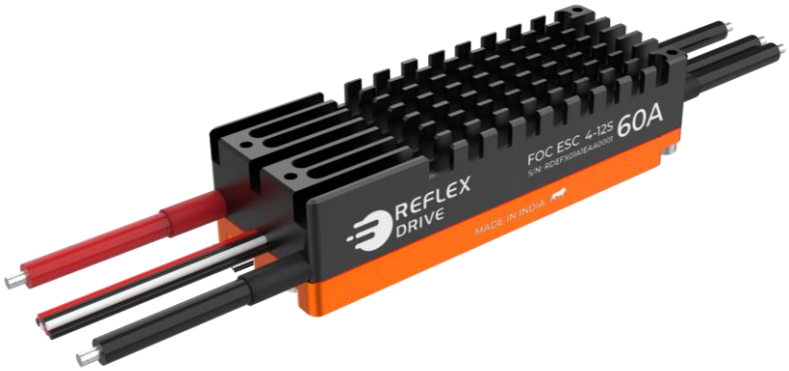
Reflex Drive Electronic Speed Controllers

Infineon Associated Partner

High-performance motor control solutions for drones



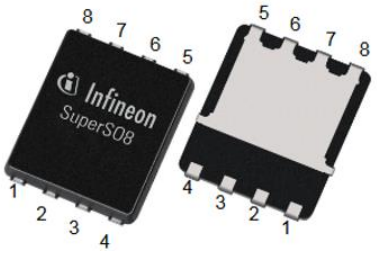
Reflex Drive's Electronic Speed Controllers (RD ESCs) deliver cutting-edge, reliable, and highly efficient solutions specifically tailored for diverse drone applications, ranging from consumer-grade to advanced industrial and robotic systems. By leveraging precise motor control, robust telemetry, and innovative electronics, Reflex Drive ESCs significantly enhance drone agility, reliability, and overall performance.

Compact and powerful, the ESCs weigh just 180 grams and occupy a volume of only 120 cm^3. Despite their small size, they deliver a substantial continuous power output of 2.8 kW (12S (48V) - 60A continuous), making them ideal for high-performance applications requiring lightweight, power-dense solutions with stable Field-Oriented Control (FOC) performance under various environmental conditions.

Depending on your specific drone requirements, Reflex Drive offers a versatile range of ESC series:

- **RD FOC ESC**: 4S-12S, 60A Designed for stable and efficient performance under challenging conditions, featuring advanced heat dissipation and Field-Oriented Control (FOC) algorithms for optimal efficiency and reliability in extended operations.
- **RD Q-Series ESC**: 4S-14S, 75A Designed for stable and efficient performance under challenging conditions, featuring advanced heat dissipation, significantly enhancing thermal and current handling capabilities. With its sleek and durable aluminum enclosure, the ESC provides excellent heat dissipation and protection against harsh environmental conditions.

Enabled by



OptiMOS™ 5 80V/100V

Infineon's OptiMOS™ 5 industrial power MOSFET devices designed to provide high power density, low thermal resistance, and improved reliability in various applications.

MOTIX™ IMD701 controller

Battery-supplied BLDC motor controller IC designed for low-power, low-voltage applications, offering a high level of flexibility, reliability, and energy efficiency.

MOTIX™ 6EDL7141 3-phase gate driver IC

Battery-supplied BLDC motor controller IC designed for low-power, low-voltage applications, offering a high level of flexibility, reliability, and energy efficiency, with features such as sensor less control, overcurrent protection, and low standby current.

Infineon

REFLEX DRIVE™

- **RD T-Series ESC**: 4S-14S, 65A Built for intensive industrial use, providing superior thermal management, reinforced protection features, and real-time telemetry for reliable performance during sustained high-load scenarios.
- **RD D-Series ESC**: 2S-6S, 40A Optimized for lightweight drones, offering maximum maneuverability and power efficiency in an ultra-compact form factor, significantly enhancing flight responsiveness and overall efficiency.
- **RD S-Series ESC**: 2S-6S, 25A Engineered for precision and agility, equipped with a powerful ARM® 32-bit Cortex microcontroller and Reflex Drive's custom firmware, ensuring rapid responsiveness, accurate motor control, and detailed operational telemetry.
- **RD 4-in-1 ESC**: 2S-6S, 40A is a high-performance electronic speed controller designed for multirotor applications. It distributes power to four brushless motors while offering synchronized control and thermal protection.

Across all Reflex Drive ESC models, extensive validation processes ensure outstanding durability, enhanced flight efficiency, and improved drone operational performance. Their lightweight yet robust construction, combined with advanced telemetry and built-in safety mechanisms, ensures reliable performance across diverse and demanding drone applications. Reflex Drive ESCs effectively meet the demanding operational needs of drones across various industries.

Target applications



Multicopter

Discover more

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neubiberg
Germany

© 2025 Infineon Technologies AG
All rights reserved.

Public

Version: V1.0_EN
Date: 05/2025

Please note!
This Document is for information purposes only and any information given herein shall in no event be regarded as a warranty, guarantee or description of any functionality, conditions and/or quality of our products or any suitability for a particular purpose. With regard to the technical specifications of our products, we kindly ask you to refer to the relevant product data sheets provided by us. Our customers and their technical departments are required to evaluate the suitability of our products for the intended application.

We reserve the right to change this document and/or the information given herein at any time.

Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.

Scan QR code and explore offering
www.infineon.com/partners