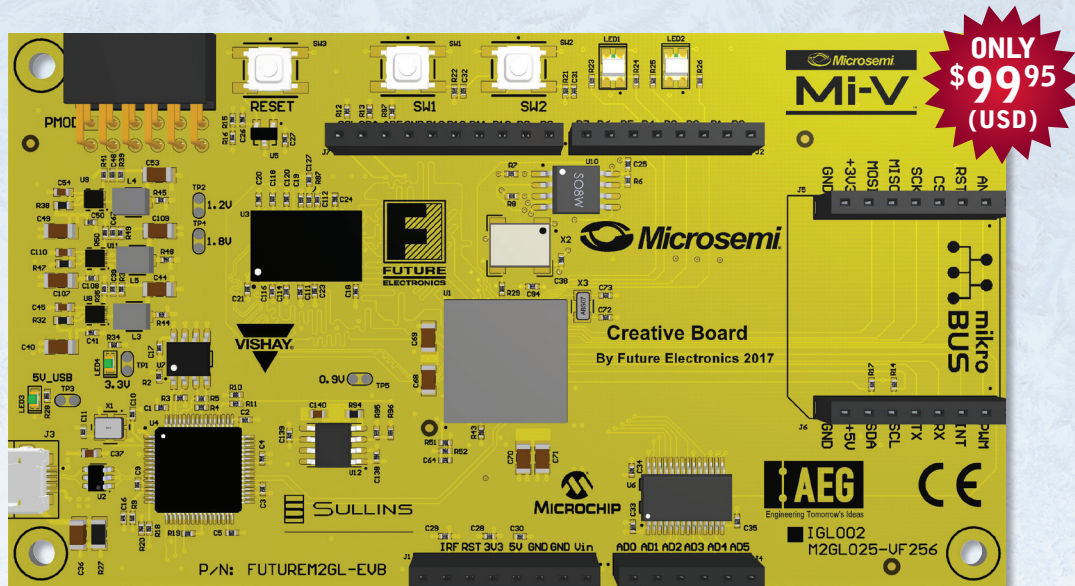


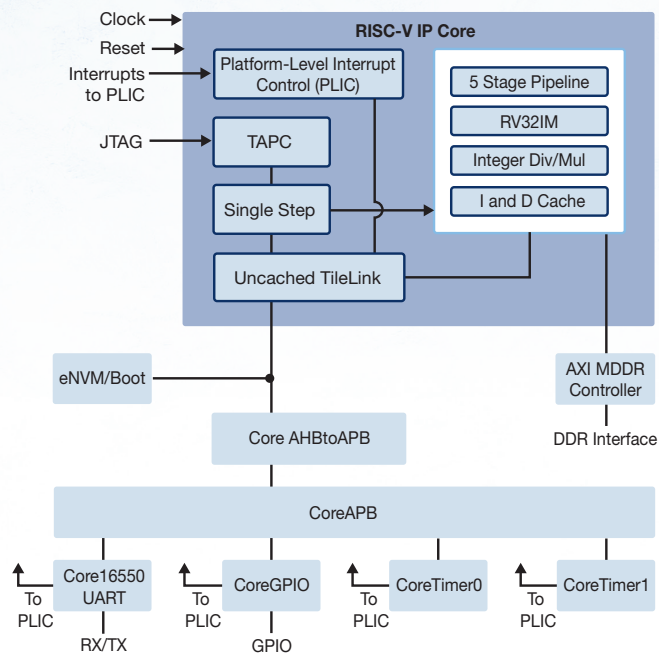
# Future Electronics - Microsemi RISC-V Creative Board



