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

In the Matter of	)	
	)	
Axon Enterprise, Inc.	)	ET Docket No. 24-40
	)	
Request for Waiver of Sections 15.247(a) and 15.247(d) of the rules for Operating in the 5725 – 5850 MHz Band.	)	

ORDER

Adopted: December 5, 2024 **Released: December 5, 2024**

By the Acting Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. By this Order we grant Axon Enterprise, Inc.'s (Axon) request to waive Sections 15.247(a) and 15.247(d) of the Commission's rules to permit its analog-modulated devices to operate at the same transmit power permitted for digitally modulated, frequency hopping devices and to operate at slight exceedance of the out of band (OOB) emission limits.[1] For the reasons discussed below, we find that there is good cause to grant Axon's waiver request.

II. BACKGROUND

2. Axon's suite of surveillance devices includes an aerial drone, a small ground vehicle, and a hand-held pole mounted camera. Up to four devices can connect to and subsequently be controlled by a single control unit that transmits control signals at 900 MHz. The three devices provide video and audio over four channels of 5 MHz bandwidth across the 5725-5850 MHz band. Axon markets its devices to state and local law enforcement officials to be used during indoor surveillance operations. On December 5, 2023, Axon filed a request for a waiver of Sections 15.247(a) and 15.247(d) of the Commission's rules, 47 C.F.R. §§ 15.247(a) and 15.247(d), to allow the certification, marketing and operation of its suite of surveillance devices.[2]

3. The unlicensed operation of a transmitter employing analog modulation in the 5725-5850 MHz band is normally subject to the requirements under Section 15.249 of the Commission's rules.[3] Axon claims the transmit power under 15.249 is insufficient to meet the needs of law enforcement.[4] Section 15.247 outlines the technical requirements for wideband systems employing digital modulation within the 5725-5850 MHz band.[5] Section 15.247(a) limits the application of subsequent subparts under Section 15.247, including the higher transmit power Axon seeks to operate its devices at, to digitally

[1] 47 CFR § 15.247(a), (d).

[2] Axon Enterprise Inc., Request for Waiver (filed December 5, 2023) (*Axon Waiver Request*).

[3] 47 CFR § 15.249.

[4] *Axon Waiver Request* at 5.

[5] 47 CFR § 15.247.

modulated, frequency hopping devices.[6] Axon is seeking a waiver of this section of the Commission's rules in order to operate its analog modulated devices at the higher transmit power normally granted to digitally modulated devices. Section 15.247(d) of the Commission's rules limit the out of band emissions (OOBE) of spread spectrum or digitally modulated intentional radiators.[7] Specifically, in any 100 kHz bandwidth outside the band in which the intentional radiator is operating, the radiator's power shall be attenuated by 30 dB below the highest level of desired power.[8] Axon's devices exceed the limit by at most 5 dB, so it seeks a waiver of the OOBE limits.[9]

4. In response to the Office of Engineering and Technology's (OET) request for comment on the Axon waiver request, four parties filed comments and one party filed reply comments.[10] The Internet & Television Association (NCTA), the Open Technology Institute at New America and Public Knowledge (OTI), Wi-Fi Alliance, WifiForward, and the Association for Broadband Without Boundaries (WISPA) expressed concerns about the potential for Axon's devices to impact the spectral landscape of the 5725-5850 MHz (U-NII-3) band subsequently causing interference to Wi-Fi operations which heavily rely on the band.[11] Opposing comments generally claim that Axon has failed to provide adequate justification for its waiver request and its devices will cause interference across the U-NII-3 band. Axon filed reply comments to address the concerns on the record.[12]

III. DISCUSSION

5. *Public Interest.* We are authorized to grant a waiver under Section 1.3 of the Commission's rules if the petitioner demonstrates good cause for such action.[13] Good cause, in turn, may be found and a waiver granted "where particular facts would make strict compliance inconsistent with the public interest."[14] To make this public interest determination, the waiver cannot undermine the purposes of the rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.[15]

---

[6] 47 CFR § 15.247(a).

[7] 47 CFR § 15.247(d).

