



# Automotive Product Selector Guide



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Microsemi® offers a broad range of automotive-grade FPGAs and ARM®-enabled SoC FPGAs for designers to choose from which best fits their requirements. This product selector guide covers primary parameters; be it logic elements density, package size, on-chip peripherals etc. that are used to select an FPGA or SoC FPGA for a given application. All the products recommended in this guide are AEC-Q100 qualified and offer extended temperature support. Microsemi's automotive-grade FPGAs and SoCs offers the advantages of best-in-class security, high-reliability and low-power flash FPGAs for automotive designers.

The following device families offer Microsemi automotive-grade FPGAs:

- ProASIC3®
- IGLOO®2
- SmartFusion®2

Family	Part Number	Package Size(mm)	Temperature Range(°C)	LEs	Mathblocks (18x18)	RAM Memory (Kbits)	Transceivers (Lanes)	Transceiver Speed	User I/Os	Status
ProASIC3	A3P060-1FG144T	13x13	-40 to 135	~700	-	18	-	-	96	Production
ProASIC3	A3P060-FG144T	13x13	-40 to 135	~700	-	18	-	-	96	Production
ProASIC3	A3P060-1FGG144T	13x13	-40 to 135	~700	-	18	-	-	96	Production
ProASIC3	A3P060-FGG144T	13x13	-40 to 135	~700	-	18	-	-	96	Production
ProASIC3	A3P060-1VQ100T	14x14	-40 to 135	~700	-	18	-	-	71	Production
ProASIC3	A3P060-VQ100T	14x14	-40 to 135	~700	-	18	-	-	71	Production
ProASIC3	A3P060-1VQG100T	14x14	-40 to 135	~700	-	18	-	-	71	Production
ProASIC3	A3P060-VQG100T	14x14	-40 to 135	~700	-	18	-	-	71	Production
ProASIC3	A3P125-1FG144T	13x13	-40 to 135	~1500	-	36	-	-	97	Production
ProASIC3	A3P125-FG144T	13x13	-40 to 135	~1500	-	36	-	-	97	Production
ProASIC3	A3P125-1FGG144T	13x13	-40 to 135	~1500	-	36	-	-	97	Production
ProASIC3	A3P125-FGG144T	13x13	-40 to 135	~1500	-	36	-	-	97	Production
ProASIC3	A3P125-1VQ100T	14x14	-40 to 135	~1500	-	36	-	-	71	Production
ProASIC3	A3P125-VQ100T	14x14	-40 to 135	~1500	-	36	-	-	71	Production
ProASIC3	A3P125-1VQG100T	14x14	-40 to 135	~1500	-	36	-	-	71	Production
ProASIC3	A3P125-VQG100T	14x14	-40 to 135	~1500	-	36	-	-	71	Production
ProASIC3	A3P250-FG144T	13x13	-40 to 135	~3,000	-	36	-	-	97	Production
ProASIC3	A3P250-1FGG144T	13x13	-40 to 135	~3,000	-	36	-	-	97	Production

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Table continuation...

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ProASIC3	A3P250-FGG144T	13x13	-40 to 135	~3,000	-	36	-	-	97	Production
ProASIC3	A3P250-1FG144T	13x13	-40 to 135	~3,000	-	36	-	-	97	Production
ProASIC3	A3P250-VQ100T	14x14	-40 to 135	~3,000	-	36	-	-	68	Production
ProASIC3	A3P250-1VQ100T	14x14	-40 to 135	~3,000	-	36	-	-	68	Production
ProASIC3	A3P250-1VQG100T	14x14	-40 to 135	~3,000	-	36	-	-	68	Production
ProASIC3	A3P250-VQG100T	14x14	-40 to 135	~3,000	-	36	-	-	68	Production
ProASIC3	A3P250-1FG256T	17x17	-40 to 135	~3,000	-	36	-	-	157	Production
ProASIC3	A3P250-FG256T	17x17	-40 to 135	~3,000	-	36	-	-	157	Production
ProASIC3	A3P250-1FGG256T	17x17	-40 to 135	~3,000	-	36	-	-	157	Production
ProASIC3	A3P250-FGG256T	17x17	-40 to 135	~3,000	-	36	-	-	157	Production
ProASIC3	A3P1000-1FG144T	13x13	-40 to 135	~11,000	-	144	-	-	97	Production
ProASIC3	A3P1000-1FGG144T	13x13	-40 to 135	~11,000	-	144	-	-	97	Production
ProASIC3	A3P1000-FGG144T	13x13	-40 to 135	~11,000	-	144	-	-	97	Production
ProASIC3	A3P1000-FG144T	13x13	-40 to 135	~11,000	-	144	-	-	97	Production
ProASIC3	A3P1000-1FG256T	17x17	-40 to 135	~11,000	-	144	-	-	177	Production
ProASIC3	A3P1000-FG256T	17x17	-40 to 135	~11,000	-	144	-	-	177	Production
ProASIC3	A3P1000-1FGG256T	17x17	-40 to 135	~11,000	-	144	-	-	177	Production
ProASIC3	A3P1000-FGG256T	17x17	-40 to 135	~11,000	-	144	-	-	177	Production
ProASIC3	A3P1000-1FG484T	23x23	-40 to 135	~11,000	-	144	-	-	300	Production
ProASIC3	A3P1000-FG484T	23x23	-40 to 135	~11,000	-	144	-	-	300	Production
ProASIC3	A3P1000-1FGG484T	23x23	-40 to 135	~11,000	-	144	-	-	300	Production
ProASIC3	A3P1000-FGG484T	23x23	-40 to 135	~11,000	-	144	-	-	300	Production
SmartFusion2	M2S005S-1VFG256T2	14x14	-40 to 125	6,060	11	703	-	-	161	Production
SmartFusion2	M2S005S-1VFG400T2	17x17	-40 to 125	6,060	11	703	-	-	171	Production
SmartFusion2	M2S005S-1FGG484T2	23x23	-40 to 125	6,060	11	703	-	-	209	Production
SmartFusion2	M2S010TS-1VFG256T2	14x14	-40 to 125	12,084	22	912	2	3.125 Gbps	138	Production

