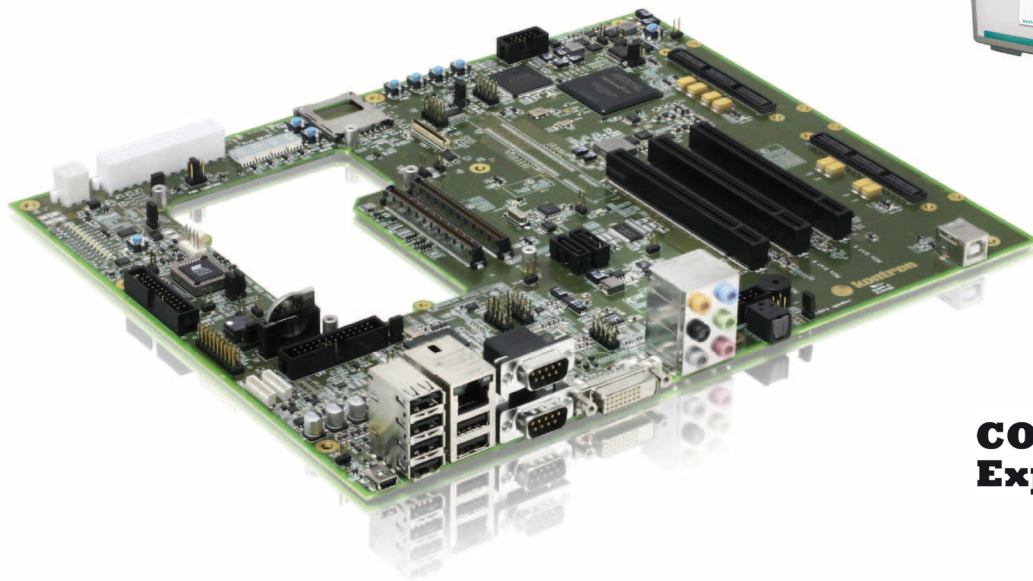


» COM Express® FPGA Starterkit «



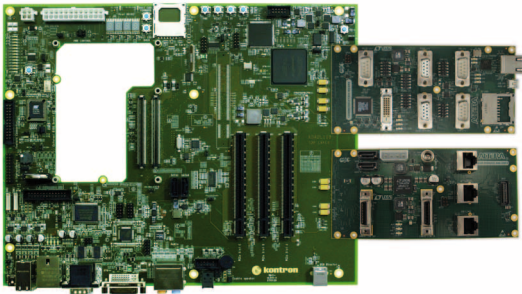
COM 
Express®

FPGA application ready Starterkit

- » COM Express® Evaluation Board for COM.0 Type 1/2 or Type 10
- » onBoard Altera® FPGA Cyclone IV GX incl. IP binary
- » HSMC card for Video/Mass storage and I/O
- » Choose your COM Express® module - Plug & Go

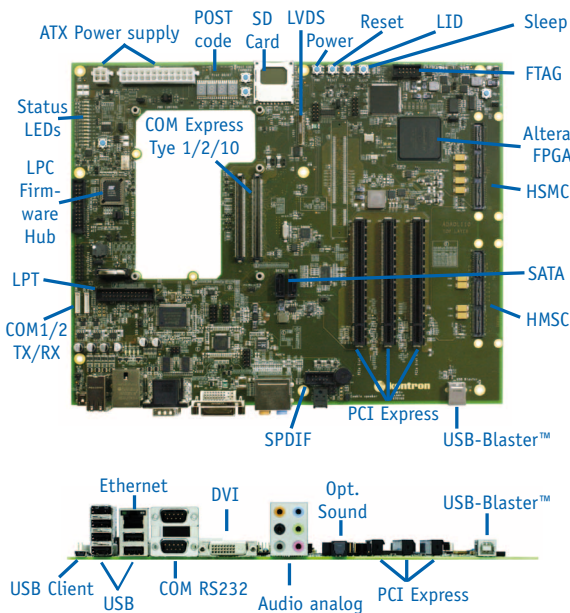
COM Express® FPGA Starterkit

Ready to use Starterkit with COM Express® FPGA Baseboard incl. Altera® Cyclone IV GX FPGA, 2 HSMC cards for automation, communication and video features, 12 V power supply and accessories.



