

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Revision of Parts 2 and 15 of the Commission's	)	
Rules to Permit Unlicensed National Information	)	ET Docket No. 03-122
Infrastructure (U-NII) devices in the 5 GHz band	)	

**ORDER**

**Adopted: February 15, 2006**

**Released: February 16, 2006**

By the Commission:

**INTRODUCTION**

1. By this Order and effective immediately, we extend for 180 days the transition periods,<sup>1</sup> adopted in the *5 GHz Extension Order* and described herein, for unlicensed National Information Infrastructure (U-NII) equipment operating in the 5.250-5.350 GHz band.<sup>2</sup> This action will allow parties to continue to obtain equipment authorizations for such equipment and to market it under the rules in effect prior to the adoption of the *5 GHz U-NII Report and Order*, pending the development of measurement procedures for evaluating these devices for compliance with the new rules.<sup>3</sup>

**BACKGROUND**

2. On November 12, 2003, the Commission adopted its *5 GHz U-NII Report and Order*, which amended Part 15 of its rules to make an additional 255 megahertz of spectrum available in the 5.470-5.725 GHz band for U-NII devices, including Radio Local Area Networks (RLANs).<sup>4</sup> This action aligned the frequency bands used by U-NII devices in the United States with bands in other parts of the world, thus decreasing development and manufacturing costs for U.S. manufacturers by allowing for the same products to be used in most parts of the world.

3. In addition to making more spectrum available for use by U-NII devices, the Commission took steps to minimize the potential for these devices to cause interference to existing radiofrequency operations. Specifically, it adopted requirements for U-NII devices in the 5.250-5.350 GHz and 5.470-5.725 GHz bands to employ Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC).

<sup>1</sup> 47 C.F.R. § 15.37(l).

<sup>2</sup> See *Revision of Parts 2 and 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) devices in the 5 GHz band*, ET Docket No. 03-122, *Order*, 20 FCC Rcd 4883 (2005) (*5 GHz Extension Order*).

<sup>3</sup> See *Revision of Parts 2 and 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) devices in the 5 GHz band*, ET Docket No. 03-122, *Report and Order*, 18 FCC Rcd 24484 (2003) (*5 GHz U-NII Report and Order*).

<sup>4</sup> See 47 C.F.R. Part 15 – Subpart E – Unlicensed National Information Infrastructure Devices. U-NII devices are “Intentional radiators operating in the frequency bands 5.15-5.35 GHz and 5.470-5.825 GHz that use wideband digital modulation techniques and provide a wide array of high data rate mobile and fixed communications for individuals, businesses, and institutions.” 47 C.F.R. § 15.403(t).

DFS is a feature that dynamically instructs a transmitter to switch to another channel whenever certain conditions (for example, a threshold value of the prevailing ambient interference level on a channel) are met. Prior to initiating and during a transmission, a U-NII device's DFS feature would monitor the available spectrum in which the device could operate for the presence of a radar signal. The principal radiofrequency operations in the 5.250-5.350 GHz and 5.470-5.750 GHz bands are Federal Government radars. If a radar signal is detected, the channel used by the radar signal would either be vacated and/or flagged as unavailable for use by the U-NII device. TPC is a feature that regulates a device's transmit power in response to the level of an input signal or a command issued by a controller (e.g., a command signal might be emitted by a controller when the received signal falls below a predetermined threshold).

4. In order to allow the immediate implementation of U-NII devices in accordance with the rules adopted in the *5 GHz U-NII Report and Order*, the Commission provided an interim test procedure to be used in obtaining equipment certifications for U-NII devices.<sup>5</sup> Upon review, the Commission found that the provisions of this test procedure were adequate to provide satisfactory testing and certification of U-NII devices containing DFS capabilities, but also recognized that the procedure may need to be modified as equipment was developed and as testing methodologies were refined. Therefore, consistent with existing practice, the *5 GHz U-NII Report and Order* stated that the Commission's Laboratory may issue updated measurement procedures in the future.<sup>6</sup>

5. In the *5 GHz U-NII Report and Order*, the Commission required that any product with the capability to operate in the new spectrum at the 5.470-5.725 GHz band, including equipment designed to operate in the existing 5.250-5.350 GHz and the new 5.470-5.725 GHz bands, must meet all of the rules, including the new DFS and TPC requirements<sup>7</sup> contained in the *5 GHz U-NII Report and Order* in accordance with the specified measurement procedures to obtain equipment certification. For devices operating in the existing 5.250-5.350 GHz band, the Commission provided a transition period in order to minimize economic hardships on manufacturers. The Commission adopted a cut-off date of one year from the date of publication of the *5 GHz U-NII Report and Order* in the Federal Register (January 20, 2005) for applications for equipment certification of products that operate in the 5.250-5.350 GHz band.<sup>8</sup> After that time, all devices for which an application for equipment certification are filed for U-NII equipment operating in the 5.250-5.350 GHz band must meet the rules adopted in the *5 GHz U-NII Report and Order*. In addition, to prevent equipment without DFS and TPC requirements from being imported and marketed indefinitely, the Commission adopted a two-year cut-off date (January 20, 2006) for the marketing and importation of equipment designed to operate in only the 5.250-5.350 GHz band.<sup>9</sup> Finally, the Commission noted that users who obtained equipment prior to any of the cut-off dates would be able to continue to use that equipment indefinitely.<sup>10</sup>

6. After the release of the *5 GHz U-NII Report and Order*, the industry and the Federal Government continued to develop final test procedures, but found that ensuring that DFS adequately protects most Federal Government radar systems was more complex than originally envisioned. Therefore, the

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<sup>5</sup> See DFS Interim Test Procedure contained in Appendix C of the *5 GHz U-NII Report and Order*.

