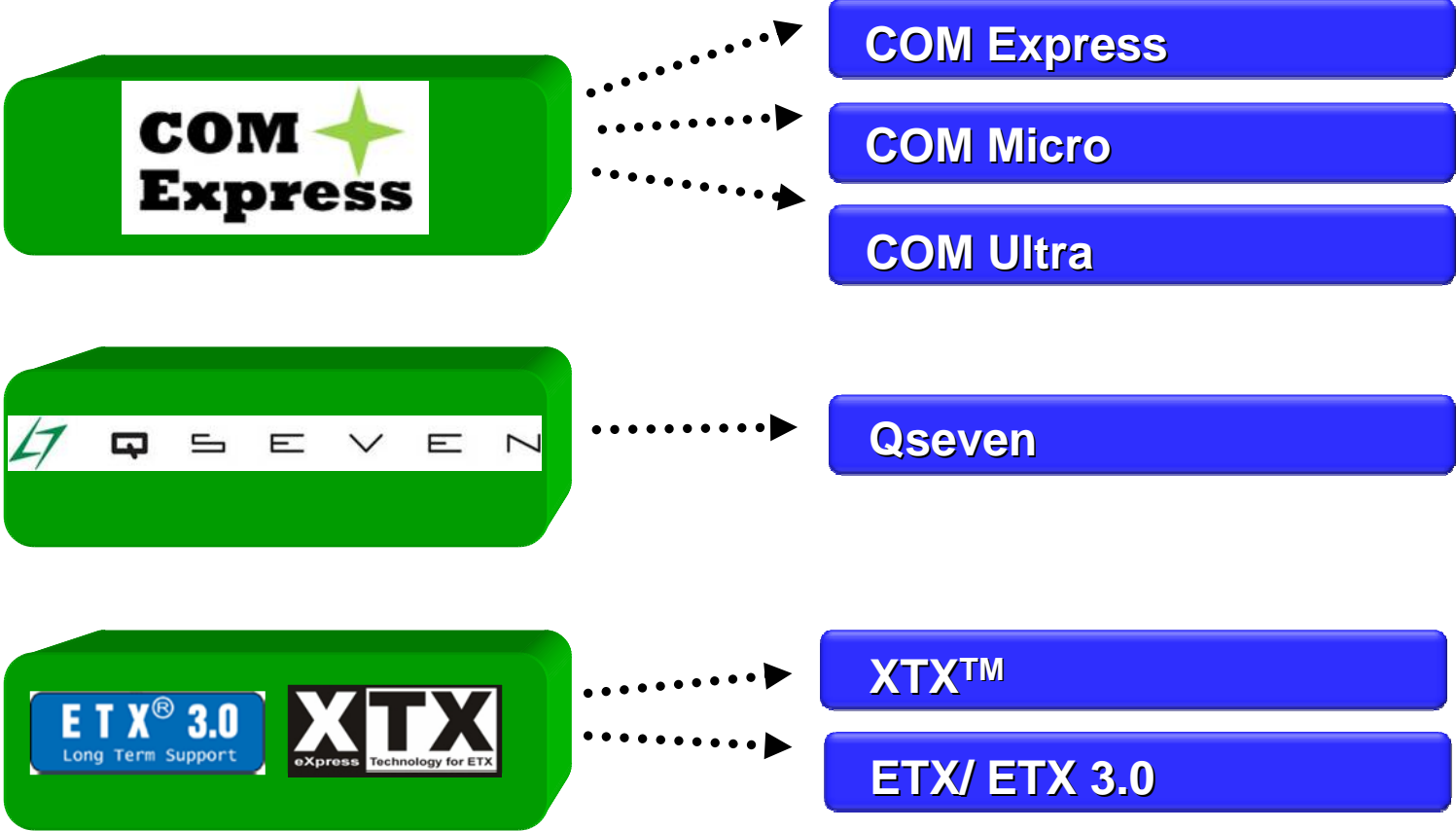


Advantech Europe GmbH

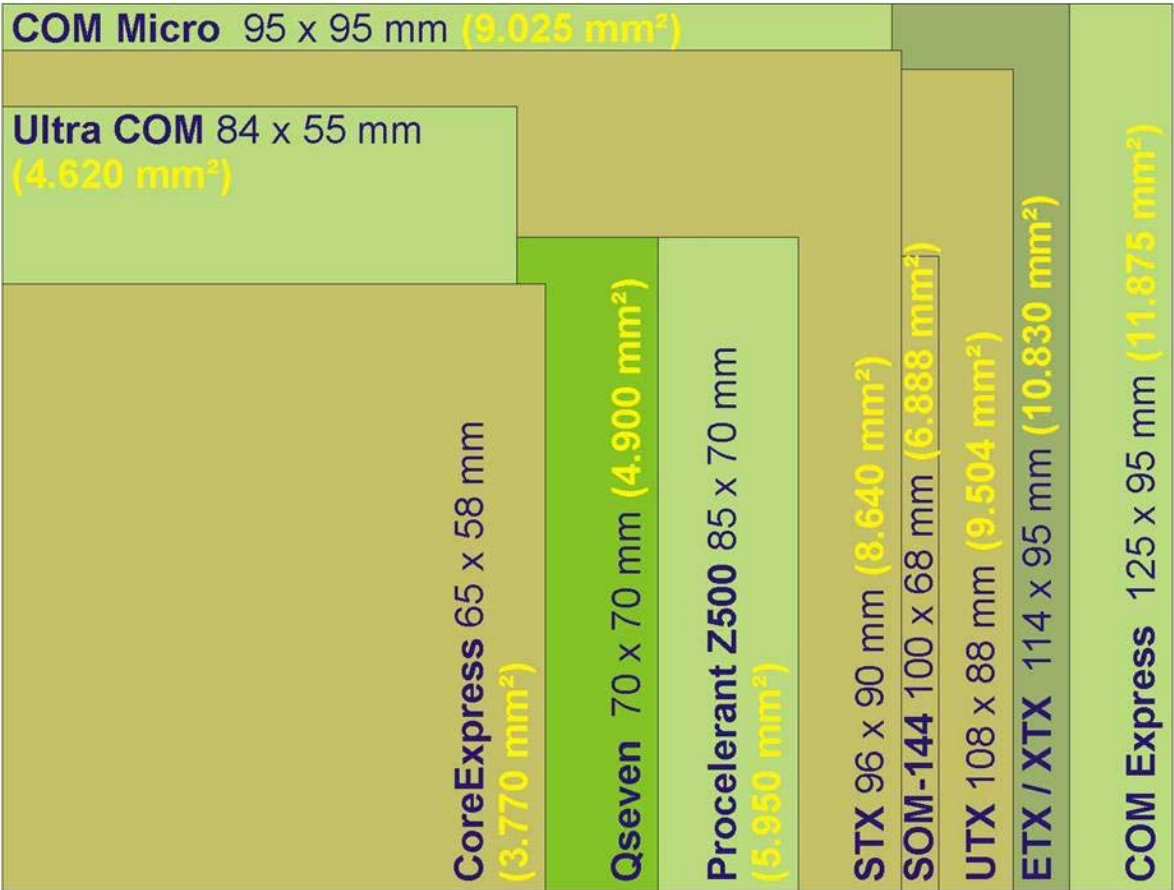
COM Express

Carsten Rebmann
Product Sales Manager
July 23, 2009

Key modules in the Market



COM Form Factors



Non Standard Single Vendor	Q7 Group www.qseven-standard.org	ETX/XTX Group www.etx-ig.org www.xtx-standard.org	COM Express Group www.picmg.org
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COM Express



- **COM Express is a completely open Standard**
- **Administered by the PICMG**
- **Wide range of Consortium Members support the Standard**

