Product Information

CMA-USB ■ PC•MIP Module USB 1.1 Controller

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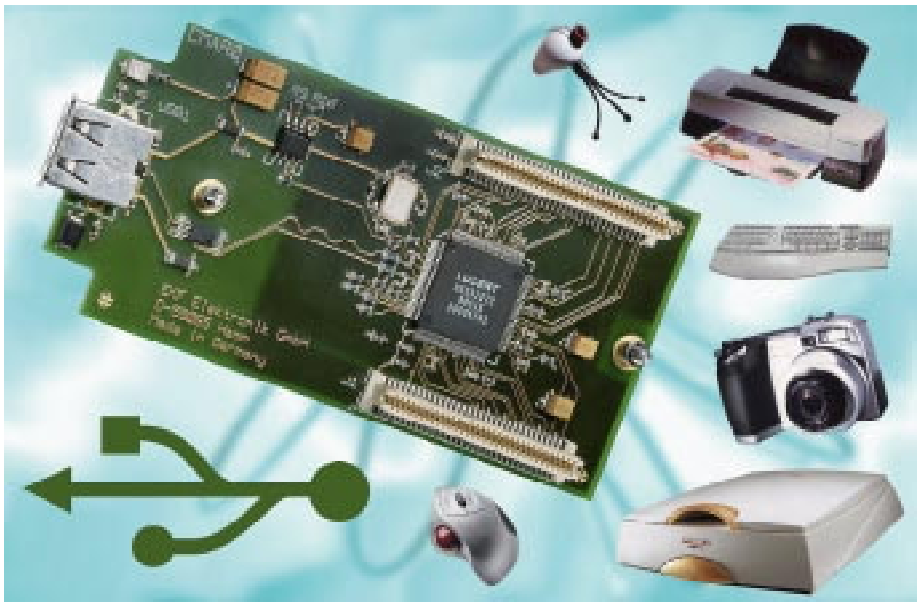
Because the customer can profit from both, individual configuration of the system and moderate cost, mezzanine concepts are very popular for industrial grade computers. Based on the PC•MIP module standard, EKF presents the ***CMA-USB,*** *an USB host controller.* The PC•MIP electrical characteristics are derived from the well known PCI specification. With respect to the mechanics, PC•MIP modules represent an improved successor to the M-Module technology.

The USB (*U*niversal *S*erial *B*us) interface is a very popular I/O standard, combining different classes of peripheral devices on a single 4-wire bus.

Built-in with any recent PC, USB will replace more and more classical interfaces as RS-232 and parallel port. Industrial users profit from USB hot plug capability and the effortless way to connect a broad range of peripheral devices.

With its data transfer rate of up to 12Mbps, USB 1.1 is a medium speed interface. However, all devices attached to the same controller have to share the available USB bandwidth. *Hence, for time critical applications it is therefore recommended to spend an individual USB host controller, as the CMA-USB, to any fast peripheral device in order to provide as much as required additional bandwidth.*



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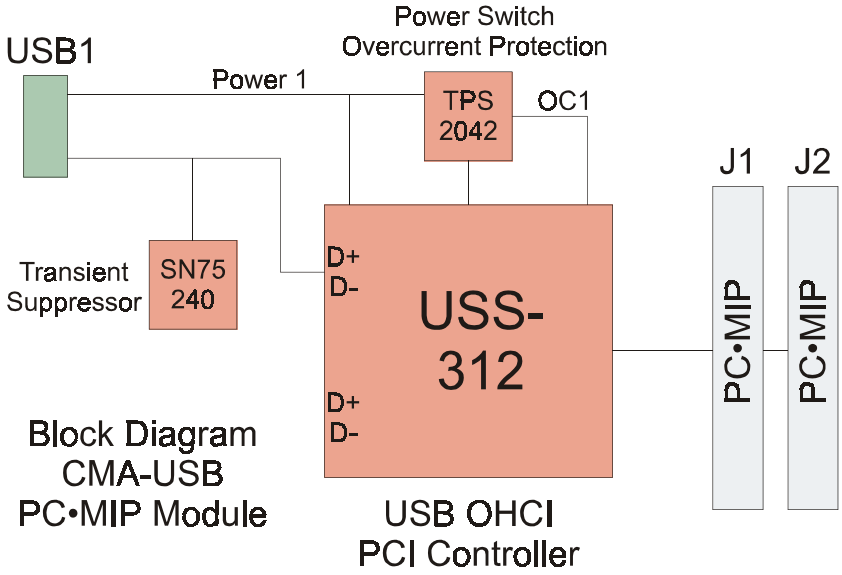
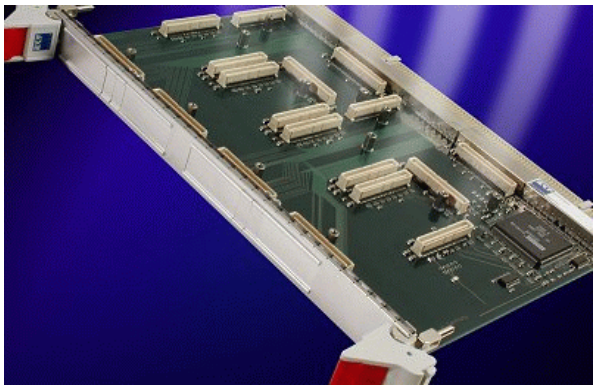


The USB controller CMA-USB is housed on a single-size type II PC•MIP module. It is provided with an type A USB connector, according to the USB specification 1.1. The board is compliant with Microsoft OHCI specification 1.0a. Users of Windows 98(SE) and Windows 2000 will find all driver support needed already embedded in their operating system.

