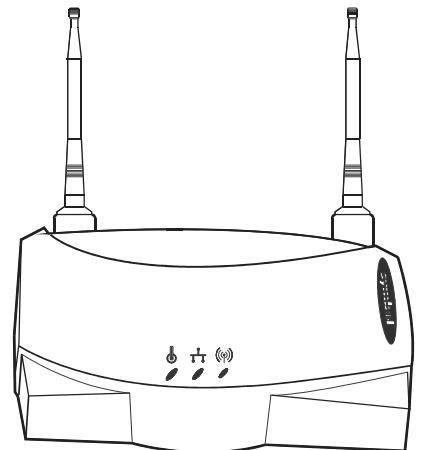


# Spectrum24<sup>®</sup>

## AP-41X1-1050 HR Access Point

### Quick Reference Guide



www.symbol.com

### Introduction

The AP-41X1-1050 Direct Sequence access point provides a bridge between Ethernet wired LANs and Spectrum24 wireless networks. The access point provides access between Ethernet wired networks and radio-equipped mobile units (MUs). MUs include all Symbol Spectrum24 terminals, scanners, PC Cards, phones, third-party devices and other equipment.

For additional installation and configuration information, go to [www.symbol.com](http://www.symbol.com) and search for the Spectrum24 AP-41X1 HR Access Point Product Reference Guide.

### Hardware Installation

#### Precautions

Before installing the access point verify the following:

- The location of the unit is dry and dust free. Install in wet or dusty areas only with additional protection. Contact a Symbol representative for more information.
- The installation environment is between -20°C and 55°C.
- AP can be installed on a different subnet if mobile IP is enabled.

### Network Connection

Locate connectors for Ethernet and power on the back of the access point. Ethernet configurations vary according to the environment.

- Power outlet
- Access point
- Null modem serial cable.

**Note:** Use and test the access point with an associated MU.

### Requirements

The minimum installation requirements for a single-cell, peer-to-peer network are:

### AP-41X1-1050 HR Access Point Antenna

The access point uses two dipole antennas to provide diversity, improved performance and increased signal strength over single antenna applications. Antenna coverage resembles lighting in that an area lit from far away might not be bright enough. An area lit sharply minimizes coverage and creates dark areas where no light exists. Uniform access point placement provides even, efficient coverage.

Position the access point and antenna using the following guidelines:

- Install the access point as high a practical
- Orient the access point vertically for best reception
- Point the antenna downward if attaching the access point to the ceiling.

### Mounting the Access Point

- Select an access point mounting option based on its intended operating environment.
- Resting flat
  - The access point rests on four rubber pads on the underside of the AP
  - Place on a surface clear of debris and away from office traffic.
  - Attached to the wall
- The access point attaches to a wall and can be oriented in any position as long as the antennas are vertical.
1. Plug the data cable RJ-45 connector into the AP RJ-45 connector.
  2. Plug the other end of the data cable into the LAN access port (possibly a hub or wall connection.)
  3. Add additional access points as needed.

### 10Base-T UTP

Use a 10Base-T connection for multiple access points or an access point attached to a wired UTP Ethernet hub. Normal 10Base-T limitations apply.

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### Patents

This product is covered by one or more of the following U.S. and foreign Patents:  
U.S. Patent No.  
4,360,798; 4,369,361; 4,387,297; 4,460,120; 4,496,831; 4,593,186; 4,603,262; 4,607,156; 4,652,750; 4,673,805; 4,736,095; 4,758,717; 4,816,660; 4,845,350; 4,896,026; 4,897,532; 4,923,281; 4,933,538; 4,992,717; 5,015,833; 5,017,765; 5,021,641; 5,029,183; 5,047,617; 5,103,461; 5,113,445; 5,130,520; 5,140,144; 5,142,550; 5,149,950; 5,157,687; 5,168,148; 5,168,149; 5,180,904; 5,229,591; 5,230,088; 5,235,167; 5,243,655; 5,247,162; 5,250,791; 5,250,792; 5,262,627; 5,262,628; 5,266,787; 5,278,398; 5,280,162; 5,280,163; 5,280,164; 5,280,498; 5,304,786; 5,304,788; 5,306,900; 5,321,246; 5,324,924; 5,337,361; 5,367,151; 5,373,148; 5,378,882; 5,396,053; 5,396,055; 5,399,846; 5,408,081; 5,410,139; 5,410,140; 5,412,198; 5,418,812; 5,420,411; 5,436,440; 5,444,231; 5,449,891; 5,449,893; 5,468,949; 5,471,042; 5,478,998; 5,479,000; 5,479,002; 5,479,441; 5,504,322; 5,519,577; 5,528,621; 5,532,469; 5,543,610; 5,545,889; 5,552,592; 5,578,810; 5,581,070; 5,589,679; 5,589,680; 5,608,202; 5,612,531; 5,619,028; 5,664,229; 5,668,803; 5,675,139; 5,693,929; 5,698,835; 5,705,800; 5,714,746; 5,723,851; 5,734,152; 5,734,153; 5,745,794; 5,754,587; 5,762,516; 5,763,863; 5,767,500; 5,789,728; 5,808,287; 5,811,785; 5,811,787; 5,815,811; 5,821,519; 5,821,520; 5,823,812; 5,828,050; 5,850,078; 5,861,615; 5,874,720; 5,875,415; 5,900,617; 5,902,989; 5,907,146; 5,912,450; 5,914,478; 5,917,173; 5,920,059; 5,923,025; 5,929,420; 5,945,658; 5,945,659; 5,946,194; 5,959,285; D305,885; D341,584; D344,501; D359,483; D362,453; D363,700; D363,918; D370,478; D383,124; D391,250; D405,077; D406,581; D414,171; D414,172  
Invention No. 55,358; 62,539; 69,060; 69,187 (Taiwan); No. 1,601,796; 1,907,875; 1,955,269 (Japan);  
European Patent 367,299; 414,281; 367,300; 367,298; UK 2,072,832; France 81/03938; Italy 1,138,713

