



The NIDAC Prescient DN4 network uses a comprehensive and modern IP technology stack to achieve advanced networking capabilities.

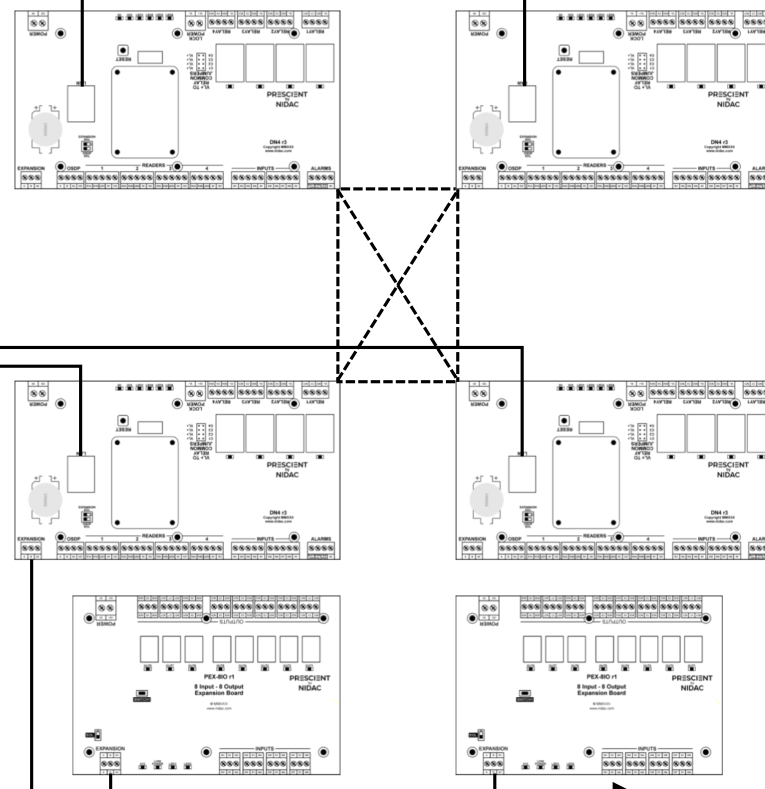
Firstly, by employing Zero Configuration Networking techniques the DN4 is network friendly with native DHCP compatibility. When connected to a DHCP server each device will be assigned a network address by the server.

Secondly, each Prescient DN4 uses an Avahi service to listen for other controllers on the network, and to monitor and register them to a known controller list. We use mDNS to broadcast to those devices in a serial.local format embedded within each device.

The controllers can be assigned a static IP address from the head end network router or within the DN4 itself and are capable of port-forwarding if required. When a static IP address is programmed the system will check the network before committing to any changes, ensuring that an IP conflict does not occur.

In a multi-controller network the meshing of Prescient DN4's means that each DN4 contains a backup of every other DN4 on the network (and also across subnets where endpoints are visible to each other). If a controller fails it is a simple process to replace and adopt a new DN4 circuit board into the network using the mesh to configure the new device.

- Dashed lines represent meshing of DN4's
- Solid lines represent the physical connection (CAT6) of each Prescient DN4 to a managed network switch



Up to 8 PEX-8IO boards can be connected to the expansion port on each DN4

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Description:
Network schema for NIDAC Prescient DN4 with PEX-8IO expansion

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