

DIGITAL ISOLATOR PRODUCT SELECTION AND RESOURCE GUIDE

Summer 2017 Edition



Choose Analog Devices' Isolation Technology!

With Analog Devices and Linear Technology now as one company, this selection guide brings together both Analog Devices' award winning digital isolation with *iCoupler*® technology and Linear Technology's highly integrated, isolated μ Module® products. Digital isolators enable designers to implement isolation in designs and avoid the cost, size, power, performance, and reliability constraints found with optocouplers. The combined broad portfolio offers solutions spanning data isolators, *isoPower*® solutions, high power isolated dc-to-dc converters, field bus and peripheral communications, gate drivers from IGBT to GaN, isolated switches, and data converter controllers, as well as Σ - Δ modulators, isolated amplifiers, and energy metrology.

Analog Devices' *iCoupler* digital isolators meet a wide range of creepage/clearance requirements and provide up to 8 mm creepage. With 2 billion channels deployed into the field, these magnetically isolated products meet the stringent safety standards required of digital isolators.

Linear Technology's μ Module isolator platform reliably integrates inductive/magnetic isolation, discrete components, ICs, and power onto a single substrate PCB, resulting in products that require no external components. Any application from signaling to sampling can be supported by the platform, delivering isolation to even nontraditional applications.

Together, Analog Devices offers digital isolation integrated into compact, robust, and reliable solutions that solve today's data transmission and power isolation challenges.

Wide Range of Applications

With over a decade of innovation integrating isolation with power, signaling, and gate drivers, *iCoupler* and μ Module digital isolators are used in applications such as:

- ▶ Process control automation
- ▶ Motor drives
- ▶ Industrial field buses
- ▶ Instrumentation devices
- ▶ Communication infrastructures
- ▶ Automotive systems
- ▶ Solar/wind energy
- ▶ Power supply/regulation systems
- ▶ Medical devices
- ▶ Metering
- ▶ Light and building controls
- ▶ Battery charging systems
- ▶ Military and aerospace (MILA) avionics
- ▶ Industrial IoT

Digital Isolators

Part Number	Number of Channels	Isolation Rating (kV rms)	Reverse Direction Options				Typical Quiescent Power Dissipation per Channel (mW)	Max Data Rate (Mbps)	Output			Max Temp (°C)	Package
			0	1	2	3			Default		EN		
									H	L	Z		
ADuM110N	1	3	•				4.9	150	•	•		125	8-lead SOIC_N
ADuM210N	1	5	•				4.1	150	•	•		125	8-lead SOIC_N
ADuM1100	1	2.5	•				0.35	25, 100	•			105, 125	8-lead SOIC_N
ADuM3100	1	2.5	•				2.64	25, 50	•			105	8-lead SOIC_N
ADuM12x ¹	2	3	•	•			2.6	150	•	•		125	8-lead SOIC_N
ADuM22x ¹	2	5	•	•			2.6	150	•	•		125	16-lead SOIC_W, 8-lead SOIC_IC
ADuM724x	2	1	•	•			4.29	1, 25	•			105	8-lead SOIC_N
ADuM120x ^{1,2}	2	2.5	•	•			1.11	1, 10, 25	•			105, 125	8-lead SOIC_N
ADuM1210	2	2.5	•	•			1.11	10		•		105	8-lead SOIC_N
ADuM320x ^{1,2}	2	2.5	•	•			1.8	1, 10, 25	•			105, 125	8-lead SOIC_N
ADuM321x ^{1,2}	2	2.5	•	•			1.8	1, 10		•		105, 125	8-lead SOIC_N
ADuM124x	2	3.75	•	•			0.0003	2	•	•		125	20-lead SSOP, 8-lead SOIC_N
ADuM220x	2	5	•	•			1.8	1, 10	•			105, 125	16-lead SOIC_W, 16-lead SOIC_IC
ADuM221x	2	5	•	•			1.8	1, 10		•		125	16-lead SOIC_W, 16-lead SOIC_IC
ADuM13x	3	3 to 3.75	•	•			2.9	150	•	•	•	125	16-lead SOIC_N, 16-lead SOIC_W
ADuM23x	3	5	•	•			2.9	150	•	•	•	125	16-lead SOIC_W, 16-lead SOIC_IC
ADuM130x ¹	3	2.5	•	•			1.11	1, 10, 90	•		•	105, 125	16-lead SOIC_W
ADuM131x	3	2.5	•	•			1.32	1, 10	•	•		105	16-lead SOIC_W
ADuM330x ¹	3	2.5	•	•			1.86	1, 10, 90	•		•	105, 125	16-lead SOIC_W
ADuM14x ¹	4	3 to 3.75	•	•	•		2.1	150	•	•	•	125	16-lead SOIC_N, 16-lead SOIC_W, 16-lead QSOP
ADuM24x ¹	4	5	•	•	•		2.1	150	•	•	•	125	16-lead SOIC_W, 16-lead SOIC_IC, 8-lead SOIC_N
ADuM744x	4	1	•	•	•		3	1, 25	•		•	105	16-lead QSOP
ADuM140x ¹	4	2.5	•	•	•		1.11	1, 10, 90	•			105, 125	16-lead SOIC_W
ADuM141x	4	2.5	•	•	•		1.32	1, 10	•	•		105	16-lead SOIC_W
ADuM340x ^{1,2}	4	2.5	•	•	•		1.5	1, 10, 90	•		•	105, 125	16-lead SOIC_W
ADuM144x ³	4	3.75	•	•	•		0.0003	2	•	•		125	16-lead QSOP, 20-lead SSOP
ADuM348x	4	3.75	•	•	•		4.72	1, 25			•	125	20-lead SSOP
ADuM240x	4	5	•	•	•		1.11	1, 10, 90	•			105	16-lead SOIC_W, 16-lead SOIC_IC
ADuM440x ¹	4	5	•	•	•		1.5	1, 10, 90	•		•	105, 125	16-lead SOIC_W, 16-lead SOIC_IC
ADuM15x	5	3	•	•	•		2.2	150	•	•		125	16-lead SOIC_N
ADuM16x	6	3	•	•	•	•	2.3	150	•	•		125	16-lead SOIC_N
ADuM764x	6	1	•	•	•	•	4.06	1, 25	•			105	20-lead QSOP
ADuM25x <i>New</i>	5	5		•	•		2.2	150	•	•		125	16-lead SOIC_IC
ADuM26x <i>New</i>	6	5		•	•	•	2.3	150	•	•		125	16-lead SOIC_IC

