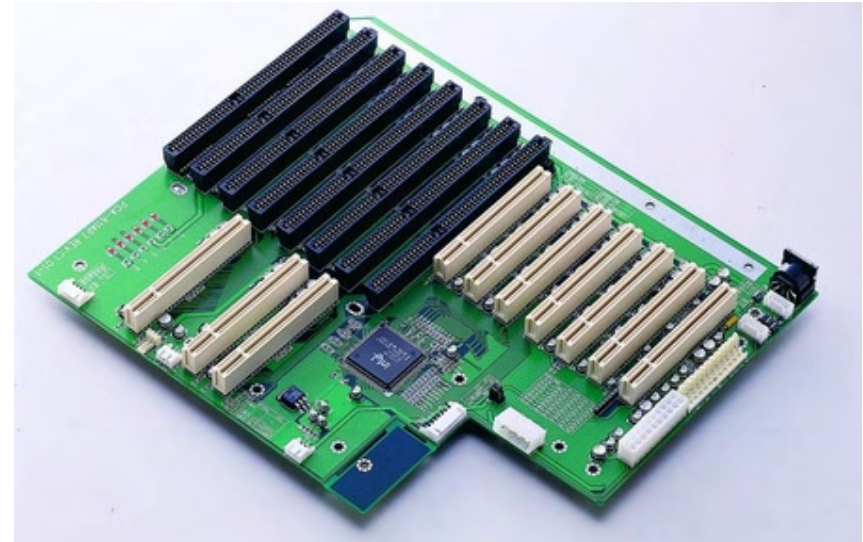


Elementos especiales de los PC industriales: Zócalos pasivos

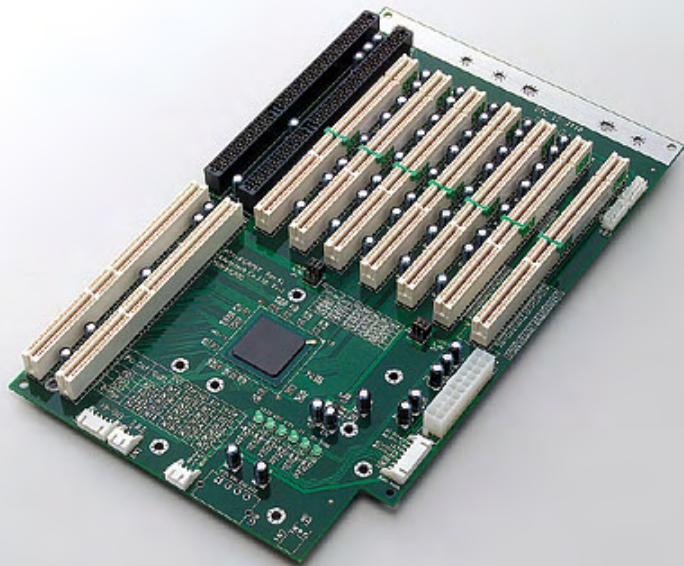
Zócalo Advantech PCA-6114P7-C

- Segmentos: 1
- Slots: 6 ISA / 7 PCI / 1 CPU
- Tamaño: 323 x 300 mm
- PCI bridge: Intel 21152
- PCI primarios: 3 slots; PCI secundarios: 4 slots
- Cumple especificaciones PICMG



Zócalo Advantech PCA-6108P6X-0A1

- Slots: 1 ISA / 6 PCI / 1 CPU
- PCI bridge: IntelR 21154
- PCI primarios: 3 slots de 64bit/66MHz
- PCI secundarios: 4 slots 64bit/33MHz
- Cumple especificaciones PICMG



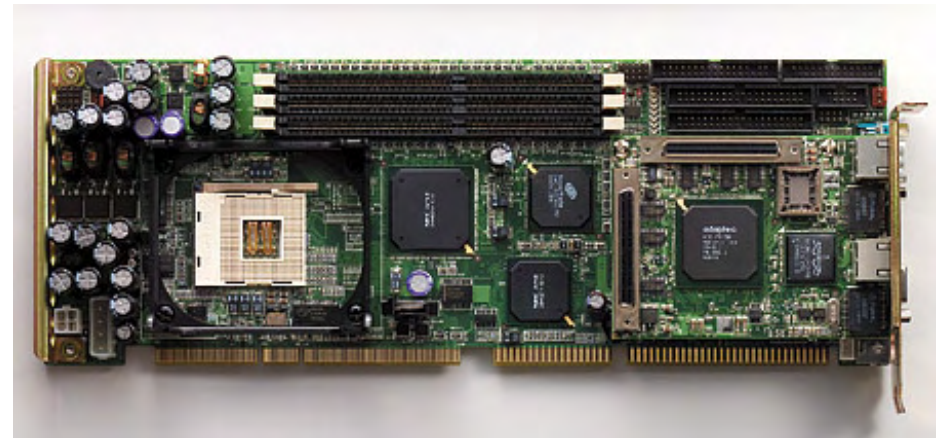
e Instalaciones. Tema 3.

