

**Supplementary Resource Utilization and Performance
(RUP) Tables**

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Interface Resource Utilization and Performance

RV32I_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	914	3670	4584	3807	109.589	
RTG4	RTG4150L FCG1657	912	3642	4554	3783	89.381	
SmartFusion2	M2S150T FC1152	905	3570	4475	3699	92.644	
IGLOO2	M2GL150 FC1152	905	3570	4475	3699	92.644	
Config parameters	RISC-V Extensions: I , Multiplier: n/a, AHB Master: n, Mirrored I/F: n, APB Master: APB3 , APB Mirrored I/F: n, AXI Master: n, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_AHB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	905	3690	4595	3825	107.701	11
RTG4	RTG4150L FCG1657	910	3592	4502	3746	88.558	-82
SmartFusion2	M2S150T FC1152	912	3590	4502	3738	96.6	-82
IGLOO2	M2GL150 FC1152	912	3590	4502	3738	96.6	-82
Config parameters	RISC-V Extensions: I , Multiplier: n/a, AHB Master: AHB , Mirrored I/F: n, APB Master: n/a, APB Mirrored I/F: n, AXI Master: n, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_AXI

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1315	3908	5223	4162	101.678	639
RTG4	RTG4150L FCG1657	1325	4037	5362	4233	85.441	778
SmartFusion2	M2S150T FC1152	1330	4131	5461	4347	93.809	877
IGLOO2	M2GL150 FC1152	1330	4131	5461	4347	93.809	877
Config parameters	RISC-V Extensions: I , Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: n/a, APB Mirrored I/F: n, AXI Master: AXI4 , AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_AHB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1021	3785	4806	3909	107.573	222
RTG4	RTG4150L FCG1657	1021	3771	4792	3920	86.296	208
SmartFusion2	M2S150T FC1152	1024	3774	4798	3924	93.747	214
IGLOO2	M2GL150 FC1152	1024	3774	4798	3924	93.747	214
Config parameters	RISC-V Extensions: I , Multiplier: n/a, AHB Master: AHB , Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_AXI

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1432	4032	5464	4294	107.55	880
RTG4	RTG4150L FCG1657	1441	4248	5689	4478	84.353	1105
SmartFusion2	M2S150T FC1152	1437	4250	5687	4476	90.408	1103
IGLOO2	M2GL150 FC1152	1437	4250	5687	4476	90.408	1103
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: AXI4, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_AHB_AXI

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1436	4103	5539	4358	101.947	955
RTG4	RTG4150L FCG1657	1440	4288	5728	4525	85.529	1144
SmartFusion2	M2S150T FC1152	1434	4230	5664	4452	89	1080
IGLOO2	M2GL150 FC1152	1434	4230	5664	4452	89	1080
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: AHB, Mirrored I/F: n, APB Master: n/a, APB Mirrored I/F: n, AXI Master: AXI4, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_AHB_AXI

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1547	4292	5839	4546	95.593	1255
RTG4	RTG4150L FCG1657	1554	4437	5991	4664	86.044	1407
SmartFusion2	M2S150T FC1152	1557	4436	5993	4681	90.123	1409
IGLOO2	M2GL150 FC1152	1557	4436	5993	4681	90.123	1409
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: AHB, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: AXI4, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RISC-V Extensions Resource Utilization and Performance

