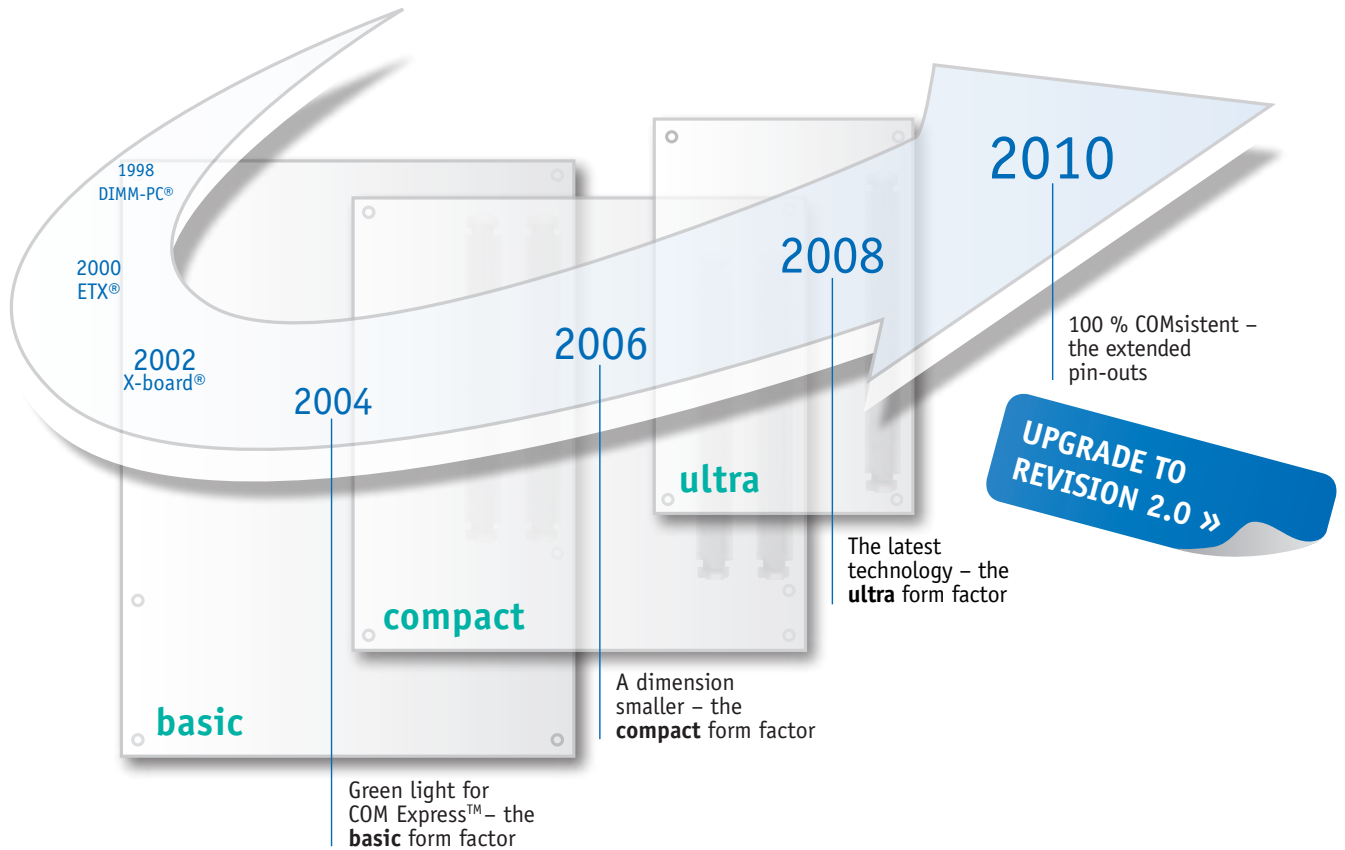


» COM Express™ «



The future-proof global standard

- » New pin-outs with multiple displays and USB 3.0
- » Over 12 years COM experience – a safe investment!
- » 100 % head start, 100 % COMsistent