Elementos especiales de los PC industriales: Tarjetas CPU

- Permiten procesamiento en paralelo

Tarjeta CPU Advantech PCA-6185: Altas prestaciones

- Socket 478 Pentium 4/Celeron Processor Card with 64-bit PCI-X/DDR/VGA/Dual Gigabit LAN/SCSI (400/533 MHz FSB)
- Pentium 4 / Celeron up to 3.06 GHz and above
- Support Intel Hyper-Threading Technology
- ServerWorks GC-SL Chipset 400/533MHz FSB
- 64-bit, 66/100 MHz PCI-X
- Onboard VGA controller with 8MB SDRAM
- Onboard single/dual 10/100/1000 Base-T Ethernet, BCM5703/5704 controller (64-bit PCI-X)
- Supports dual channel Ultra 320 SCSI (64-bit PCI-X)
- CMOS automatic backup and restore to Prevent accidental data loss of BIOS setup
- No ISA support



Elementos especiales de los PC industriales: Tarjetas CPU

Tarjeta CPU Advantech PCA-6004: Bajo consumo

- Embedded low-power C3 800 MHz CPU
- Fanless operation (external cooling required)
- VIA Apollo PLE133T chipset, 133 MHz FSB
- Dual DIMM sockets for SDRAM up to 1 GB
- On-board AGP/VGA
- Onboard 10/100Base-T networking controller
- Optional ISA high drive (HISA)



Tarjeta CPU Advantech PCA-6155V: Bajo coste

- Cost-effective industrial grade single board computer
- Chipset integrated VGA controller with shared system memory 1- 4 MB
- Supports either DIMM or SIMM memory modules



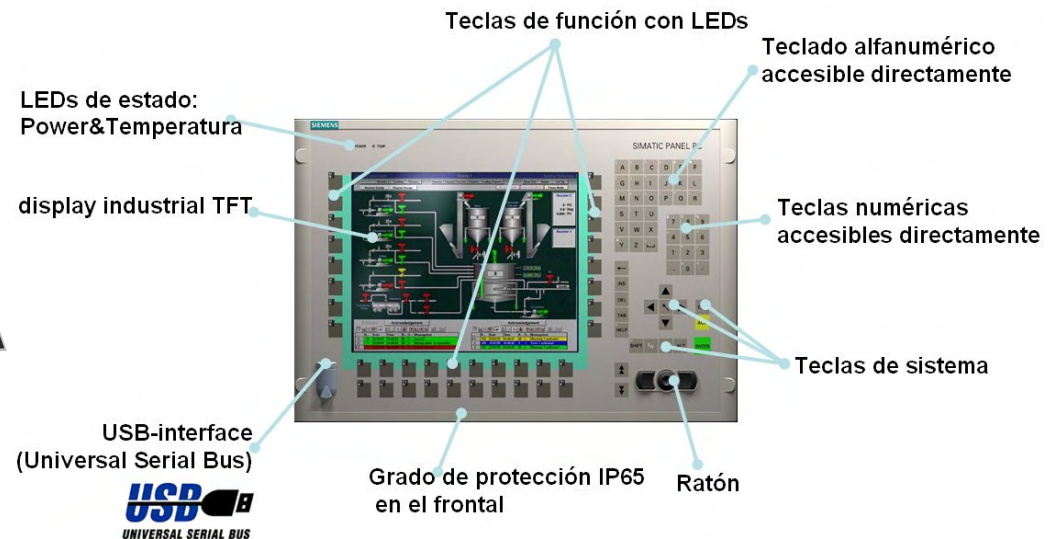
- **Pequeñas dimensiones**
 - Instalación en cabinas, pupitres y armarios
- **Funcionalidad básica, bajo consumo y poca disipación de calor**



Celeron 650 MHz o Pentium3 933 MHz sin ventilador
Buses de campo integrados en placa: ProfiBUS, CAN Open, Devicenet
512 MB de memoria RAM
3 zócalos PC/104 libres
Ethernet 10/100 Mb/s
Disco duro integrado y ampliable por tarjeta CF (CompactFlash)
DVI
3 zócalos PCI libres
Alimentación 24 V DC y Watchdog
32 KB buffered SRAM



- PC en caja con pantalla
- Aplicaciones HMI y SCADA



PC industrial de panel en chasis AMB-655HT-B4

- 19": 8U
- Nivel de protección frontal: NEMA4; NEMA12
- Disqueteras 5.25" y 3.5"
- Display: TFT LCD 15.1"
- 1024x768 pixels
- PICMG
- Tarjetas de expansión:10



PC industrial de panel PPC-1210

- PPC-1210 12.1" TFT LCD PanelPC, Wafer-5822 Geode GX1 300MHz CPU, 128Mb RAM, LAN, 2xCOM, Audio, 1x2.5" Drive Bay, External Power Adaptor
- Mounting Configuration: Panel; Wall; DeskTop
- Protection Level: IP65; NEMA4
- Display Type: TFT LCD 800x600; Size (Diagonal):12.1"
- Form Factor CPU Board: 3.5"
- CPU: Geode GX1; CPU Socket: Installed
- Chipset: CS5530A



PC industrial de panel PPC-5050AL-POS566-ACE916AP

- PPC-5050AL-POS566-ACE916AP 15" TFT LCD PanelPC with Socket-7 POS-566 CPU Board, Aluminium Front Panel, 1x3.5" Slim/Open, 1x5.25" Slim/Open, 1x2.5"/Hidden Drive Bays, 150W PS with PFC
- Mounting Config: Panel; Protection Level: IP65; NEMA4
- Display Type: TFT LCD 15.1" 1024x768
- CPU: Intel Pentium P54C/P55C; Intel Pentium MMX; AMD K6; AMD K6-2. Chipset: ALI Aladdin 5. Extension Cards (All):1



