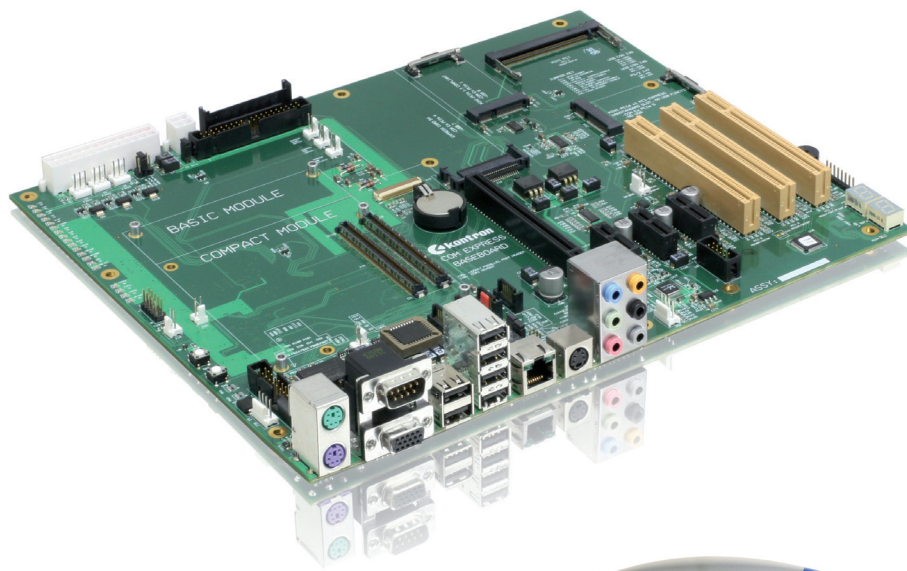


# » Starterkits and Evaluation Boards «



**COM**   
**Express**



## Starterkits and Evaluation Boards for COM Express™

- » For COM Express™ modules:  
ETXexpress®, microETXexpress®, nanoETXexpress
- » For quick evaluation purposes
- » Starterkits include all required hard- and software for immediate start

## Starterkits

Starterkits are complete care-free kits packaged in a single case. They give you a head start: Starterkits include an Evaluation Board which provides an easy plug-in of COM Express™ modules and line-up many connectors and

jacks. Those complete packages include everything needed for an immediate and efficient start and evaluation: PSU, Mass Storage, Documentation and cooler.

### COM Express™ Starterkit Type 2

A universal starterkit offering all common interfaces and accessories.



#### Technical Information

<b>Evaluation Board</b>	<b>COM Express™ Eval Type 2</b> , for COM Express™ Pin-out Type 2 compatible modules
<b>Power Supply</b>	Switchable ATX PSU 115V/230V ~
<b>Mass Storage</b>	USB stick with manuals and datasheets
<b>Documentation</b>	Manuals and datasheets are included
<b>Mounting Kit</b>	Screws and washers to mount heatspreader and module onto the evaluation board
<b>Supported Modules</b>	Any Kontron COM Express™ Type 2 compatible board is supported, i.e. ETXexpress® and microETXexpress® modules. Module must be ordered separately

### COM Express™ miniStarterkit Type 2

The reduced size makes it fitting perfectly in environments with strict space limitations.

Although the carrier board does support ETXexpress® (COM Express™ basic, 125x95mm), its size makes it the first choice for microETXexpress® modules (COM Express™ compact, 95x95mm).



