- Peaking on/off control
- Low channel cross-talk
- Small form-factor SMD
- Internally DC-blocked RF inputs and outputs

Applications

- 400GBASE-DR4, FR4 and LR4 transmitters
- Ethernet optical receiver modules: 200G/400G QSFP-DD or OSFP DR4, FR4 and LR4; and 400G OBO

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