

Easy-To-Design-In Gate Drivers Offer Reinforced Isolation

[Infineon Technologies](#) has expanded its easy-to-design EiceDRIVER X3 Compact (1ED31xx) and highly flexible EiceDRIVER X3 Enhanced Analog (1ED34xx) and the Digital (1ED38xx) gate driver families. These families now offer variants with superior reinforced isolation for higher application safety and long operating life. The new family members are VDE 0884-11 certified. With 8-mm wide-body packages, these families are suitable for applications with demanding isolation requirements including industrial drives, solar systems, uninterruptible power supplies, EV charging and other industrial applications.

The versatile EiceDRIVER X3 Compact family provides driving currents of 5.5 A, 10 A and 14 A and optimized propagation delays of 90 ns. The family also includes a Miller clamp that is highly recommended for SiC MOSFET zero-voltage turn-off. With these features, the 1ED31xx is suitable for high switching frequency applications, IGBT7 and power switches with voltage ratings up to 2300 V.

The EiceDRIVER X3 Enhanced Analog and Digital families offer precise and adjustable desat, as well as additional configurable parameters based on I²C. This supports high flexibility in designs and reduces hardware complexity and evaluation time. Furthermore, the built-in monitoring functionality enables predictive maintenance.

The EiceDRIVER X3 Enhanced 1ED34xx and 1ED38xx as well as the EiceDRIVER X3 Compact 1ED31xx can be ordered now, as can the evaluation boards. For more information on the gate driver ICs including pricing, see the [1ED31xx](#), [1ED34xx](#) and [1ED38xx](#) product pages. For more on the evaluation boards, see the [EVAL-1ED3121MX12H](#), [EVAL-1ED3122MX12H](#), [EVAL-1ED3124MX12H](#), and [EVAL-1ED3491MX12M](#) pages. More information is also available at www.infineon.com/qdisolated.



Fig. 1. The EiceDRIVER X3 Compact, and X3 Enhanced Analog and Digital gate driver IC families have been expanded with variants in the three product families that feature reinforced isolation, providing power supply designers with VDE 0884-11 certified options for silicon and wide-bandgap device types up to 2300 V.

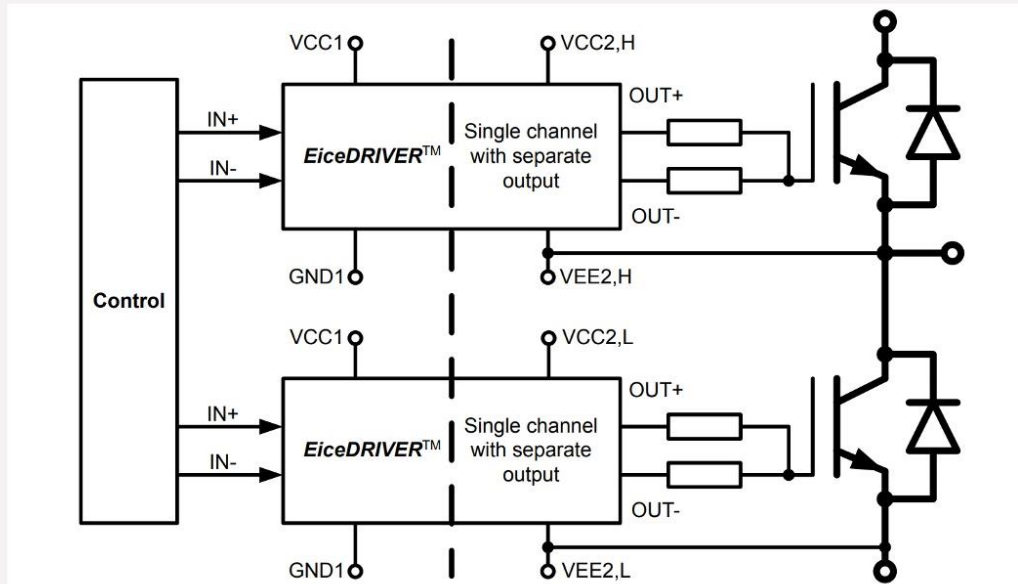


Fig. 2. The 1ED31xxMU12H (1ED-X3 Compact) gate driver ICs are galvanically isolated single-channel gate driver ICs for IGBT, MOSFET and SiC MOSFET in PG-DSO-8 package. They provide a typical output current of up to 14.0 A on separate source and sink pins or a typical output current of 10.0 A with an additional 3.0-A active Miller clamp.