[8] *Id.* The rules provide two required levels of attenuation. Radiators must be attenuated by at least 20 dB. However, if the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB. Axon's devices fall under the latter category and must therefore be attenuated by 30 dB.

[9] *Axon Waiver Request* at Tech. Attach. 2, p. 15.

[10] Office of Engineering and Technology Seeks Comment on Axon Enterprise Inc., Request for Waiver of Sections 15.247(a) and 15.247(d) of the Commission's Rules for Operating in the 5727 – 5850 MHz Band, ET Docket No. 24-40, Public Notice, DA 24-105 (OET Feb. 6, 2024) (*Axon PN*).

[11] *See* NCTA Comments, OTI Comments, Wi-Fi Alliance Comments, WISPA Comments, Letter from Mary L. Brown, Executive Director, WifiForward, to Marlene H. Dortch, Secretary, FCC, ET Docket. 24-40, (filed Jul. 17, 2024) (*WifiFoward Ex Parte*), Letter from Michael Calabrese, OTI; John Bergmayer, Public Knowledge, to Marlene H. Dortch, FCC, ET Docket 24-40, (filed Oct. 21, 2024) (*OTI PK Ex Parte*), Letter from Traci Biswese, NCTA, to Marlene H. Dortch, FCC, ET Docket 24-40, (filed Oct 28, 2024) (*NCTA Ex Parte*) .

[12] *See* Axon Reply.

[13] 47 CFR § 1.3. *See also ICO Global Communications (Holdings) Limited v. FCC*, 428 F.3d 264 (D.C. Cir. 2005); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

[14] *Northeast Cellular*, 897 F.2d at 1166; *see also ICO Global Communications*, 428 F.3d at 269 (quoting *Northeast Cellular*); *WAIT Radio*, 418 F.2d at 1157-59.

[15] *See, e.g.*, *WAIT Radio*, 418 F.2d at 1157 (stating that even though the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule);

(continued….)

6. *Channel Overlap.* All comments on the record submitted by Wi-Fi stakeholders emphasize the importance of the U-NII-3 band (5725 - 5850 MHz) as the backbone of Wi-Fi communications and express concern that Axon's devices could block key sections of the band for Wi-Fi operations.[16] Axon's devices employ four video transmission channels, each about 5 MHz wide.[17] Axon labels these four channels as SH23: 5729.5 - 5734.5 MHz, SH24: 5766.5 - 5771.5 MHz, SH25: 5803.5 - 5808.5 MHz, and SH26: 5840.5 - 5845.5 MHz respectively.[18] Within the U-NII-3 band, Wi-Fi systems implement the channel plan outlined in the 802.11a/n IEEE standard.[19] Under the 802.11a/n channel plan, there are five 20 MHz channels, two 40 MHz channels, and one 80 MHz channel available to Wi-Fi communications.[20] Notably, two of Axon's channels, SH24 and SH25, overlap with two 20 MHz channels and both 40 MHz channels available to Wi-Fi systems.[21] OTI claims that an issue occurs in any Wi-Fi channel that overlaps with one of Axon's channels.[22] OTI and Wi-Fi Alliance note that Axon's devices do not implement any coexistence protocols such as the listen before talk (LBT) protocol that Wi-Fi systems use to effectively share the band.[23] Parties therefore argue that Axon's devices could transmit continuously without being able to detect surrounding Wi-Fi communications.[24] This would interfere with ongoing, and force subsequent, Wi-Fi communications to other channels, essentially blocking key portions of the U-NII-3 band.[25] WISPA claims proof of this occurring can be seen in the coexistence testing Axon detailed in its waiver request.[26] In this coexistence study, Axon placed its surveillance drone in close proximity to a Wi-Fi network.[27] Speed tests of the Wi-Fi network were conducted while the surveillance drone was transmitting video to the control unit. Individual tests were conducted over two of

Northeast Cellular, 897 F.2d at 1166 (stating that in granting a waiver, an agency must explain why deviation from the general rule better serves the public interest than would strict adherence to the rule).

