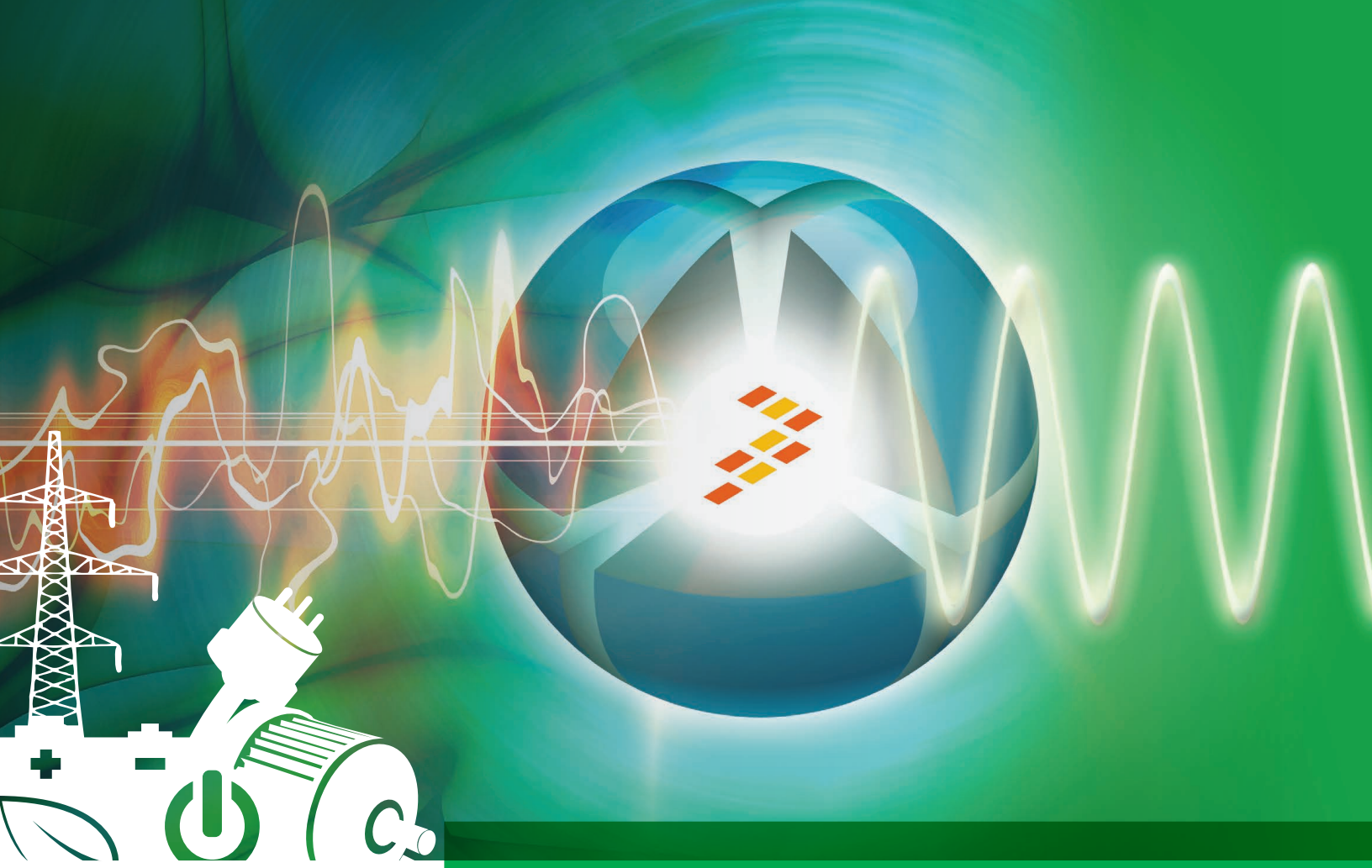

Motor Control. Digital Power Conversion. Control Loops.

