AS/400 Wireless LAN Access Points



The AS/400 Wireless LAN Access Points and LAN Adapters are members of the family of wireless LAN products that provide a complete wireless network solution for the AS/400. This wireless environment can enhance productivity by allowing access to data when and where it is needed.

The IBM Wireless LAN Access Points are compact, lightweight devices that create or extend an AS/400 Wireless LAN network. Each Access Point creates a cell of wireless LAN coverage. Networks are normally designed with overlapping cells so users can move from cell to cell within a network with no disruption of their interaction with their AS/400 system. These devices operate with existing application software interfaces, enabling a seamless addition of this new operating environment. Access points come in four models: Token Ring (TR0), Ethernet LAN (E00), Ethernet LAN Bridge (EB0), and RS-485 LAN (RS0).

2480 AS/400 Wireless Token Ring LAN Access Point - Model TR0

The Token Ring Access point can be attached to the IBM cabling system through the DB9 connector or to unshielded twisted pair using the RJ45 connector to create a Wireless LAN network. Refer to the IBM Token Ring Network Introduction and Planning Guide (GA27-3677) and the IBM Cabling System (GA570-2040) publications for more information. This device provides a high bandwidth solution for attaching desktop and notebook computers which are equipped with the AS/400 Wireless LAN ISA, Micro Channel (MCA) or PCMCIA Adapters. Any Token Ring equipped server including an AS/400, may be used in this configuration. An AS/400 is not required.

The Token Ring Access Point can also be connected to the AS/400 system through the radio link created by the AS/400 Wireless LAN Adapter. This configuration provides support for PTCs as

well as desktop and notebook computers that are equipped with the AS/400 Wireless LAN ISA, MCA or PCMCIA Adapters.

Multiple Access Points can be used to create a multi-cell network. The first Access Point attaches to the AS/400 via Token Ring cabling or an RF link. Additional Access Points may be attached either to the Token Ring cabling or through an RF link, acting as wireless repeaters.

2480 AS/400 Wireless Ethernet LAN Access Point - Model E00

The Ethernet Access Point can be attached to an Ethernet 10Base 2, 10Base 5, or 10Base T wired LAN to create an AS/400 Wireless LAN network. An Ethernet network can be extended up to 600 feet between wired Access Points. This device can also attach to the AS/400 system via a cable connected directly to an AS/400 Ethernet Adapter. This configuration provides a high bandwidth solution for attaching desktop and notebook computers, which are equipped with AS/400 Wireless LAN ISA, Micro Channel (MCA), or PCMCIA Adapters. This network configuration does not support PTCs for data collection applications. The Ethernet Access Point can also connect to the AS/400 system through the radio link created by the AS/400 Wireless LAN Adapter. This configuration provides support for PTCs as well as desktop and notebook computers that are equipped with the AS/400 Wireless LAN ISA, MCA or PCMCIA Adapters.

Multiple Access Points can be used to create a multi-cell network. The first Access Point attaches to the AS/400 via Ethernet cabling or an RF link. Additional Access Points may be attached either to the Ethernet cabling or through an RF link, acting as wireless repeaters.

2480 AS/400 Wireless Ethernet LAN Bridge Access Point - Model EB0

The Ethernet LAN Bridge Access Point allows two or more Ethernet LANs to be connected without wires. When connected by the Ethernet Bridge, workstations can communicate with each other as though they were on the same LAN.

An Ethernet network can be extended up to 600 feet between wired Access Points. The Ethernet Bridge also provides transparent, wireless data communications between a wired Ethernet LAN and a wireless LAN equipped with the AS/400 Wireless LAN family of products. Using any combination of the 2480-E00 and EB0 Access Points, users can create multi-building, indoor/outdoor wireless networks while providing mobile users seamless roaming and network management throughout the covered area.

The AS/400 Wireless Ethernet LAN Bridge Access Point attaches directly to 10Base 2, 10Base 5 or 10Base T Ethernet LAN segments conforming to IEEE 802.3 or Ethernet Blue Book Specifications. The Bridge Access Point is protocol independent and operates with environments such as:

- Client Access/400
- LAN Manager and other NDIS compliant protocols
- Novell NetWare

- TCP/IP based protocols

Operation in a particular networking environment is determined by the software drivers running in the workstation.

