

Toshiba TB6612FNG :: DC Motor Driver

The [Toshiba TB6612FNG](#) is a compact dual-channel DC motor driver. It features two H-bridge circuits that can independently control the speed and direction of two motors, with a maximum continuous current of 1.2 A per channel (3.2 A peak). The IC operates with a maximum motor supply voltage of 15 V and supports a PWM frequency of up to 100 kHz to control the motor speed.

The software implementation allows the user to put the driver in standby mode, which reduces the current consumption from 2.2 mA to only 1 uA. Both standby and stop-drive modes place the motor in a high-impedance state on the specified channel, except for the current consumption profiles.

The software is architected with long-term maintainability, portability across MCU platforms, and adherence to high software quality standards as core design principles.

- ✔ Layered architecture with clear HAL abstraction
- ✔ Conforms to ISO C99 standard
- ✔ Portable across multiple MCU platforms
- ✔ Supports both RTOS and bare-metal environments
- ✔ CMake build system for scalable integration
- ✔ Seamless integration with GCC toolchain
- ✔ Statically analyzed for MISRA, CERT, and CWE compliance

☆ [DRV_TOSHIBA_TB6612FNG](#) PUBLIC ✔ Passed

Last analysis: 25 seconds ago • 311 Lines of Code • C

A 0	A 0	A 0	A —	99.5%	0.0%
Security	Reliability	Maintainability	Hotspots Reviewed	Coverage	Duplications

Initialization Interface

```
tb6612fng_result_t tb6612fng_init( tb6612fng_handle_t*, ... )
```

Configuration Interface

```
tb6612fng_result_t tb6612fng_set_mode( tb6612fng_handle_t*, ... )
```

```
tb6612fng_result_t
```

```
tb6612fng_set_pwm_duty_cycle( tb6612fng_handle_t*, ... )
```

Data Retrieval Interface

```
tb6612fng_result_t tb6612fng_get_mode( tb6612fng_handle_t*, ... )
```

```
tb6612fng_result_t
```

```
tb6612fng_get_pwm_duty_cycle( tb6612fng_handle_t*, ... )
```

Communication Interface:

I/O