

Dual mode disk drive spindle and VCM motor driver

Data Brief

General features

- Dual operative mode (Desktop and Mobile)
- Register based architecture
- Serial communication interface up to 40 MHz

Spindle driver

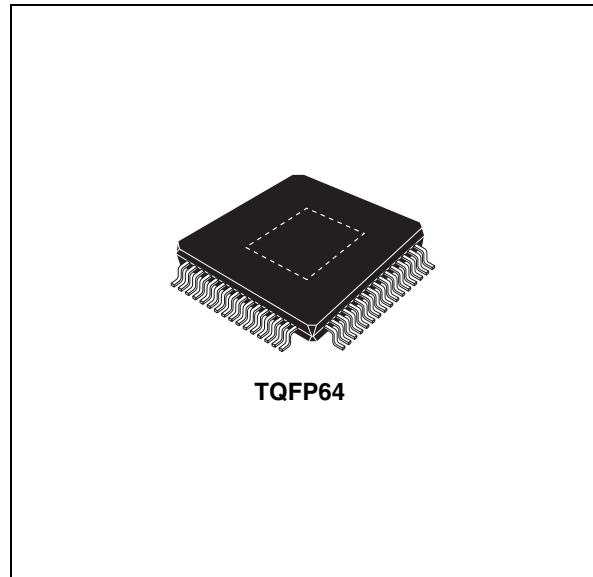
- 3A peak current drive capability
- Internal power devices with 0.5Ω max bridge impedance at 125°C.
- ST SmoothDrive architecture
- Inductance sense start-up capability
- Current sensing via integrated sense FET

VCM driver

- 2.4A peak current drive capability
- Internal power devices with 0.5Ω max bridge impedance at 125°C
- Linear and PSM VCM driving
- Dual 14-bit linear DACs for current command
- Power on/off ramp load and unload capability
- Voltage retract mode

Other functions

- 2 linear regulators.
- Programmable switching regulator
- Negative switching regulator
- Internal isolation FET
- Voltage monitoring
- Power On Reset with integrated delay
- Shock sensor circuitry
- 8-bit ADC with multiplexed inputs
- Thermal sense circuit and over temperature shutdown



Description

L7207 is a motor controller IC designed for both desktop and mobile hard disk drive applications.

The spindle motor driver subsystem integrates all power FETs driven by ST's SmoothDrive commutation technology. The voice coil driver block includes the power FETs, as well as ramp load and unload capability.

Linear voltage and switching regulators are included, as well as a negative regulator and power monitoring function.

L7207 embeds a serial interface with a maximum speed of 40 MHz.

1 Revision history

Table 1. Document revision history

Date	Revision	Changes
20-Apr-2006	1	Initial release.

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