Zócalo de expansión PCI



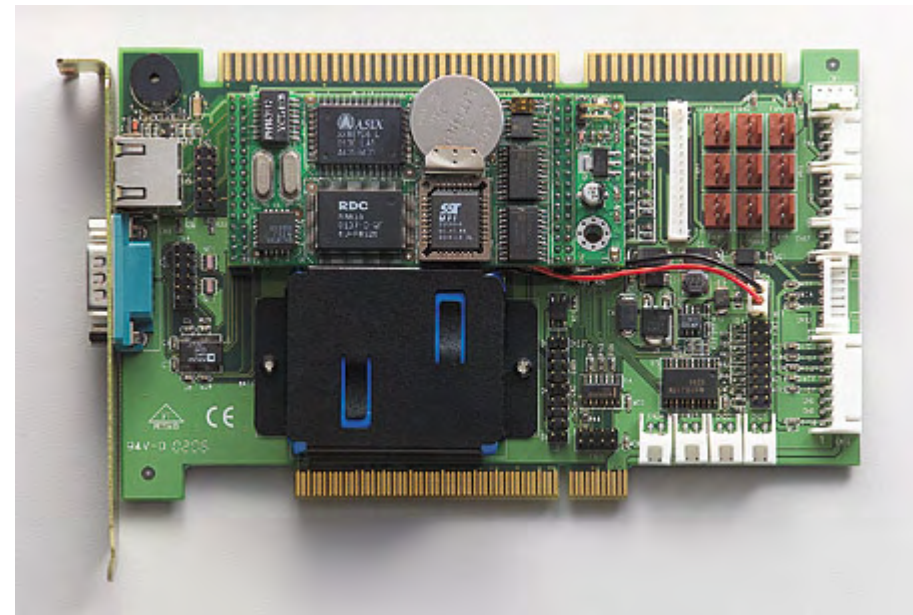
Admite Disco Duro CompactFlash



Elementos especiales de los PC industriales: Periféricos

Tarjeta de monitorización Advantech SNMP1000

- Intelligent SNMP/HTTP System Manager
- Main Features Monitors system fans, temperature, voltage, power supply, CPU fan, CPU temperature, Vcore, watchdog
- Stand alone system monitoring: no driver needed, OS independent
- Remote alarm notification through SNMP/HTTP, e-mail or pager
- Easy status monitoring through Ethernet using a browser
- Optional LCD message display
- Highly reliable: functions even when system or power fails
- Modular design eases system integration and customization



Elementos especiales de los PC industriales: Periféricos

Tarjeta de expansión a 4 puertos serie adicionales

- Placa Compact PCI CT114I
- Interface de salida: RS-232; RS-422/485
- Número de puertos: 4
- Aislamiento óptico: 2.000 V
- UART: 16C550C



Tarjeta de expansión a 4 puertos serie adicionales

- Placa PCI C104HS/PCI-DB9
- 4 puertos de salida RS-232
- Protección contra descargas de 25kV ESD
- UART: 16C550C



Elementos especiales de los PC industriales: Periféricos

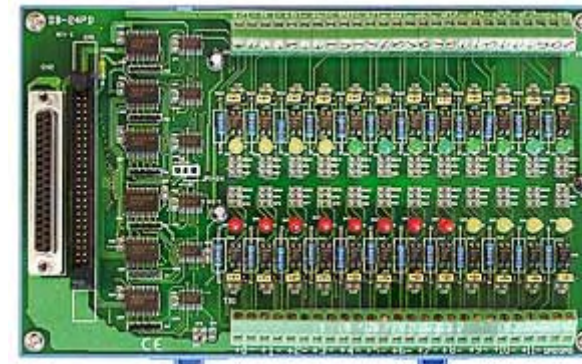
Tarjeta de adquisición de propósito general

- PCI-1802H Multifunction PCI Adapter
- 32SE/16D Analog Inputs
- 12 bit ADC, 44kHz, High Gain
- 2k words FIFO
- 2 Analog Outputs, 16DI, 16DO, Timer



Módulo de E/S

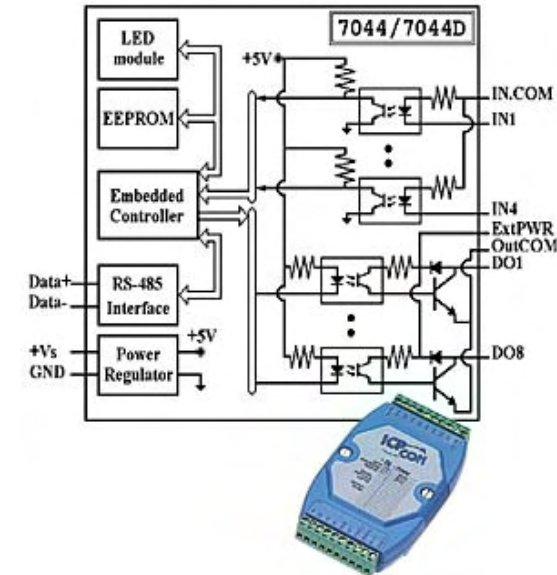
- DB-24PD/DIN 24 Channels
- AC/DC Isolated Digital Daughter Board
- Opto-22 Compatible
- DB37 Connector
- DIN Rail Mounting



Elementos especiales de los PC industriales: Periféricos

Módulo E/S de propósito general

- Módulo con interfaz serie
- DIN Rail Mounting; Plastic Case
- Entradas Digitales aisladas (Total): 4
- Salidas Digitales (Total): 8
- Timers/Counters: 4



