

# Precision Differential Fanout Buffers Selector Guide

Microsemi's miSmartBuffer™ family provides 3-, 6-, or 10-output programmable fanout buffers with multi-format I/O and per-output dividers. Applications include clock signal fanout, format conversion, frequency division, and skew adjustment in a wide variety of equipment types.

## miSmartBuffers

Product	Input Type	Input Freq.	Crystal Driver	Diff Outputs LVPECL/LVDS/HCSL	CMOS Outputs	Output Banks	Divider Value	Per-output Enable	Per-output Phase Adjust	OE Control	Host Bus	Internal Memory	Operating Temp (°C)	Pkg	Pkg Size (mm)
ZL40230	2 Diff/ LVCMOS + Crystal	<1.6 GHz	•	10 LVPECL/LVDS/HCSL	1 LVCMOS	2	1 to 8—for LVCMOS	•	N/A	SW per output/ HW per bank	SPI	N/A	-40 to 85	QFN-48	7 × 7
ZL40235				5 LVPECL/LVDS/HCSL										QFN-40	6 × 6
ZL40240		250 MHz		N/A	10 LVCMOS	1	N/A							QFN-32	5 × 5
ZL40250	3 Diff/ LVCMOS + Crystal	<1 GHz	•	0-6	0-12	6	32-bit	•	•	Per out- put by GPIO	SPI/I2C	ROM	-40 to 85	QFN-56	8 × 8
ZL40251				EEPROM											
ZL40252				0-10	0-20	ROM									
ZL40253				EEPROM											
ZL40255				0-3 400 mV/800 mV CML	0-6	3						QFN-32		5 × 5	

## miClockBuffers

Product	Input Type	Input Freq.	Crystal Driver	Diff Outputs LVPECL/LVDS/HCSL	CMOS Outputs	Output Banks	Divider Value	OE Control	Operating Temp (°C)	Pkg	Pkg Size (mm)
ZL40231	2 Diff/ LVCMOS + Crystal	<1.6 GHz	•	10 LVPECL/LVDS/HCSL	1LVCMOS	2	1 to 8—for LVCMOS	Per bank	-40 to 85	QFN-48	7 × 7
ZL40234				4 LVPECL/LVDS/HCSL							
ZL40241		<200 MHz		N/A	10 LVCMOS	1	N/A			QFN-32	5 × 5
ZL40260		<1.6 GHz	N/A	10 LVPECL	0			N/A			

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Microsemi's high-performance miClockBuffers deliver industry leading power supply noise rejection performance and low additive jitter. This preserves signal integrity resulting in high performance while simplifying engineering board design efforts.

## LVPECL miClockBuffers

Product	Output Type	Inputs	Outputs	Input Termination	Switching	750 MHz Additive Jitter fs RMS typ	Input Type	Input Coupling	Operating Frequency	Power Supply (V)	Operating Temp (°C)	Pkg	Pkg Size (mm)
ZL40200	LVPECL	1	2	External	N/A	30-40	LVPECL LVDS HCSSL CML	DC or AC	Up to 750 MHz	2.5 or 3.3	-40 to 85	QFN-16	3 x 3
ZL40201				Internal									
ZL40202			4	External									
ZL40203				Internal									
ZL40204			6	External									
ZL40205				Internal									
ZL40206			8	External									
ZL40207				Internal									
ZL40224		2	8	External	Simple	106-121						QFN-32	5 x 5
ZL40225				Internal									
ZL40208				6									
ZL40209			Internal										
ZL40210			8	External									
ZL40211				Internal									

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## LVDS miClockBuffers

Product	Output Type	Inputs	Outputs	Input Termination	Switching	750 MHz Additive Jitter fs RMS typ	Input Type	Input Coupling	Operating Frequency	Power Supply (V)	Operating Temp (°C)	Pkg	Pkg Size (mm)
ZL40212	LVDS	1	2	External	N/A	78–138	LVPECL LVDS HCSL CML	DC or AC	Up to 750 MHz	2.5 or 3.3	–40 to 85	QFN-16	3 x 3
ZL40213				Internal									
ZL40214			4	External									
ZL40215				Internal									
ZL40216			6	External									
ZL40217				Internal									
ZL40218			8	External								Simple	
ZL40219				Internal									
ZL40226		2	6	External	Glitch Free	165–194						QFN-32	5 x 5
ZL40227				Internal									
ZL40220			8	External									
ZL40221				Internal									
ZL40222			8	External									
ZL40223				Internal									



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