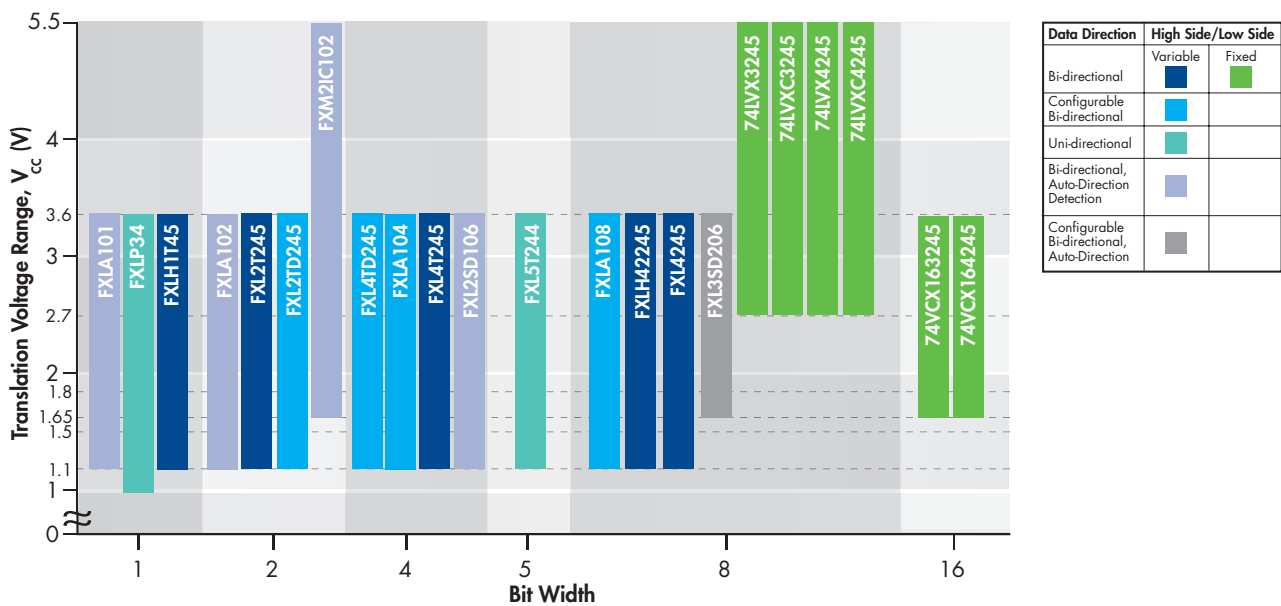


# VOLTAGE TRANSLATORS

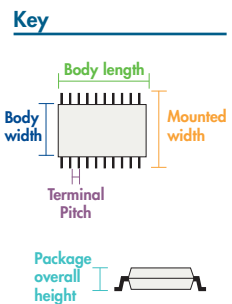
## Fairchild's Offering

Voltage translation is required when microprocessors and peripheral devices operate at different voltage levels within a system. Fairchild voltage translators interface between these system components and effectively solve the problem of input/output voltage level incompatibility while retaining signal integrity. When compared to typical configurations, Fairchild translators offer a wide variety of configurations and translation levels for designers to find the right product for their application.

## Voltage Translation



Packaging Options								
	Terminal Count	Package (Code)	Mounted Width (mm/in)	Body Width (mm/in)	Body Length (mm/in)	Overall Height (mm/in)	Terminal Pitch (mm/in)	Mounted Area (mm/in)
	5/6	SC70 (P5) (P6)	2.10/0.083	1.25/0.049	2.0/0.079	0.90/0.03	0.65/0.026	4.20/0.007
	6	MicroPak (L6)	1.0/0.039	1.0/0.039	1.45/0.057	0.55/0.021	0.50/0.020	1.45/0.002
	8	MicroPak (L8)	1.60/0.062	1.60/0.062	1.60/0.062	0.55/0.021	0.50/0.020	2.56/0.003
	10	MicroPak (L10)	1.60/0.062	1.60/0.062	2.10/0.083	0.55/0.021	0.50/0.020	3.36/0.005
	14	DQFN (BQ)	2.5/0.098	2.5/0.098	3.0/0.118	0.80/0.031	0.50/0.020	7.50/0.011
	16	DQFN (BQ)	2.50/0.098	2.50/0.098	3.0/0.118	0.80/0.031	0.50/0.020	8.75/0.013
	20	DQFN (BQ)	2.50/0.098	2.50/0.098	4.50/0.177	0.80/0.063	0.50/0.020	11.25/0.017
	24	TSSOP (MTC)	6.40/0.252	4.40/0.173	7.80/0.307	1.10/0.043	0.65/0.026	49.92/0.077
	24	MLP (MP)	3.50/0.138	3.50/0.138	4.50/0.177	0.80/0.063	0.50/0.020	15.75/0.621
	48	TSSOP (MTD)	8.10/0.319	6.10/0.240	12.50/0.492	1.10/0.043	0.50/0.020	101.25/0.157



