



HYTEC ELECTRONICS LIMITED

1U IOC with PC104+ running EPICS

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9010 IOC Blade

Rack mounting IOC with PC104+





Main Features:

- Flexible I/O options
- All-in-one
- Compact – Relatively low Cost
- 6 Industry Pack slots
- 1 PMC slot
- Signal Conditioning boards for each IP
- DC / DC power plug-ins for isolation.
- PC104+ 400MHz (standard) to 1.6GHz



Other features:

- 1U standard 19" rack unit – 450mm depth (17.5 inches)
- 2 row x 40 character LCD for diagnostics and status
- 6 IP slot addressed red LEDs
- 2 programmable status red LEDs
- DC OK green status LED
- 3 programmable push buttons (for menu navigation)
- Buried RESET button for PC104+ reset
- 5 powerful DC cooling fans for added reliability
- Fan speed sensing
- CPU temperature sensing
- 100V / 260 volt 50/60Hz universal 175W PSU – IEC plug

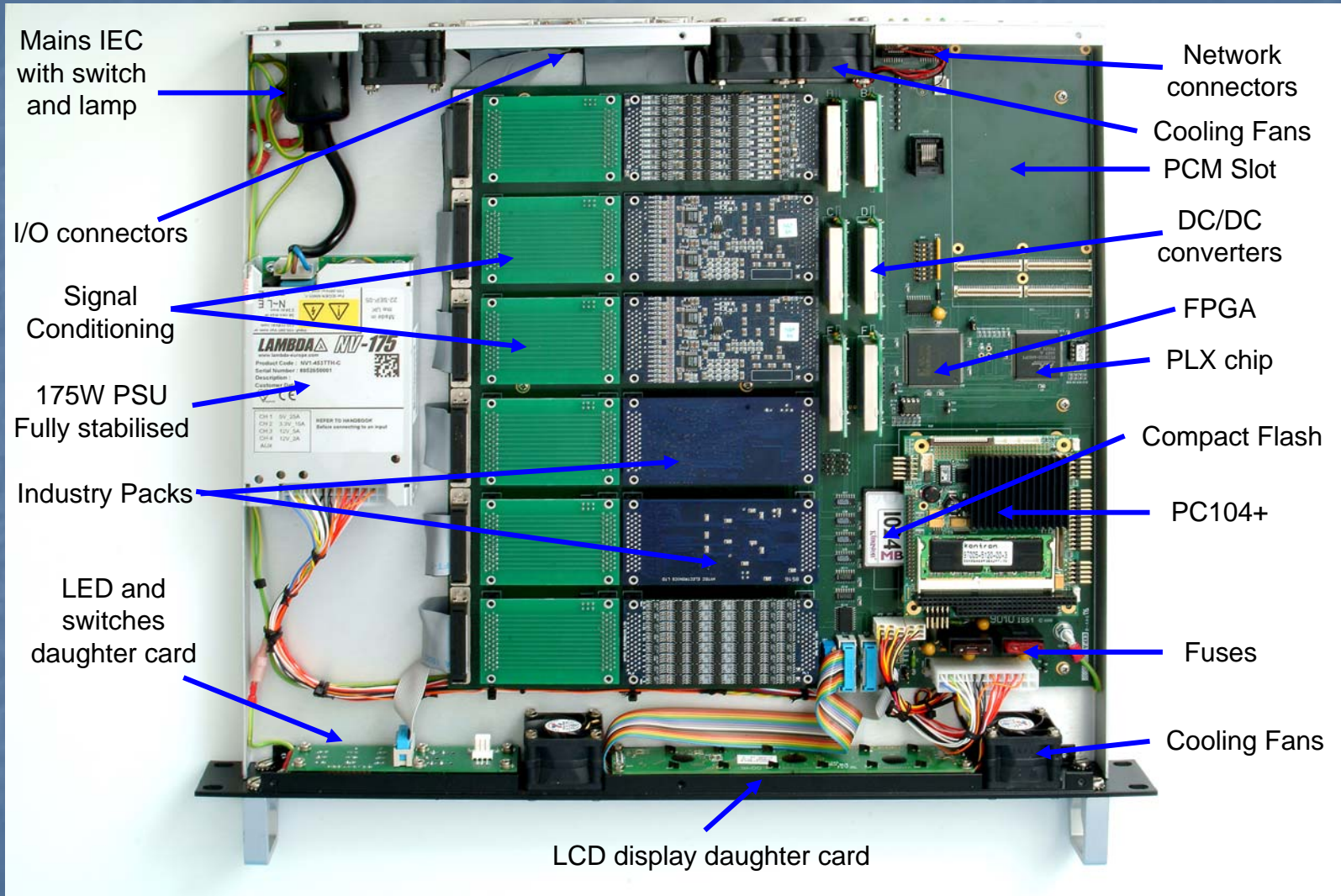


Standard PC104+ features:

- 400Mhz PC104+ supplied as standard
- 1GB Compact Flash
- 512Mb RAM
- 10/100 MHz ethernet (dual ethernet option)
- USB 2.0 port on front panel
- RS232 console port on rear
- Real Time Clock



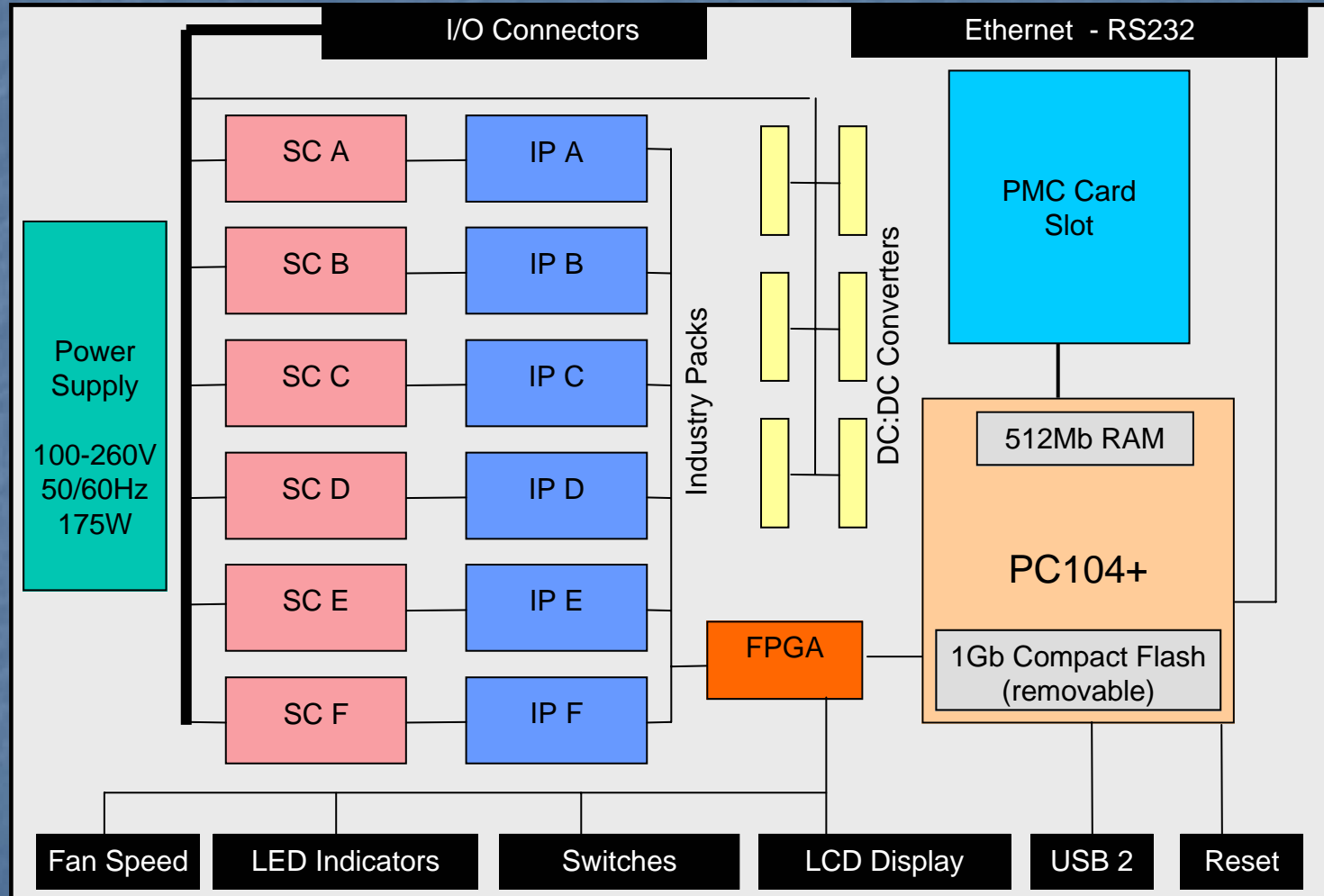
9010 – Inside the Box:



EPICS collaboration / ICALEPCS
Geneva 2005



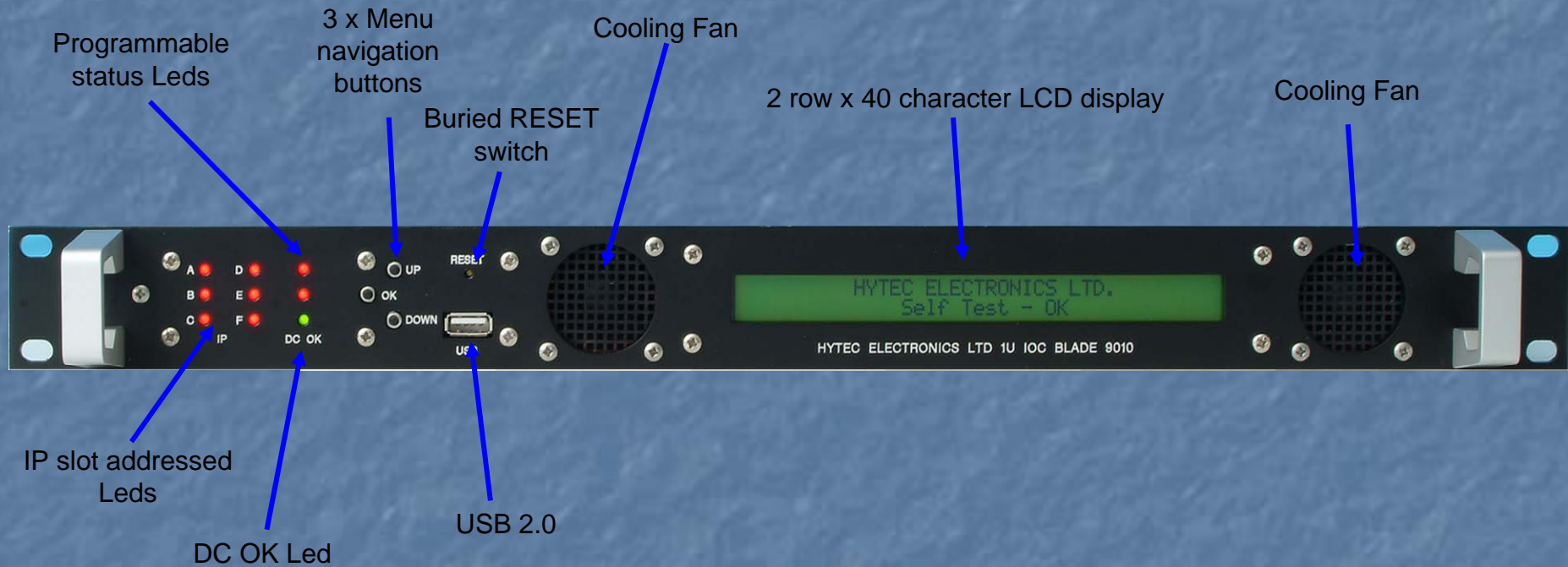
9010 – Block Diagram:



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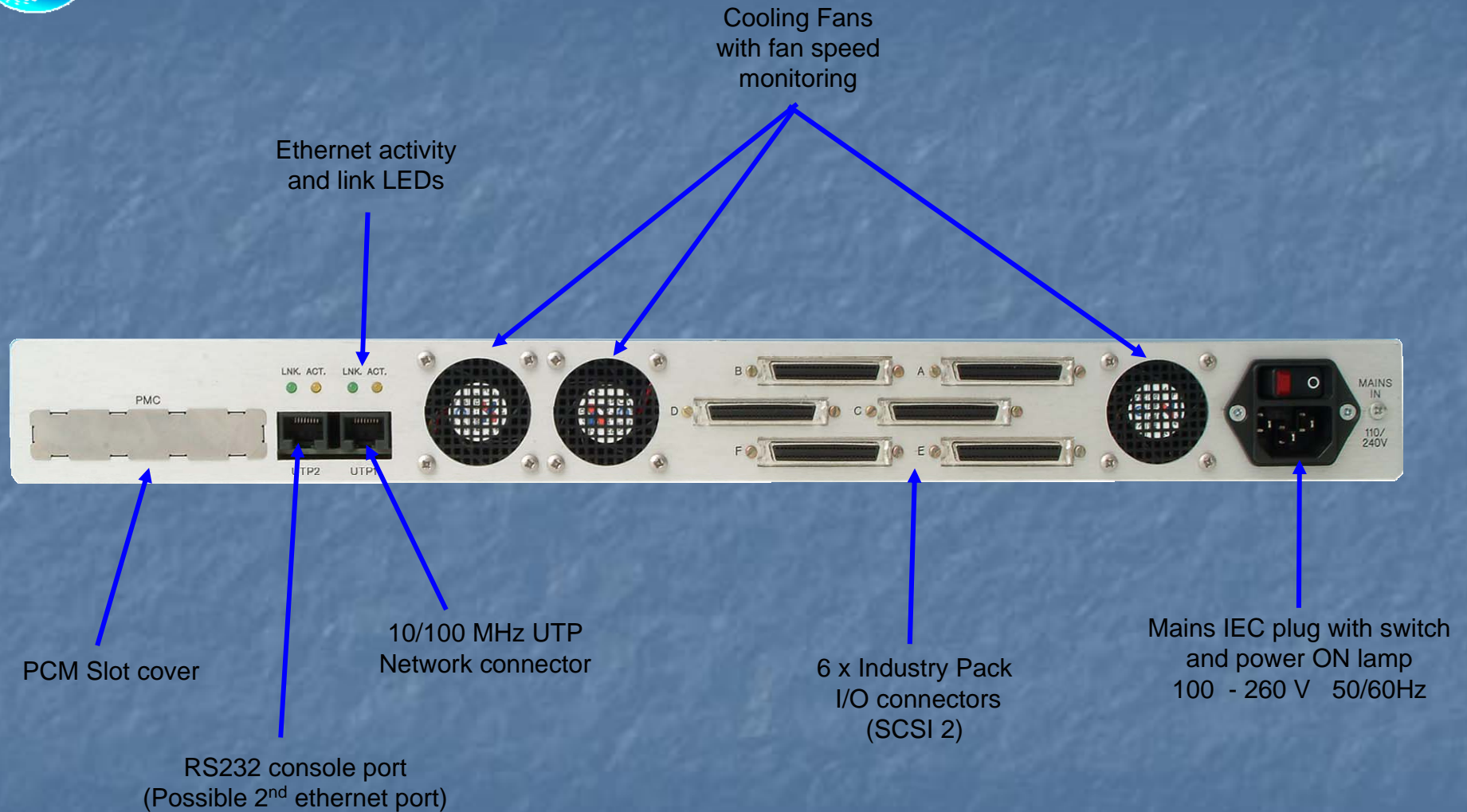