Digital Signal Controllers

Product Summary

freescale™
Digital Signal
Controllers

freescale.com/DSC

Digital Signal Controllers

Part Number	Package	Flash (KB)	RAM (KB)	FlexMem (KB)	Speed (MHz)	Performance (MIPS)	DMA	High-Res. PWM	High-Res. PWM Resolution	PWM	12-bit ADC	12-bit ADC Conversion Time	16-bit ADC	Analog Comparator	12-bit DAC	Quad Decoder	I²C	QSCI (UART)	QSPI (SPI)	CAN	16-bit Timers	PIT	GPIO (MAX)	–40 °C to +105 °C	–40 °C to +125 °C	Operating Voltage	Key Features	10K# FSRP Starting Price	Evaluation Board
MC56F82313	32 LQFP	16	4	-	50	50	4-ch.	-	-	1 x 6-ch.	2 x 3-ch.	800 ns	-	2 + 2 x 6-bit DAC	-	-	1	1	1	-	4	2	26	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP	$1.49	TWR-56F8200
MC56F82323	32 QFN	32	6	-	50	50	4-ch.	-	-	1 x 6-ch.	2 x 3-ch.	800 ns	-	2 + 2 x 6-bit DAC	-	-	1	1	1	-	4	2	26	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP	$1.59	TWR-56F8200
MC56F82723	32 LQFP and 32 QFN (5 x 5)	32	6	-	100/50	100	4-ch.	1 x 6-ch.	312pS	-	2 x 3-ch.	800 ns	-	3 + 3 x 6-bit DAC	2	-	1	1	1	-	4	2	26	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$1.69	TWR-56F8200
MC56F82733		48	8	-	100/50	100	4-ch.	1 x 6-ch.	312pS	-	2 x 3-ch.	800 ns	-	3 + 3 x 6-bit DAC	2	-	1	1	1	-	4	2	26	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$1.84	TWR-56F8200
MC56F82743		64	8	-	100/50	100	4-ch.	1 x 6-ch.	312pS	-	2 x 3-ch.	800 ns	-	3 + 3 x 6-bit DAC	2	-	1	1	1	-	4	2	26	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$2.09	TWR-56F8200
MC56F8245	44 LQFP	48	6	-	60	60	-	1 x 6-ch.	520pS	-	2 x 4-ch.	600 ns	-	3 + 3 x 5-bit DAC	1	-	2	2	1	-	8	-	35	y	y	2.7–3.6 V	CRC, COP, crossbar	$2.69	TWR-56F8257
MC56F8255		64	8	-	60	60	-	1 x 6-ch.	520pS	-	2 x 4-ch.	600 ns	-	3 + 3 x 5-bit DAC	1	-	2	2	1	1 MSCAN	8	-	35	y	y	2.7–3.6 V	CRC, COP, crossbar	$3.08	TWR-56F8257
MC56F82316	48 LQFP	16	4	-	50	50	4-ch.	-	-	1 x 6-ch.	2 x 5-ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	1	-	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$1.59	TWR-56F8200
MC56F82726		32	6	-	100/50	100	4-ch.	1 x 6-ch.	312pS	-	2 x 5-ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	1	1 MSCAN	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$1.89	TWR-56F8200
MC56F8246		48	6	-	60	60	-	1 x 6-ch.	520pS	-	2 x 5-ch.	600 ns	-	3 + 3 x 5-bit DAC	1	-	2	2	1	-	8	-	39	y	y	2.7–3.6 V	CRC, COP, crossbar	$2.74	TWR-56F8257
MC56F82736		48	8	-	100/50	100	4-ch.	1 x 6-ch.	312pS	-	2 x 5-ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	1	1 MSCAN	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$2.00	TWR-56F8200
MC56F8256		64	8	-	60	60	-	1 x 6-ch.	520pS	-	2 x 5-ch.	600 ns	-	3 + 3 x 5-bit DAC	1	-	2	2	1	1 MSCAN	8	-	39	y	y	2.7–3.6 V	CRC, COP, crossbar	$3.13	TWR-56F8257
MC56F84441		64	8	32/2	60	60	4-ch.	-	-	1 x 6-ch.	2 x 5-ch.	600 ns	-	3 + 3 x 6-bit DAC	-	1	2	2	1	-	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$1.99	TWR-56F84789
MC56F84540		64	8	32/2	80	80	4-ch.	1 x 6-ch.	390pS	-	2 x 5-ch.	300 ns	-	3 + 3 x 6-bit DAC	1	1	2	2	1	1 FlexCAN	8	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.20	TWR-56F84789
MC56F82746		64	8	-	100/50	100	4-ch.	1 x 6-ch.	312pS	-	2 x 5ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	1	1 MSCAN	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$2.19	TWR-56F8200
MC56F84451		96	16	32/2	60	60	4-ch.	-	-	1 x 6-ch.	2 x 5-ch.	600 ns	-	3 + 3 x 6-bit DAC	-	1	2	2	1	1 FlexCAN	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$1.99	TWR-56F84789
MC56F84550		96	16	32/2	80	80	4-ch.	1 x 6-ch.	390pS	-	2 x 5-ch.	300 ns	-	3 + 3 x 6-bit DAC	1	1	2	2	1	1 FlexCAN	4	2	39	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.60	TWR-56F84789
MC56F82728	64 LQFP	32	6	-	100/50	100	4-ch.	1 x 8-ch.	312pS	-	2 x 8-ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	2	1 MSCAN	4	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$1.99	TWR-56F8200
