PRODUCT BULLETIN SB 8540-2002

Type 8540-2002 8540-2003 8540-2004

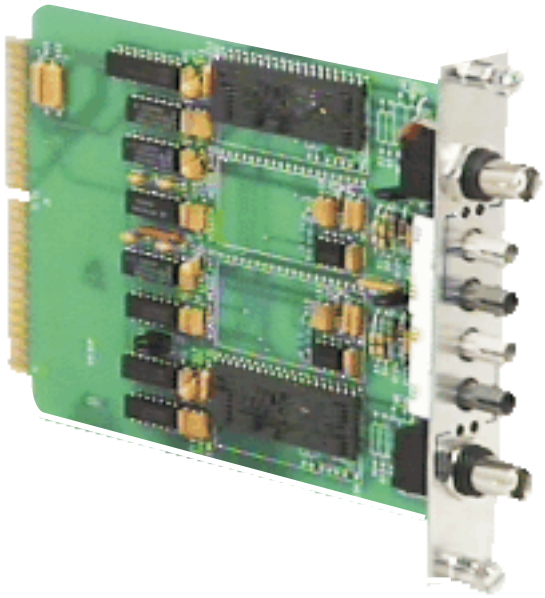
The type 8540-2002 / 2003 / 2004 ARCNET expansion modules provide multi-media cabling support for the type 8540-2000/2001 active hubs. Coaxial, twisted-pair and glass fiber optic cables can all operate on the same network by selecting the appropriate expansion modules. Star and distributed topologies are supported.

FEATURES

- Compatible with baseband ARCNET networks
- Compatible with 8540-2000/2001 series active hubs
- Coaxial, twisted-pair and fiber optic cabling supported
- Supports star or distributed star topologies
- Internal BALUNs support twisted-pair cabling
- Interfaces to either single mode or multimode fiber optics
- Activity LEDs on each port isolate network faults
- UL 1950 listed
- cUL listed per CSA 22.2 No. 950-90
- IEC 950 classified
- FCC Part 15 Class A
- CE mark

ARCNET EXPANSION MODULES

Coaxial 8540-2002
Fiber Optic 8540-2003
Twisted Pair 8540-2004



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CABLING AND TOPOLOGY:

8540-2002 Coaxial Star

Typically, ARCNET is cabled with RG-62/u coaxial cable (with BNC connectors) in a star topology, each network interface module connects directly to a port on an active or passive hub. Alternatively, RG-59/u coaxial cable can be used, but at a cost of reduced distances between a node and a hub. Overall, coaxial cable offers good performance, good noise immunity, low propagation delays, low signal attenuation, sufficient ruggedness and low cost. The coaxial star configuration also provides the longest coaxial distance and simplified troubleshooting.

8540-2003 Twisted-Pair Star

Unshielded twisted-pair wiring such as IBM Type 3 (#24 or #22 AWG solid copper twisted-pair cable or telephone wiring) can be used. BALUNs are required at both the hub and network interface module to use this cable. Twisted-pair network interface modules and hubs have internal BALUNs, so external BALUNs are not needed. Twisted-pair is convenient to install; however, its attenuation exceeds coaxial, its noise immunity is less, and its maximum length between a node and a hub is lower. RJ-11 connectors are used with this cable.

8540-2004 Glass Fiber Optics

Duplex glass, multimode fiber optic cable uses either SMA or ST™ connectors and is available in three sizes: 50/125, 62.5/125 and 100/140. Larger core sizes launch more energy allowing longer distances. This core size provides long distances, immunity to electrical noise, lightning protection and data security. Glass fiber optic cable is used in hazardous areas and inter-building cabling or whenever metallic connections are undesirable. Connectors can be either SMAs or STs. The 8540-2004 transceiver utilizes 850 nm technology.

SPECIFICATIONS:

Functional:

- Signaling rate 2.5 Mbps nominal
- Compliance ANSI/ATA 878.1

Environmental:

- Operating temperature 0 to +60°C
- Storage temperature -40 to +85°C

Physical:

- Each module occupies one slot in either the 8540-2000 or 8540-2001 powered enclosure.
- Weight, 0.18 kg (0.39 lbs)

Optical Power Budget (25° C)

Fiber Size (Microns)	850 nm (db)
50/125	6.6
62.5/125	10.4
100/140	15.9

8540-2002 Coaxial Star Topology:

Cable	Min Length	Max Length
RG-62/u	3 ft/ 1m	2000 ft/610 m
RG-59/u	3 ft/ 1m	1500 ft/457 m

8540-2002 Coaxial Bus Topology:

Cable	Min Length	Max Length	Max nodes /segment
RG-62/u	6 ft/2 m	1000 ft/305 m	8

8540-2003 Duplex Fiber Optic:

Cable	Min Length	Max Length
50/125	0	3000 ft/915 m
62.5/125	0	6000 ft/1825 m
100/140	0	9000 ft/2740 m

8540-2004 Twisted Pair Star:

Cable	Min Length	Max Length
IBM type 3	0	330 ft/100 m

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