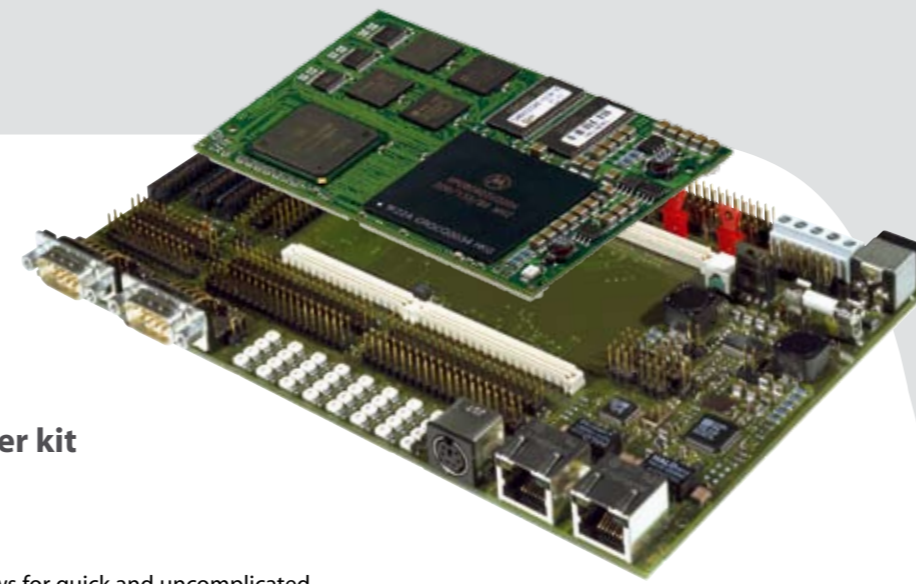
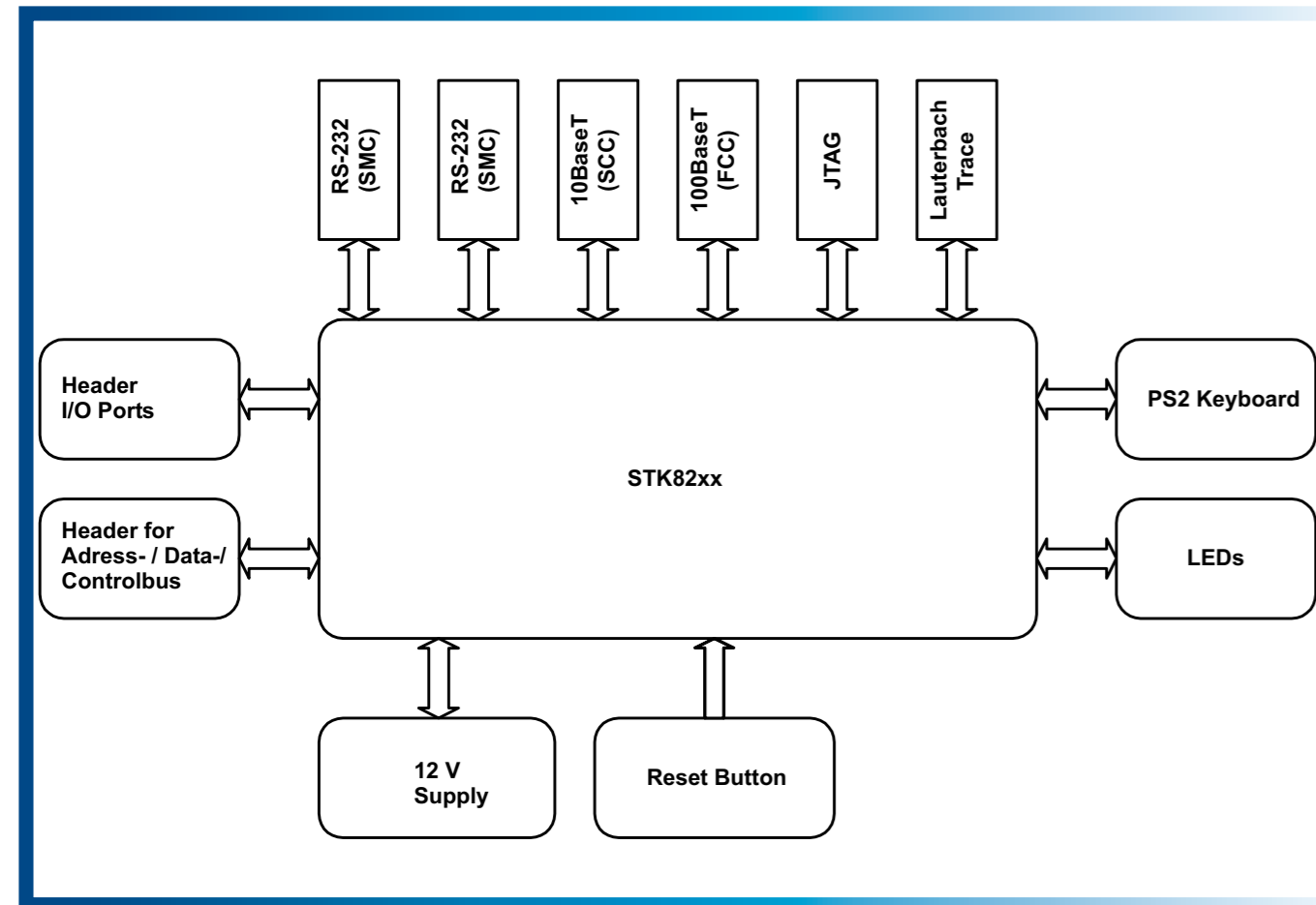