Módulos de E/S

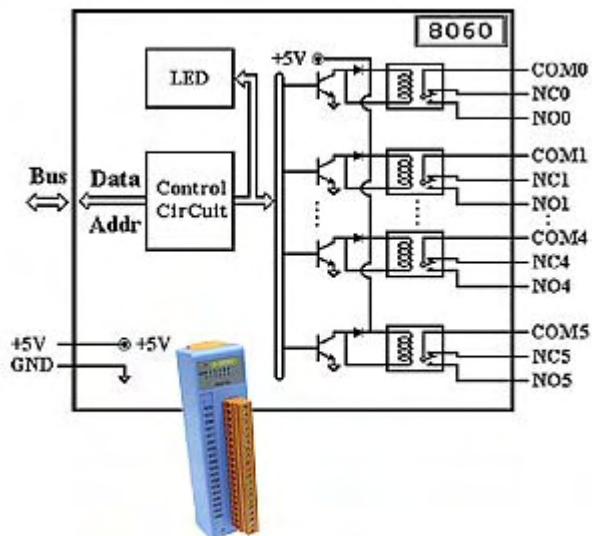
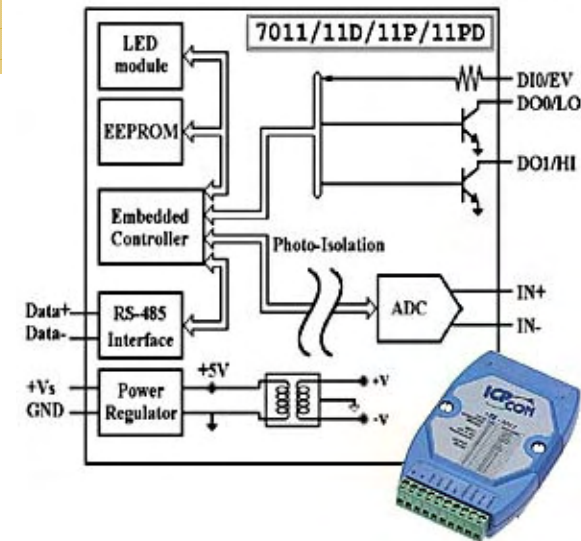
- I-7188E3D-232 PC-compatible AMD188ES 40MHz Industrial Controller
- 256kb Flash, 256kb SRAM, Ethernet
- 2xRS232, 1xRS485, 4DI, 4DO
- 7-Segment Display



Elementos especiales de los PC industriales: Periféricos

Módulo E/S de temperatura

- I-7011PD 1 Channel Input Module
- For Thermocouple Types J, K, T, E, R, S, B, N, C, L, M with Isolation
- 1 Digital Input
- 2 Digital Outputs without Isolation,
- Counter. 4,5 Digits LED Display



Módulo de E/S con relés

- I-8060 6 Channels Relay Output Module
- Parallel Bus
- Máxima corriente de corte DC 2A@30V 0.6A@110V
- Máxima corriente de corte AC 0.6A@125V 0.3A@250V
- Aislamiento de 1.500 V



Elementos especiales de los PC industriales: FAC

Fuente de alimentación ATX industrial

- ACE-1020A AC Input 300W ATX 2U
- Removable Industrial Power Supply with PFC
- Output +5V, +3.3V, +12V, -12V, -5V, +5Vsb



Fuente de alimentación ATX redundante

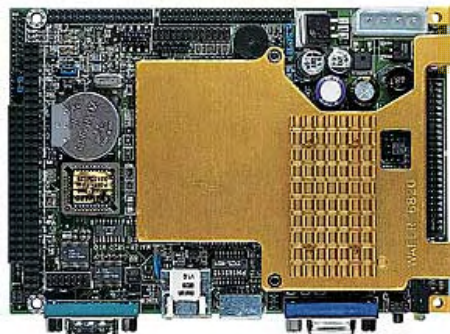
- Power Supply Type: PS/2; ATX
- Dual Redundant; Redundant Module; Hot-Swap
- Power Modules (Number): 2
- AC Voltage (Normal): 115V AC; 230V AC
- Output Power: 300W
- Output Voltage: +5V; +3.3V; +12V; -5V; -12V; +5(standby)V



Tipos de PC industriales

PC industrial portátil HTII-751-151-P4-30

- Portable Workstation with 15.1" TFT 1024x768 LCD, 10 Slots Backplane, PCI VGA Card, 108 Keys Keyboard with TouchPad, 5x5.25"/Open and 1x3.5"/Open Drive Bays, 300W ATX Power Supply
- Mounting Configuration: Mobile
- Form Factor CPU Board: PICMG Full Size (Option)
- Extension Cards (All):10
- Index Device: Touch Pad



CPU board



2.5" Flash Disk

Wafer-4823

ACE-855A
Power Supply

PC industrial de panel PPC-5012-ACE855

- Embedded Workstation with 6.4" TFT 640x480 LCD for 3.5" CPU Board, 1x2.5"/Hidden Drive Bays, 55W Power Supply
- Mounting Configuration: Wall
- Protection Level: IP65; NEMA4
- Touch Screen (Type): Option
- Form Factor CPU Board: 3.5" (Option)



Control, instrumentación e Instalaciones. Tema 3.
a. Máster Universitario. Alfredo Rosado.



PC de caja Beckhoff C6130

- 8 slot industrial PC for control. Cabinet installation drives and plug-in cards easily accessible. All connectors on the top. Detailed PC configuration information on the front status LEDs and protected reset key on the front card holders, actuated without tools
- protection class IP 20. Operating temperature 0 to 55 °C. (W x H x D) 295 x 423 x 250 mm
- Processor Intel Celeron 733 MHz. Slot motherboard with socket 370 for Intel Celeron or Pentium III
- 8 slot PISA bus passive backplane, 2 ISA, 1 combined ISA/PCI and 3 PCI slots available. 128 MB SDRAM DIMM module, expandable to 512 MB
- On board graphic adapter, 2 MB, LCD interface, monitor connector. IDE hard disk, 3½ inch, 40 GB. Floppy disk drive 1.44 MB. 2 serial RS232 ports, 2 USB and 1 parallel port on board
- PS/2 keyboard socket and PS/2 mouse socket. On board ethernet adapter with 10/100 base-t connector. 100 - 240 V AC full range compact power supply



Módulos de bus de campo para PC industriales

PCI Profibus FC3101, FC3102

- Profibus DP, DP-V1 and DP-V2 (MC): Can master the Profibus protocol with all its features
- The cards are equipped with the latest version of the Profibus technology including high-precision isochronous mode for axis control and expanded diagnostic options
- Support different polling rates for the slaves and can even synchronise several channels accurately with each other
- Further features are:
 - Cycle times from 200 μ s are possible
 - Profibus DP, Profibus DP-V1, Profibus DP-V2
 - Powerful parameter and diagnostics interfaces
 - The error management for each bus user is freely configurable
 - It is possible to read the bus configuration and automatically assign the "GSE" files
 - Optionally expandable with up to 32 kbyte of NOVRAM
 - Transmission rate 9.6 kBaud - 12 Mbaud