¹ Automotive qualified models available. Please visit product page for more information.² Enhanced products (EP) qualified models available. Please visit product page for more information.³ Intrinsic safety certified.

Digital Isolators with Isolated Power—*iso*Power or μ Module Isolated Power

Part Number	Number of Channels	Isolation Rating (kV rms)	Power Supply (V)	Reverse Direction Options					Max Data Rate (Mbps)	Isolated Power Output	Max Temp (°C)	Package
				0	1	2	3	4				
ADuM541x	4	2.5	3.0 to 5.5	•	•	•			150	150 mW	105	24-lead SSOP
ADuM641x	4	3.75	3.0 to 5.5	•	•	•			150	150 mW	105	24-lead SSOP
ADuM5000 ¹	0	2.5	3.0 to 5.5						—	500 mW @ 5 V	105	16-lead SOIC_W
ADuM5010	0	2.5	3.3 to 5.5						—	150 mW @ 5 V	105	20-lead SSOP
ADuM520x ¹	2	2.5	3.0 to 5.5	•	•	•			1, 25	500 mW @ 5 V	105	16-lead SOIC_W
ADuM521x	2	2.5	3.0 to 5.5	•	•	•			1, 25, 100	150 mW @ 5 V	105	20-lead SSOP
ADuM524x	2	2.5		•	•	•			1	50 mW @ 5 V	105	8-lead SOIC_N
ADuM540x ¹	4	2.5	3.0 to 5.5	•	•	•	•	•	1, 25	500 mW @ 5 V	105	16-lead SOIC_W
ADuM6010	0	3.75	3.0 to 5.5						—	150 mW @ 5 V	105	20-lead SSOP
ADuM621x	2	3.75	3.0 to 5.5	•	•	•			1, 25, 100	150 mW @ 5 V	105	20-lead SSOP
ADuM6000	0	5	3.0 to 5.5						—	400 mW @ 5 V	105	16-lead SOIC_W, 16-lead SOIC_IC
ADuM620x	2	5	3.0 to 5.5	•	•	•			1, 25	400 mW @ 5 V	105	16-lead SOIC_W, 16-lead SOIC_IC
ADuM640x	4	5	3.0 to 5.5	•	•	•	•	•	1, 25	400 mW @ 5 V	105	16-lead SOIC_W, 16-lead SOIC_IC
LTM2883-3S ²	6	2.5	3.0 to 3.6				•		20	0.6 W (adj 3 V to 5 V, adj 12 V, adj -12 V)	105	32-ball BGA
LTM2883-5S ²	6	2.5	4.5 to 5.5				•		20	0.6 W (adj 3 V to 5 V, adj 12 V, adj -12 V)	105	32-ball BGA
LTM2886-3S ² <i>New</i>	6	2.5	3.0 to 3.6				•		20	1 W (adj 3 V to 5 V, 5 V, -5 V)	125	32-ball BGA
LTM2886-5S ² <i>New</i>	6	2.5	4.5 to 5.5				•		20	1 W (adj 3 V to 5 V, 5 V, -5 V)	125	32-ball BGA
LTM2887-3S ² <i>New</i>	6	2.5	3.0 to 3.6				•		20	1 W (adj 1.8 V to 5 V, adj 0.6 V to 5 V)	125	32-ball BGA
LTM2887-5S ² <i>New</i>	6	2.5	4.5 to 5.5				•		20	1 W (adj 1.8 V to 5 V, adj 0.6 V to 5 V)	125	32-ball BGA

