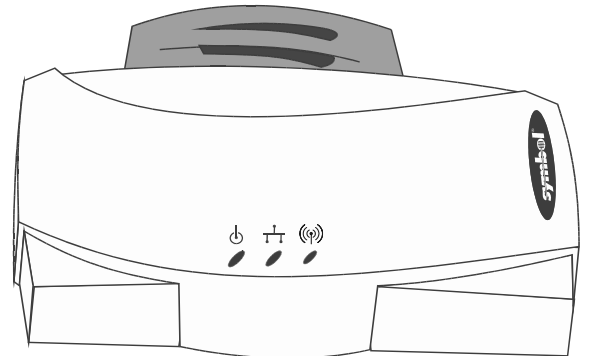


# Spectrum24<sup>®</sup>

## AP-41X1 HR Access Point Quick Reference Guide



www.symbol.com

The AP-41X1 Direct Sequences access point provides a bridge between Ethernet wired LANs and Spectrum24 wireless networks. The access point 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 the www.symbol.com and search for the Spectrum24 AP-41X1 HR Access Point Product Reference Guide.

### Hardware Installation

Before installing the AP-41X1 HR 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.

### Requirements

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

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

**Note:** Use and test the AP-41X1 HR access point with an associated MU.

### Network Connection

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

### Introduction

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### Mounting the AP-41X1 HR Access Point

The AP-41X1 HR access point rests on a flat surface or attaches to any hard, flat, stable surface. Use the standard mounting kit provided to secure the AP-41X1 HR 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.

### AP-41X1 HR Access Point Antenna

The AP-41X1 HR access point contains a built-in dual antenna assembly providing 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 AP placement provides even, efficient coverage.

Position the AP-41X1 HR 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.

### 10Base-T UTP

Use a 10Base-T connections for multiple APs or an AP attached to a wired UTP Ethernet hub. Normal 10Base-T limitations apply.

- plug the data cable RJ-45 connector into the AP RJ-45 connector.
- Plug the other end of the data cable into the LAN access port (possibly a hub or wall connection.)
- Add additional APs as needed.

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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

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70-20744-01  
Revision B

## Connecting the Power Adapter

The power adapter connects the rear of the AP to a power outlet.

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

The AP 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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<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	

### 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.

### 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/>