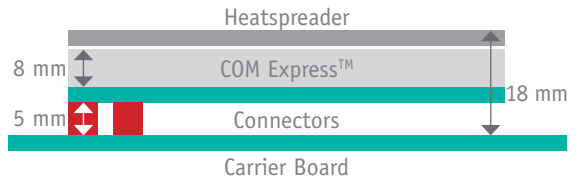


» The future-proof global standard «

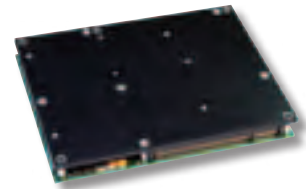
COM Express™ in credit card format – 100 % head start, 100 % COMsistent!

With the **ultra** form factor, COM Express™ technology reaches the classic Small Form Factor (SFF) world. Extremely low power consumption and ultra-small dimensions make ultra suitable for mobile battery-powered and above all, inexpensive applications. The well-known and proven COM Express™ concepts are used: ultra modules offer maximum compatibility with compact and basic. Its wide-range power supply input of down to 5V make it perfect and ideal fit for the SFF application area.

COOLING CONCEPT



- » Heatspreaders are bolted onto the COM Express™ module
- » They offer a uniform mechanical surface for heat dissipation
- » 100 % modular
- » All COM Express™ modules therefore have the same mechanical dimensions
- » Easy integration
- » Independence



Format

55 x 84 mm

Connector system

1 x 220 pins

Pin-outs

COM Express™
COM.0 Types 1 and 10

Maximum Power Input

Up to 86W, Types 1 and 10

Voltage Range

5V – 14V

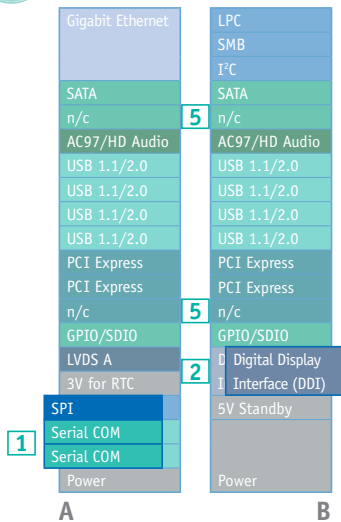


Kontron distributes the **ultra** form factor under the **nanoETXexpress** trademark.

From Revision 1.0 to 2.0 – fit for the future! New: Pin-out Types 10 and 6 with multiple displays and USB 3.0

