

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

In the Matter of	)	
	)	
Waiver of Industrial Signal Booster	)	WTB Docket No. 19 - ____
Labelling Requirements	)	
	)	

**PIVOTAL COMMWARE  
REQUEST FOR WAIVER OF SECTION 20.21(f)**

Pivotal Commware (“Pivotal”), by counsel and pursuant to Section 1.3 of the Commission’s rules, hereby submits this Request for Waiver (“Petition”) of the Industrial Signal Booster (“ISB”) labelling rules set forth in Section 20.21(f).<sup>1</sup>

**Background**

Pivotal has developed, and is in the process of obtaining equipment certification for, a low-cost mass-market solution to bringing super-fast broadband to households and small businesses using millimeter wave spectrum. The Commission recently auctioned 1,550 megahertz of millimeter wave spectrum in the 24 and 28 GHz bands, and in December 2019 the Commission will auction an additional 3,400 megahertz of millimeter wave spectrum in the 37, 39 and 47 GHz bands. The millimeter wave bands offer nearly 5 gigahertz of spectrum with wide (100 megahertz or more) channels, enabling very high throughput. However, millimeter wave transmissions present material propagation challenges that typically require line-of-sight and have difficulty penetrating walls and windows for indoor applications. Legacy transceiver technologies are inadequate to provide service to consumers without cumbersome and expensive installation procedures because the throughput is substantially reduced by reflection off and

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<sup>1</sup> 47 C.F.R. § 20.21(f).

absorption by glass windows, particularly modern low-E and double-paned windows.

Pivotal's Echo 5G Subscriber device (the "Device") solves these propagation problems by using state-of-the-art holographic beamforming to transmit and receive signals to and from a tower, even at extreme angles. The Device, which is the size of a small iPad, is mounted on a window: the outdoor portion provides radiofrequency transmissions to and from the tower, and within the customer premises.<sup>2</sup> The indoor portion is plugged in and provides the power supply via inductive wireless power transfer. The Device operates at very low radiated power levels.<sup>3</sup>

Pivotal will sell the Device only to wireless service providers, who will, in turn, provide the Device to their 5G broadband customers as an integral part of the service provider's broadband service offering. The Device will not be available at retail. Instead, wireless service providers will deliver the Device to their customers, with instructions on how to self-install the Device on a window.

The Device will operate only on spectrum licensed to the service provider. The Device will not be able to operate without authentication and provisioning by the service provider. The Device will communicate with and be remotely managed by the service provider via established LTE-based technologies. In the event the customer terminates service, the service provider will be able to shut down the Device remotely and administratively lock the unit so that it cannot transmit.

### **Request for Waiver**

Pivotal respectfully requests a waiver of ISB labelling rules set forth in Section 20.21(f), which provides in relevant part as follows:

(f) *Signal booster labeling requirements.* (1) Signal booster manufacturers, distributors, and retailers must ensure that all signal boosters marketed on or after March 1, 2014 include the

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<sup>2</sup> The dimensions of the Device are 7.5" x 7" x 1.75".

<sup>3</sup> Maximum EIRP (for each of horizontal and vertical) is 0.501 watts.

following advisories:

- (i) In on-line, point-of-sale marketing materials,
- (ii) In any print or on-line owner's manual and installation instructions,
- (iii) On the outside packaging of the device, and
- (iv) On a label affixed to the device.

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(B) For Industrial Signal Boosters:

WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of \$100,000 for each continuing violation.<sup>4</sup>

Section 1.3 of the Commission's Rules provides the Commission with discretion to waive the application of any of its rules upon a showing of good cause.<sup>5</sup> Section 1.925(b)(3) provides that the Commission may grant a waiver where it is shown that:

- (i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or
- (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.<sup>6</sup>

Federal courts have recognized that the Commission may "exercise its discretion to waive a rule where particular facts would make strict compliance inconsistent with the public interest."<sup>7</sup>

## Discussion

Application of the ISB labelling requirements set forth in Section 20.21(f) to the Device would not serve the underlying purpose of the rule, and would be inequitable, unduly burdensome, and contrary to the public interest. The underlying purpose of the rule is to protect

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<sup>4</sup> 47 C.F.R. § 20.21(f).

<sup>5</sup> 47 C.F.R. § 1.3.

<sup>6</sup> 47 C.F.R. § 1.925(b)(3).