RV32IC_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	910	3838	4748	3975	113.856	164
RTG4	RTG4150L FCG1657	908	4004	4912	4140	89	328
SmartFusion2	M2S150T FC1152	915	4017	4932	4160	91.399	348
IGLOO2	M2GL150 FC1152	915	4017	4932	4160	91.399	348
Config parameters	RISC-V Extensions: IC , Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32IM_MACC_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1046	4202	5248	4486	71.129	664
RTG4	RTG4150L FCG1657	1046	4292	5338	4575	70.328	754
SmartFusion2	M2S150T FC1152	1049	4387	5436	4650	72.495	852
IGLOO2	M2GL150 FC1152	1049	4387	5436	4650	72.495	852
Config parameters	RISC-V Extensions: IM, Multiplier: MACC , AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32IM_MACC_PIPELINED_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1050	4278	5328	4551	90.563	744
RTG4	RTG4150L FCG1657	1049	4360	5409	4655	84.602	825
SmartFusion2	M2S150T FC1152	1057	4296	5353	4566	90.359	769
IGLOO2	M2GL150 FC1152	1057	4296	5353	4566	90.359	769
Config parameters	RISC-V Extensions: IM, Multiplier: MACC Pipelined , AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32IM_FABRIC_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1082	4592	5674	4738	97.447	1090
RTG4	RTG4150L FCG1657	1087	4591	5678	4754	82.163	1094
SmartFusion2	M2S150T FC1152	1077	4627	5704	4787	84.66	1120
IGLOO2	M2GL150 FC1152	1077	4627	5704	4787	84.66	1120
Config parameters	RISC-V Extensions: IM, Multiplier: Fabric , AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32IMC_MACC_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1046	4502	5548	4786	71.721	964
RTG4	RTG4150L FCG1657	1046	4749	5795	5029	71.393	1211
SmartFusion2	M2S150T FC1152	1050	4867	5917	5163	74.738	1333
IGLOO2	M2GL150 FC1152	1050	4867	5917	5163	74.738	1333
Config parameters	RISC-V Extensions: IMC, Multiplier: MACC , AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32IMC_MACC_PIPELINED_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1049	4549	5598	4826	97.078	1014
RTG4	RTG4150L FCG1657	1048	4705	5753	4986	85.499	1169
SmartFusion2	M2S150T FC1152	1048	4616	5664	4890	90.563	1080
IGLOO2	M2GL150 FC1152	1048	4616	5664	4890	90.563	1080
Config parameters	RISC-V Extensions: IMC, Multiplier: MACC Pipelined , AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32IMC_FABRIC_APB

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1083	4941	6024	5083	101.657	1440
RTG4	RTG4150L FCG1657	1082	5096	6178	5223	88.253	1594
SmartFusion2	M2S150T FC1152	1078	5065	6143	5209	93.171	1559
IGLOO2	M2GL150 FC1152	1078	5065	6143	5209	93.171	1559
Config parameters	RISC-V Extensions: IMC, Multiplier: Fabric , AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

Interrupts Resource Utilization and Performance

RV32I_APB_6_EXT_IRQ

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	918	3613	4531	3742	99.177	-53
RTG4	RTG4150L FCG1657	919	3703	4622	3847	87.154	38
SmartFusion2	M2S150T FC1152	918	3784	4702	3916	88.082	118
IGLOO2	M2GL150 FC1152	918	3784	4702	3916	88.082	118
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 6, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_VEC_IRQ

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	882	3492	4374	3627	104.657	-210
RTG4	RTG4150L FCG1657	878	3613	4491	3751	88.09	-93
SmartFusion2	M2S150T FC1152	881	3626	4507	3778	93.093	-77
IGLOO2	M2GL150 FC1152	881	3626	4507	3778	93.093	-77
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: Y, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_VEC_6_EXT_IRQ

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	884	3614	4498	3733	112.259	-86
RTG4	RTG4150L FCG1657	888	3738	4626	3890	85.041	42
SmartFusion2	M2S150T FC1152	885	3727	4612	3846	89.92	28
IGLOO2	M2GL150 FC1152	885	3727	4612	3846	89.92	28
Config parameters	RISC-V Extensions: I , Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB , APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 6 , MTVEC Offset: 0x34, Vectored Interrupts: Y , TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

TCM Resource Utilization and Performance

RV32I_APB_TCM

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	984	3899	4883	4105	109.206	299
RTG4	RTG4150L FCG1657	984	3829	4813	4017	89.815	229
SmartFusion2	M2S150T FC1152	982	3852	4834	4059	89.654	250
IGLOO2	M2GL150 FC1152	982	3852	4834	4059	89.654	250
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: Y , TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_TCM_DAP

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	988	4001	4989	4185	107.701	405
RTG4	RTG4150L FCG1657	988	3937	4925	4138	84.488	341
SmartFusion2	M2S150T FC1152	989	3994	4983	4211	89.847	399
IGLOO2	M2GL150 FC1152	989	3994	4983	4211	89.847	399
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: Y , TCM Direct Access Port: Y , Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

MTIME Resource Utilization and Performance

RV32I_APB_MTIME

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1011	4106	5117	4226	110.951	533
RTG4	RTG4150L FCG1657	1007	4053	5060	4169	88.253	476
SmartFusion2	M2S150T FC1152	1007	4054	5061	4171	99.098	477
IGLOO2	M2GL150 FC1152	1007	4054	5061	4171	99.098	477
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: Y, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_MTIMEIRQ

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	977	3899	4876	4028	109.782	292
RTG4	RTG4150L FCG1657	975	3819	4794	3942	89.726	210
SmartFusion2	M2S150T FC1152	976	3880	4856	4003	93.257	272
IGLOO2	M2GL150 FC1152	976	3880	4856	4003	93.257	272
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: Y, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