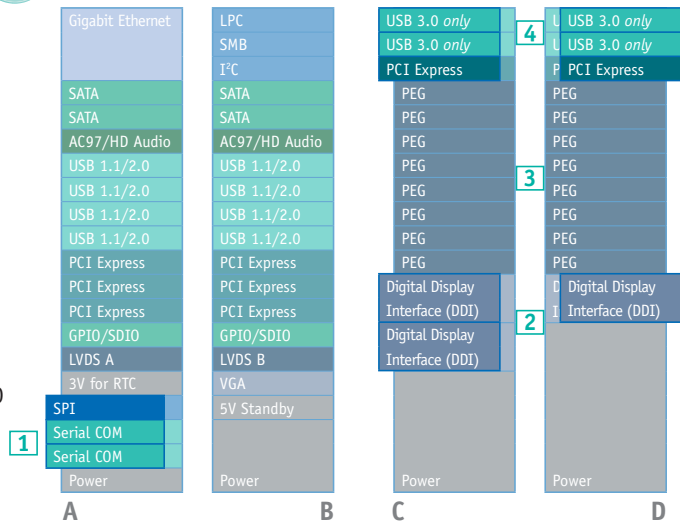
NEW

Pin-out Type 10



NEW

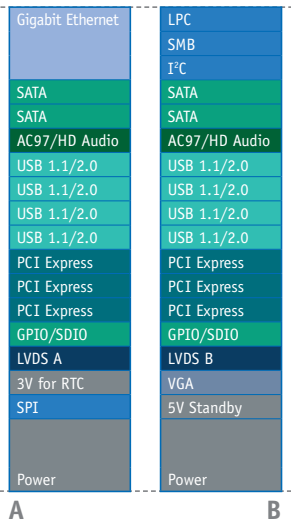
Pin-out Type 6



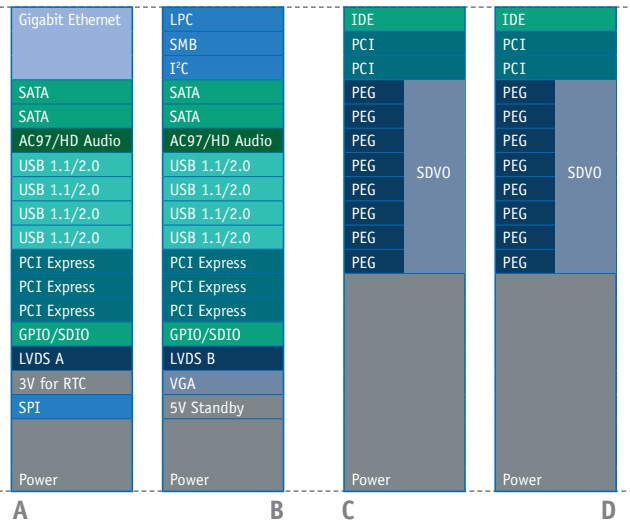
- 1 Serial COM signals can be assigned to unneeded power pins without problems.
- 2 The **Digital Display Interface (DDI)** permits pin-out with SDVO, DisplayPort or HDMI/DVI respectively.
- 3 PEG and up to 3 DDI usable simultaneously.
- 4 Existing USB 2.0 ports can be extended to USB 3.0
- 5 n/c: Reserved for future extensions such as USB 3.0

Extended: Pin-out Types 1 and 2.

Extended: Pin-out Type 1



Extended: Pin-out Type 2



The successful Types 1 and 2 have been extended: **Serial Peripheral Interface (SPI)** on reserved pins, support for PCI Express 2.0. Ideal placement gives maximum compatibility with Types 6 and 10.

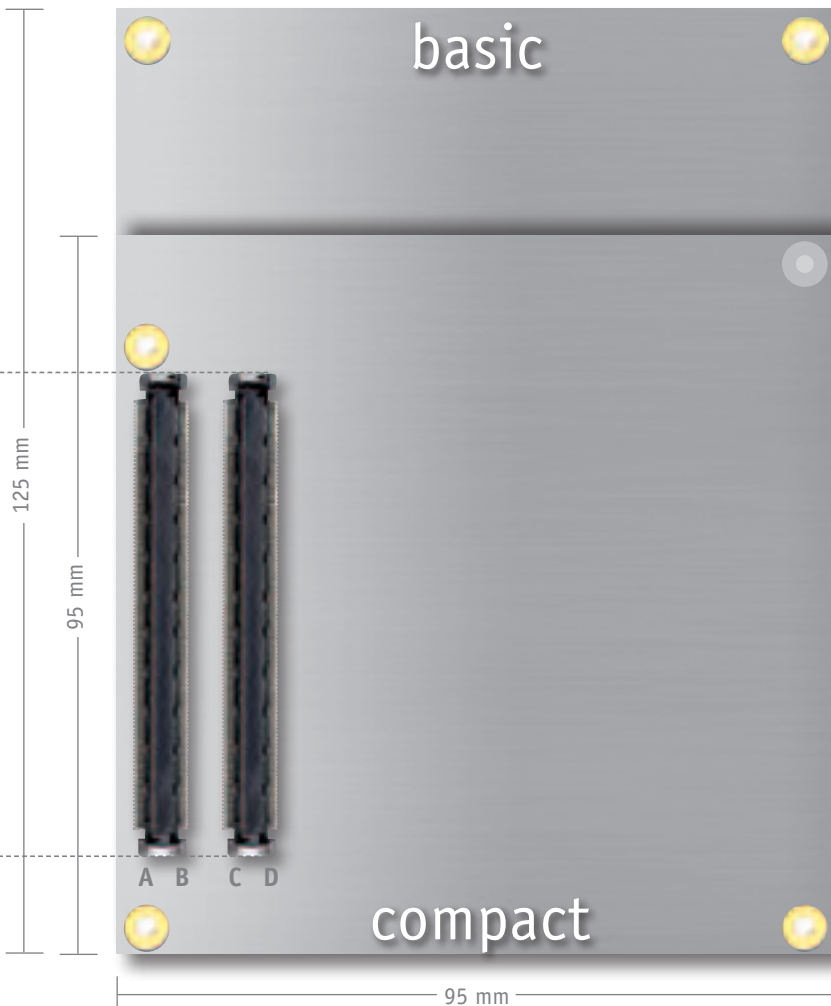
The COM Express™ specification defines different pin-outs, with Types 1, 2, 6 and 10 being the most important.