#### Technical Information

<b>Evaluation Board</b>	<b>COM Express™ miniBaseboard Type 2</b> , for COM Express™ Pin-out Type 2 compatible modules
<b>Power Supply</b>	PicoATX 120W and 12 V PSU for running the ETXexpress® miniBaseboard
<b>Mass Storage</b>	USB stick with manuals and datasheets
<b>Documentation</b>	Quickstart Manual, datasheets and How-tos
<b>Mounting Kit</b>	Screws and washers to mount heatspreader and module onto the evaluation board
<b>Supported Modules</b>	Any Kontron COM Express™ Type 2 compatible board is supported, i.e. ETXexpress® and microETXexpress® modules. Module must be ordered separately

#### Ordering Information

Article	Part-No.	Description
<b>COMe Starterkit Type 2</b>	38100-0000-00-S	COM Express™ Starterkit for Pin-out Type 2 w/o module, heatspreader and memory
<b>COMe miniStarterkit Type 2</b>	36100-0000-00-S	COM Express™ miniStarterkit for Pin-out Type 2 including Power Supply, Cables and miniBaseboard

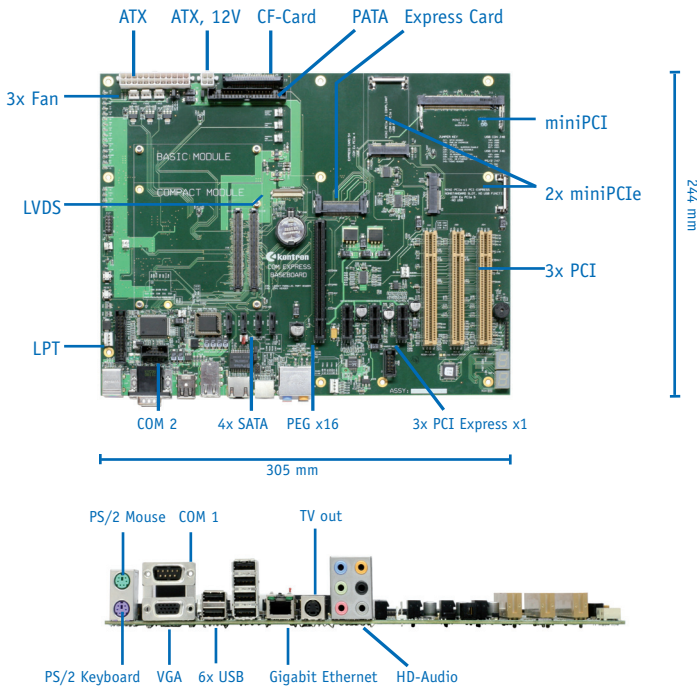
Please order separately your COM Express™ module with Cooling Solution and memory modules.

## Evaluation Boards

These Evaluation Boards can be populated with Kontron COM Express™ compatible modules. They bring out a complete array of connectors. Evaluation Boards minimize installation requirements and reduce

dramatically design time. They help to control and cut-back pre-market costs. Evaluation boards are recommended for testing in every design-in. Evaluation boards does not include any power supply, module, cooling solution, memory or display.