For data sheets, application notes, samples and more, please visit: [www.fairchildsemi.com](http://www.fairchildsemi.com)

## Applications

Voltage translators can be used in any application where an interface is needed between system components with different I/O levels.

Product Number	Bit Width	Pins	Uni-Directional	Bi-Directional	Configurable Bi-Directional	Automatic Direction Control	Voltage Range A Side (V)	Voltage Range B Side (V)	Recommended Package	Comments
FXLA101	1	6		X		X	1.1 - 3.6	1.1 - 3.6	6 Pin MicroPak	Direction control not necessary
FXLP34	1	5,6	X				1.0 - 3.6	1.0 - 3.6	6 Pin MicroPak	Lowest input voltage range
FXLH1T45	1	6		X			1.1 - 3.6	1.1 - 3.6	6 Pin MicroPak	
FXM2IC102	2	8		X		X	1.65 - 5.5	1.65 - 3.6	8 Pin MicroPak	I <sup>2</sup> C translator, open drain
FXLA102	2	8		X		X	1.1 - 3.6	1.1 - 3.6	8 Pin MicroPak	
FXL2T245	2	10		X			1.1 - 3.6	1.1 - 3.6	10 Pin MicroPak	
FXL2TD245	2	10			X		1.1 - 3.6	1.1 - 3.6	10 Pin MicroPak	
FXLA104	4	16		X	X		1.1 - 3.6	1.1 - 3.6	16 Pin μMLP	Direction control not necessary
FXL2SD106	4	16		X		X	1.1 - 3.6	1.1 - 3.6	16 Pin DQFN	SD card and SDIO translator
FXL4TD245	4	16			X		1.1 - 3.6	1.1 - 3.6	16 Pin DQFN	
FXL4T245	4	14		X			1.1 - 3.6	1.1 - 3.6	14 Pin DQFN	
FXL5T244	5	14	X				1.1 - 3.6	1.1 - 3.6	14 Pin DQFN	
FXLA108	8	20		X	X		1.1 - 3.6	1.1 - 3.6	20 Pin DQFN	Direction control not necessary
FXL3SD206	8	24		X	X	X	1.65 - 3.6	1.65 - 3.6	24 Pin μMLP	MUX/DEMUX of SDIO translator
FXLH42245	8	24		X			1.1 - 3.6	1.1 - 3.6	24 Pin MLP	
FXL4245	8	24		X			1.1 - 3.6	1.1 - 3.6	24 Pin MLP	
74LVX3245	8	24		X			2.7 - 3.6	4.5 - 5.5	24 Pin TSSOP	
74LVXC3245	8	24		X			2.7 - 3.6	3.0 - 5.5	24 Pin TSSOP	
74LVX4245	8	24		X			4.5 - 5.5	2.7 - 3.6	24 Pin TSSOP	
74LVXC4245	8	24		X			4.5 - 5.5	2.7 - 5.5	24 Pin TSSOP	
74VCX163245	16	54,48		X			2.3 - 3.6	1.65 - 2.7	48 Pin TSSOP	
74VCX164245	16	54,48		X			1.65 - 2.7	2.3 - 3.6	48 Pin TSSOP	

## Feature Definitions

**Data Direction Configuration:** Whether the product is uni-directional, bi-directional or configurable directional, meaning the direction of each bit can be controlled individually.

**Direction Control Method:** Whether the product requires direction control pins to control the direction of data flow, or whether the product automatically detects the required direction of data flow.

**High Side Level Configuration:** Whether the product requires a specific side for the higher voltage, or whether side A or B can be configured independently.

**Voltage Range:** Low voltage typically between 1.2V to 3.3V, or mid-range, typically 1.8V to 5V.

For additional information, please visit [www.fairchildsemi.com/logic](http://www.fairchildsemi.com/logic)