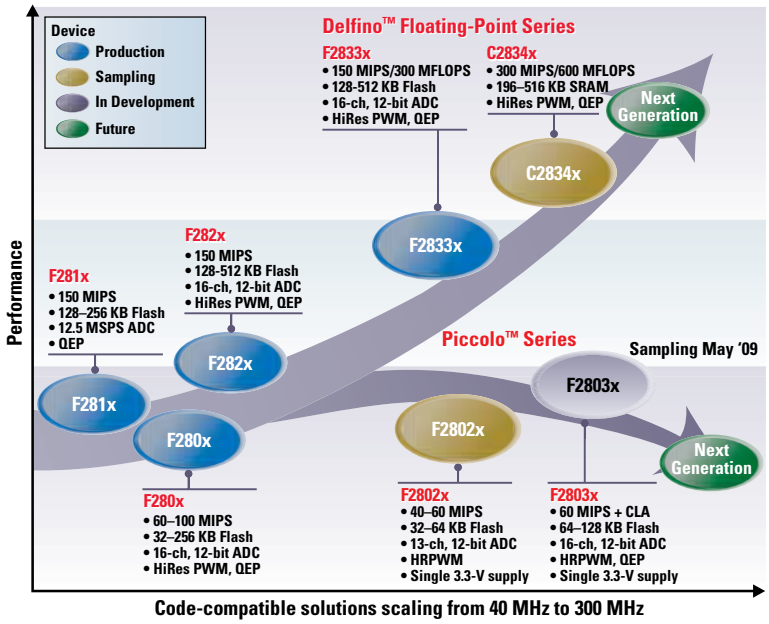
TMS320C2000™ MCU Selection Guide

C2000 MCUs are used today in digital power systems from telecom rectifiers to non-isolated DC/DC and green energy generation applications such as solar inverters and wind turbines.

C2000 MCUs are optimized for real-time embedded control applications like digital power by integrating fast 12-bit ADCs and the most sophisticated PWM generation technology with a high-performance 32-bit MCU CPU. The C2000 PWM allows duty cycle modulation with 150 ps accuracy and the flexibility to support any power stage topology easily.

TI has developed an extensive software library of common functions which greatly simplify software development without compromising real-time performance. The digital software library is available for free download at **www.ti.com/dpslib**.

C2000 MCU Digital Power Solutions



C2000 MCU Selection Table

	CPU			Memory		Control Interfaces			Communication Ports							
Controller	Speed (MHz)	FPU	DMA	RAM (KB)	Flash (KB)	PWM Channels	Timers	ADC Conv. Time (ns)	SPI	SCI	CAN	I^2C	External Memory Bus	I/O Pins	Packaging	1 KU Pricing[1]
F28x Floating Point MCUs																
TMS320F28332	100	Yes	Yes	52	128	16	9	80	1	2	2	1	32-bit	88	176 LQFP or 179 BGA	13.85
TMS320F28334	150	Yes	Yes	68	512	18	9	80	1	3	2	1	32-bit	88	176 LQFP or 179 BGA	14.75
TMS320F28335	150	Yes	Yes	68	512	18	9	80	1	3	2	1	32-bit	88	176 LQFP or 179 BGA	15.65
F28x Piccolo MCUs																
TMS320F2802x	40 - 60	No	No	12	32 - 64	8	7	216 – 1000	1	1	—	1	—	20 - 22	38 TSSOP or 48 LQFP	TBD
TMS320F2803x	60	No	No	20	64 - 128	14	7	216	2	2	1	1	—	33 - 44	64 TQFP or 80 LQFP	TBD
F28x Fixed Point MCUs																
TMS320F28232	100	No	Yes	52	128	16	9	80	1	2	2	1	32-bit	88	176 LQFP or 179 BGA	12.88
TMS320F28234	150	No	Yes	68	256	16	9	80	1	3	2	1	32-bit	88	176 LQFP or 179 BGA	13.72
TMS320F28235	150	No	Yes	68	512	18	9	80	1	3	2	1	32-bit	88	176 LQFP or 179 BGA	14.55
TMS320F2801	100	No	No	12	32	8	9	160	2	1	1	1	No	35	100 LQFP or BGA	5.80
TMS320F2802	100	No	No	12	64	8	9	160	2	1	1	1	No	35	100 LQFP or BGA	7.10
TMS320F2806	100	No	No	20	64	16	15	160	4	2	1	1	No	35	100 LQFP or BGA	8.70
TMS320F2808	100	No	No	36	128	16	15	160	4	2	2	1	No	35	100 LQFP or BGA	11.60
TMS320F2809	100	No	No	36	256	16	15	80	4	2	2	1	No	35	100 LQFP or BGA	12.95
TMS320F28044	100	No	No	20	128	16	19	80	1	1	—	1	No	35	100 LQFP or BGA	9.95
TMS320F2801-60	60	No	No	12	32	8	9	267	2	1	1	1	No	35	100 LQFP or BGA	3.95
TMS320F2802-60	60	No	No	12	64	8	9	267	2	1	1	1	No	35	100 LQFP or BGA	4.75
TMS320F28015	60	No	No	12	32	8	7	267	1	1	—	1	No	35	100 LQFP or BGA	3.25
TMS320F28016	60	No	No	12	64	8	7	267	1	1	1	1	No	35	100 LQFP or BGA	3.50