### COM Express™ Eval Type 2

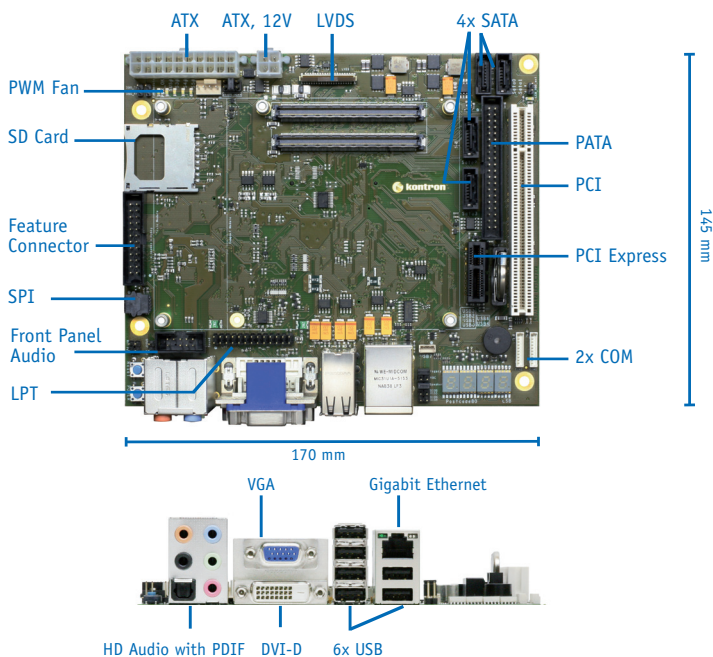


#### Technical Information

<b>Hard Disk</b>	4x SerialATA 1x PATA (40 pins for 3.5" Hard Disks) 1x CF-Card
<b>Ethernet</b>	1x 10/100/1000 MBit Ethernet magnetic connector
<b>Legacy Interfaces</b>	2x COM connector (1x pin-header) 1x LPT connector (pin header)
<b>Video Interfaces</b>	1x VGA 1x FFC Connector for JILI/LVDS panels 1x TVout
<b>USB</b>	6x USB 2.0 ports (rear panel)
<b>PCI</b>	3x PCI Slot, 1x Slot for miniPCI
<b>PCI Express</b>	PCI Express Graphics 1x16 lanes 3x PCI Express x1 lanes 2x Slots for miniPCIe
<b>Sound</b>	HD-Audio with 6 jacks
<b>Form Factor</b>	ATX form factor, 305 x 244 mm
<b>Supported Modules</b>	Any Kontron COM Express™ Type 2 compatible board is supported, i.e. ETXexpress® and microETXexpress® modules. Module must be ordered separately
<b>Power Connector</b>	ATX, 24 pins + ATX 12V, 4 pins
<b>Temperature</b>	Operation: -5° to 70°C Storage: -30° to 85°C
<b>Humidity</b>	Operation: 10% to 90% Storage: 5% to 95% (non condensing)

### COM Express™ miniBaseboard Type 2

COM Express™ miniBaseboard significantly differs in size: 170 x 145mm allows evaluation in small and size-critical situations.