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Table continuation...

Family	Part Number	Package Size(mm)	Temperature Range(°C)	LEs	Mathblocks (18x18)	RAM Memory (Kbits)	Transceivers (Lanes)	Transceiver Speed	User I/Os	Status
SmartFusion2	M2S010TS-1VFG400T2	17x17	-40 to 125	12,084	22	912	4	3.125 Gbps	195	Production
SmartFusion2	M2S010TS-1FGG484T2	23x23	-40 to 125	12,084	22	912	4	3.125 Gbps	233	Production
SmartFusion2	M2S025TS-1VFG256T2	14x14	-40 to 125	27,696	34	1104	2	3.125 Gbps	138	Production
SmartFusion2	M2S025TS-1VFG400T2	17x17	-40 to 125	27,696	34	1104	4	3.125 Gbps	207	Production
SmartFusion2	M2S025TS-1FGG484T2	23x23	-40 to 125	27,696	34	1104	4	3.125 Gbps	267	Production
SmartFusion2	M2S060TS-1VFG400T2	17x17	-40 to 125	56,520	72	1826	4	3.125 Gbps	207	Preliminary
SmartFusion2	M2S060TS-1FGG484T2	23x23	-40 to 125	56,520	72	1826	4	3.125 Gbps	267	Preliminary
SmartFusion2	M2S060TS-1FGG676T2	27x27	-40 to 125	56,520	72	1826	4	3.125 Gbps	387	Preliminary
SmartFusion2	M2S090TS-1FGG484T2	23x23	-40 to 125	86,184	84	2586	4	3.125 Gbps	425	Production
SmartFusion2	M2S090TS-1FGG676T2	27x27	-40 to 125	86,184	84	2586	4	3.125 Gbps	425	Production
IGLOO2	M2GL005S-1VFG256T2	14x14	-40 to 125	6,060	11	703	-	-	161	Production
IGLOO2	M2GL005S-1VFG400T2	17x17	-40 to 125	6,060	11	703	-	-	171	Production
IGLOO2	M2GL005S-1FGG484T2	23x23	-40 to 125	6,060	11	703	-	-	209	Production
IGLOO2	M2GL010TS-1VFG256T2	14x14	-40 to 125	12,084	22	912	2	3.125 Gbps	138	Production
IGLOO2	M2GL010TS-1VFG400T2	17x17	-40 to 125	12,084	22	912	4	3.125 Gbps	195	Production
IGLOO2	M2GL010TS-1FGG484T2	23x23	-40 to 125	12,084	22	912	4	3.125 Gbps	233	Production
IGLOO2	M2GL025TS-1VFG256T2	14x14	-40 to 125	27,696	34	1104	2	3.125 Gbps	138	Production
IGLOO2	M2GL025TS-1VFG400T2	17x17	-40 to 125	27,696	34	1104	4	3.125 Gbps	207	Production
IGLOO2	M2GL025TS-1FGG484T2	23x23	-40 to 125	27,696	34	1104	4	3.125 Gbps	267	Production
IGLOO2	M2GL060TS-1VFG400T2	17x17	-40 to 125	56,520	72	1826	4	3.125 Gbps	207	Preliminary
IGLOO2	M2GL060TS-1FGG484T2	23x23	-40 to 125	56,520	72	1826	4	3.125 Gbps	267	Preliminary
IGLOO2	M2GL060TS-1FGG676T2	27x27	-40 to 125	56,520	72	1826	4	3.125 Gbps	387	Preliminary
IGLOO2	M2GL090TS-1FGG484T2	23x23	-40 to 125	86,184	84	2586	4	3.125 Gbps	267	Production
IGLOO2	M2GL090TS-1FGG676T2	27x27	-40 to 125	86,184	84	2586	4	3.125 Gbps	425	Production
IGLOO2	M2GL005-1FGG484T1	23x23	-40 to 135	6,060	11	703	-	-	209	Planned
IGLOO2	M2GL010-1FGG484T1	23x23	-40 to 135	12,084	22	912	-	-	233	Planned

Table continuation...

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IGLOO2	M2GL025-1FGG484T1	23x23	-40 to 135	27,696	34	1104	-	-	267	Planned
IGLOO2	M2GL060-1FGG484T1	23x23	-40 to 135	56,520	72	1826	-	-	267	Planned
IGLOO2	M2GL090-1FGG484T1	23x23	-40 to 135	86,184	84	2586	-	-	267	Planned

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