RV32I_APB_MTIME_MTIMEIRQ

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1076	4172	5248	4289	108.921	664
RTG4	RTG4150L FCG1657	1073	4117	5190	4239	89.936	606
SmartFusion2	M2S150T FC1152	1074	4076	5150	4194	99.147	566
IGLOO2	M2GL150 FC1152	1074	4076	5150	4194	99.147	566
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: Y, Internal MTIME IRQ: Y, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: n						

Debug Resource Utilization and Performance

RV32I_APB_DEBUG

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1478	5354	6832	5477	104.091	2248
RTG4	RTG4150L FCG1657	1478	5224	6702	5376	88.7	2118
SmartFusion2	M2S150T FC1152	1476	5257	6733	5387	95.102	2149
IGLOO2	M2GL150 FC1152	1476	5257	6733	5387	95.102	2149
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: Y, Register Forwarding: n, ECC: n, GPR Registers: n						

Registers Resource Utilization and Performance

RV32I_APB_FWD_REGS

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	928	3861	4789	4006	85.361	205
RTG4	RTG4150L FCG1657	923	3835	4758	3975	75.438	174
SmartFusion2	M2S150T FC1152	925	4053	4978	4176	77.184	394
IGLOO2	M2GL150 FC1152	925	4053	4978	4176	77.184	394
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: Y , ECC: n, GPR Registers: n						

RV32I_APB_GPR_REGS

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	1902	5084	6986	5473	95.905	2402
RTG4	RTG4150L FCG1657	1899	5125	7024	5492	88.472	2440
SmartFusion2	M2S150T FC1152	1912	5043	6955	5419	88.511	2371
IGLOO2	M2GL150 FC1152	1912	5043	6955	5419	88.511	2371
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: n, GPR Registers: Y						

ECC Resource Utilization and Performance

RV32I_APB_ECC

Family	Part	Synthesis			P&R LEs*	Performance MHz	Total increase from RV32I APB
		DFF	4LUT	Total			
PolarFire	MPF500T-1 FCG1152E	924	3924	4848	4082	91.424	264
RTG4	RTG4150L FCG1657	922	4026	4948	4200	77.9	364
SmartFusion2	M2S150T FC1152	922	4071	4993	4248	87.214	409
IGLOO2	M2GL150 FC1152	922	4071	4993	4248	87.214	409
Config parameters	RISC-V Extensions: I, Multiplier: n/a, AHB Master: n/a, Mirrored I/F: n, APB Master: APB, APB Mirrored I/F: n, AXI Master: n/a, AXI Mirrored I/F: n, Reset Vector Address Upper 16bits: 0x8000, Reset Vector Address Lower 16bits: 0x0, External IRQs: 0, MTVEC Offset: 0x34, Vectored Interrupts: n, TCM: n, TCM Direct Access Port: n, Internal MTIME: n, Internal MTIME IRQ: n, Debug: n, Register Forwarding: n, ECC: Y , GPR Registers: n						

Coremark Performance

Coremark /MHz	Config					
	RV32	Multiplier	Reg Fwd	Reg GPRs	ECC	Memory
0.533	I	n/a	0	0	0	TCM
1.567	IM	MACC	0	0	0	TCM
1.567	IM	MACC Pipe	0	0	0	TCM
1.067	IM	Fabric	0	0	0	TCM
0.533	IC	n/a	0	0	0	TCM
1.567	IMC	MACC	0	0	0	TCM
1.500	IMC	MACC Pipe	0	0	0	TCM
1.033	IMC	Fabric	0	0	0	TCM
0.533	I	n/a	0	0	1	TCM
0.533	I	n/a	1	0	0	TCM
0.967	I	n/a	0	1	0	TCM
1.067	I	n/a	1	1	0	TCM
1.567	IMC	MACC	1	0	0	TCM
2.533	IMC	MACC	0	1	0	TCM
2.767	IMC	MACC	1	1	0	TCM
0.167	I	n/a	0	0	0	AHB
0.433	IM	MACC	0	0	0	AHB
0.200	IC	n/a	0	0	0	AHB
0.467	IMC	MACC	0	0	0	AHB
0.167	I	n/a	1	0	0	AHB
0.200	I	n/a	0	1	0	AHB
0.200	I	n/a	1	1	0	AHB
0.133	I	n/a	0	0	0	AXI
0.400	IM	MACC	0	0	0	AXI
0.167	IC	n/a	0	0	0	AXI
0.400	IMC	MACC	0	0	0	AXI
0.133	I	n/a	1	0	0	AXI
0.167	I	n/a	0	1	0	AXI
0.167	I	n/a	1	1	0	AXI