

Feature	MitySOM-A5E (23A)	MitySOM-A5E (23B)	MitySOM-AM62A	MitySOM-AM62	MitySOM-C10G	MitySOM-C10L	MitySOM-AM57(F) ⁷	MityDSP-L138F-A7 ⁷	MitySOM-A10S	MitySOM-SC5X	MitySOM-335x	MityDSP-L138(F) ⁷	
DSP Processor	None	None	None	None	None	None	Up to 2 C66x	C674x	None	None	None	C674x	
Max Speed	---	---	---	---	---	---	750 MHz	456 MHz	---	---	---	456 MHz	
L1 Program Cache	---	---	---	---	---	---	32 KB (per core)	32 KB	---	---	---	32 KB	
L1 Data Cache	---	---	---	---	---	---	32 KB (per core)	32 KB	---	---	---	32 KB	
Internal RAM	---	---	---	---	---	---	288 KB	256 KB	---	---	---	256 KB	
ARM Processor	Cortex-A76 & Cortex-A55	Cortex-A76 & Cortex-A55	Cortex-A53	Cortex-A53	NIOS II Software	NIOS II Software	Cortex-A15	ARM926EJ-S	Cortex-A9	Cortex-A9	Cortex-A8	ARM926EJ-S	
Cores	Dual / Dual	Dual / Dual	Quad	Quad	N/A	N/A	Dual	Single	Dual	Single/Dual	Single	Single	
Max Speed	1400 / 1250 MHz	1400 / 1250 MHz	1400 MHz	1400 MHz	---	---	1500 MHz	456 MHz	1500 MHz	925 MHz	1000 MHz	456 MHz	
L1 Program Cache	64 KB / 32 KB	64 KB / 32 KB	32 KB	32 KB	---	---	32 KB (per core)	16 KB	32 KB (per core)	32 KB (per core)	32 KB	16 KB	
L1 Data Cache	64 KB / 32 KB	64 KB / 32 KB	32 KB	32 KB	---	---	32 KB (per core)	16 KB	32 KB (per core)	32 KB (per core)	32 KB	16 KB	
L2 Cache	256 KB / 126 KB	256 KB / 126 KB	512 KB	512 KB	---	---	2 MB (shared)	256 KB	512 KB (shared)	512 KB (shared)	256 KB	256 KB	
Internal RAM	2 MB	2 MB	---	---	---	---	2.5 MB	8 KB	256 KB	64 KB	64 KB	8 KB	
FPGA	Agilex 5	Agilex 5	None	None	Cyclone 10 GX	Cyclone 10 LP	Artix-7 XC7A50T or XC7A15T	Artix-7 XC7A50T or XC7A15T	Arria 10SX	Cyclone V SoC	None	XC6SLX45 or XC6SLX16 (optional) ⁴	
Slices	up to 656 KLE	up to 282 KLE	---	---	up to 220,000 LE	up to 81,264 LE	up to 52,160 LE	up to 52,160 LE	up to 480,000 LE	up to 110,000 LE	---	up to 6,822	
Logic Cells	up to 889,600 ALM	up to 383,720 ALM	---	---	up to 80,330 ALM	---	up to 8150 ALM	up to 8150 ALM	up to 183,590 ALM	up to 41,509 ALM	---	up to 43,661	
Block RAM	up to 31.46 Mb	up to 14 Mb	---	---	up to 1.69Mb MLAB	up to 2,745Kb	up to 2.7Mb MLAB	up to 2.7Mb MLAB	up to 4.2Mb MLAB	up to 621Kb MLABs	---	up to 2,088 Kb	
Memory													
Max CPU RAM	8 GB LPDDR4	8 GB LPDDR4	16 GB LPDDR4	4 GB DDR4	1GB DDR3L	32MB HyperRAM	4 GB DDR3	256 MB DDR2	6 GB DDR4	4 GB DDR3	1 GB	256 MB	
CPU RAM Throughput	10.6 GB / sec	10.6 GB / sec	14.9 GB/sec	3.2 GB/sec	7.45 GB/sec	200 MB/sec	up to 5.3 GB/sec	600 MB/sec	8.5 GB/sec	TBD	800 MB/sec	532 MB/sec	
Max NOR FLASH	N/A	N/A	256 MB	256 MB	32 MB	32 MB	32 MB	16 MB	---	48 MB	8 M	8 M	
