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LANCOM[™] Access Points Installation instructions for professional installers

The legal FCC-compliant operation of wireless access points requires that particular frequency bands and maximum antenna gains are used.

To meet these legal regulations and ensure FCC-compliant operation, only the antennas mentioned in this documentation as tested during FCC approval may be used.

This document applies to the following devices:

- LANCOM XAP-40-2
- Hirschmann BAT54-Rail

A system requirement for the legal and FCC-compliant operation of WLAN access points is LCOS version 7.10 or higher.

Approved antennas

Use only the antennas listed here together with the associated gain factor. Other antennas and/or higher gains are not permitted for legal, FCC-compliant operation!

max gain at				
2400 - 2483.5 MHz suitable for omni- directional use	2400 - 2483.5 MHz suitable for fixed, point to point use	5150 - 5250 MHz only for indoor use	5725 - 5850 MHz suitable for omni- directional use	5725 - 5850 MHz suitable for fixed, point to point use
1	1	1	1	18 dBi
1	14 dBi	1	1	1
6 dBi	6 dBi	7 dBi	7 dBi	7 dBi
8.5 dBi	8.5 dBi	1	1	1
1	1	1	1	23 dBi
1	1	10 dBi	10 dBi	10 dBi
8.5 dBi	8.5 dBi	1	1	1
4 dBi	4 dBi	1	1	1
6 dBi	6 dBi	10 dBi	10 dBi	10 dBi
1	1	8 dBi	8 dBi	8 dBi
1	14 dBi	1	1	1
1	1	1	14 dBi	14 dBi
1	14 dBi	1	1	1
1	1	1	1	23 dBi
6 dBi	6 dBi	8 dBi	8 dBi	8 dBi
1	1	1	10 dBi	10 dBi
8.5 dBi	8.5 dBi	1	1	1
8.5 dBi	8.5 dBi	1	1	1
8.5 dBi	8.5 dBi	1	1	1
	MHz suitable for omnidirectional use 1 1 6 dBi 8.5 dBi 1 1 8.5 dBi 4 dBi 6 dBi 1 1 1 1 6 dBi 1 8.5 dBi 1 8.5 dBi	MHz MHz suitable for omnidirectional use suitable for fixed, point to point use 1 1 1 14 dBi 6 dBi 6 dBi 8.5 dBi 8.5 dBi 1 1 1 1 8.5 dBi 8.5 dBi 4 dBi 4 dBi 6 dBi 6 dBi 1 1 1 14 dBi 1 1 1 1 4 dBi 6 dBi 1 1 1 1 1 1 1 1 1 1 1 1 4 dBi 1 1 1 1 1 2 4 3 5 4 4 5 4 6 4 1 1 1 1 2 4	2400 - 2483.5 MHz 2400 - 2483.5 MHz 5150 - 5250 MHz suitable for omnidirectional use suitable for fixed, point to point use only for indoor use 1 1 1 1 14 dBi 1 6 dBi 6 dBi 7 dBi 8.5 dBi 8.5 dBi 1 1 1 1 1 1 1 1 1 1 1 1 10 dBi 8.5 dBi 4 dBi 1 4 dBi 4 dBi 1 1 1 8 dBi 1 1 1 4 dBi 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2	2400 - 2483.5 MHz 2400 - 2483.5 MHz 5150 - 5250 MHz 5725 - 5850 MHz suitable for omnidirectional use suitable for fixed, point to point use only for indoor use suitable for omnidirectional use 1 1 1 1 1 1 1 1 1 1 6 dBi 6 dBi 7 dBi 7 dBi 7 dBi 8.5 dBi 8.5 dBi 1 1 1 1 1 1 1 1 1 1 1 1 1 8.5 dBi 8.5 dBi 1 1 1 4 dBi 4 dBi 1 1 1 4 dBi 4 dBi 1 1 1 4 dBi 4 dBi 1 1 1 1 1 8 dBi 8 dBi 8 dBi 1 1 1 1 dBi 1 1 1 1 1 1 dBi 1 1 1 1 1

¹ Antenna is not suitable for this frequency band and must not be used



Systems

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NOTICE:

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.

Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

NOTICE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Changes or modifications made to this equipment not expressly approved by LANCOM may void the FCC authorization to operate this equipment.

FCC Radiation Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

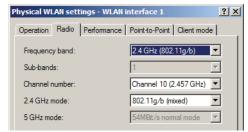
Setting WLAN parameters

The WLAN parameters must be set to the values mentioned above to ensure legal and FCC-compliant operation.



For devices with multiple WLAN modules, ensure that you enter the antenna gain for each physical WLAN interface.

To set the WLAN parameters, open Wireless LAN ► General ► Physical WLAN Settings in LANconfig. On the 'Radio' tab, you can select frequency band, channel number and other WLAN parameters.



Under WEBconfig or Telnet select (Expert Configuration >) Setup > Interfaces > WLAN > Radio-Settings.

Expert Configuration			
Setup			
Interfaces			
<u>WLAN</u>			
Radio-Settings			
lfc	WLAN-1		
Radio-Band	2.4GHz 💌		
Subbands	Band-1 ▼		
Radio-Channel	11		
Channel-List			
2.4G-Mode	11bg-mixed ▼		
5G-Mode	normal		
Antenna-Gain	3		
Tx-Power-Reduction	0		