Block diagram STK82xx



Plug&Play starter kit STK82xx

Use of the STK82xx allows for quick and uncomplicated startup of the PowerQuicc II architecture. It provides all essential interfaces of the processor to various plug connectors (e.g., RS-232 to Dsub9, 10/100BaseT to RJ45). All relevant signals from the processor are available on male multipoint connectors; in addition, Port A with a 32 bit width can be connected to LEDs in order to implement simple digital signal outputs.

Using the STK82xx, the developer is able to develop and test his software directly on the target architecture in the shortest possible time. This enables him to rapidly implement his application, thereby helping both to save time and reduce cost.

In order to facilitate using the module on the customer's base board, TQ-Components provides the circuit diagrams for the STK82. The user is able with little effort to adapt the desired information on interfacing the module and implementing it on his own base board. Complex wiring layouts at the beginning of the development project are thus a thing of the past.

Performance features of the STK82xx

- ⊖ For all TQM82xx Modules
- ⊖ 2x RS-232 interface (Sub-D)
- ⊖ 10BaseT interface (RJ45)
- ⊖ 100BaseT interface (RJ45)
- ⊖ Keyboard
- ⊖ JTAG / BDM interface
- ⊖ Lauterbach Trace
- ⊖ Reset button
- ⊖ Port A: LEDs
- ⊖ Header for Portsignals
- ⊖ Dimension: 205 x 130 mm² (8.07 x 5.12 sq. inch)

Accessories

- ⊖ STK82xx with the TQM82xx
- ⊖ Power supply
- ⊖ Serial download cable
- ⊖ On board monitor software
- ⊖ MOZI82xx module puller
- ⊖ Tool-CD

The TQ Group - The entire world of electronics The TQ Group is composed of TQ Systems, TQ Mechanics and TQ Components.

The TQ Group is composed of TQ Systems, TQ Mechanics and TQ Components. Founded in 1994, the system supplier TQ Systems develops and produces electronic modules and systems according to customer specifications. In the corporate family, TQ Mechanics is responsible for mechanical production. TQ Components markets embedded systems and industrial PCs developed and produced by TQ systems. The TQ Group has over 450 employees. Overall sales attained EUR51.2 million in business year 2004/2005.

TQ Components product line

One of the strengths of the company is self-developed embedded TQ modules. TQ offers an entire range of controllers: In addition to 16-bit and 32-bit Infineon modules, the product line includes a wide selection of Freescale and Intel-based processor boards. The modules are distinguished by their small size and long-term availability, and they satisfy high quality standards. TQ's aim remains industry-compatibility and longevity.

Another important pillar of the company is industrial PCs. They are distinguished by superior robustness and long-term availability. The space-saving mini-industrial PCs boast of a high degree of modularity. The customer can create individualized solutions without acquiring unnecessary product components.