[1] *Pricing subject to change. Please visit www.ti.com for current pricing.*

C2000 MCU Selection Table (continued)

283x Delfino (Floating Point) MCUs

	Processor			Memory			Control Interfaces							Communication Ports										
Device	Speed (MHz)	DMA	CLA	RAM (KB)	Flash (KB)	ROM (KB)	PWM Channels	HiRes PWM	Quadrature Encoder	Event Captures	Timers*	12-bit ADC Channels/ Conversion Time (ns)		McBSP	I^2C	UART /SCI	SPI	Lin	CAN	External Memory Bus	Core Supply (Volts)	GPIO Pins	On-chip Oscillator/ Regulator	Pin/ Package	1 KU Pricing[1]
TMS320C28346	300	Yes	—	516	—	Boot	24	9	3	6	19	—	—	2	1	3	2	—	2	16 or 32-bit	1.2	88	—	256GBA	16.39
TMS320C28345	200	Yes	—	516	—	Boot	24	9	3	6	19	—	—	2	1	3	2	—	2	16 or 32-bit	1.1	88	—	256GBA, 179BGA	14.42
TMS320C28344	300	Yes	—	260	—	Boot	24	9	3	6	19	—	—	2	1	3	2	—	2	16 or 32-bit	1.2	88	—	256GBA	12.78
TMS320C28343	200	Yes	—	260	—	Boot	24	9	3	6	19	—	—	2	1	3	2	—	2	16 or 32-bit	1.1	88	—	256GBA, 179BGA	11.25
TMS320C28342	300	Yes	—	196	—	Boot	16	6	2	4	14	—	—	1	1	3	2	—	2	16 or 32-bit	1.2	88	—	256GBA	10.17
TMS320C28341	200	Yes	—	196	—	Boot	16	6	2	4	14	—	—	1	1	3	2	—	2	16 or 32-bit	1.1	88	—	256GBA, 179BGA	8.95
TMS320F28335	150	Yes	—	68	512	Boot	18	6	2	6	16	16/80	—	2	1	3	1	—	2	16 or 32-bit	1.9	88	—	179BGA, 176LQFP	15.65
TMS320F28334	150	Yes	—	68	256	Boot	16	6	2	4	14	16/80	—	2	1	3	1	—	2	16 or 32-bit	1.9	88	—	179BGA, 176LQFP	14.75
TMS320F28332	100	Yes	—	52	128	Boot	16	4	2	4	14	16/80	—	1	1	2	1	—	2	16 or 32-bit	1.9	88	—	179BGA, 176LQFP	13.85

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