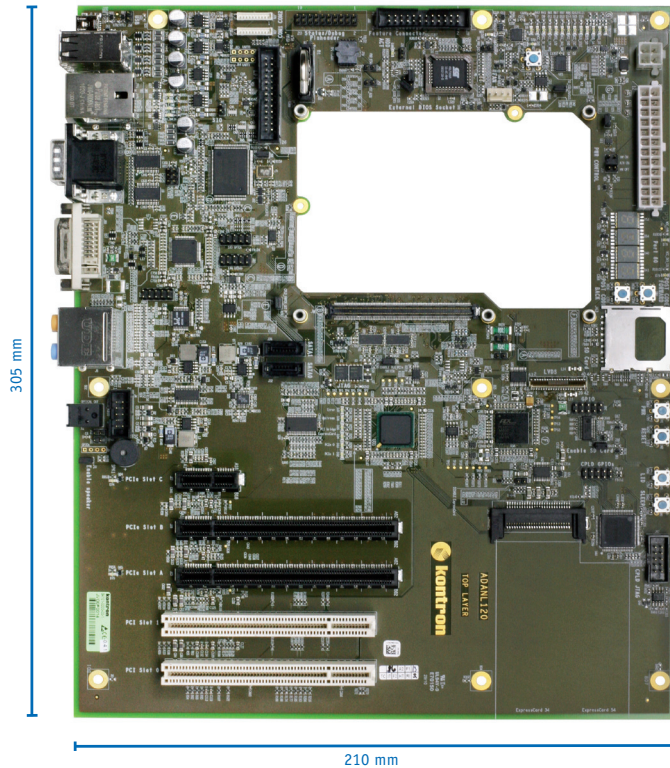
#### Technical Information

<b>Hard Disk</b>	4x SerialATA 1x PATA (40 pins for 3.5" Hard Disks) 1x SD Card
<b>Ethernet</b>	1x 10/100/1000 MBit Ethernet magnetic connector
<b>Legacy Interfaces</b>	2x COM connectors (pin header) 1x LPT connector (pin header)
<b>USB</b>	6x USB
<b>PCI</b>	1x Slot
<b>PCI Express</b>	1x PCI Express x1 lane 1x Express Card connector on backside
<b>Video Interfaces</b>	1x DVI-D 1x VGA 1x FFC Connector for JILI/LVDS panels
<b>Sound</b>	HD Audio with 6 jacks on rear panel, 2 jacks on pin-header
<b>Form Factor</b>	170 x 145 mm
<b>Supported Modules</b>	Any Kontron COM Express™ Type 2 compatible board is supported, i.e. ETXexpress® and microETXexpress® modules. Module must be ordered separately
<b>Power Connector</b>	ATX, 20 pins + ATX 12V, 4 pins
<b>Temperature</b>	Operating: 0 to +60°C Storage: -30 to +85°C
<b>Humidity</b>	Operating: 10% to 90% (non condensing) Non operating: 5% to 95% (non condensing)



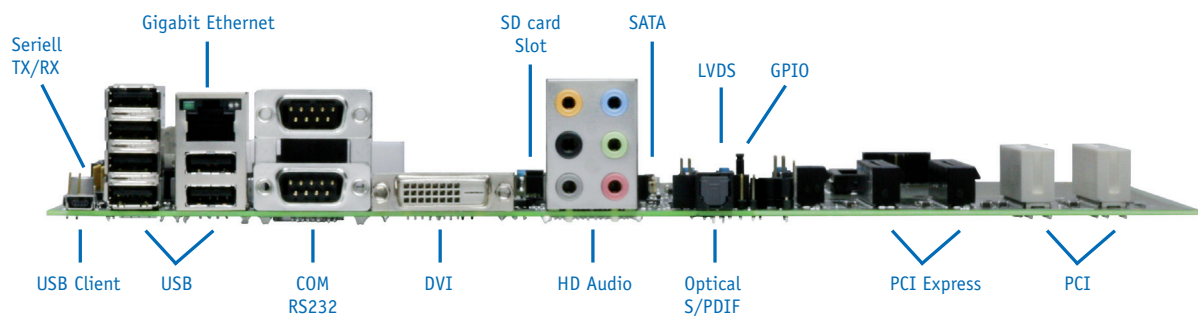
## COM Express™ Eval Type 10

The evaluation board for nanoETXexpress is designed to allow embedded application developers to get up and running quickly on the nanoETXexpress modular platform, giving them a head start on the total system design. Simply select an Type 1 or Type 10 nanoETXexpress CPU module, then Plug & Go.



### Technical Information

<b>I/O Features</b>	2 SATA standard connector PCI Express - 1 PCIexpress x1 Slot - 2 PCIexpress x16 Slot, electrically x1 - 1 Express Card (PCIe plus USB port 5) PCIe to PCI bridge PEX8112 - 2 PCI 32 Bit slots SD card slot shared with GPIO pin header Onboard RTC Battery Power / Reset Button LID/Sleep button SPI/LPC Firmware Hub socket for external BIOS 4 digit Port 80/81 POST code display Winbond 83627 LPC-I/O - 2 serial Ports on DSUB9 - LPT pin header / PWM fan / Hardware monitor 2 serial port (TX/RX) connector (KAB-DSUB9-3) Feature connector (I <sup>2</sup> C, SMB, Power control)
<b>Ethernet</b>	10/100/1000 MBit LAN RJ45 connector on rear panel
<b>USB</b>	6x USB 2.0 rear connectors (USB port 0, 1, 2, 3, 4, 6) 1 USB client (USB port 7)
<b>Graphic</b>	DVI-D, SIL1364 SDVO to DVI LVDS FFC40 connector
<b>Sound</b>	Onboard HD Audio Codec Realtek ALC888 Analog 7.1 Audio, optical S/PDIF out and digital S/PDIF in & out
<b>Power Supply</b>	ATX power supply 24 + 4 pin Status Led
<b>Form Factor</b>	ATX Baseboard size; 12" x 9,6"
<b>Supported Computer-on-Modules</b>	COM Express™ Rev. 2.0 Pin-out Type 1 + Type 10 ultra size specification compatible COMs (nanoETXexpress) COM must be ordered separately