TQ components
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Modular – it fits!

EMBEDDED-MODULES

TQM82xx

32-bit Microprocessor MPC8xxx Family



Operating system and tool partner for TQ modules





The Premium-Modules

TQM82xx

TQ Components is offering high-performance embedded modules with its TQM82xx module family. The basic unit is the 32-bit PowerQUICCII processor series by Freescale. The complex controllers are particularly suitable for use in applications where top performance and universality are required.

An essential feature of the TQM82xx embedded module family is the complete integration of computing functionality in the module. This includes clocking as well as monitoring the microprocessor, non-volatile flash, memory, working memory (SDRAM) and two serial interfaces for basic commu-

nication. In addition to the 10BaseT Ethernet interfaces, the processor also possesses 100BaseT interfaces which makes it highly suitable as a central communication element in heterogeneous networks.

The user has at his disposal all relevant processor pins such as address, data and control lines in the robust 440 pin plug connectors of the module. Despite the numerous functions integrated in the module, TQ-Components was able to restrict the size to 100 x 68 mm² (3.94 x 2.68 square inch) for a very compact design.

Ready for industrial use

For electronic components to survive in tough industrial environments, they need to be tough. The TQM82xx family with its robust construction can be modified to endure an expanded temperature range. In addition to industry-compatible components, the 0.8 mm system plugs are designed robustly to withstand particularly high vibrations. Of course, the product family and every other TQ product are available over the long term. TQ Components guarantees solutions with the same construction and functions for at least ten years.

Operating systems – software - tools

The TQM82xx modules are supported by numerous operating systems and tool suppliers. The fundamentally transparent availability of the processor family in applications allows it to be adapted to other operating systems that support PowerPC. Developers get their initial support from the MON82xx monitor software that comes with the delivery. In addition to initializing the board, it

offers additional rudimentary functions for working with TQM82xx modules. If needed, it can be replaced with customer-specific or operating-system-specific boot firmware for adapting the module to customer applications.

TQM82xx highlights

- Up to 400 MHz CPU
- Up to 128 MB SDRAM
- 100BaseT Ethernet
- PCI interface
- Expanded temperature range
- Small dimensions: 100 x 68 mm² (3.94 x 2.68 square inch)