Módulos de bus de campo para PC industriales

PCI CANopen FC5101, FC5102

- Fieldbus CANopen. Fieldbus channels 1 or 2
- Transmission rate 10, 20, 50, 100, 125, 250, 500, 800, 1000 kBaud
- Interface to the PC Plug and Play PCI Interface 32 Bit with 4 kBytes DPRAM per channel
- Bus interface 9-pin D-sub connector according to CANopen specification, interface galvanically isolated
- Communication CANopen network master and CANopen manager or CANopen slave
- Bus nodes per channel: max. 127 slaves. Termination resistor switchable
- Hardware diagnostics 2 LEDs per channel
- Dimensions approx. 106 x 175 mm. Operating temperature 0 °C ... 55 °C
- All CANopen PDO communication types are supported: event driven, time driven (using an event timer), synchronous, polling
- Individual monitoring of the process data objects
- Synchronisation with the PC controller's task cycle



Módulos de bus de campo para PC industriales

PCI DeviceNet FC5201, FC5202

- **Fieldbus DeviceNet. Fieldbus channels: 1 or 2**
- **Transmission rate 125, 250, 500 kBaud**
- **Interface to the PC Plug and Play PCI interface 32 Bit with 4 kBytes DPRAM per channel**
- **Bus interface Open style connector 5-pin according to DeviceNet specification, galvanically isolated. Card comes with connector.**
- **Communication master and slave functionality. Bus nodes per channel: max. 63 slaves**
- **All DeviceNet I/O modes are supported: polling, change of state, cyclic, strobed**
- **Device Heartbeat Messages, Device Shutdown Messages**
- **Unconnected message manager (UCMM)**
- **Termination resistor switchable**
- **Hardware diagnostics 2 LEDs per channel**
- **Dimensions approx. 106 x 175 mm**
- **Operating temperature 0 °C ... 55 °C**

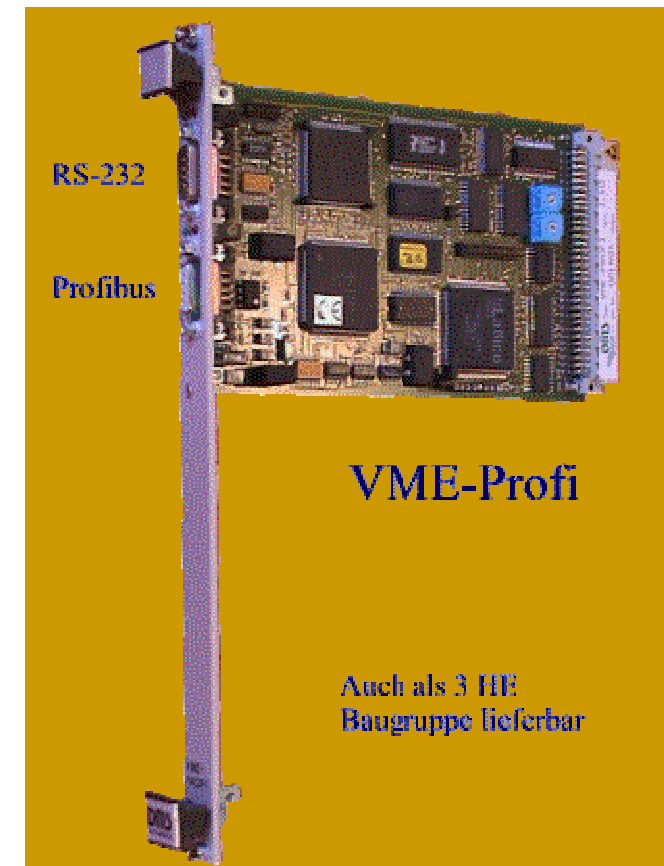


Módulos de bus de campo para PC industriales

VME Profibus FC5201, FC5202

○ Tarjeta para conexión entre Bus VME interno y Profibus

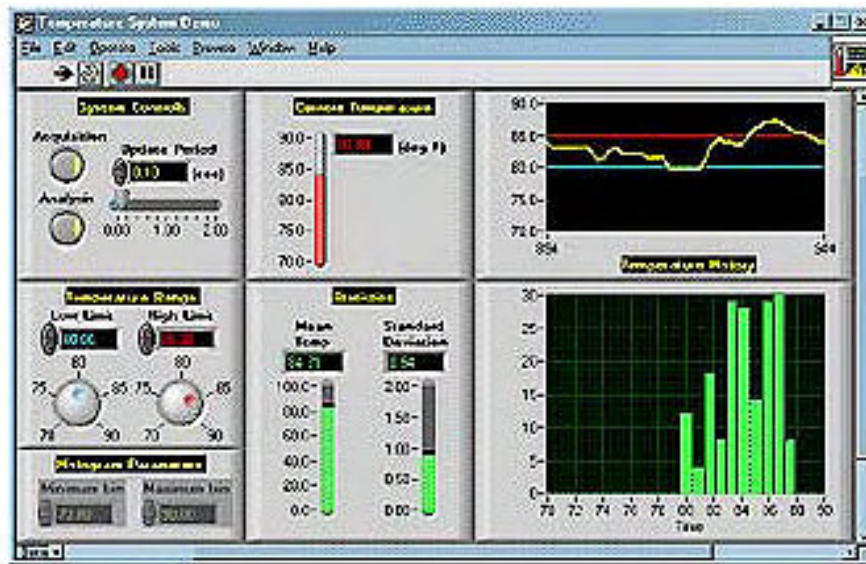
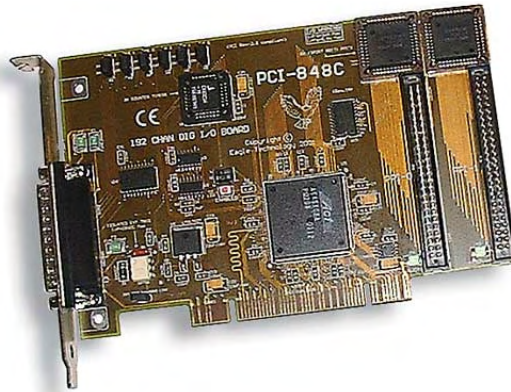
- Dos versiones: Maestro y esclavo
- Incluye puerto RS-232 para depuración y configuración
- Procesador Profibus MC68331 con 256 KB RAM, 512 KB Flash
- Interfaz VMEbus esclavo A24 D16 estándar