### Ordering Information

For a complete delivery with customer samples following articles are necessary:

Article	Part-No.	Description
<b>COMe Eval Type 10</b>	34101-0000-00-1	COM Express™ Evaluation board COM Express™ Rev. 2.0 Type 10 + Type 1
<b>COMe Eval Type 2</b>	38104-0000-00-0	Evaluation carrier board for COM Express™ modules Pin-out Type 2
<b>COMe miniBaseboard Type 2</b>	38102-0000-00-1	Application carrier board for COM Express™ modules Pin-out Type 2

## COM Express™ HMI Starterkit Type 1

The COM Express™ HMI Starterkit Type 1 is equipped for express evaluation purposes. The fully equipped Starterkit is shipped incl. a COM Express™ HMI Baseboard Type 1, a 7" WVGA Panel with touch, 12V power supply, cables and accessories and a USB stick with a demo image of Win CE 6.0, incl. a QNX® Neutrino® fastboot demo video.

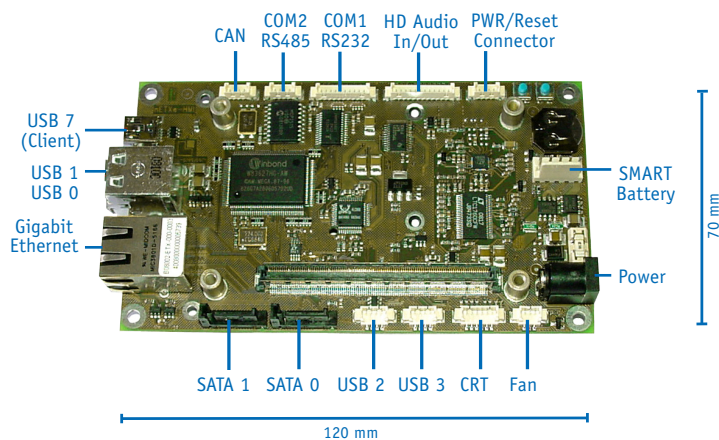


### Technical Information

<b>Evaluation Baseboard</b>	COM Express™ HMI Baseboard Type 1 Small form factor 120 x 70 mm; Max component height below 18mm
<b>Display</b>	1x Display PM070WL4, 7" WVGA 800x480, with assembled backlight cable
<b>Power Supply</b>	12V PowerSupply PAA060F, with power cable
<b>Cables</b>	2x USB socket, KAB-USB-1 2x CAN socket, KAB-CAN-1 (one for COM2/one for CAN) 1x RS232 socket (COM1), KAB-DSUB9-3 1x RS485 socket (COM2) 1x JILI cable, KAB-JILI30-TSLD01 1x USB cable for touch controller, ETP-CB-SXU00
<b>Other Features</b>	1x USB touch controller, ETP-MB-4000UACG 1x Audioboard, B08700-KAB-XX-XX01, with cable
<b>Software</b>	BSP for WIN CE 6.0, WIN XP; WIN CE 6.0 demo image, QNX® Neutrino® fastboot demo video
<b>Supported Modules</b>	nanoETXexpress-SP. Module must be ordered separately.

## COM Express™ HMI Baseboard Type 1

The COM Express™ Human Machine Interface (HMI) Baseboard is suited for daily use and is designed to allow embedded application developers to get up and run quickly with the Ultra sized nanoETXexpress module platform.