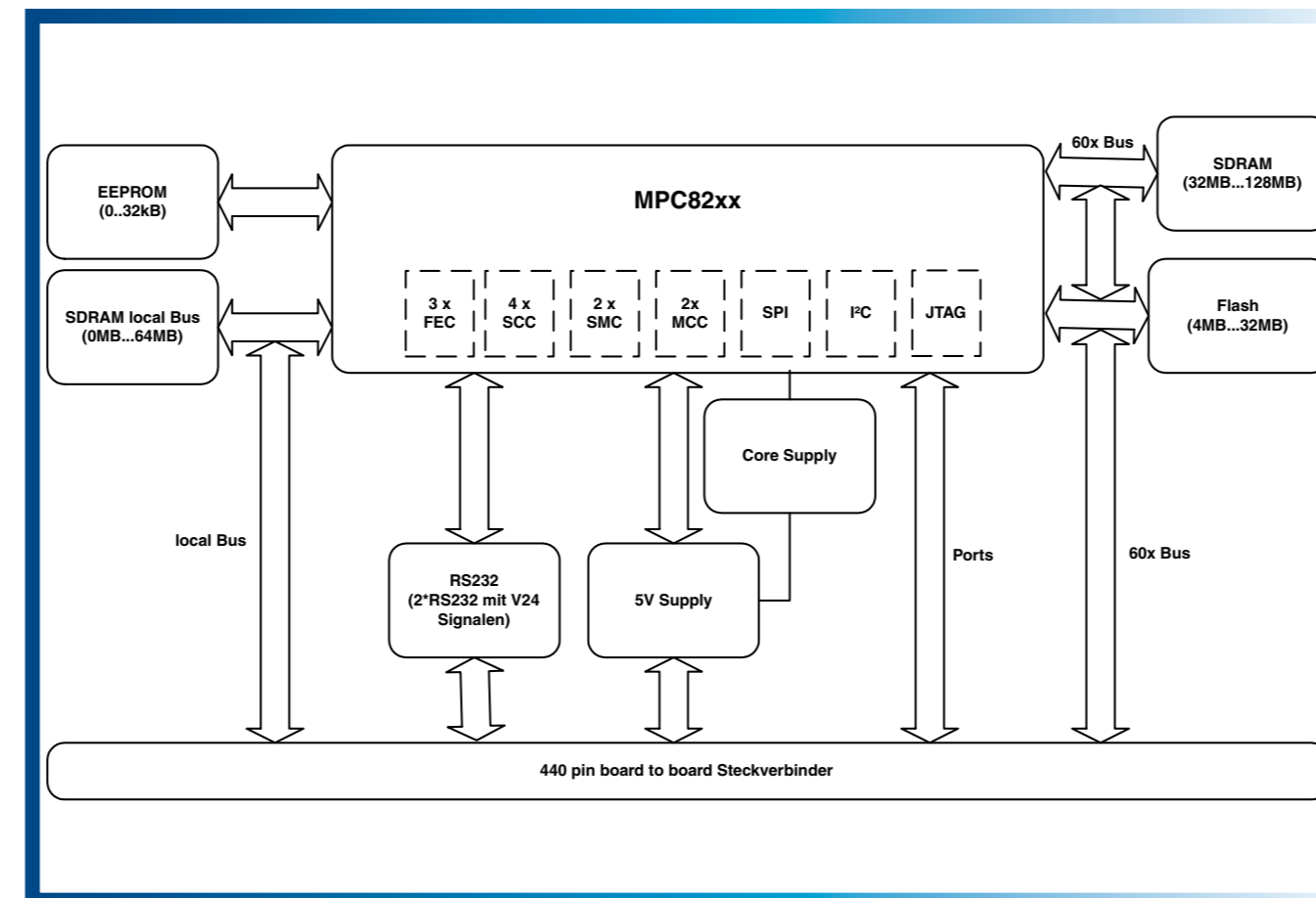
Performance features of the 64-bit

MPC82xx microprocessor family

Funktion Derivate	I-Cache (Kbyte)	D-Cache (Kbyte)	10BaseT	10/100BaseT	UTOPIA ATM	HDL Channels	SCC	FCC	MCC	#T1/E1	USB (V 1.1)	PCI	TC/IIMA	CPU/CPM/Bus Speed
MPC8255	16	16	up to 4	up to 2	1 Ch.	up to 128	4	2	1	4				200/133/66 300/200/66
MPC8260	16	16	up to 4	up to 3	2 Ch.	up to 256	4	3	2	8				200/133/66 266/200/66 300/200/66 300/208/83
MPC8265	16	16	up to 4	up to 3	2 Ch.	up to 256	4	3	2	8		yes		266/166/66 266/200/66 300/200/66 300/208/83
MPC8247	16	16	up to 3	up to 2	no	up to 64	3	2	0	2	yes	yes	no	400/266/133

Block diagram

TQM82xx



TQM82xx-

Family

Module-Type	TQM82xx
Microprocessor Type	MPC8247, MPC8255, MPC8260, MPC8265
CPU Clock	200 - 400 MHz ¹⁾
CPM Clock	166 - 300 MHz ¹⁾
Bus Speed	66 - 100 MHz ¹⁾
Power Fail / WatchDog	MAX814
Memory	
SDRAM 60x Bus	32 - 128 MB
SDRAM local Bus	0 - 64 MB
Flash	8 - 32 MB
EEPROM	0 - 32 kB
¹⁾ Depending on processor	

Module-Type	TQM82xx
Interfaces	
Serial	2 x RS-232
USB	yes ¹⁾
Ethernet	10 / 100 BaseT ¹⁾
PCI	yes ¹⁾
ATM	yes ¹⁾
I / O Ports	120
Address / Data bus	32 Bit / 64 Bit
General	
Power supply	3.3V / 5V
Temperature range	0°C...+70°C
Optional	-40°C...+85°C
Plug system	SMD RM0.8 mm
Number of Pins	440
Dimensions	100 x 68 mm ²
Starter kit	STK82xx
¹⁾ Depending on processor	

Block diagram

MPC82xx

