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:

- Mains IEC with switch and lamp
- I/O connectors
- Signal Conditioning
- 175W PSU Fully stabilised
- Industry Packs
- LED and switches daughter card
- Network connectors
- Cooling Fans
- PCM Slot
- DC/DC converters
- FPGA
- PLX chip
- Compact Flash
- PC104+
- Fuses
- Cooling Fans
- LCD display daughter card

EPICS collaboration / ICALEPCS
Geneva 2005
9010 Front Panel:

- Programmable status LEDs
- 3 x Menu navigation buttons
- Buried RESET switch
- Cooling Fan
- 2 row x 40 character LCD display
- USB 2.0
- IP slot addressed LEDs
- DC OK Led
9010 Rear Panel:

- Cooling Fans with fan speed monitoring
- Ethernet activity and link LEDs
- PCM Slot cover
- 10/100 MHz UTP Network connector
- RS232 console port (Possible 2nd ethernet port)
- 6 x Industry Pack I/O connectors (SCSI 2)
- Mains IEC plug with switch and power ON lamp
  - 100 - 260 V
  - 50/60Hz

EPICS collaboration / ICALEPCS
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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
- 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
- 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 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