- Es posible realizar control de planta con PC de diferentes modos
 - **Control Directo**
 - El PC gestiona E/S mediante programación estándar
 - **SoftPLC**
 - El PC aplica tiempo determinístico para control de E/S y tiempo de ciclo
 - **SlotPLC**
 - El PC sirve de alojamiento para un módulo específico que internamente contiene un autómata programable



- Se accede a los elementos de control a través de librerías para programación en VBasic, VisualC, LabView, etc.



Se emplean tarjetas de expansión de E/S locales o remotas (a través de tarjetas de bus de campo)

Aplicaciones para captura de datos y poco control de salidas en tiempo real



- El control lo realiza un PC
 - La programación es análoga a un PLC
 - Posee librerías especiales de tiempo real y determinístico
- Principales fabricantes
 - Siemens: WinAC
 - Beckhoff: TwinCAT



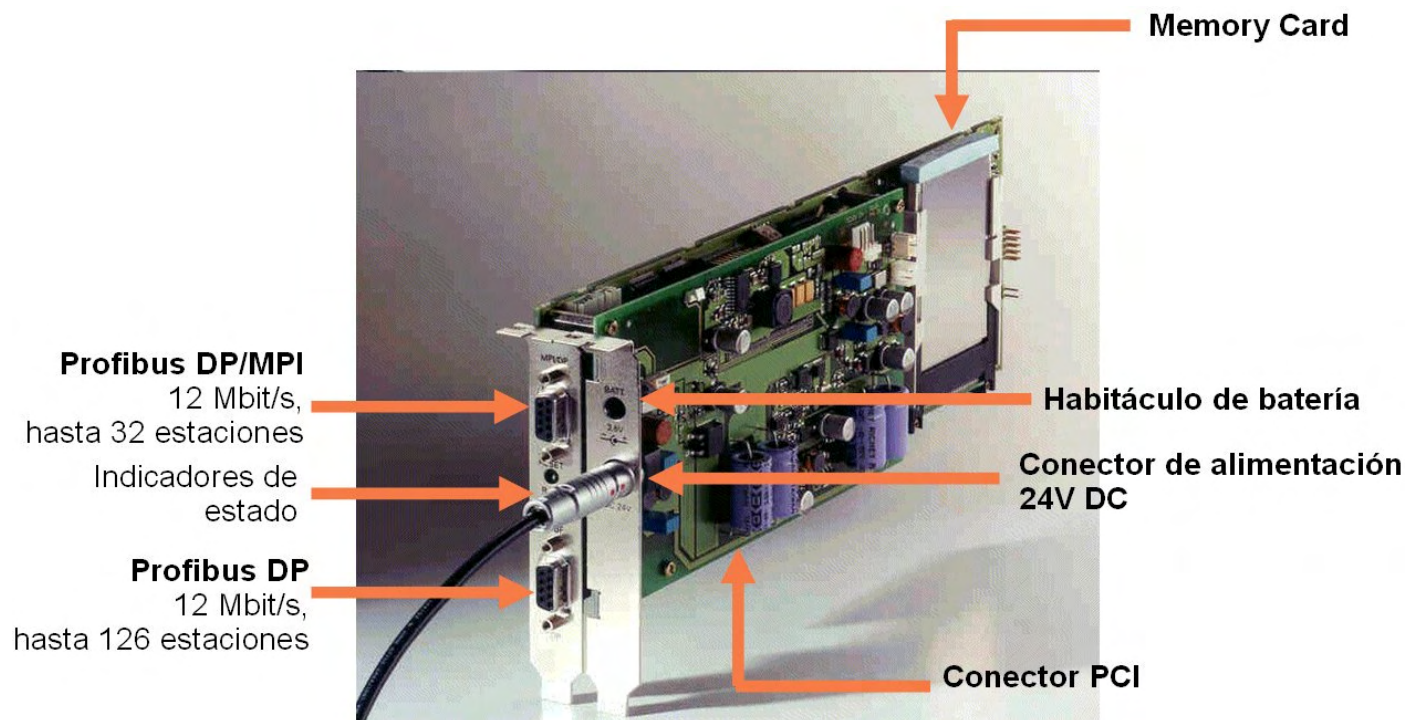
Aplicaciones donde un autómeta programable está más limitado, y un PC la puede realizar fácilmente