Symbol Technologies, Inc.  
One Symbol Place  
Holtsville, NY  
11742-1300



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Revision B

## Connecting the Power Adapter

The power adapter connects to the rear of the access point and to a power outlet.

1. Verify that the power adapter matches the country-of-use requirements.
2. Plug the power adapter cable into the back of the access point.
3. Plug the adapter into an outlet.

The access point functions without user intervention after setup. Refer to the LED Indicators section of this document to verify that the unit is functioning correctly.

## LED Indicators

The top panel LED indicators provide a status display indicating transmission, and other activity. They are:



*Power*

Flashing indicates AP initialization.  
Steady Green during operation.



*Wired LAN Activity*

Flashing indicates data transfers on wired connection.



*Wireless LAN Activity*

Flickering indicates beacons and data transfers with MUs.

## Specifications

### Physical Characteristics

<i>Dimensions</i>	1.75" H x 6" L x 8.5" W (4.45" cm H x 15.24" cm L x 21.59" cm W)
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### Network Characteristics

<i>Driver Support</i>	NDIS v4.0 and v5.0
<i>Ethernet Frame</i>	DIX, Ethernet II and IEEE 802.3
<i>Filtering Packet Rate</i>	14,400 frames per second filtering and forwarding
<i>Ethernet Connection</i>	10Base-T (RJ-45)
<i>Serial</i>	PC/AT serial port - DB9 Male, RS-232 using a DTE termination, 19200 bps
<i>SNMP</i>	Version 1, Symbol MIB, 802.11 MIB and MIB-II

## Customer Support

Symbol Technologies provides its customers with world-class customer service and technical support. The Symbol Support Center operates as the single point of contact for any technical problem, question or support issue.

The Support Center operates all year, 24 hours a day, staffed by full-time professional Technical Specialists.

If the Symbol Customer Support specialists cannot solve a problem immediately within its tiered, technical-support center, access to all technical disciplines within Symbol becomes available for further assistance and support.

First response / contact within 24 hours or one business day. Responses by email, fax, or telephone. When contacting Symbol Customer Support, please provide the following information:

- serial number of unit
- model number or product name
- software type and version number.

<i>Weight (w/power supply)</i>	1 lbs. (0.454 kg)
<i>Operating Temperature</i>	-4° F to 131° F (-20° C to 55° C)
<i>Storage Temperature</i>	-40° F to 149° F (-40° C to 65° C)
<i>Humidity</i>	10% to 95% noncondensing
<i>Shock</i>	40 G, 11 ms, half-sine
<i>ESD</i>	meets CE-Mark
<i>Drop</i>	withstands up to a 30 in. (76 cm) drop to concrete with possible surface marring

## Radio Characteristics

<i>Frequency Range</i>	country dependent; within 2400 MHz to 2500 MHz	
<i>Frequency</i>	<i>Number of Channels</i>	<i>Country</i>
2412-2470	1-11	United States
2430-2447	5-8	Israel
2457-2463	10-11	Spain
2458-2472	10-13	France
2483-2485	14	Japan
<i>11 Mbps Range</i>	open environment - over 100 ft. typical office/retail environment - 30 to 50 ft.	
<i>TX Max. Radiated EIRP</i>	US: FCC part 15.247 Europe: ETS 300 320 Japan: RCR STD-33	
<i>Modulation</i>	Binary GFSK	
<i>Emissions</i>	US: FCC part 15.247, 15.205, 15.209 Europe: ETS 300 320 Japan: RCR STD-33	

## North American Contacts

Inside North America, contact Symbol by:

Symbol Technologies, Inc.  
One Symbol Plaza  
Holtsville, New York 11742-1300  
Telephone: 1-516-738-2400/1-800-SCAN 234  
Fax: 1-516-738-5990

## Symbol Support Center:

telephone: 1-800-653-5350  
fax: (516) 563-5410  
Email: support@symbol.com

## International Contacts

Outside North America, contact Symbol by:

Symbol Technologies Technical Support  
12 Oaklands Park  
Berkshire, RG41 2FD, United Kingdom  
Tel: 011-44-118-945-7000 or 1-516-738-2400 ext. 6213

## Additional Information

Obtain additional information by contacting Symbol at:

1-800-722-6234, inside North America  
+1-516-738-5200, in/outside North America

<http://www.symbol.com/>