

Glossary

Power Domain: A collection of design elements that share a single primary supply connection and, at least conceptually, share a common power strategy.

Isolation: Isolation is a technique for controlling the behavior of a signal that is driven by a powered down power domain. Isolation consists of driving the signal to a known state - 1, 0, or latching it to a previous value when the power domain is powered down.

Retention: Retention is a technique for retaining the state value of registers in a powered down power domain.

Isolation Cells: Cells (gates) that perform the isolation function in a design. Also known as clamp cells or clamps.

Level Shifters: Cells (typically buffers) that translate inputs with one voltage swing to an output with a different voltage swing.

Retention Register: A register that extends the functionality of a normal register (flip-flop) with the ability to retain its memory during power down, assuming an appropriate second (always on) supply as well as save and restore signaling.

Shadow Register: The section of a retention register retains the register state during power down. Also known as a balloon registers (due to the topology of some implementations).

Power Switch: At the RTL and architectural level, a power switch allows the power to a power domain to be switched on or off (also known as power gated).

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