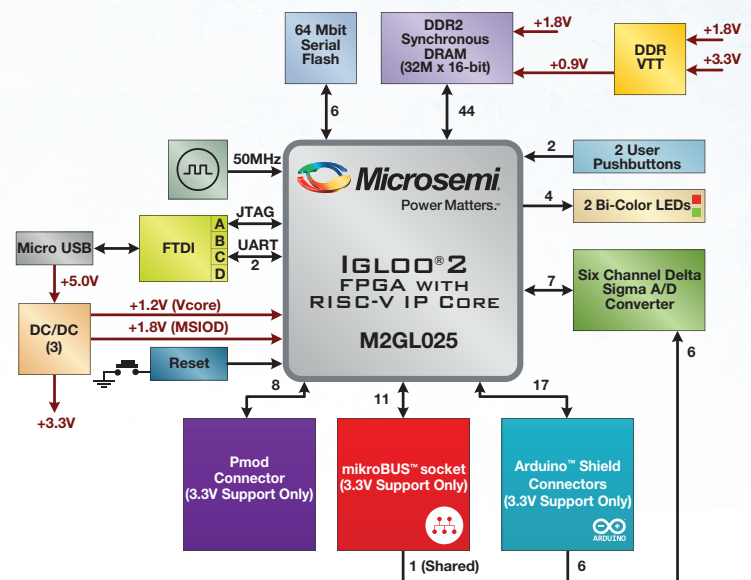
A 32 bit RISC-V processor is pre-programmed into the IGLOO2 on the RISC-V Creative Board. The complete Microsemi RISC-V solution is available on GitHub, [github.com/RISCV-on-Microsemi-FPGA](https://github.com/RISCV-on-Microsemi-FPGA) and contains the following:

- The recently introduced RISC-V IP core
- Libero development software to customize the RISC-V IP and your design
- HDL & C code reference design which runs a hello world demo on the Creative Board
- SoftConsole 5.1 IDE for Linux – and Windows compiler and debugger for Microsemi’s RISC-V IP core
- Utilize the Microsemi IGLOO2 FPGA 25k LE device to develop your design

## Microsemi® IGLOO®2 FPGA



## Creative Board Block Diagram



## Product Offering

		IGL002	M2GL005	M2GL010	M2GL025	M2GL050	M2GL060	M2GL090	M2GL150	
		SmartFusion2	M2S005	M2S010	M2S025	M2S050	M2S060	M2S090	M2S150	
Common between IGL002 and SmartFusion2	Logic/DSP	Logic Elements (4LUT+DFF)	6,060	12,084	27,696	56,340	56,520	86,316	146,124	
		Math Blocks (18 x 18)	11	22	34	72	72	84	240	
		PLLs and CCCs	2	2	6	6	6	6	8	
	FPGA Memory Blocks	LSRAM 18k bit Blocks	10	21	31	69	69	109	236	
		uSRAM 1k bit Blocks	11	22	34	72	72	112	240	
		Total k bits	191	400	592	1314	1314	2074	4488	
	Memory Sub System	eNVM (K Bytes)	128	256					512	
		eSRAM (K Bytes)	64							
SmartFusion2 Only	Microcontroller Sub System	ARM Cortex M3	Yes							
		10/100/1000 Ethernet, HS USB, CAN, RTC	1 each							
		UART, SPI, I²C, Timer	2 each							
Common between IGL002 and SmartFusion2	Security	Hard Security Blocks	AES256, SHA256, RNG				AES256, SHA256, RNG, ECC, PUF			
	High Speed Interfaces	DDR2/3 Controllers (Count x Width)	1 x 18			2 x 36	1 x 18		2 x 36	
		SERDES Lanes	0	4		8	4		16	
		PCIe Gen2 End Points	0	1	1	2	2	2	4	
	Max User I/Os	MSIO (3.3v)	115	123	157	139	271	309	292	
		MSIOD (2.5v)	28	40	40	62	40	40	106	
		DDRIO (2.5v)	66	70	70	176	76	76	176	
		Total I/O	209	233	267	377	387	425	574	
Temperature Grades	Commercial C, Industrial I, Military M, Automotive T2	C, I, T2	C, I, M, T2						C, I M	
IGL002 Only	Automotive T1	T1 (up to 135°C Tj)	T1	T1	T1	T1	T1	T1		

## Creative Board Features

- Microsemi IGL002 (M2GL025) FPGA
- Microsemi LX7167 step-down converter
- 32M x 16-bit DDR2 synchronous DRAM (SDRAM)

- 64Mb serial flash
- Six channel synchronous sampling 16/24-bit resolution Delta-Sigma A/D converters
- Embedded FlashPro 5
- Arduino™ compatible

- expansion headers
- MikroBUS™ compatible expansion headers
- PMod™ compatible expansion connector
- User buttons and LED

