

Modicon Quantum automation platform

PCMCIA memory extension cards

Presentation

PCMCIA memory extension cards make it possible to extend the RAM memory capacity of high-performance Quantum processors.

Depending on the model, these cards are designed to accommodate:

- The program, symbols and constants of the application
- The additional data of the application
- Or both

PCMCIA memory extension cards

All the cards fit into PCMCIA slots in the Quantum 140 CPU 651 ●0/671 60 processors.

These cards provide three different storage types:

■ Storage of the application: program, symbols and constants in a common space 512 Kb to 4096 Kb: TSX MFP P●●●K/M for Flash EPROM memories.

■ Storage of the application and additional data, comprising:

- application area from 192 Kb to 7 Mb
- data storage area 7 Mb to 0 Kb for additional data storage.

The limit between these 2 spaces is configurable. The configurable cards are:

- TSX MRP C●●●K/M for SRAM memories
- TSX MCP C●●●K/M for Flash EPROM and SRAM memories.

■ Storage of additional data, provided by SRAM TSX MRP F004M/008M memory cards with 4 or 8 Mb.

These cards use 2 technologies:

■ Battery-backed SRAM

Used particularly in the application program design and debugging phases.

These cards provide:

- all of the application's transfer and modification services in online mode
- additional data storage

The memory is protected by a removable battery built into the PCMCIA card. A second auxiliary battery is present to enable the main battery to be replaced without loss of data.

■ Flash EPROM

Used when debugging of the application program is complete. This is used to:

- overcome battery lifetime restrictions
- perform one global application transfer

When in use, it is impossible to carry out modifications to the application in online mode.

Program modification in online mode

Only those extension cards in which the program is stored in SRAM memory (TSX MRP C●●●K/M) allow you to perform program modifications in online mode.

A user with a processor fitted with a memory extension card and who wishes to make modifications or additions to the program in online mode must structure the application program in several reasonably sized sections.

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References

Quantum 140 CPU 651 50, 140 CPU 651 60 and 140 CPU 671 60 processors can receive the following memory extension cards.

There are two types of memory limit:

- One associated with the type of processor.
- One associated with the selected PCMCIA memory card.

The lowest of these two limits defines the memory capacity accessible to users for their applications.

PCMCIA memory extension cards

Description	Memory size		Reference	Weight kg
	Application	Data files		
Configurable SRAM application/files memory extension	192...768 Kb	576...0 Kb	TSX MRP C768K	–
	192...1024 Kb	832...0 Kb	TSX MRP C001M	–
	192...1792 Kb	1600...0 Kb	TSX MRP C01M7	–
	192...2048 Kb	1856...0 Kb	TSX MRP C002M	–
	192...3072 Kb	2880...0 Kb	TSX MRP C003M	–
	192...7168 Kb	6976...0 Kb	TSX MRP C007M	–
Flash EPROM application memory extensions	512 Kb	–	TSX MFP P512K	–
	1024 Kb	–	TSX MFP P001M ▲	–
	2048 Kb	–	TSX MFP P002M ▲	–
	4096 Kb	–	TSX MFP P004M ▲	–
Configurable Flash EPROM and SRAM application/files memory extensions	512 Kb	512 Kb	TSX MCP C512K ▲	–
	2048 Kb	1024 Kb	TSX MCP C002M ▲	–
SRAM files memory extensions (1)	–	4096 Kb	TSX MRP F004M ▲	–
	–	8192 Kb	TSX MRP F008M	–

Replacement parts

Description	Use	Type	Reference	Weight kg
Backup battery	SRAM PCMCIA memory card	Main	TSX BAT M02	0.010
		Auxiliary	TSX BAT M03	–
Handle	PCMCIA memory card	–	TSX P CAP	0.030

(1) Intended for the storage of manufacturing recipes and production data. Capacity depends on the PCMCIA card model.