<sup>6</sup> See *5 GHz Report and Order* at ¶ 39.

<sup>7</sup> In the *5 GHz Report and Order*, the Commission required TPC for U-NII devices operating in the 5.250-5.350 GHz and 5.470-5.725 GHz bands and at power levels higher than 500 mW. See *5 GHz U-NII Report and Order* at ¶¶ 35-36.

<sup>8</sup> For example, equipment designed to operate in only the 5.250-5.350 GHz band could continue to obtain certification without having DFS and TPC, so long as the application for equipment certification was filed prior to the cut-off date of one year. See *5 GHz U-NII Report and Order* at ¶ 42.

<sup>9</sup> See § 15.37(l).

<sup>10</sup> See *5 GHz Report and Order* at ¶ 42.

Commission adopted the *5 GHz Extension Order* extending the cut-off dates adopted in the *5 GHz U-NII Report and Order* to allow sufficient time to complete the final test procedures.<sup>11</sup> Specifically, the *5 GHz Extension Order* extended by one year the cut-off date for applications for certification of U-NII equipment operating without DFS or TPC in the 5.250-5.350 GHz band until January 20, 2006. Additionally, the two-year cut-off date for marketing and importation of equipment designed to operate in only the 5.250-5.350 GHz band was extended for one year until January 20, 2007.

## DISCUSSION

7. The Commission, National Telecommunications and Information Administration (NTIA), and the U-NII equipment industry are continuing to work together to develop test procedures to ensure that DFS adequately protects most Federal Government radar systems and have now completed a draft plan of test procedures. We anticipate NTIA will soon submit the revised measurement procedure to the Commission for consideration. The Commission will issue the updated measurement procedures for the certification of U-NII equipment containing DFS and TPC capabilities.

8. We note that the cut-off date for applications for equipment certification for products without DFS and TPC that operate in the 5.250-5.350 GHz band is January 20, 2006. We therefore are extending this cut-off date by 180 days in order to allow sufficient time for manufacturers to incorporate DFS into U-NII devices and comply with the rules including the new test procedures. Therefore, effective July 20, 2006, all devices for which an initial application for equipment certification is filed for U-NII equipment operating in the 5.250-5.350 GHz band must meet the rules adopted in the *5 GHz U-NII Report and Order*. We also extend by 180 days the two-year cut-off date for marketing and importation of equipment designed to operate in only the 5.250-5.350 GHz band. Therefore, U-NII equipment operating in the 5.250-5.350 GHz band that are imported or marketed on or after July 20, 2007 must comply with the DFS and TPC requirements adopted in the *5 GHz U-NII Report and Order*. We note that users who obtained equipment prior to any of these cut-off dates will be allowed to continue to use that equipment indefinitely. Finally, because our action today temporarily relieves a restriction, *i.e.*, the cut-off dates for equipment authorizations and the marketing of U-NII equipment in the 5.250-5.350 GHz band, we make this Order effective upon release.<sup>12</sup>

9. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i), 303(f), and 303(r) of the Communications act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(f), and 303(r), and Section 553(d) of the Administrative Procedure Act, 5 U.S.C. § 553(d), this Order IS HEREBY ADOPTED.

10. IT IS FURTHER ORDERED that Section 15.37(l), 47 C.F.R. § 15.37(l) IS HEREBY AMENDED, as set forth in the attached Appendix, and shall become effective upon release of this Order.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

<sup>11</sup> See *5 GHz Extension Order* at ¶¶ 8-9.

<sup>12</sup> See Section 553(d)(1) of the Administrative Procedure act, 5 U.S.C. § 553(d)(1). The Commission also will not send a copy of this Order pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

**APPENDIX**  
**FINAL RULES**

Part 15 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation of Part 15 continues to read as follows:

**AUTHORITY: 47 U.S.C. 154, 302a, 303, 304, 307, 336, and 544A**

2. Section 15.37 is amended by modifying paragraph (l) to read as follows:

**§ 15.37 Transition provisions for compliance with the rules**

\* \* \* \* \*

(l) U-NII equipment operating in the 5.25-5.35 GHz band for which applications for certification are filed on or after July 20, 2006 shall comply with the DFS and TPC requirements specified in Section 15.407 of this part. U-NII equipment operating in the 5.25-5.35 GHz band that are imported or marketed on or after July 20, 2007 shall comply with the DFS and TPC requirements in Section 15.407 of this part.

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