MC56F8247		48	8	-	60	60	-	1 x 6 + 3-ch.	520pS	-	2 x 8-ch.	600 ns	-	3 + 3 x 5-bit DAC	1	-	2	2	1	-	8	-	54	y	y	2.7–3.6 V	CRC, COP, crossbar	$3.32	TWR-56F8257
MC56F82738		48	8	-	100/50	100	4-ch.	1 x 8-ch.	312pS	-	2 x 8-ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	2	1 MSCAN	4	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$2.15	TWR-56F8200
MC56F8257		64	8	-	60	60	-	1 x 6 + 3-ch.	520pS	-	2 x 8-ch.	600 ns	-	3 + 3 x 5-bit DAC	1	-	2	2	1	1 MSCAN	8	-	54	y	y	2.7–3.6 V	CRC, COP, crossbar	$3.49	TWR-56F8257
MC56F84442		64	8	32/2	60	60	4-ch.	-	-	1 x 9-ch.	2 x 8-ch.	600 ns	1 x 8-ch.	4 + 4 x 6-bit DAC	-	1	2	2	1	-	8	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$2.20	TWR-56F84789
MC56F84543		64	8	32/2	80	80	4-ch.	1 x 8 + 1-ch.	390pS	-	2 x 8-ch.	300 ns	1 x 8-ch.	4 + 4 x 6-bit DAC	1	1	2	2	1	1 FlexCAN	8	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.29	TWR-56F84789
MC56F82748		64	8	-	100/50	100	4-ch.	1 x 8-ch.	312pS	-	2 x 8-ch.	800 ns	-	4 + 4 x 6-bit DAC	2	-	1	2	2	1 MSCAN	4	2	54	y	y	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, WCOP, EWM	$2.29	TWR-56F8200
MC56F84452		96	16	32/2	60	60	4-ch.	-	-	1 x 9-ch.	2 x 8-ch.	600 ns	1 x 8-ch.	4 + 4 x 6-bit DAC	-	1	2	2	1	1 FlexCAN	8	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$2.65	TWR-56F84789
MC56F84553		96	16	32/2	80	80	4-ch.	1 x 8 + 1-ch.	390pS	-	2 x 8-ch.	300 ns	1 x 8-ch.	4 + 4 x 6-bit DAC	1	1	2	2	1	1 FlexCAN	8	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$4.26	TWR-56F84789
MC56F84462		128	24	32/2	60	60	4-ch.	-	-	1 x 9-ch.	2 x 8-ch.	600 ns	1 x 8-ch.	4 + 4 x 6-bit DAC	1	1	2	2	1	1 FlexCAN	8	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.10	TWR-56F84789
MC56F84763		128	24	32/2	100	100	4-ch.	1 x 8 + 1-ch.	312pS	-	2 x 8-ch.	300 ns	1 x 8-ch.	4 + 4 x 6-bit DAC	1	1	2	2	1	1 FlexCAN	8	2	54	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.94	TWR-56F84789
MC56F84565	80 LQFP	128	24	32/2	80	80	4-ch.	-	-	1 x 9-ch.	2 x 8-ch.	600 ns	1 x 10-ch.	4 + 4 x 6-bit DAC	-	1	2	3	2	1 FlexCAN	8	2	68	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.29	TWR-56F84789
MC56F84766		128	24	32/2	100	100	4-ch.	1 x 8 + 1-ch.	312pS	1 x 7-ch.	2 x 8-ch.	300 ns	1 x 10-ch.	4 + 4 x 6-bit DAC	1	1	2	3	2	1 FlexCAN	8	2	68	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$4.65	TWR-56F84789
MC56F84585		256	32	32/2	80	80	4-ch.	-	-	1 x 9-ch.	2 x 8-ch.	600 ns	1 x 10-ch.	4 + 4 x 6-bit DAC	1	1	2	3	2	1 FlexCAN	8	2	68	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.90	TWR-56F84789
MC56F84786		256	32	32/2	100	100	4-ch.	1 x 8 + 1-ch.	312pS	1 x 7-ch.	2 x 8-ch.	300 ns	1 x 10-ch.	4 + 4 x 6-bit DAC	1	1	2	3	2	1 FlexCAN	8	2	68	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$5.15	TWR-56F84789
MC56F84567	100 LQFP	128	24	32/2	80	80	4-ch.	-	-	2 x 12-ch.	2 x 8-ch.	600 ns	1 x 16-ch.	4 + 4 x 6-bit DAC	-	1	2	3	3	1 FlexCAN	8	2	86	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$3.40	TWR-56F84789
MC56F84769		128	24	32/2	100	100	4-ch.	1 x 8 + 4-ch.	312pS	1 x 12-ch.	2 x 8-ch.	300 ns	1 x 16-ch.	4 + 4 x 6-bit DAC	1	1	2	3	3	1 FlexCAN	8	2	86	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$4.75	TWR-56F84789
MC56F84587		256	32	32/2	80	80	4-ch.	-	-	2x 12-ch.	2 x 8-ch.	600 ns	1 x 16-ch.	4 + 4 x 6-bit DAC	1	1	2	3	3	1 FlexCAN	8	2	86	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$4.00	TWR-56F84789
MC56F84789		256	32	32/2	100	100	4-ch.	1 x 8 + 4-ch.	312pS	1 x 12-ch.	2 x 8-ch.	300 ns	1 x 16-ch.	4 + 4 x 6-bit DAC	1	1	2	3	3	1 FlexCAN	8	2	86	y	-	2.7–3.6 V	Memory resource protection, crossbar, CRC, dual clocks, COP, EWM	$5.25	TWR-56F84789

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