Isolated Switching Regulators with Integrated Power Transformers

Part Number	Number of Power Outputs	Isolation Rating (kV rms)	Input Voltage (V)		Output Voltage (V)		Output Ripple	Output Power (24 V _{IN} to 5 V _{OUT})	LDO Output	Max Temp (°C)	Package
			Min	Max	Min	Max					
LTM8047	1	0.5	3.1	32	2.5	12	20 mV rms	1.5 W		125	45-ball BGA
LTM8048	2	0.5	3.1	32	1.2	12	20 μ V rms	1.5 W combined	•	125	45-ball BGA
LTM8057	1	2	3.1	31	2.5	12	20 mV rms	1.5 W		125	38-ball BGA
LTM8058	2	2	3.1	31	1.2	12	20 μ V rms	1.5 W combined	•	125	38-ball BGA
LTM8067	1	2	2.8	40	2.5	24	30 mV rms	2.25 W		125	38-ball BGA
LTM8068	2	2	2.8	40	1.2	18	20 μ V rms	2.25 W combined	•	125	38-ball BGA
LTM8046	1	2	3.1	31	1.8	12	20 mV rms	2.75 W		125	51-ball BGA

Isolated Switching Regulators

Part Number	Number of Channels	Isolation Rating (kV rms)	Reverse Direction Options					Max Data Rate (Mbps)	Isolated Supply Output		Input Voltage (V)		LDO Output	Integrated Power Transformer	Max Temp (°C)	Package
			0	1	2	3	4		Current (mA)	Range (V)	Min	Max				
ADuM3070	0	2.5							500	3.3 to 24	3	5.5			105	16-lead QSOP
ADuM347x ¹	4	2.5	•	•	•	•	•	1, 25	400	3.3 to 24	3	5.5			105	20-lead SSOP
ADuM4070	0	5							500	3.3 to 24	3	5.5			105	16-lead SOIC_IC
ADuM447x	4	5	•	•	•	•	•	1, 25	500	3.3 to 24	3	5.5			105	20-lead SOIC_IC

¹ Automotive qualified models available. Please visit product page for more information.² Logic supply voltage range (V_L or V_{DD}) 1.6 V to 5.5 V.