[16] WISPA Comments at 2; Wi-Fi Alliance Comments at 2; OTI Comments at 1-2; NCTA Comments at 7; *WifiForward Ex Parte* at 1-2.

[17] These channels have center frequencies at 5732 MHz, 5769 MHz, 5806 MHz, and 5843 MHz. Letter from Bruce Olcott, Counsel to Axon Enterprise, Jones Day, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 24-40, at 1 (filed Jul. 7, 2024) (*Axon Ex Parte*).

[18] Axon lists the center frequencies of the channels and their respective labels. *Axon Ex Parte* at 1. By dividing the listed bandwidth of 5MHz in half and subsequently adding or subtracting this from the center frequency one can derive the upper and lower channel bounds respectively.

[19] *See* "IEEE Standard for Information technology-- Local and metropolitan area networks-- Specific requirements-- Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment 5: Enhancements for Higher Throughput," in *IEEE Std 802.11n-2009* (Amendment to *IEEE Std 802.11-2007* as amended by *IEEE Std 802.11k-2008*, *IEEE Std 802.11r-2008*, *IEEE Std 802.11y-2008*, and *IEEE Std 802.11w-2009*), vol., no., pp.1-565, 29 Oct. 2009, doi: 10.1109/IEEESTD.2009.5307322.

[20] The 20 MHz channels are centered at 5745 MHz, 5765 MHz, 5785 MHz, 5805 MHz, and 5825 MHz respectively. The 40 MHz channels are centered at 5755 MHz and 5795 MHz. The 80 MHz channel is centered at 5775 MHz. *See* https://transition.fcc.gov/bureaus/oet/ea/presentations/files/oct14/51-New-Rules-for-UNII-Bands,-Oct-2014-TN.pdf at 10.

[21] The two Axon channels SH 24 and SH 25 overlap with Channel 153 (5755 – 5775 MHz) and Channel 161 (5795 – 5815 MHz) respectively. For a visual representation of the Wi-Fi Channels, see https://transition.fcc.gov/oet/ea/presentations/files/may17/31-Part-15-Panel-UNII-UpdatesDT.pdf at 3.

[22] OTI Comments at 6.

[23] Wi-Fi Alliance Comments at 3.; OTI Comments at 6.

[24] Wi-Fi Alliance Comments at 4; NCTA Comments at 7.

[25] *Id.*

[26] WISPA Comments at 2 (referencing *Axon Waiver Request* at 10-11).

[27] *Axon Waiver Request at 10-11*.

Axon's channels with both showing no impact to Wi-Fi communications.[28] However, parties argue these results only show that the surveillance drone transmissions were detected by the Wi-Fi system's LBT protocol resulting in Wi-Fi communications being forced to switch to another channel. As previously mentioned, OTI argues that given the lack of coexistence protocols, an Axon device operating in a channel that overlaps with a Wi-Fi channel will block that entire channel from Wi-Fi communications.[29] OTI claims that in a worst case scenario four Axon devices could be operating continuously in outdoor and indoor environments resulting in severe impact to surrounding Wi-Fi communications.[30] OTI and NCTA urge the Commission to consider adding additional conditions, if the waiver is to be granted, including prohibiting Axon devices from employing fixed infrastructure.[31]

7. In response Axon argues that opposing parties fail to understand the operational conditions and limited scope under which it seeks to operate its devices.[32] Regarding OTI's worst case scenario, Axon highlights that its devices are battery-operated with a maximum operating time of a few hours.[33] Therefore, its devices cannot be continuously operated for an indefinite duration but are instead designed to be operated in discrete law enforcement-related engagements. Further, Axon claims that its devices are not designed for outdoor surveillance for a few reasons: its devices have no zoom function thus rendering them ineffective at significant distances, its devices are not designed to withstand outdoor conditions, and its devices require the control unit to be significantly close to the surveillance device.[34] Axon acknowledges there may be circumstances in which its devices are operated outdoors; however, this would only occur in situations where law enforcement have not secured safe entry into a building resulting in surveillance devices being turned on before they are maneuvered into a building.[35] To mitigate concerns on the record, Axon proposes its waiver be conditioned to emergency situations only and not for routine monitoring or generalized neighborhood surveillance purposes.[36]