El peso de las tareas PC es grande comparado con las tareas de control

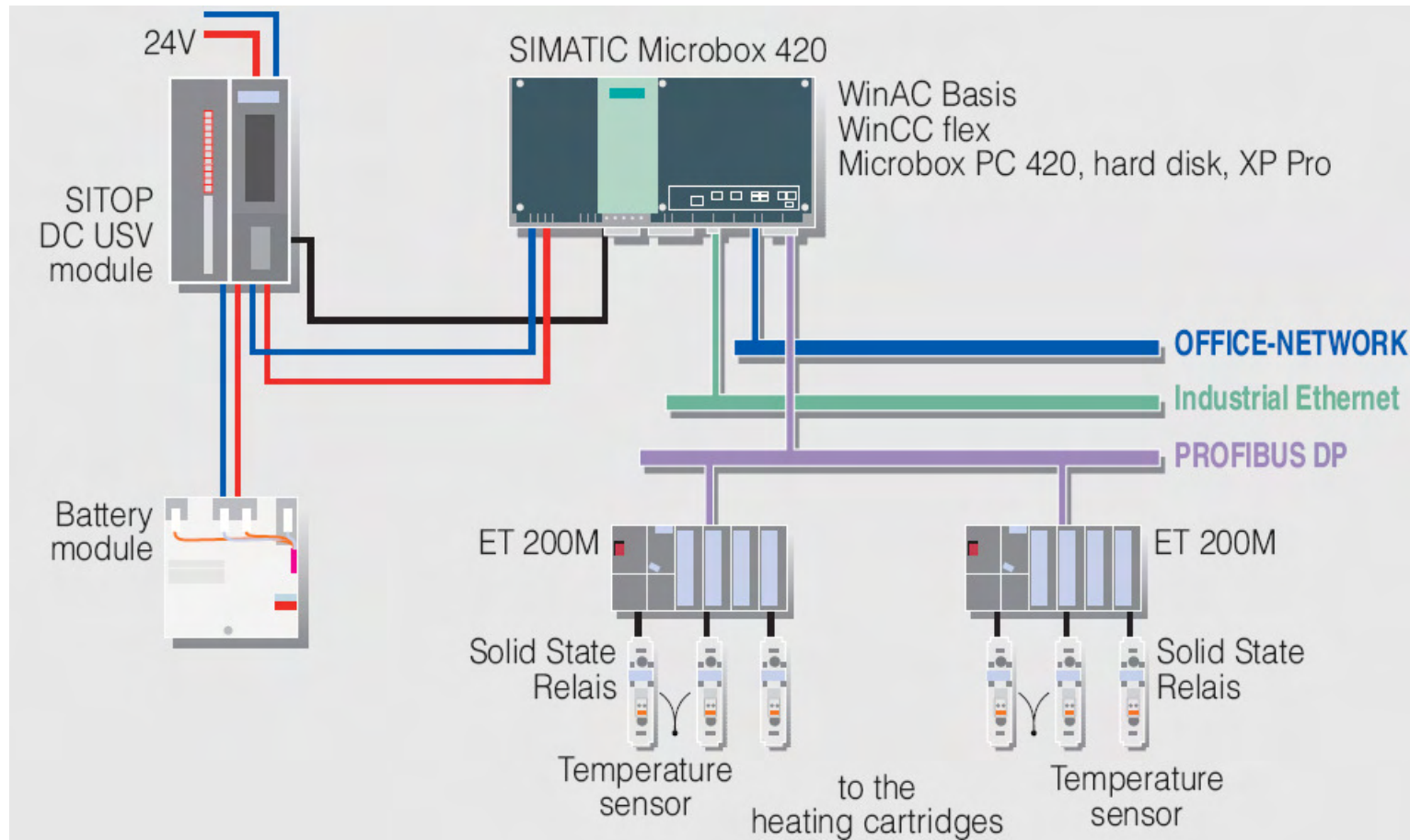
Las condiciones críticas de funcionamiento no son muy estrictas



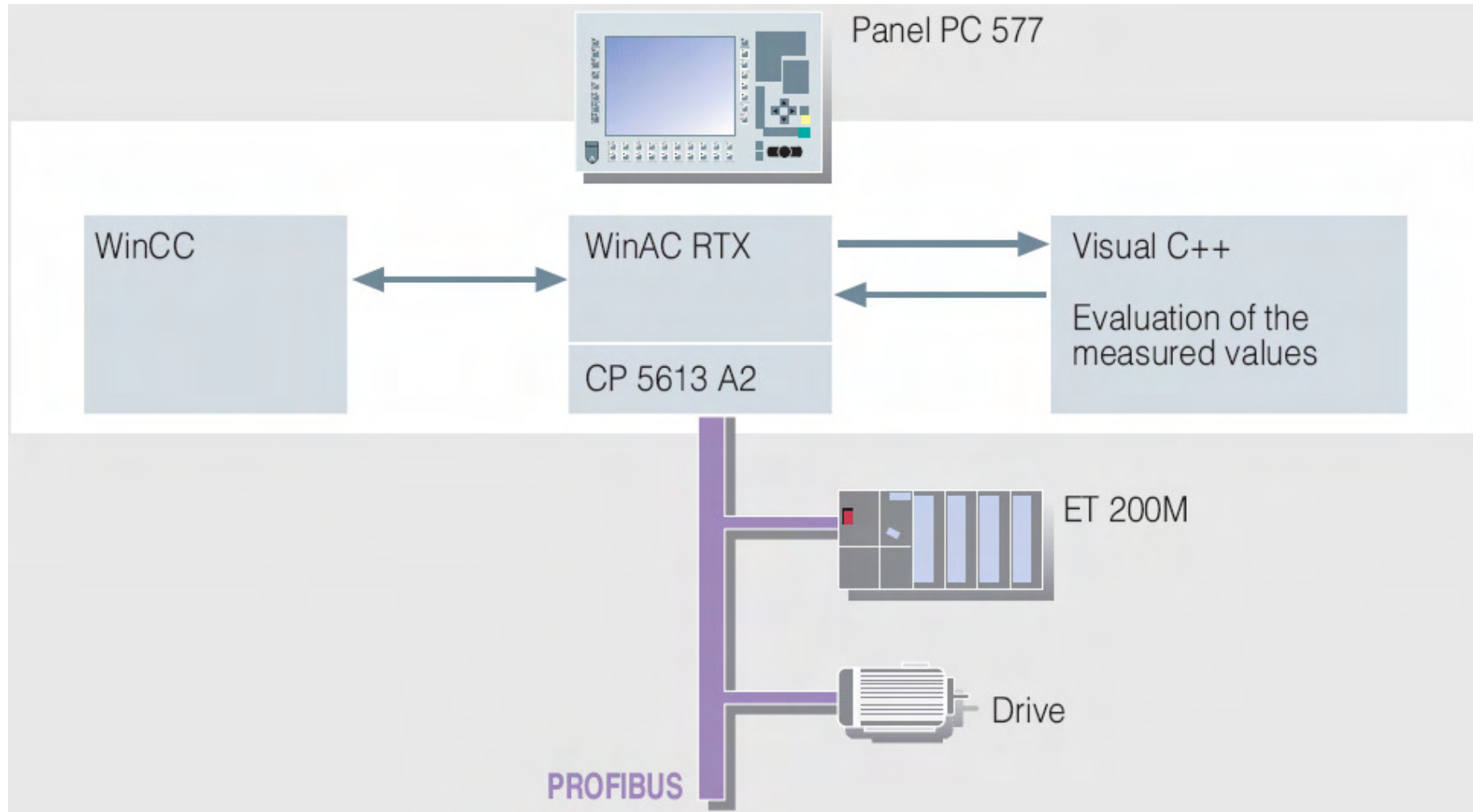
- Completamente independiente del PC
- Intercambio de datos intensivo con PC
- Necesario donde el control típico PLC sigue siendo necesario



