

# Instructions for the installation of Detachable Antenna with the FWG114P

## 1. Introduction

This information provides guidelines to permit you to install the NETGEAR detachable antennas with the FWG114P 11g wireless router and antenna cable and be compliant with the FCC regulations. FWG114P provides 15dBm maximum transmit power plus antenna gain.

The maximum equivalent isotropic radiated power limit is 1W ERP. When installing the detachable antennas listed below, the installer has to be sure the limits won't be exceeded. If so, attenuation in the form of antenna cable is added between the FWG114P wireless node and the antenna.

**It is not allowed to let the end user do whatever they want. Anyone tries to use non-Netgear dedicated accessory may have violated the regulation and voided the right to use. If they use Netgear's antenna accessories, they are all well prepared. The cables and connectors are matched.**

**Disclaimer:** Use of any antenna requires careful planning and extra consideration to comply with emissions and health standards and regulations. It is recommended that a qualified professional installer service is consulted for site survey and proper installation. Antenna installation must comply with the maximum level authorized by each country.

## 2. NETGEAR Antenna Cable Attenuation at 2.4- 2.5 GHz

NETGEAR Cable Type	Length	Typical Attenuation at 2.4 - 2.5 GHz
ACC-10314-01	1.5 m	<b>1.1 dB</b>
ACC-10314-02	3 m	<b>2.0 dB</b>
ACC-10314-03	5 m	<b>3.2 dB</b>
ACC-10314-04	10 m	<b>6.1 dB</b>
ACC-10314-05	30 m	<b>18.0 dB</b>

## 3. Installation Procedure for the Wireless Node, Antenna Cable, and Antenna

1. In the table below, identify the NETGEAR detachable antenna to be used with the FWG114P, e.g. the ANT24D18.
2. Read the required NETGEAR Antenna cable to be used, e.g. ACC-10314-05 30m cable (with ANT24D18). In some cases, no cable is required. Therefore in this situation, the user is free to use a NETGEAR cable from 1.5m to 30m or no cable at all.
3. Connect the selected antenna cable to the FWG114P wireless Node and to the antenna

### Antenna list: Mandatory antenna cable to be used with each antenna and FWG114P

NETGEAR Antenna	Manufacturer P/N	Antenna Type	Antenna max. Gain	Theoretical EIRP without cable	MINIMUM Cable Attenuation needed	NET Antenna cable MIN
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<b>ANT24P2 TBC*</b>	JOYMAX IW-144	Omnidirectional	2dBi	17 dBm EIRP	0 dB	0 m	
<b>ANT24P3 TBC*</b>	ANTENNIQUES MCS-003A	Omnidirectional	3dBi	18 dBm EIRP	0 dB	0 m	
<b>ANT24P4 TBC*</b>	JOYMAX IW- 152RS	Omnidirectional	4dBi	19 dBm EIRP	0 dB	0 m	
<b>ANT24S4 TBC*</b>	SENAO NAS- T0405(N)	Omnidirectional Triband Stand	4dBi	19 dBm EIRP	0 dB	0 m	
<b>ANT24P5 TBC*</b>	ANTENNIQUES MCS-004	Omnidirectional	5dBi	20 dBm EIRP	0 dB	0 m	
<b>ANT24S5 TBC*</b>	SENAO NAS- 2405(N)	Omnidirectional Stand	5dBi	20 dBm EIRP	0 dB	0 m	
<b>ANT24P7 TBC*</b>	ANTENNIQUES MCS-004A	Omnidirectional	7dBi	22 dBm EIRP	2 dB	3 m	
<b>ANT24P93 TBC*</b>	SENAO SAG- T0909	Omnidirectional triband	9dBi	24 dBm EIRP	4 dB	10 m	
<b>ANT24P9 TBC*</b>	SENAO SAG-2409	Omnidirectional Antenna	9dBi	24 dBm EIRP	4 dB	10 m	
<b>ANT24P12 TBC*</b>	SENAO SAG-2412	Omnidirectional Antenna	12dBi	27 dBm EIRP	7 dB	30 m	
<b>ANT24P123 TBC*</b>	SENAO SAG- T1112	Omnidirectional triband Antenna	12dBi	27 dBm EIRP	7 dB	30 m	
<b>ANT24O5</b>	SENAO NAP- 2405(N)	Ceiling Antenna	5dBi	20 dBm EIRP	0 dB	0 m	
<b>ANT24D12 TBC*</b>	SENAO SAP-2412	Patch Antenna	12dBi	27 dBm EIRP	7 dB	30 m	
<b>ANT24D18</b>	SENAO NAP- 2418(N)	Patch Antenna	18dBi	33 dBm EIRP	13 dB	30 m	

\* NETGEAR part number to be confirmed

#### 4. Calculation of cable length typical attenuation when maximum power is different Reference to FCC Part 15.247(b)(4):

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power from the intentional radiator shall be reduced below the stated values of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

**Disclaimer:** NETGEAR assumes no responsibility in case of intentional or unintentional violation of the maximum allowable EIRP/ERP in a particular country, miscalculation of the attenuation, faulty non-NETGEAR wireless node, or bad connection from antenna to wireless node.