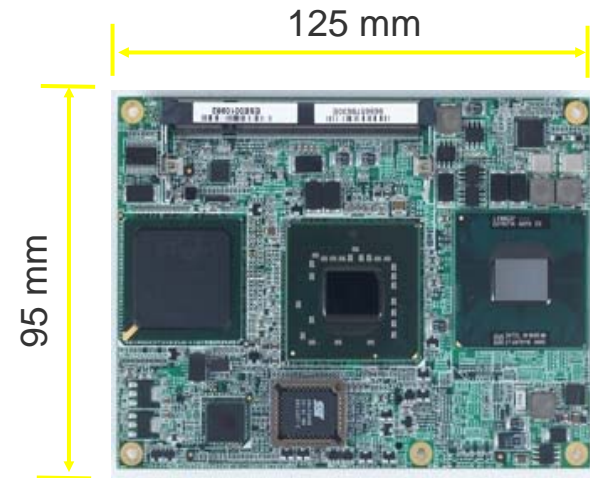
- **PCI Express as a replacement of the PCI bus**
- **PCI Express Graphics as a replacement of AGP**
- **Serial ATA as a replacement of Parallel ATA**
- **Serial DVO as a replacement of DVO**
- **LVDS as a replacement of parallel LCD panel interfaces**

COM Express



- **Basic Form Factor**
- **5 Pin-Out Configurations** (Majority is using Type 2)

Types	Connector Rows	PCI Express Lanes	PCI	IDE Ports	LAN Ports
Type 1	A-B	Up to 6	-	-	1
Type 2	A-B C-D	Up to 22	32 bit	1	1
Type 3	A-B C-D	Up to 22	32 bit	-	3
Type 4	A-B C-D	Up to 32	-	1	1
Type 5	A-B C-D	Up to 32	-	-	3



- **Fixed Board Size: 95 x 125 mm²**
(extended size 110 x 155 mm²)
- **188W max power consumption**

COM Express



Specification of Baseboard Connector

Two Rows of 220 Pins each	Tyco Free Height or compatible Connector	8 mm or 5 mm total Stack-Height Options	Rated up to 6.25 GHz Performance
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Row A	PCIe Graphics	SATA	AC'97 / HDA	USB	ExpressCard	PCIe	Flat Panel	PCIe	VCC	VCC		
Row B	LPC	SMB	SATA	AC'97 / HDA	I2C	USB	ExpressCard	PCIe	Flat Panel	VGA	TVout	VCC
Row C	IDE		PCI			PCIe Graphics		SDVO	PCIe Graphics	VCC		
Row D	IDE		PCI			PCIe Graphics		SDVO	PCIe Graphics	VCC		

COM Express



Recommended:

- Very Long Term Requirement
- High End Application
- Heavy PCI Express Needs
- Real Standard

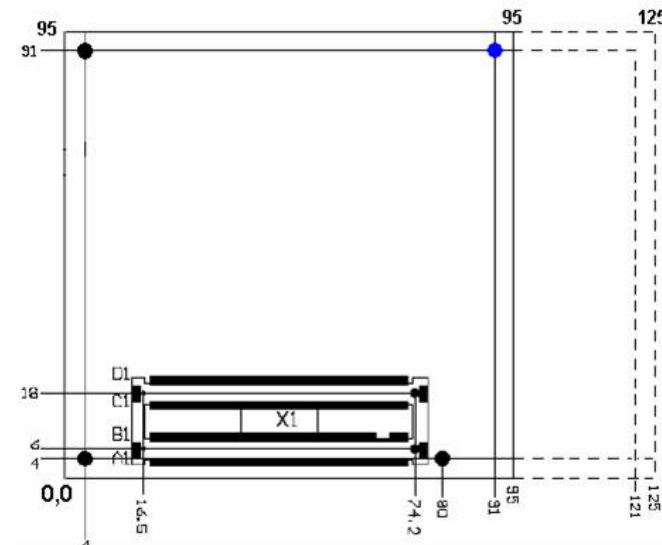
COM Micro

Electrical SPEC

- COM Express Type II
- Max. 188 Watts power loading

Mechanical SPEC

- 95 mm x 95 mm



COM Micro

Recommended:

- Low End Designs
- Need for PCI Express

Thank you very much for your attention!