Isolated RS-485 Transceivers

Part Number	Insulation Rating (kV rms)	Full Duplex	Half Duplex	Max Data Rate	Integrated Isolated Power	Isolated Power Output	Integrated Transformer Driver	Power Supply (V)		Max Temp (°C)	Package
								Logic Side	Bus Side		
ADM2482E	2.5	•	•	16 Mbps			•	3.0 to 5.5	3.3	85	16-lead SOIC_W
ADM2483	2.5		•	500 kbps				2.7 to 5.5	5	85	16-lead SOIC_W
ADM2484E	5	•	•	500 kbps				3.0 to 5.5	3.3	85	16-lead SOIC_W
ADM2485	2.5		•	16 Mbps			•	2.7 to 5.5	5	85	16-lead SOIC_W
ADM2486	2.5		•	20 Mbps				2.7 to 5.5	5	85	16-lead SOIC_W
ADM2487E	2.5	•	•	500 kbps			•	3.0 to 5.5	3.3	85	16-lead SOIC_W
ADM2490E	5	•		16 Mbps				2.7 to 5.5	5	105	16-lead SOIC_W
ADM2491E	5	•	•	16 Mbps				3.0 to 5.5	5	85	16-lead SOIC_W
ADM2582E	2.5	•	•	16 Mbps	•			3.0 to 5.5		85	20-lead SOIC_W
ADM2587E	2.5	•	•	500 kbps	•			3.0 to 5.5		85	20-lead SOIC_W
ADM2682E	5	•	•	16 Mbps	•			3.0 to 5.5		85	16-lead SOIC_IC
ADM2687E	5	•	•	500 kbps	•			3.0 to 5.5		85	16-lead SOIC_IC
ADM2795E ¹ <i>New</i>	5		•	2.5 Mbps				1.7 to 5.5	3 to 5.5	125	16-lead SOIC_W
LTM2881-3 ²	2.5	•	•	20 Mbps	•	1 W (5 V)		3.0 to 3.6		105	32-ball BGA, 32-pad LGA
LTM2881-5 ²	2.5	•	•	20 Mbps	•	1 W (5 V)		4.5 to 5.5		105	32-ball BGA, 32-pad LGA
LTM2885 ² <i>New</i>	6.5	•	•	20 Mbps	•	1 W (5 V)		4.5 to 5.5		105	42-ball BGA

Isolated CAN Transceivers

Part Number	Fault Protection (V)	Insulation Rating (kV rms)	High Voltage Bus Side Regulator	Max Data Rate (Mbps)	Integrated Isolated Power	Isolated Power Output	Power Supply (V)		Max Temp (°C)	Package
							Logic Side	Bus Side		
ADM3052	±36	5	•	1			3.0 to 5.5	11 to 25	85	16-lead SOIC_W
ADM3053	±36	2.5		1	•		5.0		85	20-lead SOIC_W
ADM3054 ³	±36	5		1			3.0 to 5.5	5	125	16-lead SOIC_W
LTM2889-3 ² <i>New</i>	±60	2.5		4	•	0.75 W (adj 3 V to 5 V)	3.0 to 3.6		125	32-ball BGA
LTM2889-5 ² <i>New</i>	±60	2.5		4	•	(adj 3 V to 5 V)	4.5 to 5.5		125	32-ball BGA

LVDS Isolators

Part Number	Max Data Rate (Mbps)	Max Prop Delay (ns)	Number of Channels	Inputs		Insulation Rating (kV rms)	Working Voltage (V rms/V _{PEAK})	Special Features	Max Temp (°C)	Package
				Side 1	Side 2					
ADN4650	600	4.5	2	2	0	5	300/424	—	125	20-lead SOIC_W, 20-lead SSOP
ADN4651	600	4.5	2	1	1	5	300/424	Fail safe	125	20-lead SOIC_W, 20-lead SSOP
ADN4652	600	4.5	2	1	1	5	300/424	Fail safe	125	20-lead SOIC_W, 20-lead SSOP

¹ The ADuM3224 and ADuM4224 are versions of the ADuM3223 and ADuM4223. Unlike the ADuM3223 and ADuM4223, they do not offer thermal shutdown.

² Logic supply voltage range (V_L or V_{LO}) 1.6 V to 5.5 V.

³ Automotive qualified models available. Please visit product page for more information.

USB 2.0 Isolators

Part Number	Insulation Rating (kV rms)	Data Rate (Mbps)		Integrated Isolated Power	Isolated Power Output	ESD Protection (kV)	Max Temp (°C)	Package
		Low Speed	Full Speed					
ADuM3160	2.5	1.5	12				105	16-lead SOIC_W
ADuM4160	5	1.5	12			10	105	16-lead SOIC_W, 16-lead SOIC_IC
LTM2884	2.5	1.5	12	•	2.5 W @ 5 V ($V_{CC} = 8.6$ V to 16.5 V) or 1 W @ 5 V ($V_{CC} = 4.4$ V to 8.6 V)	15	105	44-ball BGA
LTM2894 <i>New</i>	7.5	1.5	12			20	125	24-ball BGA

