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|  | **CaLinx2+** | **XUPv5 110LXT** | **DE2-70 (with TRDB-LTM, TRDB-D5M)** | **DE3**  **(with MTDB, THDB-ADA)** |
| ***FPGA*** | Xilinx™ VirtexE XCV2000E | Xilinx™ Virtex5 XCC5VLX110T | Altera™ Cyclone II EP2C70 | Altera™ Stratix III EP3SL150 (340) |
| ***LUTs/LEs*** | 43K (4LUTs) | 70K (6LUTs) | 68K LEs (4LUTs) | 57K (135K) (8LUTs) |
| ***RAM*** | 655Kb (Block)  614Kb (Distributed) | 6.448 Mb (Block & Distributed) | 1Mb | 5Mb (16Mb) |
| ***Working Freq.*** | 27Mhz | 500Mhz (Tested and Proven) | 250Mhz (Untested, marketing claim) | 500Mhz (Untested, marketing claim) |
| ***On Board Clocks*** | 1 × 27MHz  1 × 25MHz | 1 × 100Mhz, 1 × 33MHz, 1 × 27Mhz,  1 × 200Mhz (differential) | 3 × 50MHz  1 × 28.63Mhz | 2 × 50MHz  1 × 24Mhz |
| ***Memory*** |  |  |  |  |
| ***DRAM*** | 2 × 256MB SDRAM | DDR2 SO-DIMM (256MB Included) | 2 × 32MB SDRAM | DDR2 SO-DIMM (2GB Included) |
| ***SRAM*** | None | 1MB (with pairty) | 2MB | None |
| ***Flash*** | None | 32MB (Linear for data)  32Mb (SPI for Configuration Files) | 8MB | None |
| ***Removable (Flash)*** | CompactFlash (SystemACE) | CompactFlash (SystemACE) | SD Card | 2 × SD Card |
| ***User Level I/O*** |  |  |  |  |
| ***Slide Switches*** | None | None | 18 | 4 |
| ***DIP Switches*** | 16 | 8 | None | 8 (Tiny) |
| ***Push Buttons*** | 8 | 5 + Dedicated Reset | 4 | 4 |
| ***Rotary Encoder*** | None | 1 | None | None |
| ***7-Segment Display*** | 8 | None | 8 | 2 |
| ***LEDs*** | 8 × Red | 15 × Green | 18 × Red; 9 × Green | 8 × RGB |
| ***LCD*** | 16 × 2 Character Matrix | 16 × 2 Character Matrix | 16 × 2 Character Matrix | None |
| ***LCD Screen*** | None | None | 4.3” LCD Touch Pane (800×480 Res) | 4.3” LCD Touch Panel (800×480 Res) |
| ***Camera*** | None | None | 1.3 Megapixel (Up to 15 fps) | None |
| ***Ethernet*** | 4 × 10/100 (PHY Interface) | 1 × 10/100/1000 (PHY Interface) | 1 × 10/100 (MAC Interface) | 1 × 10/100 (PHY Interface) |
| ***High-Speed Network*** | None | SMA, SATA, SFP | None | None |
| ***USB*** | 1 (PHY) | 1 × Host; 1 × Device  1 × Configuration (Platform-USB) | 1 × Host; 1 × Device  1 × Configuration (USB-Blaster) | 2/3 × Host; 1/0 × Device (Chosen by jumper)  1 × Configuration (USB-Blaster) |
| ***RS232*** | 2 | 1 | 1 | 1 |
| ***PS/2*** | 1 | 2 | 1 | 1 |
| ***ADC / DAC*** | 1 × ADC | None | None | 2 × High-Speed ADC  2 × High-Speed DAC |
| ***Video In*** | 1 × TV In (NTSC) | 1 × VGA In (10-bit) | 2 × TV In (NTSC) | 1 × TV In (NTSC) |
| ***Video Out*** | 1 × TV Out (NTSC)  1 × S-Video Out (NTSC) | 1 × DVI Out | 1 × VGA Out (10 bit) | 1 × VGA Out (10 bit) |
| ***Audio In*** | 1 × Mic  1 × Stereo | 1 × Mic  1 × Line In (Stereo) | 1 × Mic  1 × Line In (Stereo) | 1 × Mic  1 × Line In (Stereo) |
| ***Audio Out*** | 1 × Headphones  1 × Stereo | 1 × Headphones  1 × Line Out (Stereo) | 1 x Line Out (Stereo) | 1 x Line Out (Stereo) |
| ***GPIO*** | 120-pin | 1 × 32 single-ended  1 × 16 high-speed differential pair | 2 × 40-pin  GPIO-0: TRDB-D5M  GPIO-1: TRDB-LTM | 4 × 120-pin high-speed  A: 2 × 40-pin *OR* 1 × 120-pin high-speed  B: DDR2 SO-DIMM  C: MTDB (Touch Screen)  D: THDB-ADA (A2D & D2A Board) |
| ***Other I/O*** | ZigBee, 2 × N64 Controller | PCIe 1×, Audio Piezo Transducer, Xilinx XC95144XL CPLD, High-Speed Mictor Test Header, Agilent Soft-Touch, Pins/Temp for Fan | IrDA | Temp. Sensor |
| ***Synopsis*** | -Dated I/O; Slower FPGA  -Breaking down; No more being built | +Rugged/durable design (Plexiglas enclosure)  +Heat sink/Fan for FPGA  -Needs expansion (i.e. RGB LEDs, DIP switches, 7-seg. Display, and radio (Bluetooth and ZigBee))  -Needs NTSC capability | +Tested, proven durable design  -Older, low cost FPGA  -I/O downgrade from CaLinx2+  -Geared toward embedded design  -Other schools released solutions | -Graphic interface for generating top-level code; not custom board friendly  -No upgrade in I/O from the CaLinx2+  -Too new of a board  -Too soon to adopt  -Unsuitable for a student lab |