

Feature	MitySOM-A10S	MitySOM-5CSX	MitySOM-iMX6	MitySOM-335x	MityDSP-L138(F) <sup>7</sup> LX16	MityDSP-L138(F) <sup>7</sup> LX45	MityDSP-6455F 4000	MityDSP-6455F 2000	MityDSP-6711F-XM	MityDSP-6711F
<b>DSP Processor</b>	None	None	None	None	C674x	C674x	C6454 / 55 <sup>5</sup>	C6454 / 55 <sup>5</sup>	C6711	C6711
Max Speed	---	---	---	---	456 MHz	456 MHz	1200 MHz	1200 MHz	200 MHz	200 MHz
L1 Program Cache	---	---	---	---	32 KB	32 KB	32 KB	32 KB	4 KB	4 KB
L1 Data Cache	---	---	---	---	32 KB	32 KB	32 KB	32 KB	4 KB	4 KB
Internal RAM	---	---	---	---	256 KB	256 KB	2048 KB	2048 KB	64 KB	64 KB
<b>ARM Processor</b>	Cortex-A9	Cortex-A9	Cortex-A9	Cortex-A8	ARM926EJ-S	ARM926EJ-S	None	None	None	None
<b>Cores</b>	Dual	Single/Dual	Single/Dual/ Quad	Single	Single	Single	---	---	---	---
Max Speed	1500 MHz	925 MHz	1200 MHz	1000 MHz	456 MHz	456 MHz	---	---	---	---
L1 Program Cache	32 KB (per core)	32 KB (per core)	32 KB (per core)	32 KB	16 KB	16 KB	---	---	---	---
L1 Data Cache	32 KB (per core)	32 KB (per core)	32 KB (per core)	32 KB	16 KB	16 KB	---	---	---	---
L2 Cache	512 KB (shared)	512 KB (shared)	1 MB	256 KB	256 KB	256 KB	---	---	---	---
Internal RAM	256 KB	64 KB	---	64 KB	8 KB	8 KB	---	---	---	---
<b>FPGA</b>	10AS	5CSXC6	None	None	XC6SLX16 <sup>4</sup> (optional)	XC6SLX45 <sup>4</sup> (optional)	X3CS4000	X3CS2000	XC3S1000	XC3S4000
Slices	up to 480,000 LE	up to 110,000 LE	---	---	2,278	6,822	27,648	20,480	7,680	3,584
Logic Cells	up to 183,590 ALM	up to 41,509 ALM	---	---	14,579	43,661	62,208	46,080	17,280	8,064
Block RAM	up to 4.2Mb MLAB	up to 621Kb MLABs	---	---	576 Kb	2,088 Kb	1,728 Kb	720 Kb	432 Kb	288 Kb
<b>Memory</b>										
Max CPU RAM	6 GB DDR4	4 GB DDR3	4 GB	1 GB	256 MB	256 MB	128 MB	128 MB	32 MB	8 MB
CPU RAM Throughput	8.5 GB/sec	TBD	---	800 MB/sec	532 MB/sec	532 MB/sec	2000 MB/sec	2000 MB/sec	400 MB/sec	400 MB/sec
Max NOR FLASH	---	48 MB	512KB	8 M	8 M	8 M	16 M	16 M	16 M	2 M
Max NAND FLASH	8 GB	---	8 GB	1 GB	512 MB	512 MB	None	None	None	None
Max FPGA RAM	2 GB	512 MB	---	---	N/A	N/A	64 M	64 M	32 M <sup>1</sup>	8 M <sup>1</sup>
FPGA RAM Throughput	4.26 GB/sec	TBD	---	---	N/A	N/A	400 MB/sec	400 MB/sec	400 MB/sec	400 MB/sec
<b>Interface</b>		<b>MXM 3.0 Type</b>	<b>SMARC</b>	<b>SO-DIMM-204</b>	<b>SO-DIMM-200</b>	<b>SO-DIMM-200</b>	<b>SO-DIMM-200</b>	<b>SO-DIMM-200</b>	<b>SO-DIMM-144</b>	<b>SO-DIMM-144</b>
Required Voltages	5 or 12	5	5	3.3 - 5	3.3	3.3	3.3	3.3	3.3, 2.5, 1.23	3.3, 2.5, 1.23
Avail FPGA I/O	up to 168	up to 137	---	---	96	88	140	140	100	100
<b>Peripherals</b>										
Ethernet MAC	3 x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000	10/100	10/100	10/100/1000	10/100/1000	0 <sup>3</sup>	0 <sup>3</sup>
McBSP Ports	N/A	N/A	N/A	N/A	2	2	2	2	2	2
LCD	N/A	N/A	N/A	1	1	1	N/A	N/A	0 <sup>2</sup>	0 <sup>2</sup>
VPIF	N/A	N/A	N/A	N/A	1	1	N/A	N/A	N/A	N/A
MMC/SD	1	1	1	3	1	1	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>
SATA	N/A	N/A	1	N/A	1	1	N/A	N/A	N/A	N/A
I2C	5	4	4	2	2 <sup>6</sup>	2 <sup>6</sup>	1 <sup>6</sup>	1 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>
SPI	2 Master/2 Slave	2	2	2	2 <sup>6</sup>	2 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>
USB	1	2	1	2	2	2	0 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>
UARTS	2	2	3	6	3 <sup>6</sup>	3 <sup>6</sup>	1 <sup>6</sup>	1 <sup>6</sup>	1 <sup>6</sup>	1 <sup>6</sup>
CAN	N/A	2	2	2	N/A	N/A	N/A	N/A	N/A	N/A
PCIe	PCIe x 8	PCIe x4	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Transceivers	12 x 8 Gbps	6 x 3.125 Gbps	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Availability</b>	<b>Q4 2018</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>	<b>In Production</b>
<b>Introduction Date</b>	<b>2018</b>	<b>2013</b>	<b>2016</b>	<b>2012</b>	<b>2010</b>	<b>2010</b>	<b>2006</b>	<b>2006</b>	<b>2004</b>	<b>2004</b>

**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.

