

Product brief

ISOFACE™ quad-channel digital isolators

Robust isolation with accurate timing performance and low power consumption

Overview

The ISOFACE™ 4DIRx4xxH quad-channel digital isolator family supports data rates up to 40 Mbps and ensures signal integrity over a wide ambient operating temperature range (-40 °C to +125 °C) and across production spread. Infineon's robust coreless transformer (CT) technology guarantees high immunity against system noise (CMTI >100 kV/μs) and withstands up to 5700 V_{RMS} isolation voltage (V_{ISO}). Four data channels in a wide-body DSO-16 package allow for simplified and high power density designs and improve system efficiency with low current consumption. Product variants with different channel configurations, fail-safe default output states and output enable configurations are available.



Potential applications

- > Server, telecom and industrial SMPS
- > Industrial automation systems, industrial field bus isolation, SPI isolation
- > Medical equipment
- > Motor drives

Key features

- > Four data channels in WB DSO 16 package
- > Low current consumption
- > High isolation and signal robustness
- > Accurate timing performance
- > Both high and low default output state options available

Product benefits

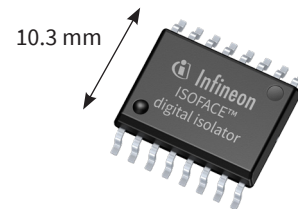
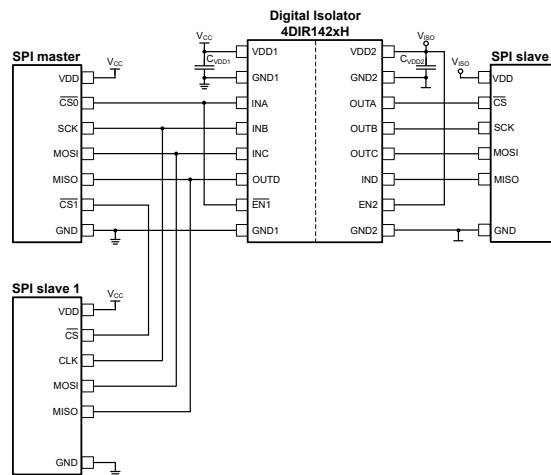
- > Efficiency gain and PCB space savings
- > Safe and reliable operation
- > Signal integrity
- > Regulatory safety

System benefits

- > Higher system efficiency in simplified and high power density designs
- > Reliable system operation in noisy environments with a trusted isolation solution
- > Stable system operation with predictable data communication
- > Simplified system safety approval
EN and CQC certification
(IEC 62368-1, IEC 60601-1, IEC 61010-1 and GB4943.1)

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DSO16 Pin
Wide Body
1.27 mm lead pitch

Product portfolio

Part number	Orderable part number (OPN)	Channel direction	Data rate (max)	Propagation delay (typ)	Min. pulse width** (min/max)	Default output states	Output enable	Isolation rating	Safety certification*	Package
4DIR0400H	4DIR0400HXUMA1	4+0 (4 forward 0 reverse)	40 Mbps	26 ns	9 ns / 15 ns	Low	Active-high	V _{ISO} = 5700 V _{RMS} (UL1577)	UL1577 VDE 0884-17 IEC 60747-17 IEC 62368-1 IEC 60601-1 IEC 61010-1 GB4943.1	PG-DSO-16 10.3 x 10.3 mm
4DIR0401H	4DIR0401HXUMA1					High				
4DIR1400H	4DIR1400HXUMA1	3+1 (3 forward 1 reverse)				Low				
4DIR1401H	4DIR1401HXUMA1					High				
4DIR2400H	4DIR2400HXUMA1	2+2 (2 forward 2 reverse)				Low				
4DIR2401H	4DIR2401HXUMA1					High				
4DIR1420H	4DIR1420HXUMA1	3+1 (3 forward 1 reverse)				Low	Active-low (ideal for shared SPI bus)			
4DIR1421H	4DIR1421HXUMA1					High				

* Certification planned

** Minimum input pulse width that changes the output state

www.infineon.com/digitalisolators



www.infineon.com

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