ETH I/O
Ethernet I/O

Aerospace

Acromag
THE LEADER IN INDUSTRIAL I/O

Application Note:

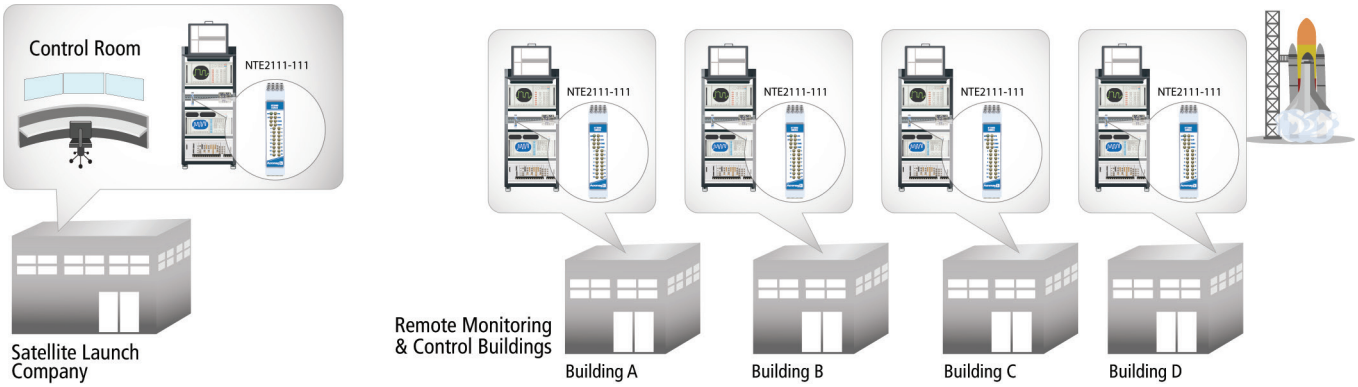
How to Distribute Critical Signals to Multiple Locations at the Same Time

Defining the Problem:

A satellite launch company needs to send a discrete abort signal to multiple locations at the same time if anything gets out of specification. The equipment to monitor and control the launch are in several different buildings but all on the same network.

System Requirements:

Timing is critical and all signals must be sent at the same time. Signals must be failsafe. Units must be rugged due the vibration during launch.



Implementing the Solution:

1. The NTE2111-1111 is part of Acromag's family of Ethernet products. The NT (New Technology) has a unique feature called i2o® Multicast. Multicast allows the NT to operate as a standard remote I/O unit, but additional Multicast sending and listening IP addresses can be assigned to the unit.

2. The NTE2111-1111 can be configured to assign one or more of its channels to act as peer-to-peer outputs of a corresponding input sending unit. While functioning normally, the NT will be constantly listening for a message to the Multicast IP address. Once it receives the message, it immediately outputs the signal.

3. The sending unit will immediately broadcast the message to a multicast sending IP address upon a change of state to its input. Any other NT unit that has been assigned the same address as its Multicast listening IP address will get the message. This makes the number of output locations virtually limitless.

Featured Products:

NTE2111-1111: Ethernet I/O module with dual RJ45 ports, 16 discrete I/O channels

Notes:

Would you like to have app notes like this delivered straight to your inbox? Click here to receive Acromag's monthly eNewsletter.

Why Acromag:

The Multicast feature on Acromag's new NT series allows peer-to-peer communication from a single unit to multiple units over any Ethernet network. Discrete inputs to discrete outputs or analog inputs to analog outputs. The NTE2111-1111 was selected because it is low-side switching. That gives it a positive "off" voltage. In case of a power or unit failure, the output would indicate the alarm condition for failsafe operation. The NT series is designed for wide operating temperatures and to withstand 25g shock and 4g vibration. Each NTE (Ethernet) unit can have up to three NTX (Expansion) units of any I/O type added on to it for flexibility and customization at low cost. Acromag is a Michigan-based manufacturer that has been in business forover 60 years. Acromag products are manufactured in the USA.

Tel 248-295-0880 ■ sales@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

Bulletin #8401069