9010 Front Panel:





9010 Rear Panel:





Signal conditioning card range

- 9202 Analogue I/O
 - 16 I/O
 - DC/DC isolation capable
 - External clock input
 - External trigger input
 - Filter options
- 9301 Digital Input
 - 16 inputs
 - DC/DC isolation capable
 - Input and Output strobes
- 9303 Digital Output
 - 16 outputs
 - DC/DC isolation capable
 - Input and Output strobes
- 9304 Straight Through
 - Routes all signals straight through to the I/O connectors



Software Support



- LINUX / HTML



- LINUX / TCPIP

- LINUX / EPICS



- RTEMS / EPICS



- Windows / OPC Server



LINUX / HTML



- Interface to configure and monitor the 9010 IOC
- A tabbed page for each IP slot and the PCM slot. The pages specific to the IP card (Hytec IP cards only)
- General configuration tab
- Remote testing without client code



LINUX / TCPIP



- Support for a specific TCP/IP socket interface
- Simple commands
(STATUS, CONFIGURE, READ, WRITE)
- Allows C, C++ remote programs a simple interface
- Maybe SNMP – MIB interface later



LINUX / EPICS



- EPICS 3.14.6 already running (Demo)
- Scan of the IP slots (VITA4) to identify cards fitted during start up.
- Default database channel sets for IP cards found added to start script.
- IOC auto configured
- Remote modification of default script possible



RTEMS / EPICS

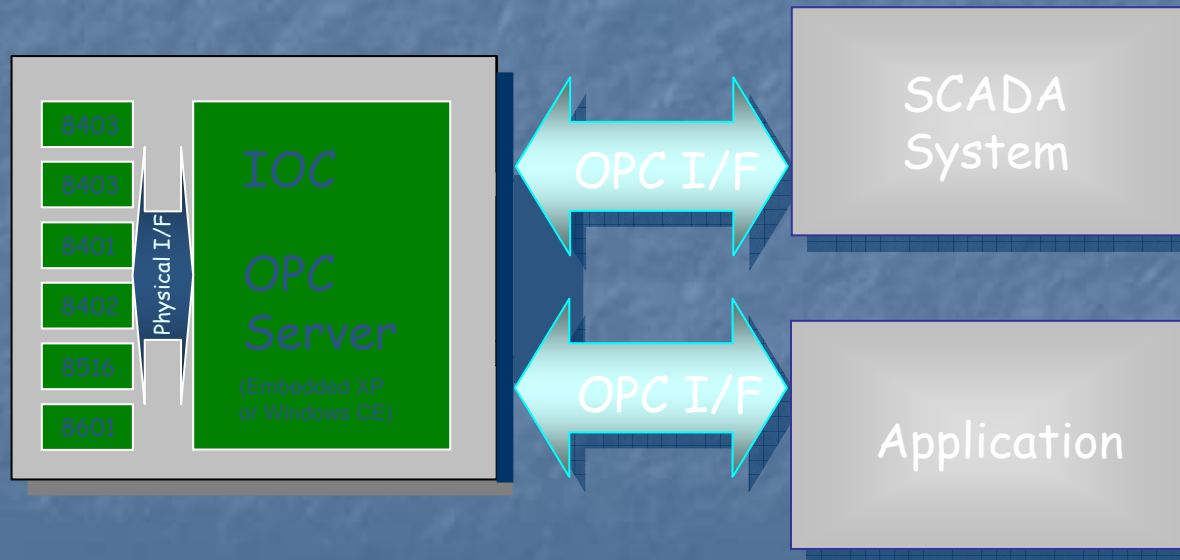


- RTEMS version will be supported
- Existing VxWorks drivers to be ported to RTEMS
- Simplest and most direct replacement for VME system running VxWorks



Windows / OPC Server

- Embedded Windows XP or Windows CE based OPC Server
- Up to date OPC specification compliant
- Automatic device (Hytec) detection and basic database configuration
- Client database configuration tool



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