Max NAND FLASH	N/A	N/A	128 GB	128 GB	---	---	N/A	512 MB	8 GB	---	1 GB	512 MB	
Max FPGA RAM	N/A	N/A	---	---	---	---	N/A	N/A	2 GB	512 MB	---	N/A	
FPGA RAM Throughput	N/A	N/A	---	---	---	---	N/A	N/A	4.26 GB/sec	TBD	---	N/A	
Interface	Dual Samtec Board to Board	Dual Samtec Board to Board	SO-DIMM DDR4	SO-DIMM DDR4			SO-DIMM DDR4		SO-DIMM-200		MXM 3.0 Type	SO-DIMM-204	SO-DIMM-200
Required Voltage	TBD (5V or 3.3)	TBD (5V or 3.3)	3.3V	3.3V	5V	5V	5V	3.3V	5V or 12V	5V	3.3V - 5V	3.3V	
Avail FPGA I/O	up to 136	up to 230	---	---	up to 192	up to 192	up to 96	96	up to 168	up to 137	---	88	
Peripherals													
Ethernet MAC	2x 10/100/1000	2x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000	N/A	N/A	2 x PRU 10/100, 2 x 10/100/1000	10/100	3 x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000	10/100	
McBSP Ports			N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	2	
LCD			1	2	N/A	N/A	1	1	N/A	N/A	1	1	
VPIF			N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	1	
MMC/SD	1	1	2	2	N/A	N/A	3	1	1	1	3	1	
SATA			N/A	N/A	N/A	N/A	1	1	N/A	N/A	N/A	1	
I2C	5	5	3	3	N/A	N/A	3	2 ⁶	5	4	2	2 ⁶	
SPI	2	2	3	3	N/A	N/A	3	2 ⁶	2 Master/2 Slave	2	2	2 ⁶	
USB	2 x 2.0; 1 x 3.0 Gen1 or Gen2	2 x 2.0	2	2	N/A	N/A	1 x 2.0; 1 x 3.0	2	1	2	2	2	
UARTS	2	2	7	7	N/A	N/A	10	3 ⁶	2	2	6	3 ⁶	
CAN	N/A	N/A	3	3	N/A	N/A	2	3	N/A	2	2	N/A	
PCIe	x8 Gen 3	N/A	N/A	N/A	PCIe x 4	N/A	N/A	N/A	PCIe x 8	PCIe x4	N/A	N/A	
MIPI	2 x4 CSI or DSI	8 x4 CSI or DSI	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Transceivers	12 x 17 Gbps	N/A	N/A	N/A	12 x 12.5 Gbps	N/A	2	N/A	12 x 11.3 Gbps	6 x 3.125 Gbps	N/A	N/A	
Availability	Production 2025	Production 2025	Production 2024	In Production	Production 2024	Production 2024	In Production	In Production	In Production	In Production	In Production	In Production	
Introduction Date	2024	2024	2023	2022	2023	2022	2020	2022	2018	2013	2012	2010	

Notes:

1. FPGA and CPU share RAM via DSP EMIF, 100 MHz clock rate maximum.
2. LCD interface core is available for the FPGA to drive local and remote LCD display.
3. Soft FPGA MAC cores are available for 10/100 Mbit Ethernet Phy Control.
4. Spartan-6 features a 6 input LUT allowing for significantly more logic in the same number of slices when compared to a Spartan-3.
5. TMS6455 Option Including 8 Rocket I/O ports is available upon request.
6. The listed peripheral interfaces are available from the DSP/ARM. Additional interfaces can be created in modules with FPGA's.
7. These modules are available with or without the FPGA.

