

Dual push-button on/off controllers



Allows safe and easy power control

The STM6600 and STM6601 devices are smart push-button on/off controllers that enable designers to improve the user experience of battery-powered devices such as e-books, mobile internet devices, digital cameras, media players, handheld medical equipment and numerous portable devices. They enable and disable power for the application depending on push-button states, signals from the processor, and battery voltage.

If the battery is excessively discharged or a fault is detected in the power supply, the IC blocks power-up. The ICs also implement smart-reset capabilities to enable users to safely recover devices that have frozen or crashed.

They feature a very low current consumption of 6 μA in normal operation and only 1 μA during standby.

KEY FEATURES

- Operating voltage: 1.6 to 5.5 V
- Low standby current: 1 μA
- Adjustable Smart Reset™ assertion delay time driven by external capacitor
- Fixed time power-up duration (STM6601) or push-button power-up duration (STM6600)
- Debounced push-button
- ESD inputs protections:
 - up to ± 15 kV (air discharge)
 - ± 8 kV (contact discharge)
- Active-high or active-low enable output
- Battery monitoring feature
- 1.5 V voltage reference with 1% accuracy
- Industrial operating temperature: -40 to +85 °C
- Available in TDFN12 (2 x 3 mm) package

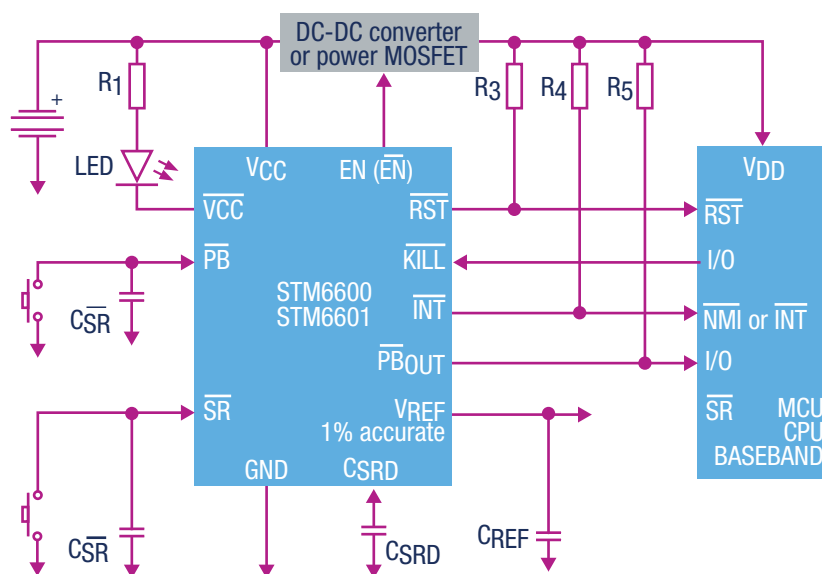
KEY BENEFITS

- Secure start-up, or power-down driven by push button or by application
- Secure reset or power-down in case of non-responding application
- Customizable according to specific application requirements

TARGETED APPLICATIONS

- Smartphones
- Tablets
- Smart watches
- Wearable / IoT devices
- Multimedia players
- Activity trackers
- MP3 players
- Portable navigation devices

APPLICATION SETUP DIAGRAM



SMART ON/OFF CONTROLLER PRODUCT RANGE

Part number	I/O response options	Threshold voltage options (V)		Blanking time options (s)	Package
		Power-on	Power-off		
STM6600	EN output is active high, long push asserts $\overline{\text{RST}}$ EN output active low, long push asserts $\overline{\text{RST}}$ EN output active high, long push deasserts $\overline{\text{EN}}$ EN output active low, long push deasserts $\overline{\text{EN}}$	2.50, 3.30, 3.40, 3.50	2.0, 3.10, 3.20, 3.30	5.6, 11.2	TDFN12
STM6601	EN output is active high, long push asserts $\overline{\text{RST}}$ EN output active low, long push asserts $\overline{\text{RST}}$ EN output active high, long push deasserts $\overline{\text{EN}}$ EN output active low, long push deasserts $\overline{\text{EN}}$	3.10, 3.30, 3.40, 3.50	2.90, 3.10, 3.20, 3.30	1.4, 5.6	TDFN12

STM6600: $\overline{\text{PB}}$ must be held low until PSHOLD confirmation

STM6601: $\overline{\text{PB}}$ can be released before PSHOLD confirmation



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