COM Express® FPGA Baseboard

Jumper selectable flexible use for COM Express® Type 2/1 and Type 10 Computer-on-Modules. Pin out of COM Express® row A/B compliant to Type 10 and C/D (only necessary pins like SDVO, Power, Type ...) compliant to Type 2; It is pure reference for FPGA evaluation, so additional interfaces direct from COM Express® are reduced to minimal need.



Technical Information

Evaluation Baseboard	COM Express® FPGA Baseboard (305 mm x 243 mm)
Accessories	USB-Blaster™ cable, DSUB3 cable, mounting kit, ATX power supply, height adapter for Type 1/10 COM
Software	IP binary for Altera® HSMC cards on separate USB stick
Supported Modules	COM Express® pin-out Type 1/2 or Type 10 Computer-on-Modules like Kontron's ETXexpress®, microETXexpress®, nanoETXexpress COM's
FPGA Altera® Cyclone IV GX	
HSMC Communication Board	2x CAN; 2x RS232; 2x RS 485; DVI; SD Card socket Mini USB 2.0 ports Ethernet; GPIO x4
HSMC Mass storage and Video Board	2x SATA; ATA HD Power; General Purpose XCVR; Display Output for integrated National FPD2 Link (LVDS); General Display Output (LVDS); Camera Link Input; Camera Link Output; MOST Network Interface for SMSC OS881110 evaluation board; GPIO x 4

Technical Information

PCI Express	1 PCIe x1 Lane 0 connected to FPGA 3 PCIe x16 electrical by 1 Lane 1,2,3; (strap option) Lane 1,2,3 on FPGA only
Ethernet	10/100/1000 MBit LAN magnetic; RJ45 connector on front panel
Serial	2 Serial RS232 ports on DSUB9; additional w. Type 10 COM only: 2 Serial ports (TX/RX) to 10 pol mini connector
Parallel Port (LPT)	1 x LPT
SATA	2 x SATA up to 600Mb/s
USB/USB Client	6 x USB 2.0 ports on USB type A connectors; 1 x USB client on mini USB connector
Post Code	4 digit POST code (LPC)
Audio	Intel® High Definition Audio / AC 97 codec; Onboard HD Audio Codec Realtek ALC888; Analog 7.1 Audio, optical Toslink out and digital S/PDIF in & out
I²C / SM Bus external	1 x I²C and 1 x SM on feature connector
SPI	External boot via SPI flash device
SDIO/GPIO	8 x GPIO on pin header, switch for selecting SD Card or GPIO
SD Card	1 x SD Card socket
LVDS	LVDS (only single channel A) connected to a J1LL connector; strap option: connect LVDS channel A to FPGA only for graphic features
SDVO	1 x SDVO
BIOS	2 x BIOS socket (LPC/SPI) for external BIOS
Form Factor	ATX Baseboard size; 305 mm x 243 mm (12" x 9,6")
Temperature	0° to 60°C (operating), -30° to 85°C (non-operating)
FPGA Altera® Cyclone IV GX	
Interface from COM	1 x PCIe Lane by 1; strap option Lane 1,2,3 on FPGA; optional LVDS channel A to FPGA only; DDR2 SODIMM Slot integrated USB Blaster for programming by USB Interface

Ordering Information

COM Express® FPGA Starterkit 38111-0000-00-S

Starterkit incl. COM Express® FPGA Baseboard for Type 1/2 and Type 10 with onboard Altera® FPGA and 2 HSMC I/O Card; ATX Power supply; USB cable, mounting kit; Please order your COM Express® module pin-out Type 1/2 or Type 10 + cooling solution + memory (if required) separately)

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