

Vergleich unterschiedlicher Computer-On-Module Standards

C. Eder, 22. Juli 2009

	COM Express Type2	ETX Rev. 2.x	ETX Rev. 3.x	XTX	ESMexpress	Qseven	nanoETXexpress	ESMini	CoreExpress
ISA	-	y		-	-	-	-	-	-
LPC	y	-		y	-	y	y	y	y
32 Bit PCI	y	-		y	-	-	-	-	-
PCIe	6 lanes + PEG	-		4 lanes	4 lanes + PEG	4 lanes	6 lanes	2 lanes	5 lanes
PEG	y, shared with SDVO	-		-	y, shared with SDVO	-	-	-	-
USB2.0	8	4		6	8	8	8	8	8
LAN	10/100/1000 MBit	10/100 MBit		10/100 MBit	3x 10/100/1000 MBit	10/100/1000 MBit	10/100/1000 MBit	2x 10/100 MBit	1000 MBit
PATA	1	2		2	-	-	-	-	-
SATA	4	-	2	4	3	2	4	1	4
SDIO	-	-		-	-	8 bit	4 bit, shared with GPIO	8 bit	8 bit
SDVO	y, shared with PEG	-		-	y, shared with PEG	y, shared	y, feature connector	y	y
LVDS	y	y		y	y	y	y	y	y
DisplayPort	-	-		-	y, shared	y, shared	-	-	-
HDMI	-	-		-	y, shared	y, shared	-	-	-
HDA	y	-		y	y	y	y	y	y
Legacy I/O	-	y		y	-	-	-	-	-
PS/2 (kb/mouse)	-	y		y	-	-	-	-	-
SMBus / I ² C	y	y		y	y	y	y	y	y
Software API	-	-		-	-	y	-	-	y (LEMT)
GPIO	4in/4out	-		-	1 I/O	-	4in/4out, shared with SDIO	up to 117, (via FPGA)	-
Max. Power Consumption	<188W	<40W		<40W	<40W	<12W	<100W	<15W	<10W
Supply Voltage	12V	5V		5V	9..16V	5V	5...14V	5V	5V
Connector	2x220 Pin	4x100 Pin		4x100 Pin	2x120 Pin	direct 230 Pin	1x220 Pin	2x120 Pin	1x 220 Pin
Size	95x125mm Basic 110x155mm Extended	95x114mm		95x114mm	95x125mm	70x70mm	55x84mm	95x55mm	58x65mm
Special Features					conductive cooling			FPGA, UART, CAN, conductive cooling	CAN
max. I/O Bandwidth over all (w/o Panel & Sound Signals)	12,4 GByte/s	0,6 GByte/s	0,9 GByte/s	3,3 GByte/s	11,3 GByte/s	3,0 GByte/s	4,2 GByte/s	1,7 GByte/s	3,8 GByte/s
Specification Body	PICMG	Industry Group		Industry Group	Industry Group VITA proposal	Industry Group	Industry Group	Industry Group	Industry Group
Active Members	>20	>20		>10	2	>20	5	1	2
Specification	www.picmg.org	www.etx-ig.com		www.xtx-standard.org	www.vita.com	www.Qseven-standard.org	www.nanoetxexpress.com	not public	www.coreexpress.com