I²C Isolators

Part Number	Insulation Rating (kV rms)	Power Supply (V)	Serial Data	Serial Clock	Max Frequency (kHz)	Integrated Isolated Power	Isolated Power Output	Max Temp (°C)	Package
ADM3260	2.5	3.0 to 5.5	Bidirectional	Bidirectional	1000	•		105	20-lead SSOP
ADuM1250 ¹	2.5	3.0 to 5.5	Bidirectional	Bidirectional	1000			125	8-lead SOIC_N
ADuM1251 ¹	2.5	3.0 to 5.5	Bidirectional	Unidirectional	1000			125	8-lead SOIC_N
ADuM2250 ¹	5	3.0 to 5.5	Bidirectional	Bidirectional	1000			105	16-lead SOIC_W, 16-lead SOIC_IC
ADuM2251 ¹	5	3.0 to 5.5	Bidirectional	Unidirectional	1000			105	16-lead SOIC_W, 16-lead SOIC_IC
LTM2892 -I ²	3.5	3.0 to 5.5	Bidirectional	Unidirectional	400			125	24-ball BGA
LTM2883 -3I ²	2.5	3.0 to 3.6	Bidirectional	Unidirectional	400	•	0.6 W (adj 3 V to 5 V, adj 12 V, adj -12 V)	105	32-ball BGA
LTM2883 -5I ²	2.5	4.5 to 5.5	Bidirectional	Unidirectional	400	•	0.6 W (adj 3 V to 5 V, adj 12 V, adj -12 V)	105	32-ball BGA
LTM2886 -3I ² <i>New</i>	2.5	3.0 to 3.6	Bidirectional	Unidirectional	400	•	1 W (adj 3 V to 5 V, 5 V, -5 V)	125	32-ball BGA
LTM2886 -5I ² <i>New</i>	2.5	4.5 to 5.5	Bidirectional	Unidirectional	400	•	1 W (adj 3 V to 5 V, 5 V, -5 V)	125	32-ball BGA
LTM2887 -3I ² <i>New</i>	2.5	3.0 to 3.6	Bidirectional	Unidirectional	400	•	1 W (adj 1.8 V to 5 V, adj 0.6 V to 5 V)	125	32-ball BGA
LTM2887 -5I ² <i>New</i>	2.5	4.5 to 5.5	Bidirectional	Unidirectional	400	•	1 W (adj 1.8 V to 5 V, adj 0.6 V to 5 V)	125	32-ball BGA

¹ Automotive qualified models available. Please visit product page for more information.

² Logic supply voltage range (V_L or V_D) 3 V to 5.5 V. LTM2883, LTM2887, LTM2892 include aux channels.