Over 12 years COM experience – a safe investment!

The **basic** and **compact** form factors from COM Express™ are the recognized successors to the legendary ETX® form factor that in its day set the standard for COM modules. Over 12 years of COM experience means a safe investment in the future. The basic form factor offers space to meet all requirements. Moreover, these powerful modules, with a host of features, are very easy to implement.

The official compact form factor from COM Express™ is smaller and ideally suited for space-critical or mobile applications. The interfaces, pin-outs and connector placements are 100 % compatible with the basic form factor. Even the attachment holes and cooling concept are identical. This guarantees extremely simple interchangeability on Carrier Boards and maximum protection of investment.

Original size



COM 
Express

Format

95 x 125 mm (basic)
95 x 95 mm (compact)

Connector system

2 x 220 pins

Pin-outs

COM Express™
COM.0 Types 2 and 6

Maximum Power Input

Up to 127W, Types 2 and 6

Voltage Range

8.5V – 18V

Kontron distributes the **basic** and **compact** form factors under the registered trademarks **ETXexpress®** and **microETXexpress®**.

» The advantages at a glance «

Investment protection included!

COM Express™ is the first independent module standard prepared for innovative interface technologies such as USB 3.0. The new Types 6 and 10 pin-outs provide a secure future and help ensure long-term protection of your investment. COM Express™ technology now has the ability to handle future developments while retaining the connector concept and the standard and maximum backwards compatibility with the established Types 1 and 2.

COM Express™ – the intelligent decision!

- » Scalable computing power
- » Scalable dimensions
- » Short time-to-market
- » Manufacturer independence
- » Leverage of know-how
- » Ruggedized
- » Simplified development
- » Long-term availability
- » Numerous product and services vendors

The connector concept – a success factor!

In the COM Express™ standard, PICMG® has different defined pin-outs for one or two 220-pin connectors that are placed next to each other. The positioning of the connectors guarantees extremely simple interchangeability of the three COM Express™ form factors. These 'recipes for success' have proven themselves and are widely used, not only for Computer-on-Modules. The connectors are resistant to shock and vibration and offer extraordinarily high bandwidth for high-speed data transmission.



One standard, three sizes

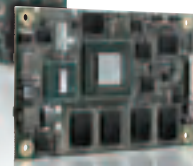
ETXexpress® =
form factor basic



microETXexpress® =
form factor compact



nanoETXexpress =
form factor ultra



» Learn more «

ABOUT PICMG® AND COM EXPRESS™



In 1994, PICMG® (PCI Industrial Computer Manufacturers Group) was founded as a non-profit, tax-exempt organization of more than 400 member companies who collaboratively develop open specifications. They concentrate their activities on telecommunications and industrial computing applications. The companies involved have a long history of developing leading-edge products for these industries.

COM Express™ is the latest PICMG® standard – officially adopted in 2005 – for Computer-on-Modules (COM). COM Express™ modules are often sold as own brands such as ETXexpress® from Kontron. For the form factors basic, compact and ultra, the dimensions and the advantageous connector concept are decisive success factors. With revision 2.0, which brings a forward-looking pin-out and numerous further improvements, the COM Express™ standard forms the ideal technology basis for product success that is sustainable in the long-term.

GET MORE OUT OF IT – WITH VALUE-ADDS FROM KONTRON

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K-station
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