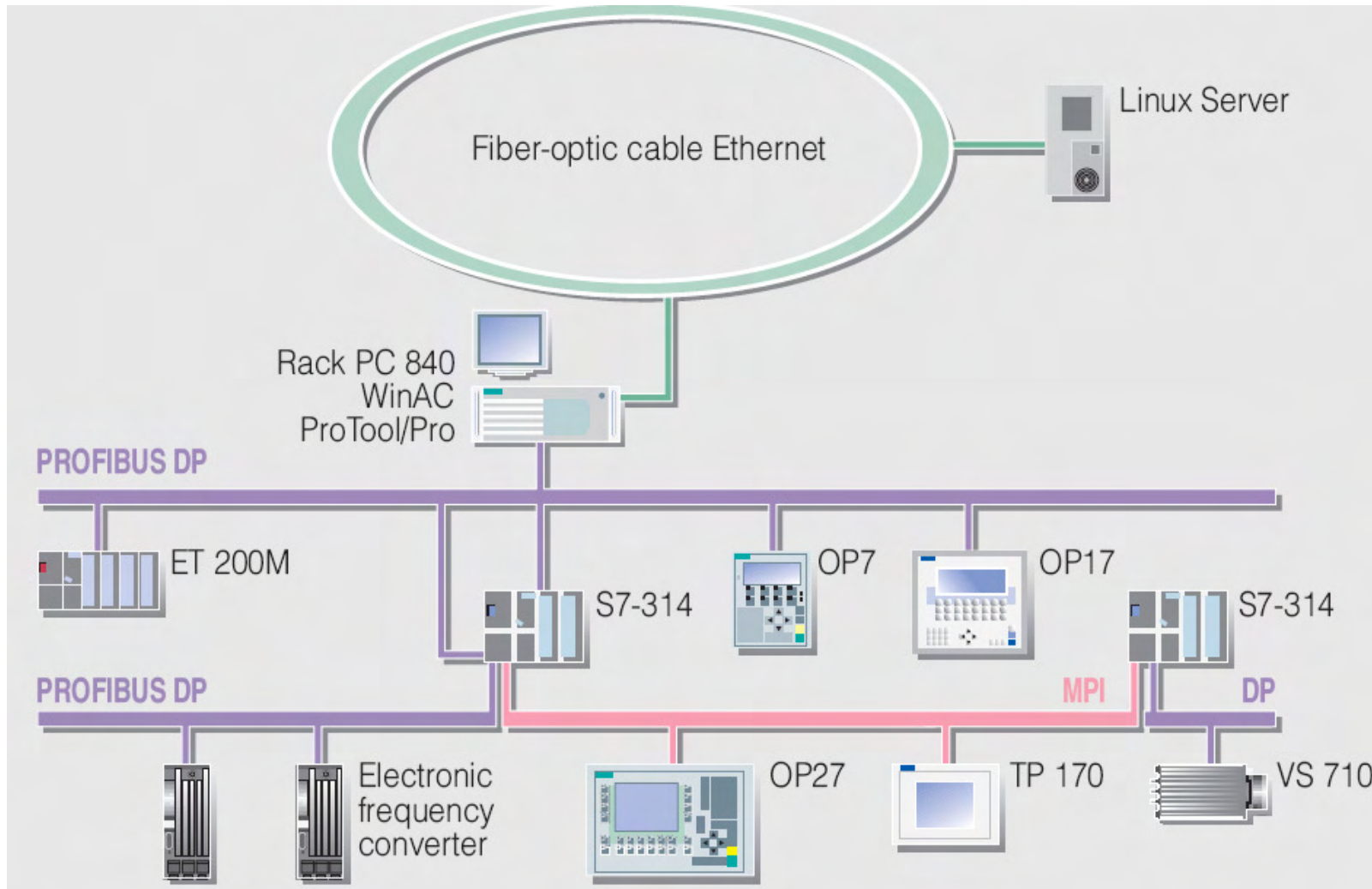
Aplicaciones con PC Industriales



Aplicaciones con PC Industriales



Aplicaciones con PC Industriales



Aplicaciones con PC Industriales