8. To address the issue of overlapping channels, Axon proposes an additional waiver condition for its devices to prioritize the two channels that do not overlap with Wi-Fi channels.[37] Further, anytime a device needs to switch to one of the two overlapping channels, the control unit will display urgent messages to the user informing them of the congested channels and urging the use to promptly switch back to the one of the two outer channels.[38] Additionally, Axon clarifies that in most emergency situations law enforcement only requires two surveillance devices.[39] Axon therefore believes that risk of interference or blocked channels will be mitigated by the limited scope in which its devices would be operated.[40] WifiForward argues that these conditions are insufficient to address concerns of interference and urges the Commission's decision be based on supporting the coexistence of the band and the

[28] *Id*.

[29] OTI Comments at 6

[30] *Id*.

[31] *OTI PK Ex Parte* at 3, *NCTA Ex Parte* at 2.

[32] Axon Reply 1-2.

[33] *Axon Waiver Request* at 2.

[34] Axon Reply at 2.

[35] Axon Reply at 11.

[36] *Id*.

[37] *Axon Ex Parte* at 1.

[38] *Id*. at 2-3.

[39] Axon Reply at 6.

[40] Axon Reply at 1.

consumers who benefit from the services in the unlicensed band.[41] WifiForward argues that under these conditions Wi-Fi operations will still be disrupted in at least one of the five 20 MHz channels by an always on Axon device.[42] However, Axon claims its devices are configured so that the outer channels are used by default, the devices operate on a very limited battery life, the devices are only used in emergency situations and in most emergency scenarios only up to two devices are used per controller.[43] Additionally, because urgent messages will be constantly displayed to users anytime they switch to a congested channel, the use of those congested channels will be mitigated.[44]

9. *Analog Modulation*. Commenters also argued that Axon failed to provide sufficient justification for its use of analog modulation.[45] In its waiver request, Axon argues its devices use analog modulation to provide law enforcement with reliable video feeds.[46] Axon claims that when signal degradation results in inadequate signal strength, a digitally modulated video signal will suffer the "cliff-effect" in which it remains stuck on a frame or drops altogether.[47] In contrast, when an analog modulated video signal experiences signal degradation the video may contain static and noise but can remain viewable.[48] NCTA acknowledges that the cliff-effect can occur in digitally modulated signals, but argues that it only occurs at the very fringes of signal coverage.[49] Further, NCTA explains that there are techniques such as pre-coding and error detection that can mitigate the likelihood of the cliff-effect occurring.[50] NTCA also points to surveillance drones currently on the market that employ digital modulation and are still used by law enforcement.[51]

10. In response, Axon claims that while the techniques laid out by NCTA can mitigate the cliff-effect, the risk of it occurring still exists and impacts the reliability of digitally modulated signals.[52] Additionally, Axon argues that surveillance devices using digital modulation are intended for outdoor applications where line-of-sight conditions provide better signal reliability.[53] Axon's devices are intended for indoor applications where non-line-of-sight conditions subsequently require high signal reliability and low latency.[54] Axon claims that compared to the 25 milliseconds of latency experienced by analog signals, digital signals can have up to 600 milliseconds of latency indoors.[55] Axon reassures that it will work with the Commission to identify an alternative approach to make the benefits of analog modulated surveillance devices available to law enforcement without necessitating waivers of Sections 15.247(a) and

[41] *WifiForward Ex Parte* at 3.

[42] *Id.* at 2.

[43] *Axon Ex Parte* at 1-4.

[44] *Id*. at 3.

[45] WISPA Comments at 1; OTI Comments at 3; NCTA Comments at 2.

[46] *Axon Waiver Request* at 4.

[47] *Id*.

[48] *Id*.

[49] NCTA Comments at 4-5.

[50] *Id*.

[51] *Id*.

[52] Axon Reply at 3-4.

[53] *Id*.

[54] *Id*.

[55] *Id*.

