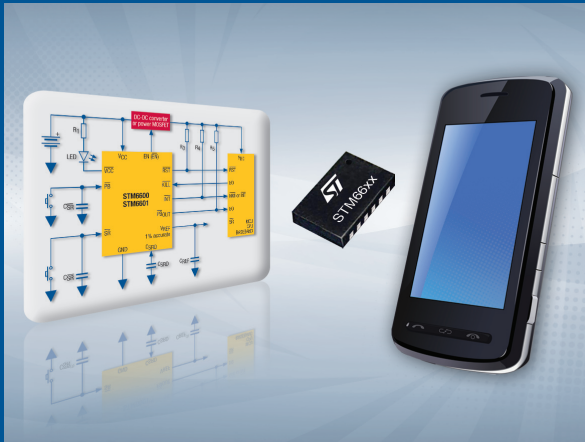# STM66xx

Smart on/off controllers for safe and simple control of applications using push buttons

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.
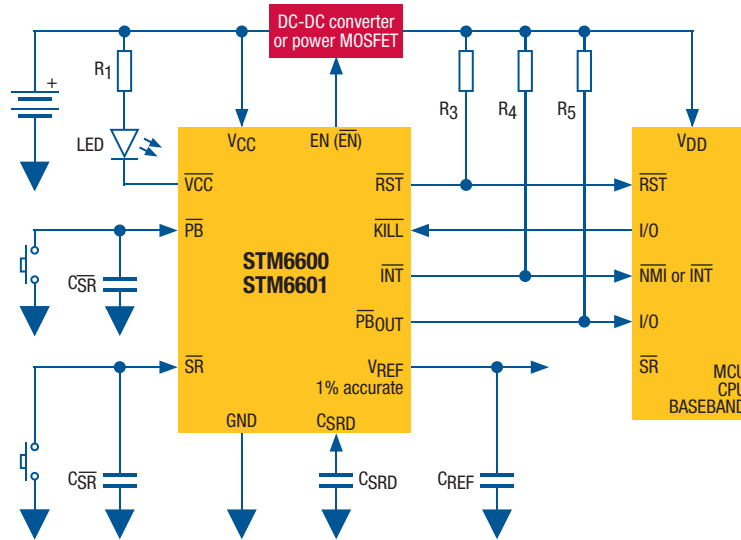
Key features

- Operating voltage: 1.6 to 5.5 V
- Low standby current: 1 µA
- Adjustable smart-reset assertion delay time driven by external capacitor
- Power-up duration determined primarily by push button press (STM6600) or by fixed time period, t_{ON_BLANK} (STM6601)
- Debounced push-button (/PB) and smart-reset (/SR) inputs
- /PB and /SR ESD inputs withstand voltages up to ±15 kV (air discharge) ±8 kV (contact discharge)
- Active-high or active-low enable output option (/EN or EN) provides control of MOSFET, DC-DC converter, regulator, etc.
- Secure startup, interrupt, smart reset or power down driven by push button
- Battery monitoring feature prevents over-discharging
- Precise 1.5 V voltage reference with 1% accuracy
- Industrial operating temperature: -40 to +85 °C
- Available in TDFN12 (2 x 3 mm) package

Applications

- Portable devices
- Terminals
- Audio and video players
- PDAs, palmtops, organizers

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 /RST /EN output active low, long push asserts /RST EN output active high, long push deasserts EN /EN output active low, long push deasserts /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 /RST /EN output active low, long push asserts /RST EN output active high, long push deasserts EN /EN output active low, long push deasserts /EN	3.10, 3.30, 3.40, 3.50	2.90, 3.10, 3.20, 3.30	1.4, 5.6	TDFN12

STM6600: /PB must be held low until PS_{HOLD} confirmation
STM6601: /PB can be released before PS_{HOLD} confirmation

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