The CMA-USB has been designed with rugged environment in mind. The USB data transmission lines are protected against transient voltages by a special suppressor circuitry. The power line of the USB connector is overcurrent limited and short circuit proof (with thermal shutdown). These measures are important, because USB allows for hot plug operation (life connect/disconnect).

For use in a CompactPCI® system, EKF recommends e.g. the CM6-SEXTET, a passive PC•MIP module carrier board.



The CMA-USB cares for effortless and low-cost attachment of USB peripheral devices to industrial computers. An individual controller as the CMA-USB dedicated to time critical devices guarantees for fastest response and highest possible data throughput.

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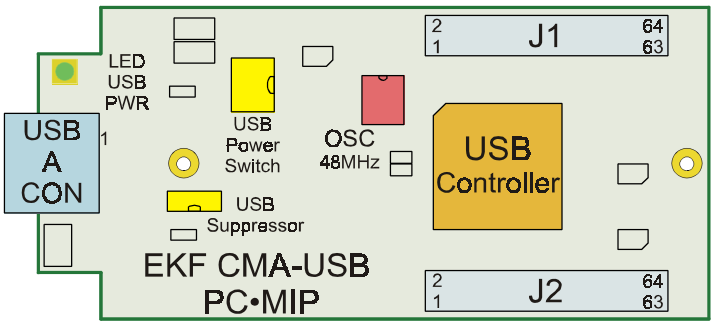
Technical Specifications

Printed Circuit Board	**Dimensions**	PC•MIP module type II (single-size 47x99.25mm^2)
USB (Universal Serial Bus)	**General**	1 downstream USB port according to USB Rev. 1.1, up to 127 devices can be controlled by one CB1-OBOE, support of all transfer modes (control, interrupt, bulk, isochronous), SPH (self powered hub) functionality
	Connector USB1	type A connector (front panel), power line pin overcurrent limited and fused against short cicuit, thermal shutdown, nominal load 5 USB units (5V/0.5A), data signal lines protected from transient voltages
	Data Transfer Rates	12Mbps full speed, 1.5Mbps low speed operation
	Controller Chip	Lucent USS-312 (or -302), compliant with OHCI Rel. 1.0a, compatible to CMD USB-670 and OPTi FireLink 82C681
	LED	LED (on-board) USB power
	Drivers	*Windows 98(SE)* and *Windows 2000* (Microsoft Windows Standard OpenHCD Drivers compliant, follow directions after window 'New Hardware found' opens up with the message 'USB Root Hub') *Linux*
PCI Bus	**Connector J1/J2**	32-Bit, 33MHz, DMA bus master, 133MBps
Power Consumption	**Connector J1/J2**	+5V ±5% 0.1A max. (external load by remotely sourced USB devices not included) +3.3V ±0.3V 0.2A max.
Temperature Humidity	**Commercial Version**	operation temperature 0-70 °C (industrial grade temperature range available on request) humidity 5-90% non condensing

subject to change without further notice



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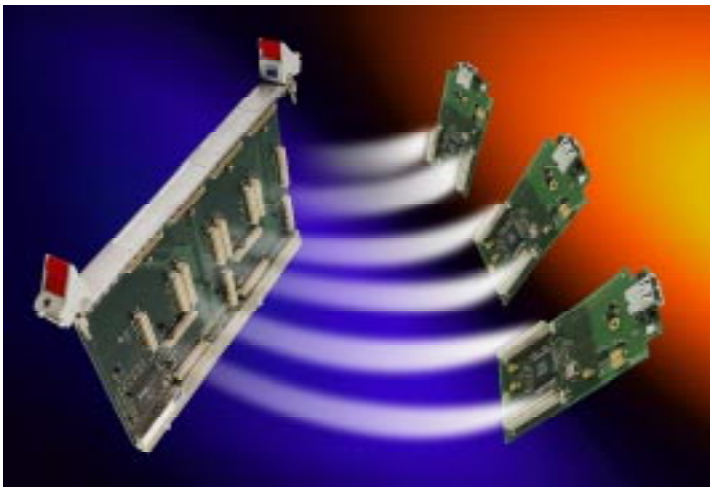
Ordering Information		
Short Alias	Ordering Number	Short Description
	CMA-1-USB	PC•MIP module USB 1.1 OHCI host controller
COMBO	CM1-1-COMBO	CPCI 6U PC•MIP carrier board, 4 slots, i960 local processor
TRIO	CM5-1-TRIO	CPCI 3U PC•MIP carrier board, 3 slots, passive
SEXTET	CM6-1-SEXTET	CPCI 6U PC•MIP carrier board, 6 slots, passive



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