



# Feature Overview TriCore™ Family

## TriCore™ Microcontroller

Product Type	Max Clock Frequency [MHz]	Program Memory [KByte]	SRAM (incl. Cache) [KByte]	Co-Processor <sup>1)</sup>	Cores/Lockstep	Timed I/O GPIO	Number of ADC Channels	External Bus Interface	CAN/CAN-FD Nodes	Communication Interfaces <sup>2)</sup>	Temperature Ranges <sup>3)</sup>	Packages	Additional Features/Remarks <sup>4)</sup>
<b>AURIX™ – Family</b>													
TC299T	300	8000	728	FPU	3/1	263	84/10 DS	yes	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LFBGA5-16	EVR, STBU, HSM
TC299TX	300	8000	2728	FPU	3/1	263	84/10 DS	yes	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LFBGA-516	EVR, STBU, HSM
TC299T	300	6000	728	FPU	3/1	263	84/10 DS	yes	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LFBGA-516	EVR, STBU, HSM
TC298T	300	8000	728	FPU	3/1	232	60/10 DS	yes	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LBGA-416	EVR, STBU, HSM
TC298T	300	6000	728	FPU	3/1	232	60/10 DS	yes	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LBGA-416	EVR, STBU, HSM
TC297T	300	8000	728	FPU	3/1	169	84/10 DS	no	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LFBGA-292	EVR, STBU, HSM
TC297T	300	6000	728	FPU	3/1	169	84/10 DS	no	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LFBGA-292	EVR, STBU, HSM
TC297TA	300	8000	2728	FPU, FFT, CIF	3/1	169	84/10 DS	no	6	4xASCLIN, 6xQSPI, 3xMSC, 2xI <sup>2</sup> C, 15xSENT, 5xPSI5, 2xFlexRay, Ethernet	K	PG-LFBGA-292	EVR, STBU, HSM
TC277T	200	4000	472	FPU	3/2	169	60/6 DS	no	4	4xASCLIN, 4xQSPI, 2xMSC, HSSL, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	K	PG-LFBGA-292	EVR, WUT, HSM
TC275T	200	4000	472	FPU	3/2	112	60/6 DS	no	4	4xASCLIN, 4xQSPI, 2xMSC, HSSL, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	K	PG-LQFP-176	EVR, WUT, HSM
TC267D	200	2500	240	FPU	2/1	169	50/3 DS	no	5	4xASCLIN, 4xQSPI, 2xMSC, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	K	PG-LFBGA-292	EVR, STBU
TC265D	200	2500	240	FPU	2/1	112	50/3 DS	no	5	4xASCLIN, 4xQSPI, 2xMSC, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	K	PG-LQFP-176	EVR, STBU
TC264D	200	2500	240	FPU	2/1	88	40/3 DS	no	5	4xASCLIN, 4xQSPI, 2xMSC, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	K	PG-LQFP-144	EVR, STBU
TC264DA	200	2500	752	FPU, FFT, CIF	2/1	88	40/3 DS	no	5	4xASCLIN, 4xQSPI, 2xMSC, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	K	PG-LQFP-144	EVR, STBU
TC244S	180	2000	192	FPU	1/-	88	40/3 DS	no	3	2xASCLIN, 4xQSPI, 2xMSC, 4xSENT, FlexRay, Ethernet	K	PG-LQFP-144	EVR, STBU
TC237L	200	2000	192	FPU	1/1	120	24	no	6	2xASCLIN, 4xQSPI, 4xSENT, FlexRay	K	PG-LFBGA-292	EVR, WUT, HSM
TC234L	200	2000	192	FPU	1/1	120	24	no	6	2xASCLIN, 4xQSPI, 4xSENT, FlexRay	K	PG-TQFP-144	EVR, WUT, HSM
TC233L	200	2000	192	FPU	1/1	78	24	no	6	2xASCLIN, 4xQSPI, 4xSENT, FlexRay	K	PG-TQFP-100	EVR, WUT, HSM
TC234LA	200	2000	704	FPU, FFT	1/1	120	24	no	6	2xASCLIN, 4xQSPI, 4xSENT, FlexRay, Ethernet	K	PG-TQFP-144	EVR, WUT, HSM
TC224L	133	1000	96	FPU	1/1	120	24	no	3	2xASCLIN, 4xQSPI, 4xSENT	K	PG-TQFP-144	EVR, WUT
TC223L	133	1000	96	FPU	1/1	78	24	no	3	2xASCLIN, 4xQSPI, 4xSENT	K	PG-TQFP-100	EVR, WUT
TC222L	133	1000	96	FPU	1/1	59	24	no	3	2xASCLIN, 4xQSPI, 4xSENT	K	PG-TQFP-80	EVR, WUT
TC213L	100	500	96	FPU	1/1	78	24	no	3	2xASCLIN, 4xQSPI, 4xSENT	K	PG-TQFP-100	EVR, WUT
TC212L	100	500	96	FPU	1/1	59	24	no	3	2xASCLIN, 4xQSPI, 4xSENT	K	PG-TQFP-80	EVR, WUT
<b>AURIX™ – Bare Die</b>													
TC270T	200	4000	472	FPU	3/2		60/6 DS	no	4	4xASCLIN, 4xQSPI, 2xMSC, HSSL, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	L	Bare Die	EVR, WUT, HSM
TC260D	200	2500	240	FPU	2/1		50/3 DS	no	5	4xASCLIN, 4xQSPI, 2xMSC, I <sup>2</sup> C, 10xSENT, 3xPSI5, FlexRay, Ethernet	L	Bare Die	EVR, STBU



