



~ELECTRONIC DESIGN & MANUFACTURE ~

Technical Bulletin

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Synchronising Independent Sites Sharing a Common Boundary

This document describes the configuration and wiring of two PAE212 Ethernet Interfaces to provide Energiser Synchronisation of two independently controlled and monitored sites that share a common boundary.

The Scenario

An installer has secured a house with a Z14 Security Energiser and now a neighbour wants to install an electric fence. They both share a middle wall, but do not want to leave the 2.5m gap between fences, as per IEC regulation. As such, the two fences require a Synchronised pulse to conform to safety standards. Additionally, each site requires keypad control and reporting without interacting with the bordering fence.

The Solution

A PAE212 Ethernet Interface added to each site will solve the problem.

Requirements

It is expected that the reader has prior knowledge concerning configuring a Z-Series Energiser using a Keypad and also configuring a PAE212 using Perimeter Patrol. Access to a version of Perimeter Patrol 5.2 or above operating in Professional Mode is required to follow the procedure listed below.

The Procedure

PAE212 Configuration

1. Connect both PAE212 to the computer running Perimeter Patrol
2. Open Perimeter Patrol and Scan for the Ethernet Devices
3. On each PAE212:
 - a. Select each (in turn) in the Detected Devices list. Ensure the box is Ticked.
 - b. Set the Ethernet ID to 1 (for the first PAE212) and 2 (for the second PAE212)
 - c. Disable DHCP
 - d. Set the Static IP address. Recommended addresses are 192.168.0.150 and 192.168.0.151
 - e. Ensure the Subnet Mask is 255.255.255.0
 - f. Set both the Gateway and DNS to 192.168.0.1
 - g. Remember to press the Commit Changes button to save your changes
4. Press the Scan button again and confirm that your changes have been saved correctly
5. Disconnect the PAE212 and close Perimeter Patrol

JUR Add/Remove Zones

Interface to scan: 192.168.0.16 - Local Area Connection

Detected Ethernet Devices:

<input checked="" type="checkbox"/>	ETH-231329 - 192.168.0.108 - ID0
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Check None Check All

Selected Ethernet Device

Net. Name	ETH-231329	Firmware 1v05
IP Address	192.168.0.108	New Settings
Ethernet ID	0	0
DHCP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Static IP	192.168.0.150	192.168.0.150
Subnet Mask	255.255.255.0	255.255.255.0
Gateway	192.168.0.1	192.168.0.1
DNS	192.168.0.1	192.168.0.1
MAC	C8:90:3E:03:87:A1	
Count	0	Clear Known Energisers List

Assign Unique Ethernet IDs to Checked Devices

Commit Changes to Ethernet Devices

Energiser Configuration

1. Program the Energiser to a Group ID of 2. If there is more than one Energiser on each site, the other Energisers should be configured to IDs greater than 2.
2. Confirm that each Energiser is displaying Er-16 on the LCD display (assuming it has one fitted)
3. Now the Energisers can be wired into the PAE212

Site Configuration

1. Wire each site using the Keypad Bus connections
2. Confirm each site operates correctly
3. Create/Buy a Cross Over Ethernet wire to connect between the PAE212 of each site
4. Connect the two sites together and then arm both sites. Confirm that their pulses are synchronised. Please be aware it may take 5 minutes (after the Ethernet Cable is connected) to synchronise.