(d) of the Commission's rules.[56] Therefore, Axon proposes an additional waiver condition: that the waiver be sunset three years after it is granted.[57]

11. *Out-of-Band-Emission.* NCTA expresses concern that Axon's devices exceed the OOBE limits in Section 15.247(d).[58] In response, Axon argues that NCTA fails to identify any reason why the slight exceedance of the OOBE limits could result in interference to Wi-Fi or other services.[59] Further, Axon highlights the fact it already explained how a slight exceedance of OOBE limits would not impact other users in adjacent frequencies.[60] In their waiver request, Axon explains that the OOBE limits are only exceeded at the lower and upper edges of the band (i.e., 5725 MHz and 5850 MHz respectively).[61] Axon highlights that the OOBE limits at the lower edge of the U-NII-3 band were primarily adopted to protect the Federal Aviation Administration's (FAA's) Terminal Doppler Weather Radar (TDWR) and other radar facilities from interference.[62] Axon's lab testing shows the exceedance of the OOBE limit occurs at 5724.9 MHz and the OOBE of its devices is well below out limits at 5700 MHz.[63] There remains 74.9 MHz of spectrum between the OOBE exceedance of Axon's devices and the upper edge (i.e., 5650 MHz) of the TDWR band. At the upper edge, Axon again argues there will be no impact to adjacent services as U-NII-4 devices operate at much higher power than Axon's devices.[64] Further, Axon highlights that the Dedicated Short-Range Communications systems (DRSC) previously operating in the adjacent band, were ordered to vacate the spectrum in 2020.[65] Axon therefore claims the slight exceedance of OOBE limits at the lower and upper edges of the band and the importance of public safety services its devices will provide fully warrant the Commission granting a waiver of Section 15.247(d).[66]

12. *Other Issues.* OTI and NCTA claim that Axon is seeking to operate at the highest power levels allotted to Part 15 devices (i.e., a maximum conducted average output power of 1 Watt and a conducted power spectral density limit of 8dBm/ 3kHz).[67] However, Axon claims opposing parties mischaracterize its devices.[68] Axon points to its lab tests that show its devices operate at a maximum conducted average output power of about 0.5 Watts and with a power spectral density of about 6.5 dBm/ 3kHz, both of which are below the power level granted under Section 15.247.[69] In an effort to reassure opposing parties, Axon proposes another waiver condition limiting its devices to the output power and power spectral density of its devices to the values listed in its test report (i.e., 0.563 Watts and 6.5 dBm/ 3kHz).[70] OTI questions why Axon cannot seek to operate in other bands, specifically the 4.9 GHz band

[56] Axon Reply at 11.

[57] *Id*.

[58] NCTA Comments at 6. *See* 47 CFR § 15.247(d).

[59] Axon Reply at 5.

[60] *Id. See Axon Waiver Request* at 8-10.

[61] *Axon Waiver Request* at 8.

[62] *Id.* at 9. *See Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Infrastructure (U-NII) Devices in the 5 GHz Band,* ET Docket No. 13-49, Memorandum Opinion and Order, 31 FCC Rcd at 2318, para. 2. (Mar. 1, 2016).

[63] *Axon Waiver Request* at Tech. Attach., p. 15.

[64] *Id.* at 10. *See* 47 CFR § 15.407(a)(3).

[65] *Axon Waiver Request* at 10.

[66] *Id*.

[67] OTI Comment at 2; NCTA Comments at 3-4. *See* 47 CFR § 15.247.

[68] Axon Reply at 1-2.

[69] *Axon Waiver Request* at 7.

[70] Axon Reply at 11. *See Axon Waiver Request* at Tech. Attach., pp. 22 and 28.

dedicated to public safety.[71] This would result in Axon devices having dedicated spectrum without impacting Wi-Fi communications. To this end, Axon argues that Section 90.1205(c) prohibits use of the 4.9GHz band for aeronautical mobile operations.[72] Further, any waivers to operate in this band have strictly prohibited the use of drone or UAS in order to protect radio astronomy observatories.[73]

13. *Decision.* We find that there is a clear public interest in making Axon's surveillance devices available for use in the specific law enforcement scenarios that Axon describes. The devices can be effective in mitigating the risk of serious injury by providing law enforcement with real-time information in dangerous situations such as searching hostage locations or identifying an active shooter.[74] However, we also recognize the public interest in the incumbent unlicensed use of the band – especially for the multitude of Wi-Fi applications that rely on these workhorse frequencies.

