

what is it? microIOC Analog/Digital, **enables acquisition and remote control of analog and digital signals.** Analog acquisition features controllable gain, user-defined number of sampling channels and trigger conditions.

With microIOC Analog/Digital you are able **to measure results** of analogue sensors, **states** of digital contacts, **switch on and off** various equipment, and **provide required analogue signals** and control them over the Ethernet.



The following features are provided as standard: industrial-grade components; standard x86 architecture; dual Ethernet, 2xUSB, RS232, and VGA interfaces; complete SW support: Linux Debian or RTEMS, control system integration.

Please check microIOC baseline for the details of the microIOC family.

benefits

- control of devices with analog and digital interface and integration into control system.
- every signal can be configured as input or output
- less maintenance and installation costs because of standard microIOC HW&SW platform
- modular: additional I/O (GPIB, serial...)
- low cost per I/O channel

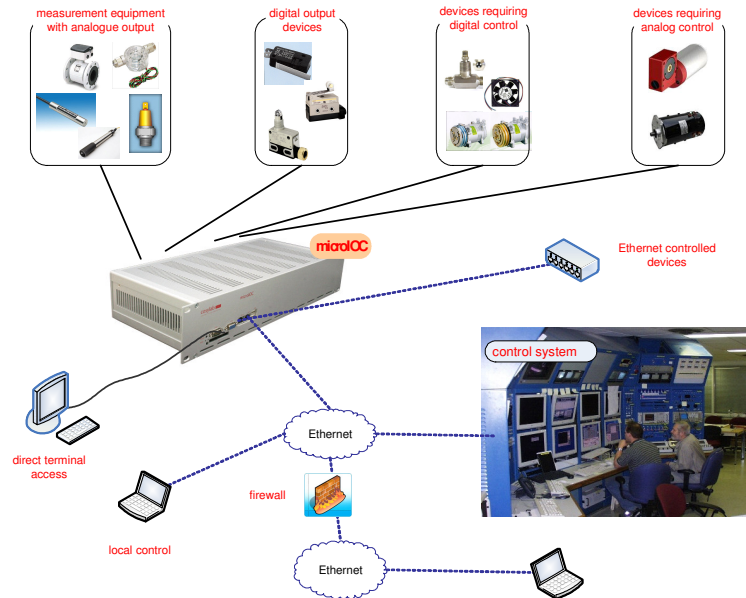


key features

- customized back-panel interfaces for direct connection of various instrumentation, acquisition systems and actuators
- content price/ performance value for precision data acquisition
- multiple I/O digital channels
- up to 500kHz sampling rate



use case



technical specification

| microIOC Analog/Digital | |
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| microIOC control unit | |
| CPU | x86 compatible AMD GEODE GX1, 300 MHz |
| interfaces | 2x10/100 Ethernet , 2xUSB, RS232, VGA, |
| SW | Linux Debian or RTEMS, full control system integration (EPICS, ACS and Tango) |
| power supply | 110/220 V (50/60 Hz), 60 W, industrial grade, current protection |
| casing | desktop 8" 2U (200 x 88 x 160) rack-mount 19" 2U (440 x 88 x 200) |
| 16-bit extension module (up to 3 can be used) | |
| analog inputs | 16 single ended or 8 differential inputs resolution: 16 bit sampling rate: 250kHz or 500kHz bipolar ranges(±0.5V, ±1V, ±2.0V, ±2.5V, ±5V, ±10V) unipolar ranges (0-1V, 0-2V, 0-4V, 0-5V, 0-10V) over-voltage protection (-37 to +52V) trigger source software selectable - external trigger, programmable timer, program command, A/D start, single scan start |
| analog outputs | 2 analog outputs resolution: 12 bit ranges: 0-5, 0-10V |
| digital I/O | 16 programmable as inputs or outputs in groups of 8 |
| 12-bit extension module (up to 3 can be used) | |
| analog inputs | 8 single ended or 8 differential inputs resolution: 12 bit sampling rate: 100kHz programmable ranges: 0-5V, 0-10V, ±5V, ±10V A/D triggering method: Software selectable: programmable timer, program command |
| analog outputs | 4 analog outputs resolution: 12 bit voltage ranges: (0-5V, 0-10V, ±5V, ±10V) trigger sources: software selectable programmable timer and program command |
| digital I/O | 24 digital channels buffered channels: 16 |

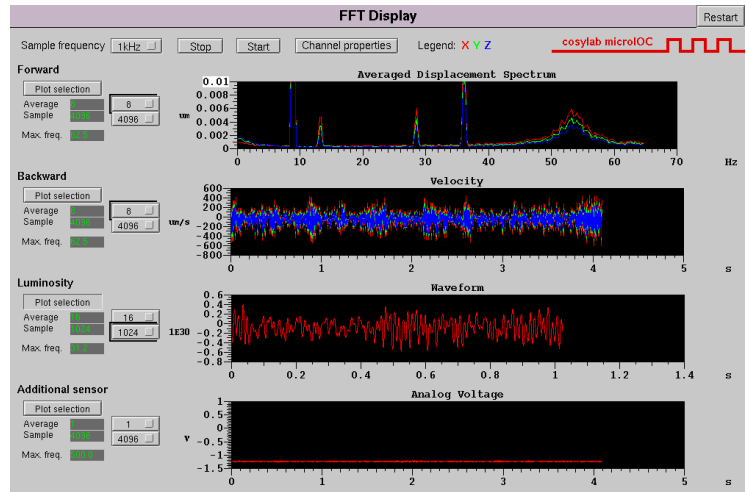


microIOC FFT spectra

microIOC Analog/Digital can be upgraded with EPICS FFT Application for acquisition of 8 analog signals and the spectra analysis of the signals by means of FFT. The GUI application offers control over the acquisition frequency, analog ranges, conversion parameters etc.

FFT spectra GUI

- providing buttons for starting and stopping application
- selecting plots and displaying selected plots
- setting and monitoring ADC parameters
- setting and monitoring FFT parameters



FFT spectra Channel properties

The individual channel properties can be edited in "FFT Channel Properties" window.