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## TriCore™ Microcontroller

Product Type	Max Clock Frequency [MHz]	Program Memory [KByte]	SRAM (incl. Cache) [KByte]	Co-Processor <sup>1)</sup>	Digital I/O Lines	Number of ADC Channels	Timed IO Channels (PWM, CAPCOM, GPTA)	External Bus Interface	CAN Nodes	Communication Interfaces <sup>2)</sup>	Temperature Ranges <sup>3)</sup>	Packages	Additional Features/Remarks <sup>4)</sup>
<b>AUDO – Next Generation Family</b>													
TC1766	80	1500	88	FPU, PCP	81	32	48	no	2	2xASC, 2xSSC, MSC, 2xMLI	K	PG-LQFP-176	
TC1796	150	2000	192	FPU, PCP	123	44	126	yes	4	2xASC, 2xSSC, 2xMSC, 2xMLI	K	PG-BGA-416	
<b>AUDO – Future Family</b>													
TC1736	80	1000	48	FPU	70	24	53	no	2	2xASC, 2xSSC, MSC, MLI	K	PG-LQFP-144	
TC1767	133	2000	104	FPU, PCP	88	36	80	no	2	2xASC, 2xSSC, MSC, MLI	K	PG-LQFP-176	
TC1797	180	4000	176	FPU, PCP	221	48	118	yes	4	2xASC, 2xSSC, 2xMSC, 2xMLI, 2xFlexRay	K	PG-BGA-416	
<b>AUDO MAX – Family</b>													
TC1724	133	1500	152	FPU, PCP	89	28	77	no	3	2xASC, 4xSSC, MSC, MLI	K	PG-LQFP-144	EVR
TC1728	133	1500	152	FPU, PCP	113	36	94	no	3	2xASC, 4xSSC, MSC, MLI	K	PG-LQFP-176	EVR
TC1782	180	2500	176	FPU/PCP	88	36	80	no	3	2xASC, 3xSSC, MSC, MLI, FlexRay	K	PG-LQFP-176	
TC1784	180	2500	176	FPU/PCP	141	36	122	yes	3	2xASC, 3xSSC, MSC, MLI, FlexRay	K	PG-LFBGA-292	
TC1791	240	4000	288	FPU/PCP	130	48	100	no	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, FlexRay	K	PG-LFBGA-292	
TC1793	270	4000	288	FPU/PCP	221	44	112	yes	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, FlexRay	K	PG-LBGA-416	
TC1798	300	4000	288	FPU/PCP	238	72	138	yes	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, FlexRay	K	PG-BGA-516	

1) MAC = Multiply-Accumulate-Unit (DSP), FPU = Floating Point Unit, PCP = Peripheral Control Processor

2) I<sup>2</sup>C = Inter-Integrated Circuit, USART = Universal Synchronous Asynchronous Receiver Transmitter, UART = Universal Asynchronous Receiver Transmitter, SSC = Synchronous Serial Channel, ASC = Asynchronous Serial Channel, MLI = Micro Link Interface, MSC = Micro Second Channel, LIN = Local Interconnect Network

3) Ambient Temperature Range: B = 0 ... 70°C, F = -40 ... 85°C, X = -40 ... 105°C, K = -40 ... 125°C, A = -40 ... 140°C, L = -40 ... 150°C, H = -40 ... 110°C

4) ROM = Read Only Memory, EVR = Embedded Voltage Regulator

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