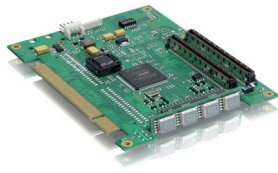
### Technical Information

<b>Power</b>	SmartBattery, 2 cells Li-Ion; Single power supply +12V
<b>Hard Disk</b>	2 x SATA
<b>Ethernet</b>	10/100/1000 LAN magnetic connector
<b>Interface</b>	COM1 RS232 COM2 RS485 CAN
<b>PCI Express</b>	Expansion PCI Express Card 34/54 slot
<b>Flash Extension</b>	microSD Slot (depending on nETXe-module)
<b>USB</b>	2x USB 2.0 front connectors (USB 1,3) 2x USB internal on pin header (USB 0,2) 1x USB client port (USB port 7)
<b>Display connectivity</b>	JILI, LVDS Panel connector CRT internal (depending on nETXe-module)
<b>Sound</b>	HD Audio Codec ALC888 S/PDIF In/Out; Line In/Out
<b>Form Factor</b>	120 x 70 mm
<b>Supported Modules</b>	COM Express™ COM.0 Pin-out Type 1 modules in ultra size only, e.g. nanoETXexpress-SP. Module must be ordered separately.
<b>Temperature</b>	0 – 60 °C operating temp.

### Ordering Information

Article	Part-No.	Description
<b>COMe HMI Starterkit Type 1</b>	34100-0000-00-S	COM Express™ HMI Starterkit Type 1, incl. nETXe-HMI Board 34100-0000-00-0, 7" WVGA Panel with touch, 12V power supply, cables and accessories, packed in plastic case
<b>COMe HMI Baseboard Type 1</b>	34100-0000-00-0	COM Express™ HMI Baseboard Type 1, COM Express™ Type 1

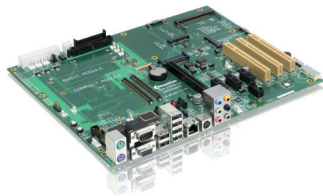
## COM Express™ Debug Card



For easy debugging of self-designed carrier boards, Kontron offers with the COM Express™ Debug Card a helpful tool to customers, Sales Partners and Design Partners. The COM Express™ Debug Card can either be plug into a free PCI slot or nested between the module or the carrier board. It reads out the POST code which is sent over PCI or LPC bus and displays it. Thus, developers easily can find out where customized configuration gets stuck. The COM Express™ Debug Card can be ordered separately using the article no. 11112-0000-00-0.

## HOW TO CUSTOMIZE YOUR KIT?

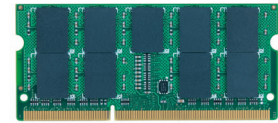
1. Select either a Starterkit or an Evaluation Board:



2. Select a COM Express™ compatible module (plus corresponding Cooling Solution) of your choice:



3. Select memory modules:



4. Send your request to our Sales Representative or to [info@kontron.com](mailto:info@kontron.com)  
5. A customized offer will be sent to you.

## Wind River Starterkits

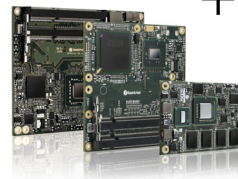
### Preassembled Starterkits including Computer-on-Module and Wind River LiveUSB Evaluation

- » Get your application development started immediately
- » Fully assembled Starterkits for COM Express™ Technology
- » Pre-assembled with COMs incl. Heatspreader and Memory
- » Equipment for Wind River LiveUSB Evaluation Environment

The COM Express™ Starterkits VxWorks are equipped for express evaluation purposes. The VxWorks Starterkits are fully assembled with a COM incl. memory and Heatspreader.

The VxWorks LiveUSB consists of VxWorks 6.8 and Tilcon Graphics Evaluation 5.7 environment, packed on a self contained bootable Fedora 11 LiveUSB stick with the Wind River Workbench 3.2 Development Environment with a 30 day evaluation period.

Find more details on the separate Datasheet "Starterkits with VxWorks".



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