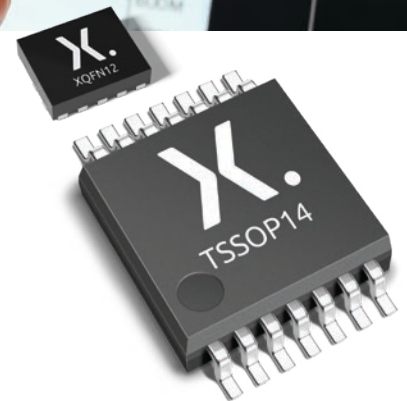


4-bit voltage translating buffer for SPI applications

74AVC4T3144 & 74LVC4T3144 are 4-bit dual-supply level translating buffers with 3-state output. Three channels translate from $V_{CC(A)}$ to $V_{CC(B)}$ and one channel translates from $V_{CC(B)}$ to $V_{CC(A)}$. This combination provides an ideal solution for SPI communication between two devices operating at different voltage supplies.



74AVC4T3144 & 74LVC4T3144 are equipped with both overvoltage-tolerant inputs and I_{OFF} circuitry. This allows connection of input signals higher than $V_{CC(A)}$ or $V_{CC(B)}$: 0 to 3.6 V for AVC, 0 to 5.5 V for LVC.

I_{OFF} circuitry prevents potentially damaging backflow currents. In suspend mode where $V_{CC(A)}$ or $V_{CC(B)} = 0$ V, all outputs are disabled (high-impedance).

SPI data rates up to 380Mbps can be achieved by 74AVC4T3144 in a 1.8 to 3.3 V translation scenario and up to 200Mbps by 74LVC4T3144 in a 3.3 to 5.5 V scenario.

74AVC4T3144 & 74LVC4T3144 are both specified in our standard temperature range of -40 °C to +125 °C, with AEC-Q100 versions available for Automotive applications.

74AVC4T3144 is available in XQFN12 leadless package and 74LVC4T3144 is available in TSSOP14 leaded package.

Key Features & Benefits

- › Wide supply voltage range
- › High noise immunity
- › Low power -ideal for battery-operated devices
- › Partial power down / suspend mode
- › Fully specified:
 - 74AVC4T3144 from 0.8 V to 3.6 V
 - 74LVC4T3144 from 1.2 V to 5.5 V

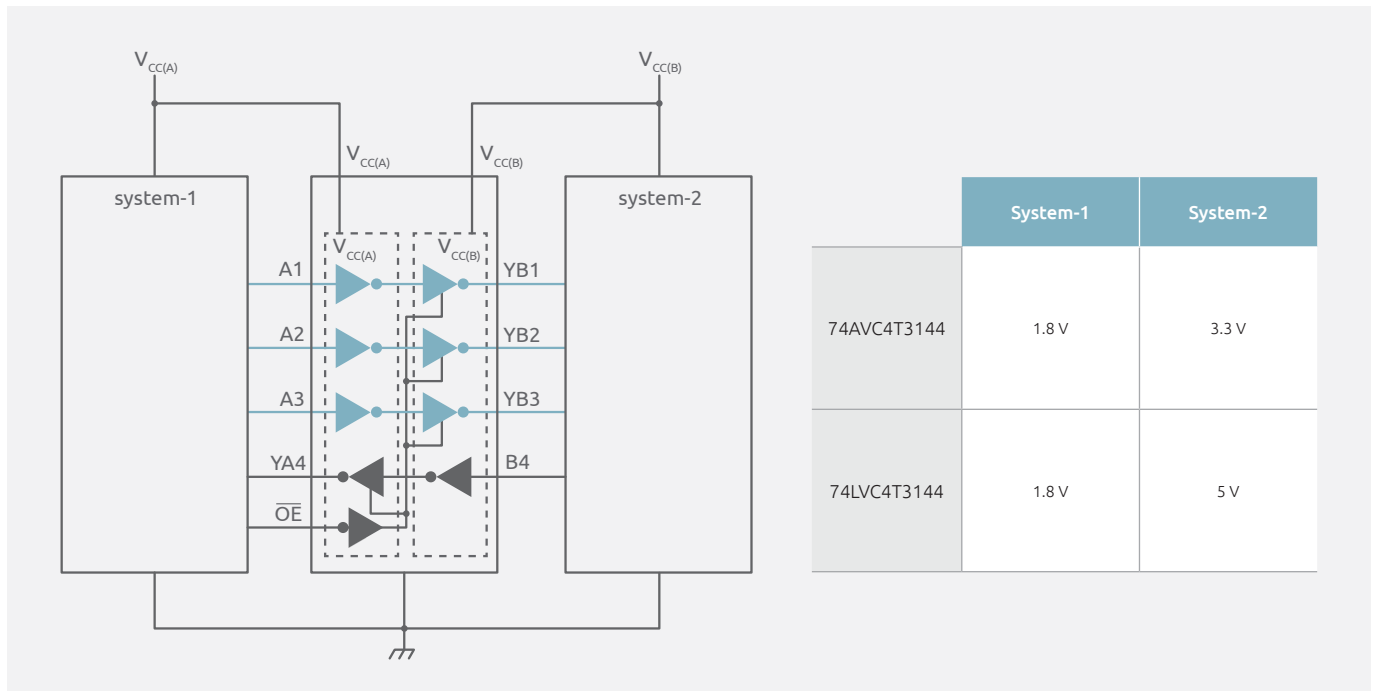
Applications

- › SPI bus interfacing
 - Hearing aids
 - Communications
 - Audio, video-gaming
 - Consumer hand-held
 - Industrial



Parametrics

Type	$V_{CC(A)}$ (V)	$V_{CC(B)}$ (V)	Output Drive	Prop Delay (t_{PD})	Temperature Range	Static Current (I_{CC})
74AVC4T3144	0.8 – 3.6	0.8 – 3.6	+/- 12 mA	4.6 ns	-40 °C ~ +125 °C	0.1 μ A (typ.)
74LVC4T3144	1.2 – 5.5	1.2 – 5.5	+/- 24 mA	6.3 ns	-40 °C ~ +125 °C	0.1 μ A (typ.)

Circuit diagram



Packages

Suffix	Name	Package family	Dimensions (L x W x H, in mm)	
GU	SOT1174-1	XQFN12	1.70 x 2.00 x 0.50	
PW	SOT402-1	TSSOP14	5.00 x 6.40 x 1.10	

Download the product datasheet [74AVC4T3144](#) [74LVC4T3144](#)

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