SPI Digital Isolators—SPIsolator® or µModule Isolated SPI

Part Number	Product Feature	Power Supply (V)	Insulation Rating (kV rms)	No. Auxiliary Inputs		Slave Ports	Max SPI CLK Rate (MHz)	Integrated Isolated Power	Isolated Power Output	Max Temp (°C)	Package
				Side 1	Side 2						
ADuM3150	High speed	3.0 to 5.5	3.75	1	1	1	40			125	20-lead SSOP
ADuM3151	Aux channels	3.0 to 5.5	3.75	2	1	1	17			125	20-lead SSOP
ADuM3152	Aux channels	3.0 to 5.5	3.75	1	2	1	17			125	20-lead SSOP
ADuM3153	Aux channels	3.0 to 5.5	3.75	0	3	1	17			125	20-lead SSOP
ADuM3154	Multiple slave support	3.0 to 5.5	3.75	0	0	4	17			125	20-lead SSOP
ADuM4150	High speed	3.0 to 5.5	5	1	1	1	40			125	20-lead SOIC_IC
ADuM4151	Aux channels	3.0 to 5.5	5	2	1	1	17			125	20-lead SOIC_IC
ADuM4152	Aux channels	3.0 to 5.5	5	1	2	1	17			125	20-lead SOIC_IC
ADuM4153	Aux channels	3.0 to 5.5	5	0	3	1	17			125	20-lead SOIC_IC
ADuM4154	Multiple slave support	3.0 to 5.5	5	0	0	4	17			125	20-lead SOIC_IC
LTM2892-S ¹	Aux channels	3.0 to 5.5	3.5	0	2	1	8			125	24-ball BGA
LTM2883-3S ¹	Aux channels	3.0 to 3.6	2.5	0	2	1	8	•	0.6 W (adj 3 V to 5 V, adj 12 V, adj -12 V)	105	32-ball BGA
LTM2883-5S ¹	Aux channels	4.5 to 5.5	2.5	0	2	1	8	•	0.6 W (adj 3 V to 5 V, adj 12 V, adj -12 V)	105	32-ball BGA
LTM2886-3S ¹ New	Aux channels	3.0 to 3.6	2.5	0	2	1	8	•	1 W (adj 3 V to 5 V, 5 V, -5 V)	125	32-ball BGA
LTM2886-5S ¹ New	Aux channels	4.5 to 5.5	2.5	0	2	1	8	•	1 W (adj 3 V to 5 V, 5 V, -5 V)	125	32-ball BGA
LTM2887-3S ¹ New	Aux channels	3.0 to 3.6	2.5	0	2	1	8	•	1 W (adj 1.8 V to 5 V, adj 0.6 V to 5 V)	125	32-ball BGA
LTM2887-5S ¹ New	Aux channels	4.5 to 5.5	2.5	0	2	1	8	•	1 W (adj 1.8 V to 5 V, adj 0.6 V to 5 V)	125	32-ball BGA
LTM2893 ²	ADC	3.0 to 5.5	6	0 to 3	0 to 3	2	100			125	36-ball BGA
LTM2895 ²	DAC	3.0 to 5.5	6	0 to 3.3	0 to 3	2	100			125	36-ball BGA

Isolated RS-232 Transceivers

Part Number	Insulation Rating (kV rms)	ESD Protection (kV)	Max Data Rate (kbps)	Number Tx	Number Rx	Integrated Isolated Power	Isolated Power Output	Supply Voltage	Aux Channel (Mbps)	Max Temp (°C)	Package
ADM3251E	2.5	15	460	1	1	•		4.5 to 5.5		85	20-lead SOIC_W
ADM3252E	2.5	15	460	2	2	•		3.0 to 5.5		85	44-ball BGA
LTM2882-3	2.5	10	1000	2	2	•	1 W (5 V)	3.0 to 3.6	10	105	32-ball BGA
LTM2882-5	2.5	10	1000	2	2	•	1 W (5 V)	4.5 to 5.5	10	105	32-ball BGA

¹ Logic supply voltage range (V_I or V_{DD}) 1.6 V to 5.5 V.² Logic supply voltage range (V_I or V_{DD}) 1.71 V to 5.5 V.

Isolated Gate Drivers

Part Number	Isolated Channels	Insulation Rating (kV rms)	Min Pulse Width (ns)	Output Voltage Range (V)	Output Current (A _{PEAK})	Power Level (mW)	Input Logic Levels	Max Temp (°C)	Package
ADuM4121-1 <i>New</i>	1	5	50	4.5 to 35	2		CMOS	125	8-lead SOIC_IC
ADuM4121 <i>New</i>	1	5	50	4.5 to 35	2		CMOS	125	8-lead SOIC_IC
ADuM4120-1 <i>New</i>	1	5	50	4.5 to 35	2		CMOS	125	6-lead SOIC_IC
ADuM4120 <i>New</i>	1	5	50	4.5 to 35	2		CMOS	125	6-lead SOIC_IC
ADuM4138' <i>New</i>	1	5	50	12 to 24	6		CMOS	150	28-lead SOIC_W
ADuM3123	1	3	50	4.5 to 18	4		CMOS	125	8-lead SOIC_N
ADuM4135	1	5	50	12 to 35	4		CMOS	125	16-lead SOIC_W
ADuM4136	1	5	50	12 to 35	4		CMOS	125	16-lead SOIC_W
ADuM6132	1	3.7	50	12.5 to 17	0.2	275	CMOS	85	16-lead SOIC_W
ADuM7234	2	1	100	12 to 18	4		CMOS	105	16-lead SOIC_N
ADuM1233	2	2.5	80	12 to 18	0.1		TTL	105	16-lead SOIC_W
ADuM1234	2	2.5	100	12 to 18	0.1		CMOS	105	16-lead SOIC_W
ADuM3220 ¹	2	2.5	50	4.5 to 18	4		CMOS	125	8-lead SOIC_N
ADuM3221 ¹	2	2.5	50	4.5 to 18	4		CMOS	125	8-lead SOIC_N
ADuM5230 ¹	2	2.5	100	12 to 18	0.1	150	CMOS	105	16-lead SOIC_W
ADuM7223	2	2.5	50	4.5 to 18	4		CMOS	125	14-pad LGA
ADuM3223 ¹	2	3	50	4.5 to 18	4		CMOS	125	16-lead SOIC_N
ADuM3224 ^{1,2}	2	3	50	4.5 to 18	4		CMOS	125	16-lead SOIC_N
ADuM4223 ¹	2	5	50	4.5 to 18	4		CMOS	125	16-lead SOIC_W
ADuM4224 ^{1,2}	2	5	50	4.5 to 18	4		CMOS	125	16-lead SOIC_W