14. Based on the record of this proceeding and the above analysis, we are convinced that the Axon devices can be operated without unduly jeopardizing Wi-Fi operations. The limited scope in which these devices will be operated in itself helps to mitigate the risk of interference. Axon's devices are intended for temporary indoor use and are not designed to withstand outdoor conditions or to operate for extended periods of time. Further, these surveillance devices are intended to only be used in emergency situations, which in most cases will require a maximum of two devices.

15. We recognize the concerns from Wi-Fi operators that, under the terms of the initial waiver request, Axon's devices could still lead to Wi-Fi interference. However, we note that Axon, in addressing such concerns, has indicated that it would be willing to accept waiver conditions and limitations appropriate to the limited scope of its product's use.[75] And even to the extent that there still is a worst-case potential for two surveillance devices to operate in both overlapping channels and essentially block Wi-Fi communications from accessing key channels, such disruption to other unlicensed services is no different than the same situation where any two unlicensed devices try to operate in close proximity. While as a general rule we strongly encourage compatibility among unlicensed users, we are not convinced that the small number of Axon devices being used in limited public safety situations will result in a meaningful impairment of the well-established Wi-Fi ecosystem under this particular fact pattern. Specifically, Axon's devices' limited operations combined with the additional waiver conditions means that any harmful interference instances will be limited to short periods of time and in discrete areas. Further, the safety benefits that Axon's devices provide will greatly benefit the public. This decision therefore supports consumers benefiting from unlicensed services in the band while minimizing the effect that Axon's devices might have on other unlicensed users.

16. Finally, we note that the 5725-5850 MHz band is allocated on a primary basis to Federal radiolocation services. The Department of the Air Force (DAF) operates space launch tracking radars at the Vandenberg and Patrick Space Force bases.[76] These radars operate in frequencies that overlap with the frequencies that Axon intends to use on an unlicensed basis and, as a result, Axon has an obligation to avoid causing harmful interference to authorized Federal systems operating in this band. To help ensure

[71] OTI Comments at 8-9.

[72] Axon Reply at 9, Letter from Kym Crave, National Association of Women Law Enforcement Executives, to Marlene H. Dortch, FCC, ET Docket 24-40, (filed Mar. 29, 2024), Letter from Megan E. Noland, Major County Sheriffs of America, to Jessica Rosenworcel, FCC, ET Docket 24-40, (filed May 20, 2024).

[73] *Id*. at 10.

[74] *Axon Waiver Request* at 13.

[75] *Id*.

[76] *See* Letter from Charles Cooper, Associate Administrator, Office of Spectrum Management, NTIA, to Ronald Repasi, Chief, Office of Engineering and Technology, FCC at 9-10 (Sept. 8, 2020) (on file in ET Docket No. 19-138 and available at https://www.fcc.gov/ecfs/search/search-filings/filing/10908294330694). This letter includes an enclosed Advisory Notice from Enforcement Bureau that details the interference concerns at Air Force bases.

that Axon complies with this requirement, we are requiring Axon to notify DAF whenever its devices are sold to law enforcement agencies intending to use them within 40 km of both Space Force bases.

17. We will include specific conditions in the waiver grant to ensure that actual operation is in conformity with Axon's stated limited scope of operation. We find merit in the observations by WISPA and NCTA that if Axon's waiver is granted, it should be done so temporarily and be strictly limited in scope.[77] Therefore, among the conditions of the waiver, we are imposing a 3-year limit on Axon's waiver beginning on the day the waiver is granted without any option for extension. Axon's waiver will therefore be sunset after the 3-year limit, under which Axon's three devices described herein will no longer be authorized to be sold or marketed but all existing devices can continue to be operated under the conditions of this waiver grant. We are also imposing conditions to limit the impact of channel overlap so that Wi-Fi systems can continue to use the heavily relied upon U-NII-3 band.