2480 AS/400 Wireless RS-485 LAN Access Point - Model RS0

The RS-485 Access Point connects an RS-485 network to a wireless LAN. An RS-485 network can be extended up to 8000 feet from the AS/400 system using up to four RS-485 Access Points. The RS-485 backbone network supports a data rate of 230 kilobits per second. This type of network is most often used with data collection applications. The RS-485 Access Point attaches to the AS/400 system via twisted pair wiring connected to the AS/400 Wireless LAN Adapter or through the radio link created by the AS/400 Wireless LAN Adapter. The RS-485 Access Point creates a cell of wireless network coverage and acts as a network repeater to extend the area of coverage beyond the initial cell created by the AS/400 Wireless LAN Adapter. Networks are designed to create overlapping cells to ensure consistent coverage of the desired area. These Access Points, when connected to an AS/400 Wireless LAN Adapter, provide support for desktop and notebook computers, equipped with the AS/400 Wireless LAN ISA, MCA, and PCMCIA Adapters, plus PTCs for data collection applications.

Note: A 2.4 GHz antenna is required for each wireless Access Point. A site survey can determine which antenna is appropriate for the network environment. A variety of antennas are available including the dipole, omni-directional, hemispherical, directional, and Yagi. A power supply is shipped with each Access Point.

Technical Information

Physical Specifications:

Access Points (All Models.):

- Width: 20.3cm (8.0 inches)
- Depth: 16.5cm (6.5 inches)
- Height: 4.8cm (1.9 inches)
- Weight: 1.4kg (3.0 lbs)

LAN Interfaces Supported:

- Token Ring Access Point (TR0)
  - IBM Cabling System using DB9 Connector
  - Unshielded Twisted Pair using RJ-45 Connector
- Ethernet LAN Access Point (E00) and Ethernet LAN Bridge Access Point (EB0)

  - Thin Ethernet, IEEE 802.3 10Base 2, BNC Connector
  - Thick Ethernet, IEEE 802.3 10Base 5, DB 15 AUI Connector
  - Twisted Pair Ethernet, IEEE 802.3 10Base T, RJ-45 Connector
- RS-485 LAN Access Point (RS0)
  - Localtalk, Din-8 connector

Operating Environment:

- Access Points (All Models)
  - Temperature: $0^\circ - 40^\circ$ C ($32^\circ - 104^\circ$ F)
  - Electrical power: External 120 VAC, 60Hz

Hardware Requirements:

- Token Ring Access Point (TR0)

  When using AS/400 Wireless PTCs:
  - Any AS/400 Model DXX or later except D01 or E02 with AS/400 Wireless LAN Adapters with FC #2668 and #2663.

  When using ONLY AS/400 Wireless LAN Adapters (ISA, MCA and PCMCIA):
  - Any network server with Token Ring connectivity. OR
  - Any AS/400 model DXX or later with
    * AS/400 Token Ring Adapter feature number 2619, 2626 or 2636.
    * Token Ring IOA (Adapter on MFIOP) feature number 7175
    * FSIOP feature numbers 6516-6519 and 6526-6529
    * 16/4 Token Ring High Performance for Server Models feature number 9619.
- Ethernet LAN Access Point (E00) and Ethernet LAN Bridge Access Point (EB0)
  - Any AS/400 Model DXX or later with AS/400 Ethernet Adapter with FC #2617, #2625 or #9617 or
  - Any AS/400 Model DXX or later with FC #2668 and FC #2663
- RS-485 LAN Access Point (RS0)
  - Any AS/400 Model DXX or later with FC #2668 and FC #2663

Software Requirements:

- Token Ring Access Point (TR0)

  This product requires OS/400 at the appropriate version and release level to support the AS/400 LAN adapter being used.

- Ethernet LAN Access Point (E00) and Ethernet LAN Bridge Access Point (EB0)
  - With AS/400 Ethernet FC 2617 - OS/400 Version 2 Release 2 or later
  - With AS/400 Ethernet FC 2625 - OS/400 Version 2 Release 3 or later
  - With AS/400 Ethernet FC 9617 - OS/400 Version 2 Release 3 or later
- RS-485 LAN Access Point (RS0)
  - OS/400 Version 3 Release 1 or later

Radio Characteristics:

- Up to 5 channels at 1 or 2 megabits/sec, user selectable
- 2.400 to 2.4835 GHz frequencies
- Raw bit rate of 1 or 2 megabits/second
- Transmit power is a maximum of 100 mW.

Range:

- Wireless LAN coverage is a function of antenna gain, placement, and type, as well as building construction and density.
- Site survey required to determine radio frequency coverage and effective network configuration
- Indoor dense office: up to 150 feet (45 meters)
- Indoor open office: up to 300 feet (91 meters)
- Open factory/warehouse: up to 1500 feet (450 meters)
- Outdoor line-of-sight: up to 3 miles when using the Yagi antenna (FC #5190). Only applicable for the Access Points, the AS/400 Wireless LAN Adapter, the ISA Adapter, and the MCA Adapter.

Regulatory Agency Compliance:

- Complies with FCC Part 15 as a Class A computing device
- Complies with both FCC and DOC regulations for license-free operation in the 2.4 GHz band

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