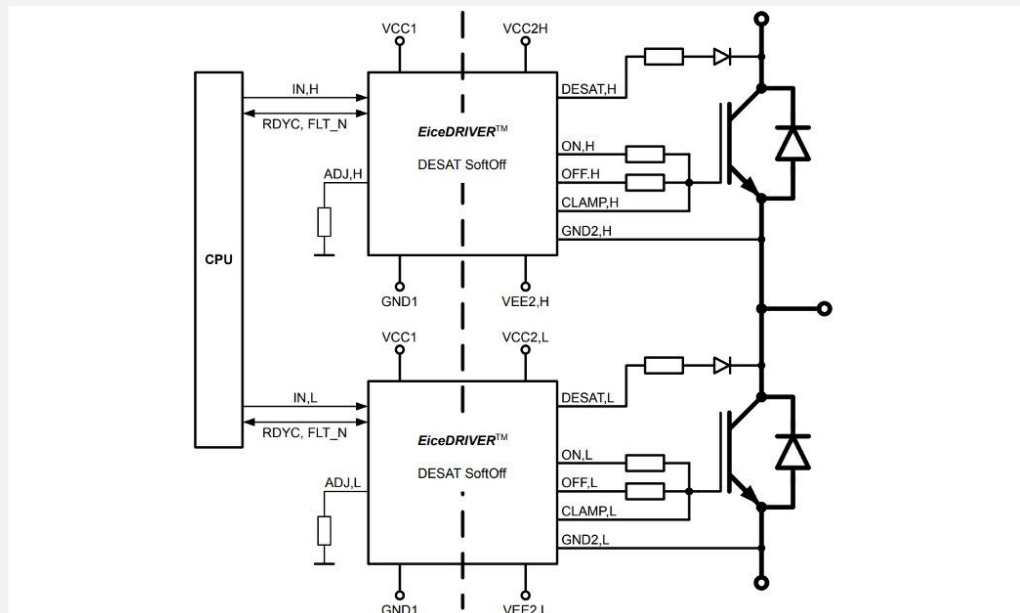


Fig. 3. The 1ED34x1Mc12M family (X3 Analog) consists of galvanically isolated single-channel gate driver ICs in a small PG-DSO-16 package with a large creepage and clearance of 8 mm. The gate driver ICs provide a typical peak output current of 3 A, 6 A, and 9 A.

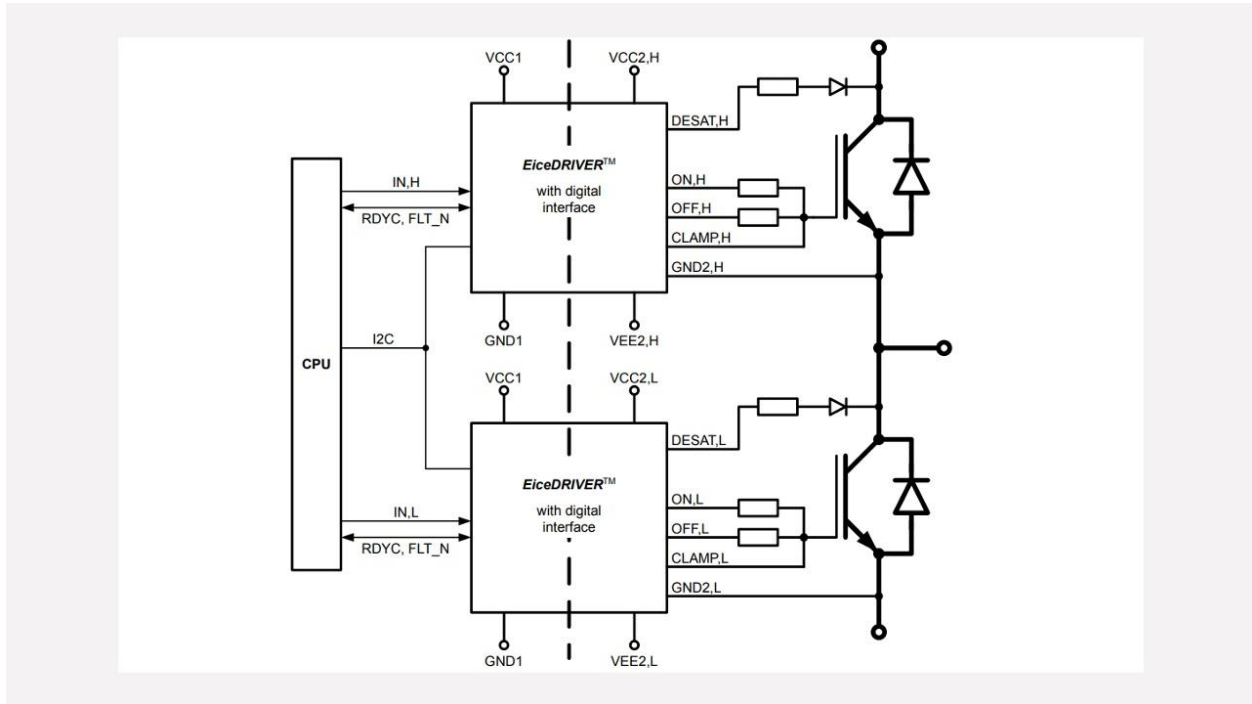


Fig. 4. The 1ED38x0Mc12M family (X3 Digital) consists of galvanically isolated single-channel gate driver ICs in a small PG-DSO-16 package with a large creepage and clearance of 8 mm. The gate driver ICs provide a typical peak output current of 3 A, 6 A, and 9 A.