

Product Data Sheet

For further information, please contact Morley Electronics Technical Sales.

Nexus Access Control Echelon Networks

The Nexus modular access control range from Morley Electronics is available with optional communications, including RS232, RS485, Echelon standard communications Transceivers and RS485/LAN network adapters. Nexus is an on-line system, in that it reports to and is programmed by management software designed and supplied by Morley Electronics. Software used to manage Nexus installations is known as the 'Visikey' range.

Morley Free Topology/Echelon networks

Morley's free topology twisted pair wiring scheme allows installers the choice of wiring in star, loop or bus configurations to suit the architecture of the installation, thereby saving on cable and installation costs. Furthermore, retrofits to Echelon based installations can be carried out with minimal wiring changes and alterations.

The structure calls for a Morley Echelon interface module (Part no. 102005) within each Nexus controller and an Echelon Link Power Transceiver board (Part no. 104007) in the controlling PC.

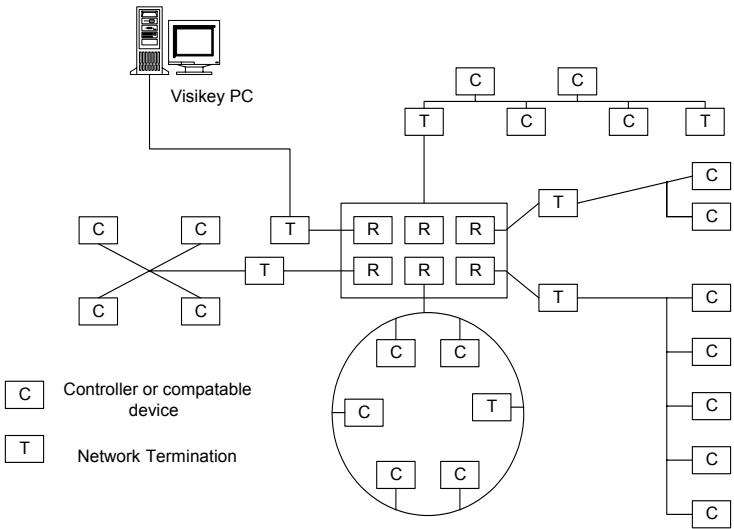
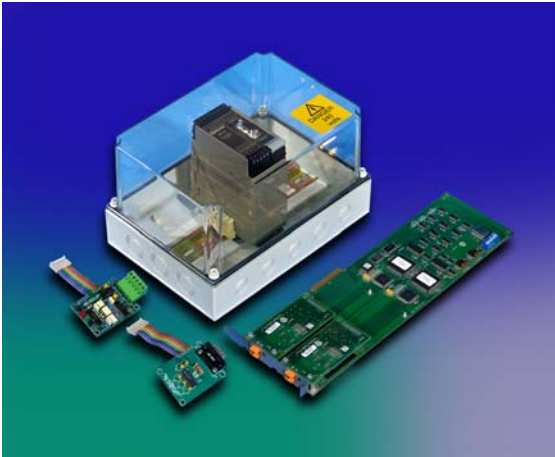
Physical Layer Repeaters

In the event that limits on individual cable distances or node numbers are exceeded (see supporting notes), a physical layer repeater can be used to extend each network segment. In this way, systems can grow inexpensively with much reduced installation costs. The diagram on the right shows a typical illustration utilising physical layer repeaters.

Doubly Terminated Bus Topology (Ring)

Each doubly terminated system offers increased network coverage up to a maximum of 2.7KM total length, see table overleaf.

Use of the Morley free topology can realise a total of 2,048 reader and 8,192 fully assignable I/O for each Nexus system.



Example of system network options for Morley Free Topology, using physical layer repeaters

Nexus Echelon Module



The RS 485 module fits into the socket connection provided on top of the Nexus processor module and is affixed to the radiation emission 'can' covering the processor board using the screws provided.

Echelon Transmission Specifications

Doubly Terminated Bus Topology Specification

	Max. node to node distance	Max total cable length	Units
Belden 85102	500	500	Metres
Belden 8741	400	500	
Level IV, 22AWG	400	500	
JY (St) Y 2x2x0.8	320	500	
TIA Cat 5	250	450	

Echelon Communications (PC) Board



Free Topology Specification

	Max Bus Length	Units
Belden 85102	2700	Metres
Belden 8471	2700	
Level IV, 22AWG	1400	
JY (St) Y2x2x0.8	900	
TIA Cat 5	900	

The Echelon Transceiver Board is fitted within the PC and is used for control of the Echelon network. Experts should fit boards and care should be taken not to invalidate the warranty of PC's. Please contact Morley for advice and information regarding Free Topology Networks.

Part Numbers

104007 - Echelon Transceiver Board
102005 - Echelon Interface Module

Morley Electronics Ltd.

Unit 34, Moorland Way,
Nelson Park,
Cramlington,
Northumberland,
NE23 1WE

T: +44 (0) 1670 732444

F: +44 (0) 1670 707333

Email: accesssales@morleyuk.co.uk

Web: www.morleyuk.co.uk

Morley Electronics operates a policy of continuous product improvement and reserves the right to change products without notice

Presented by