Isolated Amplifiers

Part Number	Insulation Rating (kV rms)	-3 dB Bandwidth (kHz)	Accuracy (%)	V _{IN} Min (mV)	V _{IN} Max (V)	V _{OUT} Min (mV)	V _{OUT} Max (V)	Max Temp (°C)	Package
ADuM3190 ¹	2.5	400	1	400	1.5	400	5	125	16-lead QSOP
ADuM4190 ³	5	400	1	400	1.5	400	5	125	16-lead SOIC_IC

Isolated Analog-to-Digital Converters

Part Number	Insulation Rating (kV rms)	Resolution (Bits)	Clock Rate (MHz)	Clock Source	ADC SNR Typ (dB)	SINAD Typ (dB)	Config/Programming Interface	Power Supply Bus (V)	Max Temp (°C)	Package
AD7402-8	5	16	10	Internal	87	82	CMOS, serial	3.0 to 5.5	105	8-lead SOIC_W
AD7403-8	5	16	20	External	88	87	CMOS, serial	3.0 to 5.5	105	8-lead SOIC_IC
AD7400	5	16	10	Internal	71	70	CMOS, serial	3.0 to 5.5	105	16-lead SOIC_W
AD7400A	5	16	10	Internal	80	78	CMOS, serial	3.0 to 5.5	125	16-lead SOIC_W
AD7401	5	16	20	External	82	81	CMOS, serial	3.0 to 5.5	105	16-lead SOIC_W
AD7401A	5	16	20	External	83	82	CMOS, serial	3.0 to 5.5	125	16-lead SOIC_W
AD7403	5	16	20	External	88	87	CMOS, serial	3.0 to 5.5	125	16-lead SOIC_IC
AD7405	5	16	20	External	88	87	LVDS, serial	3.0 to 5.5	105	16-lead SOIC_IC
ADE7912	5	24	4	External	74	73	Serial	3.3	85	20-lead SOIC_IC
ADE7913	5	24	4	External	74	73	Serial	3.3	85	20-lead SOIC_IC

Isolated Switch Controller

Part Number	Insulation Rating (kV rms)	ESD Protection (kV)	Configuration/Programming Interface	Isolated Power Output	ADC Monitoring	Max Temp (°C)	Package
LTM9100 <i>New</i>	5	20	I ² C/SMBus	0.35 W (10.4 V), 75 mW (5 V)	(1) Current (2) Voltage	105	42-ball BGA

¹ Automotive qualified models available. Please visit product page for more information.

² The ADuM3224 and ADuM4224 are versions of the ADuM3223 and ADuM4223. Unlike the ADuM3223 and ADuM4223, they do not offer thermal shutdown.

³ Enhanced products (EP) qualified models available. Please visit product page for more information.

Safety Certifications

The *iCoupler* family of digital isolation products has been tested and approved by various regulatory agencies, including UL, CSA, VDE, TÜV, CQC, and now for intrinsic safety ATEX and IECEx. For a full listing and downloadable PDF, visit analog.com/iCouplerSafety. Linear Technology's isolator μ Module platforms are certified by safety houses including UL, CSA, and IEC.



Digital Isolation Support Resources

To learn more about digital isolators, visit analog.com/iCoupler for information on about *iCoupler* digital isolators and for Linear Technology's resources, visit [\$\mu\$ Module Design and Manufacturing Resources](#). This page will provide you with information on items like:

- ▶ Evaluation boards
- ▶ Safety standards/certifications
- ▶ Technical articles
- ▶ EMC mitigation techniques

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