<sup>7</sup> *Northwest Cellular Telephone Co.*, 897 F.2d at 1166 (citing *WAIT Radio*, 418 F.2d at 1159).

service providers from interference created by high-power industrial signal boosters. In adopting the labelling requirements, the Commission stated as follows:

Industrial Signal Boosters include large, high powered devices intended for professional or enterprise use. \*\*\* The output power and gain for Industrial Signal Boosters are typically multiple times the power and gain of Consumer Signal Boosters. These devices are designed to serve multiple users simultaneously and cover large areas such as stadiums, shopping malls, office buildings, tunnels and campuses.<sup>8</sup>

We are wary, however, that consumers may erroneously purchase Industrial Signal Boosters and unwittingly cause interference to wireless networks because these devices do not contain sufficient, consumer-targeted safeguards. We thus require that Industrial Signal Boosters be labelled to notify consumers that operation of the device requires an FCC license or express (*i.e.* individualized) consent of the licensee whose signals are intended to be amplified by the device.<sup>9</sup>

Pivotal submits that the ISB labelling requirements make no sense for the Device, for many reasons:

- Consumers cannot “erroneously purchase” the Device because the Device is not available at retail. Consumers can only obtain the Device from their service provider.
- The Device cannot cause interference to wireless networks because the Device cannot operate without authentication from the service provider. In the event the customer terminates service, the service provider will be able to shut down and lock the Device remotely.
- The Device operates at very low radiated power levels. The Industrial Signal Booster rules were intended for high-power outdoor signal boosters used in network and enterprise operations.
- The text of the label is inapplicable to the Device, and likely to cause confusion and undue concern among consumers.
- The Device is intended for self-installation by consumers. The language in Section 20.21(f), “WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS,” will create enormous confusion and would put the Device at a competitive disadvantage to devices with similar functionality – but no labelling requirement.

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<sup>8</sup> *Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission’s Rules to Improve Wireless Coverage Through the Use of Signal Boosters*, Report and Order, 28 FCC Rcd 1663, FCC 13-21, adopted Feb. 20, 2013 (*Report and Order*) at para. 16.

<sup>9</sup> *Report and Order* at para. 20.

- The text regarding a requirement to hold an FCC license is wholly unnecessary and confusing because in all cases the service provider supplying the Device to the consumer will hold the appropriate FCC license.
- The text that warns of “penalties in excess of \$100,000 for each continuing violation,” is irrelevant, because consumers cannot violate FCC regulations by using the Device. Further, the language is unduly alarming, and could scare off potential customers and slow the uptake of 5G fixed wireless broadband.

Application of the labelling requirement would also be contrary to the public interest.

The FCC recognizes the importance of using millimeter wave spectrum to provide very high-speed wireless broadband service to consumers and small businesses.<sup>10</sup> Pivotal’s Device will expedite the introduction of 5G millimeter wave broadband into the market. However, the onerous labelling requirements in Section 20.21(f) could well create a material barrier to the widespread and rapid deployment of the Device into the 5G ecosystem.

In light of the above, Pivotal respectfully requests that the Commission waive, *in its entirety*, the Part 20.21(f) labelling requirement for the Device. However, if the Commission believes that a label is still necessary, Pivotal proposes the following text:

This device must be installed in a fixed location on your window. This device may only be operated with the permission of your service provider. Users are prohibited from making any alterations to this device.

If a label is required, Pivotal proposes to provide the text of the label in the following places:

- In any print or on-line owner's manual and installation instructions
- On the outside packaging of the device

Pivotal urges the Commission to waive any requirement that the label be added to marketing materials or to the Device itself. The Device is quite small and must already accommodate the

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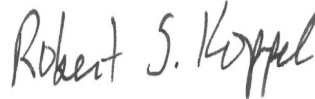
<sup>10</sup> See e.g. Public Notice, Office of the [FCC] Chairman, rel. Nov. 14, 2018, commenting on the auction of 24 and 28 GHz band spectrum (“Today’s spectrum auction shows that America is continuing to lead the world in 5G, the next generation of wireless connectivity. *These airwaves will be critical in deploying 5G services and applications.*”) (emphasis added).

standard FCC equipment authorization label. Adding further text would require a larger label and would be particularly unsightly because the device must be mounted on a window where a label would be highly visible. The Commission does not require any label (other than the standard equipment authorization label) for other consumer RF devices, such as Wi-Fi routers and personal cell spots.<sup>11</sup>

### **Conclusion**

For the reasons set forth herein, Pivotal Commware urges the Commission to expeditiously grant this Request for Waiver of the ISB labelling requirements set forth in Section 20.21(f) of the Commission's rules.

Respectfully submitted,



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<sup>11</sup> Pivotal recognizes that the Commission requires a label on Consumer Signal Booster (“CSB”) devices. CSBs are very different than Pivotal’s Device, because CSBs can be purchased at retail, can transmit without authentication by a service provider, and operate on licensed spectrum – thus presenting a risk of interference. Accordingly, it makes sense to require that a label be used to inform consumers that they must register CSBs with their wireless provider.