

31st August 2021

Federal Communications Commission
Authorization & Evaluation Division
7345 Oakland Mills Road
Columbia, Maryland 21046

Subject: Product Variant Letter

**Applicant: Etherstack Inc
FCC ID: 2ADAKSFFR6UL2**

To Whom It May Concern:

This letter serves to provide information to the Federal Communications Commission, with the respect to optional product configurations to the product **FCC ID: 2ADAKSFFR6UL2**. The product configuration variations form the permissive changes sought as part of this application.

This application consists of the following two independent product changes:

- **Addition of a second RF Port (Rx Only)**
- **Addition of an Internal Duplexer**

The “**Addition of a second RF Port (Rx Only)**” option will be a factory fitted option. The Transmit (Tx) Port remains the same RF port in all product configurations.

The “**Addition of an Internal Duplexer**” option can be provisioned via a changeable module. The module is intended to be changeable by user agencies to cater for different use cases, such that one product unit may be used in different product configurations. The internal duplexer provides the means to house a duplexer within the enclosure to support full duplex operation without the need for an additional external duplexer/filter. The changeable module may be:

- changed from a module without an internal duplexer to a module with an internal duplexer, or
- changed from a module with an internal duplexer to another module with a different internal duplexer, or
- changed from a module with an internal duplexer to a module without an internal duplexer.

Through consultation with the FCC, guidance has been provided from the FCC to the Agent (Ultratech) that the internal duplexer may be added to the product via the permissive change process. The insertion of a duplexer filter in to the RF Tx Path is the only Tx RF path difference between all configurations.

The two changes above are product options, when different combinations of these two changes are combined, there is a total three additional product configurations:

- **Single External RF Port and an Internal Duplexer (Configuration 1)**
- **Two External RF Ports and No Internal Duplexer (Configuration 2)**
- **Two External RF Ports and an Internal Duplexer (Configuration 3)**

As part of this application, the three new product configurations noted above have been assessed as Class II permissive changes.

The configuration of the product in the original certification is described as:

- **Single External RF Port and No Internal Duplexer (Configuration 0)**

The following table summarizes the four possible configurations of the product.

Config No.	No. RF ports	2nd RF Port Function	Changeable Duplexer Module
0	1	-	No Internal Duplexer
1	1	-	Internal Duplexer
2	2	Rx Only	No Internal Duplexer
3	2	Unused	Internal Duplexer

Please contact me if there is any information you may need.

Sincerely,

Doug Chapman

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