

# PAC system MSX-Box for the CompactPCI bus



- Open and transparent Programmable Automation Controller system
- With free development tools
- Live DVD based on open source programs
- Real-time measurement system

## PAC systems

### Programmable Automation Controller

PAC systems are mainly used for industrial measurement and control or regulation tasks as well as for motion control.

They execute several tasks simultaneously and in a deterministic way.

#### Core features of a PAC system:

- Compact and robust design
- Programmable
- Standard Ethernet (TCP/IP)
- CPU board as system controller
- Different I/O modules

## Set course for freedom

Experience with the MSX-Box-CPCI what freedom of decision-making really means:

- You select the components of your PAC system: The MSX-Box-CPCI is based only on reliable standard technologies like for example CompactPCI backplane. Freedom also means that you can use any of the numerous standard CompactPCI I/O boards.
- You decide, whether and when to update your operating system: Using the real-time operating system Linux with RTAI extension, no need to take care of updates. Save time and money!
- You have free access to the software down to the kernel source code: You can make extensive system adaptations and realize your own optimized measurement system.

## Boost your applications

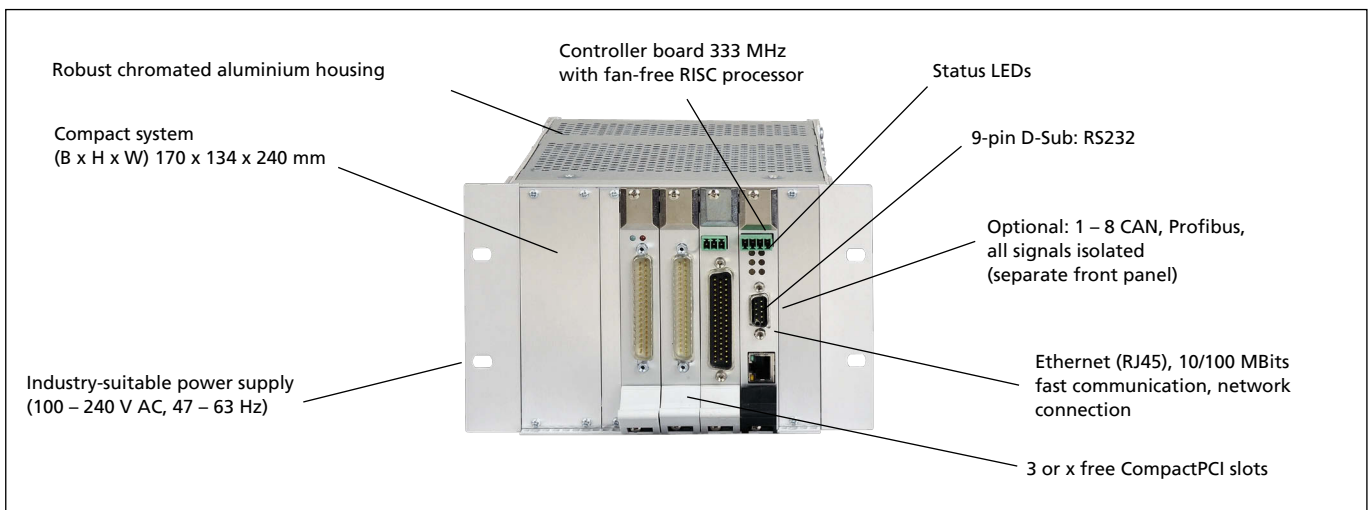
Working with the MSX-Box-CPCI that fits to your needs will boost your measurement and control applications. The MSX-Box-CPCI is supplied with development tools: You can realize even very complex tasks quite easily.

The most important advantage of a PAC system with such a transparent structure is that in case of emergency, you can react fast and efficiently.

Thanks to the long-term ADDI-DATA supply philosophy, you secure your investments for a long time. Furthermore, the fact that the MSX-Box-CPCI is supplied with free development tools limits the purchase price for serial equipment.

