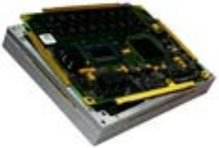




Computer-On-Modules (COMs)






PCI Express based: Rugged COM Express

	Type	CPU	Memory max.	Interfaces	Cooling Concept	Dimensions	Software
CB70C 	Rugged COM Express (VITA 59)	Intel Core i7, up to i7-3612QE, 2.1 GHz (64-bit CPU)	16 GB DDR3 DRAM	1 LVDS, 3 DDI, 1 VGA, HD Audio, 2 SATA 3 Gb/s, 2 SATA 6 Gb/s, 4 USB 3.0, 4 USB 2.0, 1 Gb Ethernet, 7 PCIe x1 (2.x), GPIO, LPC, SPI	Conduction cooled according to VITA 59 Air cooled versions according to PICMG COM.0	135 mm x 105 mm (Basic format)	Windows, Linux
CB30C 	Rugged COM Express (VITA 59)	Freescall QorIQ P1022/P1013, up to 1.2 GHz	2 GB DDR3 DRAM	2 SATA 3 Gb/s, SDIO, 3/4 USB 2.0, 2/3 Gb Ethernet, 2/3 PCIe x1 (1.0a), 2/4 UARTs, GPIO, I2C, SPI; optional: DVI, LVDS, processor local bus	Conduction cooled according to VITA 59 Air cooled versions according to PICMG COM.0	135 mm x 105 mm (Basic format)	Linux, VxWorks
CC10C 	Rugged COM Express (VITA 59)	Freescall ARM Cortex-A9 i.MX 6 series i.MX6S, i.MX6DL, i.MX6D or i.MX6Q, 800 MHz or 1.0 GHz	4 GB DDR3 SDRAM, eMMC card	1 Gb Ethernet, 1 Fast Ethernet, 6 USB 2.0, LVDS, DVI, AC'97 audio, 1 SATA 3 Gb/s, 1 PCIe x1 (1.1), UARTs, PWM, I2C, SPI, further I/O in FPGA (140 pins available) or driven by i.MX 6	Conduction cooled according to VITA 59 Air cooled versions according to PICMG COM.0	105 mm x 105 mm (Compact format)	Linux, VxWorks

Computer-On-Modules (COMs)





PCI Express based: ESMexpress

	Type	CPU	Memory max.	Interfaces	Cooling Concept	Dimensions	Software
XM1L 	ESMexpress	Intel Atom Z510P/ Z530P/ Z510PT/ Z520PT up to 1.6 GHz	2 GB DDR2 SDRAM	1 Gb Ethernet, 1 SATA 1.5 Gb/s, 8 USB 2.0, SDVO, LVDS, HD Audio, PCIe x1 link to carrier	Conduction cooled	95 mm x 125 mm	Windows, Linux, VxWorks, QNX
XM50 	ESMexpress	PowerPC MPC8548 / 1.33 GHz down to MPC8543 / 800 MHz	2 GB DDR2 SDRAM (ECC), 2 MB SRAM, 128 KB FRAM	3 Gb Ethernet, 3 SATA 1.5 Gb/s, 6 USB 2.0 + 1 USB client, PCIe x8 link to carrier	Conduction cooled	95 mm x 125 mm	Linux, VxWorks, QNX, Integrity
XM51 	ESMexpress	PowerPC eight-core P4080, quad-core P4040 or quad-core P3041 / 1.2 to 1.5 GHz	Up to 16 GB DDR3 SDRAM (ECC), 128 KB FRAM, 256 MB Flash	2 Gb Ethernet, 2 SATA 3 Gb/s, 4 USB 2.0 + 1 USB client, 2 PCIe x1 links to carrier	Conduction cooled	95 mm x 125 mm	VxWorks (Linux on request)


Computer-On-Modules (COMs)



PCI Express based: ESMini

	Type	CPU	Memory max.	Interfaces	Cooling Concept	Dimensions	Software
	ESMini	Intel Atom E600, up to 1.6 GHz	2 GB DDR2 SDRAM	Up to 2 Gb Ethernet, 2 SATA, 7 USB 2.0, 4 UARTs, 1 CAN bus, SDVO, LVDS, HD audio, 2 PCIe x1 links to carrier	Conduction cooled	95 mm x 55 mm	Windows, Linux, VxWorks, QNX
	ESMini	PowerPC MPC5121e or MPC5123, up to 400 MHz	512 MB DDR2 SDRAM	1 Fast Ethernet, 6 USB 2.0 (1 USB client), 1 SDHC, 2 UARTs, up to 4 CAN bus, AC'97 audio, display interface or programmable serial interfaces, up to 8 GPIO lines, 1 SATA prepared	Screened for -40°C to +85°C operating temp. without frame. Conduction cooling possible with frame.	95 mm x 55 mm	Linux, VxWorks

PCI based: ESM

	Type	CPU	Memory max.	Interfaces	Cooling Concept	Dimensions	Software
	ESM Onboard I/O	PowerPC MPC8548 / 1.33 GHz down to MPC8543 / 800 MHz	2 GB DDR2 SDRAM, 1 GB NAND Flash, 128 KB FRAM	3 Gb Ethernet, 2 COMs, further I/O in FPGA (81 pins available)	Tailored heat sink	149 mm x 71 mm	Linux, VxWorks, QNX, INTEGRITY (on request)