

Flexible 1.8V to 3.3V, 6-Channel, 2:1 Multiplexer/Demultiplexer Delivers High-Bandwidth Signal Switching

The PI3A27518 is a bidirectional, 6-channel, 1:2 multiplexer/demultiplexer designed to operate from 1.65V to 3.6V. This device can handle both digital and analog signals, and can transmit signals up to V_{DD} in either direction.

The PI3A27518 has two control pins, each controlling three 1:2 muxes at the same time, and an enable pin that puts all outputs in high-impedance mode. The control pins are compatible with 1.0-V logic thresholds and are backwards-compatible with 1.8V, 2.5V, and 3.3V logic thresholds.

The PI3A27518 allows SD, SDIO, and multimedia card host controllers to expand out to multiple cards or peripherals. This device also supports other 6-bit interfaces, such as qSPI.

The PI3A27518 is packaged in the 24-pin TQFN 4mm x 4mm package and operates with an industrial temperature range of -40°C to +85°C.



The Diodes Advantage

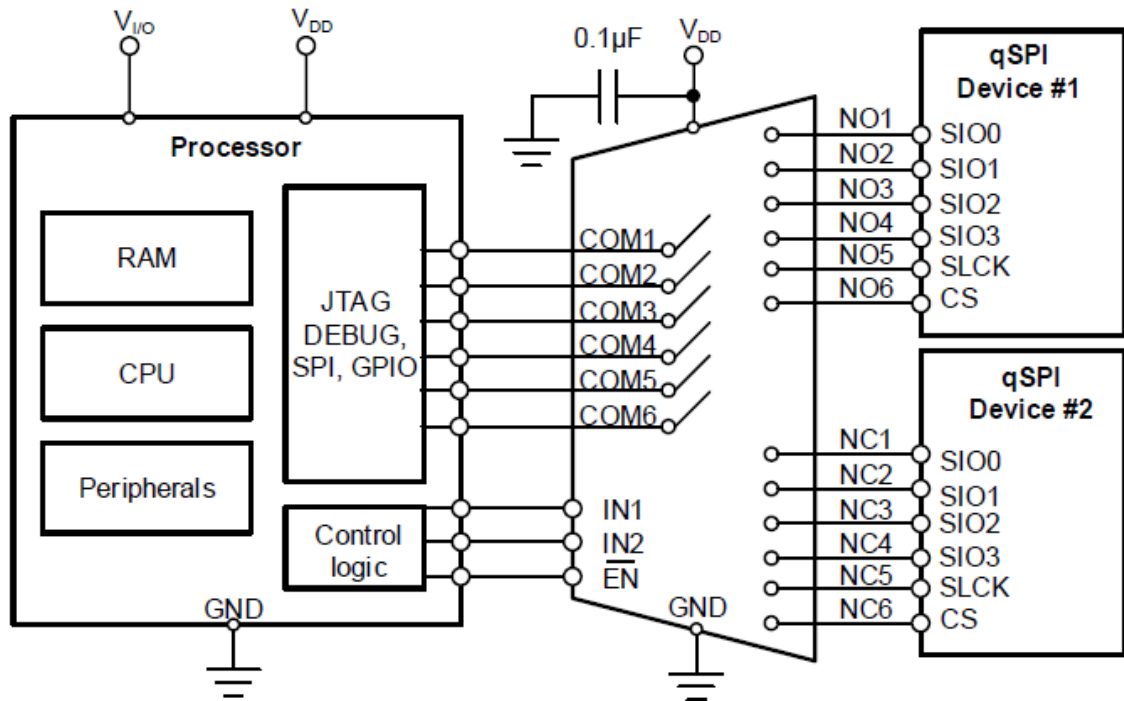
The PI3A27518 operates with a wide voltage range, very low power consumption, and small packaging.

- **High bandwidth of 380MHz**
 Provides high data throughput to reduce data transfer time; a 50% improvement compared to competitors' devices
- **Supports 1.0V logic-compatible control input, and is backwards-compatible with 1.8V control input**
 Good for low voltage control logic in advanced low voltage application processors or CPUs
- **Isolation in power down mode $V_{DD} = 0V$**
 Prevents current leak in either direction when within $V_{DD} = 0V$ status
- **Better channel-to-channel crosstalk rejection**
 Reduces signal distortion to improve audio/video signal quality in audio/video applications

Applications

- SD-SDIO and MMC Two-Port MUX ■ Audio/Video Signal Routing
- qSPI Bus Two-Port MUX

Typical Application Circuit



Ordering Information

Part Numbers	Compliance	Package Code	Package	Moisture Sensitivity	Reel Size	# per Reel
PI3A27518ZDEX	Standard	ZD	TQFN-24	MSL-1	13"	3,500

Cross Reference

Competitors	Part#	Package	Diodes Ordering Part#	Match Type
TI	TS3A27518ERTWR	TQFN-24	PI3A27518ZDEX	PP

PP = Pin-to-pin replacement; Form, function, and electrical specifications are identical