**Experience today how to realize your applications of tomorrow:**

[www.msx-box.com](http://www.msx-box.com)



**MSX-Box-CPCI-400****CompactPCI controller board**

RISC processor:	64-bit MIPS, no fan
Clock:	333 MHz
Memory:	16 MB Flash, 128 MB SDRAM, option up to 256 MB
Installed OS:	Embedded RTAI Linux
Standard interface:	D-Sub 9-pin: 1 x RS232
Safety features:	24 V reset input, H-active; Relay output, freely programmable, closing contact
Optional:	Additional front panel: D-Sub 25-pin: 1 – 8 CAN, Master/Slave, isolated D-Sub 9-pin: 1 x Profibus/Slave, isolated
Transfer rate:	10/100 Mbits

**Mains supply unit**

Input voltage:	100 V – 240 V, AC, 47 – 63 Hz (other voltage on request)
Output voltage:	5 V (depending on the system)
Noise immunity:	Short circuit, overload, overvoltage
Connection:	Power cable, 2 m

**CompactPCI backplane with 4 CompactPCI slots**

CompactPCI slots:	Total amount: 4 Reserved: 1 x CompactPCI controller board Free: for 3 additional CompactPCI boards
Specification:	PCI specification PICMG rev. 2.1. PICMG2.0 R3.0 CPCI Core Specification V I/O +5V

**MSX-Box-CPCI-xxxx**

Same as MSX-Box-CPCI-400, but with a CompactPCI-Backplane with x slots, incl. x-1 free slots for CompactPCI boards

**Mains supply unit**

Input voltage:	100 V – 240 V, AC, 47 – 63 Hz (other voltage on request)
Output voltage:	5 V, 3,3 V, ±12 V (depending on the system)
Noise immunity:	Short circuit, overload, overvoltage
Connection:	Power cable, 2 m

**CompactPCI backplane with x CompactPCI slots**

Number of the CompactPCI slots according to requirements	Reserved: 1 x CompactPCI controller board, further slots free for CompactPCI boards
Specification:	PCI specification PICMG rev. 2.1. PICMG2.0 R3.0 CPCI Core Specification PICMG 2.6 Bridging Specification (according to requirements) V I/O +5V

**For MSX-Box-CPCI-400 and -xxxx****Extensive software support**

Free development tools (GNU compiler, Cygwin, samples in source code ...), Knoppix Live-DVD development environment.

**Housing**

Material:	Chromated aluminium
Heat dissipation:	Through programmable fan
Temperature range:	0 – 60 °C
Temperature monitoring:	Configuration at delivery: 5 °C to 45 °C, min. and max. value programmable through software. The temperature value can be monitored. Resolution: 1 °C
Front openings:	for 3 CompactPCI boards and 1 bracket (MSX-Box-CPCI-400) for x CompactPCI boards and 1 bracket (MSX-Box-CPCI-xxxx)
Housing dimensions: (L x H x W)	170 x 134 x 240 mm (without fan) (MSX-Box-CPCI-400)
Weight:	approx. 2.5 kg (standard MSX-Box-CPCI-400 system)
Status display:	6 LEDs, incl. 4 freely programmable

**Optional accessories**

Cable:	Ethernet patch cable 2 m, shielded, RJ45 connector (PC ↔ MSX-Box-CPCI)
--------	---



You will find a large range of adapted CompactPCI boards on [page 240](#)

**Ordering information**

**MSX-Box-CPCI:** PAC system, incl. development tools (GNU compiler, Cygwin, source code samples, ...) and technical description

**Versions**

**MSX-Box-CPCI-400:** 4 CompactPCI slots (incl. 1 slot reserved for the controller board; 3 free slots)  
**MSX-Box-CPCI-xxxx:** x CompactPCI slots (incl. 1 slot reserved for the controller board; x-1 free slot)

**Options**

**MSX-256MB:** Memory extension up to 256 MB

**MSX-Basis:** Basic equipment for the options **MSX-CAN**, **MSX-Profibus**, **MSX RTSync**

**MSX-CAN-x:** 1/2/4/8 x CAN bus, master/slave, optically isolated, incl. FB-CPCI-CAN

**MSX-Profibus:** 1 x Profibus, slave

**FB-Profibus:** FB-CPCI-Profi (please order separately)

**MSX-RTSYNC:** for the synchronisation of several MSX-Boxes (with time stamp), incl. FB-CPCI-RTSync

**On request:** further housing dimensions