5.8.1 Power-on reset

The power-on reset (POR) generator initializes the system when the supply voltage is above the power-on threshold.

The system is held in a reset state until the supply reaches the minimum operating voltage and the internal voltage regulators start. After a power-on reset, the device starts up.

5.8.2 Pin reset

A pin reset is generated when the physical reset pin on the device is asserted.

Pin reset is available on the reset pin **nRESET**, see Pin assignments on page 859. The device starts after **nRESET** is deasserted.

The reset pin has an internal pull-up resistor with the same resistance as GPIO pull-ups, see GPIO — General purpose input/output on page 274.

CTRL-AP can also reset a pin, see CTRL-AP resets on page 102.

5.8.3 Brownout reset

The brownout reset (BOR) generator puts the system in RESET state if the supply voltage drops below the brownout reset threshold.

Similar to a power-on reset, the device starts after BOR is deasserted.

5.8.4 Glitch detector

The glitch detector (GLITCHDET) sets the system to the RESET state when the supply voltage or the device internal digital voltage drops below safe thresholds.

Similar to a power-on reset and a brownout reset, the device starts after GLITCHDET is deasserted.

For more information about the glitch detector, see GLITCHDET — Voltage glitch detectors on page 164.

5.8.5 Wakeup from System OFF mode reset

The device is reset when it wakes up from System OFF mode.

Similar to a power-on reset (POR), the device is started after waking up from System OFF.

If the device is in Debug interface mode, the debug access port (DAP) is not reset after a wakeup from System OFF mode. For more information, see Debug and trace on page 815.

For details on the System OFF mode, see System OFF mode on page 68.

5.8.6 Soft reset

A soft reset is generated when the SYSRESETREQ bit of the application interrupt and reset control register (AIRCR) in the Arm CPU is set. For more information, see Arm documentation.

A soft reset can also be generated using CTRL-AP, see CTRL-AP resets on page 102.

Similar to a power-on reset (POR), the device is restarted after a soft reset.

5.8.7 CTRL-AP resets

CTRL-AP can generate the following resets.

• Soft reset
• Pin reset
• Hard reset. This is used during an Erase ALL operation and is less intrusive than Pin reset. For more details, see Reset behavior on page 103.

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