18. *Waiver Conditions*. We find that approval of the waiver for Axon's surveillance devices provides benefits that would make strict compliance with the subparts under 15.247 inconsistent with the public interest. This waiver will promote law enforcement with additional safety measures during a dangerous or emergency situation. In order to reap these benefits and mitigate the risk of interference to other users in the band, we grant this waiver subject to the following conditions:

1) Axon's three surveillance devices shall be certified by a designated Telecommunication Certification Body and must comply with the technical specifications applicable to operation under Part 15 of the Commission's rules, except as permitted below:
    a. The operational limitations in 47 CFR § 15.247(a) are waived to permit the analog modulated devices to operate under 15.247(b)-(c), (e)-(i) .
    b. The out-of-band emission limits in 47 CFR § 15.247(d) may be exceeded by no more than 6 dB.
2) Sales of Axon devices under this waiver grant shall be limited to 2,000 individual units (comprised of all three surveillance device types (i.e., drone, pole-mounted camera, and vehicle) combined) during the first year of sale and no more than 4,000 individual units each year thereafter up to a combined total of 10,000 units at the end of three years.
    a. Marketing of the three surveillance device types shall be limited to direct sales to law enforcement organizations that are eligible for licensing under the provisions of 47 CFR § 90.20. Any offer for sale or lease of the device must include the following statement: "This device has been authorized by the Federal Communications Commission only for sale directly to law enforcement organizations that are eligible for licensing under the provisions of Section 90.20 of the Commission's rules. This device has not been authorized for use and may not be offered for sale or lease to any other entities. This device is limited to use by law enforcement agencies only for emergency and surveillance operations." Any law enforcement agency that purchases devices from Axon must be subject to an agreement addressing resale of these devices; the agreement must either prohibit resale or limit resale, either to Axon or to Axon and any party that is another law enforcement agency eligible for licensing under Section 90.20 of the Commission's rules,
3) Axon shall clearly and conspicuously note in all instructions and training materials included or otherwise made available with its surveillance devices that surveillance devices shall be used only by law enforcement agencies for emergencies involving safety-of-life purposes and related training and shall not be operated in routine monitoring or generalized neighborhood surveillance purposes. Also, transmitters shall not be used for permanent or fixed operations.
4) Axon's surveillance devices must be battery powered.
5) Axon's surveillance devices are permitted to transmit only over the 4 channels outlined in Axon's Waiver request (i.e., SH23: 5729.5 – 5734.5 MHz, SH24: 5766.5 – 5771.5 MHz, SH25: 5803.5 – 5808.5 MHz, and SH26: 5840.5 – 5845.5 MHz). The radio configuration must prioritize use of Channels SH23 and SH26.

[77] WISPA Comments at 1; NCTA Comments at 12.

6) Axon shall notify the Department of the Air Force IRAC Representative at thu.luu@us.af.mil when systems are sold to law enforcement agencies who plan to use them within 40 km of Patrick Space Force Base, FL (28 36 29 N 080 36 14 W) and Vandenberg Space Force Base, CA (34 38 24 N 120 35 23 W).
7) This waiver and its conditions are granted to Axon to market its devices for three years following the release of this Order.

IV. ORDERING CLAUSES

19. Accordingly, pursuant to authority delegated in Sections 0.31 and 0.241 of the Commission's rules, 47 CFR §§ 0.31, 0.241, and Section 1.3 of the Commission's rules, 47 CFR § 1.3, IT IS ORDERED that the Request for Waiver filed by Axon on December 5, 2023 IS GRANTED consistent with the terms of this Order. This action is taken pursuant to Sections 4(i), 302, 303(e), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(e), and 303(r). This action is effective upon release of this Order.

20. IT IS FURTHER ORDERED that, if no applications for review are timely filed, this proceeding SHALL BE TERMINATED, and the docket CLOSED.

FEDERAL COMMUNICATIONS COMMISSION

Ira Keltz
Acting Chief
Office of Engineering and Technology