

# nCONTROL

Clearbox Systems is proud to present nControl, an innovative new monitoring and control solution. With modularized hardware and software, the system uniquely addresses remote site monitoring. An nControl module consists of a low power, industrial CPU, dual isolated serial ports, and dual isolated Ethernet ports. A removable SD card allows software and configuration to be moved from module to module, and houses the powerful Newpoint Technologies, Inc. Compass™ Software Suite. Its low power design (<10W) and broad input voltage range makes nControl an ideal choice regardless of site power constraints.



## A COMPLETE M & C SOLUTION

nControl is a complete network management system that offers reliability and scalability. The system achieves this by moving forward from the traditional approach of centralized hardware to a modular system. This means you can physically locate your control system at the device you are monitoring. This approach not only scales to large facilities, but allows a cost-effective entry level solution for smaller sites. Each module can independently report change and alarm information back to central sites efficiently using Newpoint's Replicator protocol. Additionally nControl supports numerous other communication interfaces and protocols.

Clearbox Systems, in partnership with Newpoint Technologies, Inc. combines a powerful monitoring software solution with a small, resilient device. This solution harnesses the proven stability and flexibility of the Compass™ Software Suite. Compass™ provides an extensive driver library, SNMP manager and agent capability, along with a communications manager for supporting a variety of site connections. nControl neatly integrates with existing Compass installations by supporting Newpoint's centralized system administration software.

nControl is designed from the ground up with isolation on all control interfaces and with no moving parts, ensuring a superior level of reliability. An on board wide input power supply, combined with a universal mains adaptor allows the flexibility to run from virtually any site power available. nControl is a feature rich module in a compact design, and its variable mounting options allow installation where space is a premium.

It's all about moving the control system to the device level, providing a cost effective solution with distributed intelligence.

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## KEY FEATURES

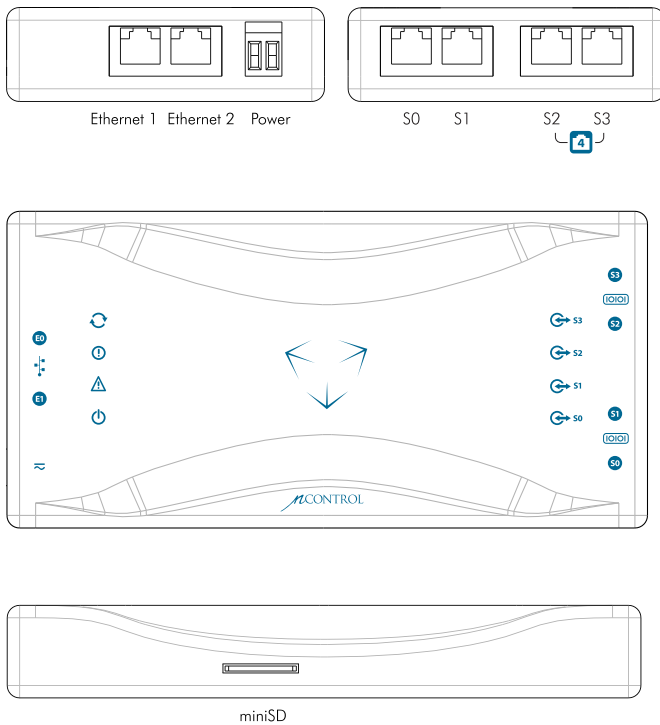
Small modular design allows you to locate your control system at the device being controlled

2.5kV of Ethernet isolation and 4kV of serial isolation protects downstream equipment from the effects of high voltage transients and faults

Powerful 140MHz processor capable of running complex protocols to communicate with any device and allowing for future software upgrades

Wide input voltage range 9 – 70V AC/DC to allow for any site supply to power the unit

## TECHNICAL SPECIFICATIONS



- 2 applies only to the nControl-2 model
- 4 applies only to the nControl-4 model

### Interfaces

- 2 x 10/100 Mbps Ethernet Ports with auto crossover
- 2 2 x RS232/422/485 Software Selectable Serial Ports
- 4 4 x RS232/422/485 Software Selectable Serial Ports

### Specifications

- 140MHz Industrial CPU
- 2 32MB SDRAM system memory
- 4 64MB SDRAM system memory
- 32MB on-board FLASH memory
- miniSD Card for logs / configuration

### Isolation

- Ethernet ports: 2.5kV isolation
- Serial Port: 4kV isolation

### Power

- Input Voltage: 9-70V AC/DC unregulated
- Power consumption: < 10W

### Physical

- Size: 191mm x 88mm x 26mm
- Weight: 300 grams

### Environmental

- Operating Temperature: 0 to +45 degrees Celsius.
- Relative Humidity : less than 80% non-condensing

## CONFIGURATION OPTIONS

nControl modules do not require the use of an Ethernet switch for communications, as modules can have their Ethernet ports daisy chained (Fig 1) saving costs on small sites. On larger sites (Fig 2), Ethernet switches can be used to allow attachment of additional devices or provide redundant communications as required.

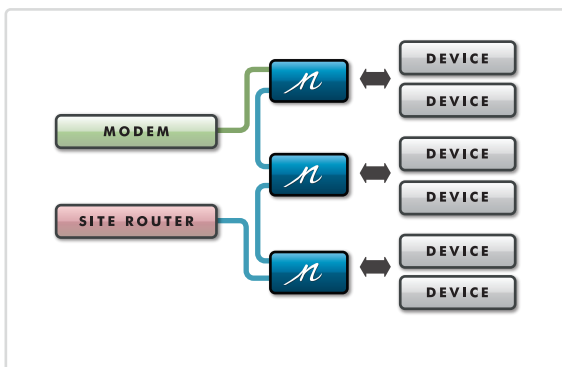


Figure 1 - Daisy Chained, Individually Powered Modules

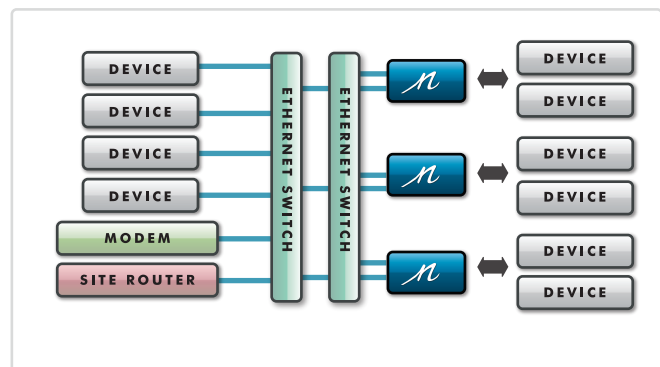


Figure 2 - Central Redundant Ethernet Switches