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USER GUIDE:
New Universal PIM Calculator

CommScope introduces a new and improved evolution of PIM evaluation with the Universal PIM Calculator. Unlike earlier versions that only worked with specific bands and blocks, the Universal PIM Calculator can be used in any region of the world, for any band and block.

FEATURES*:

- Capable of calculating second-, third-, fourth-, and fifth-order PIM. Calculation speed is greatly improved.
- Tabs at the upper-left select pre-populated bands and blocks for North America, EMEA, CALA, Japan and Taiwan—and more tabs can be added for other regions.
- Pre-populated band(s) can be removed to customize the calculator for a given operator by highlighting the band to be removed and clearing the "enable" box. Then click the upper Update button.
- If the pre-populated bands and blocks do not cover an operator's requirements, a custom calculator can be designed using any 3GPP band(s) from a convenient drop-down list.
- If the pre-populated block start and stop frequencies do not match an operator's requirements—or, if the operator wants to position an LTE channel in a specific part of the block—the frequencies can be changed. First, highlight the band of interest, then highlight the block of interest. Changing transmit frequency(s) will automatically change the companion receive frequency(s), but they too can be manually overridden and changed if necessary.
- The bandwidths and names of blocks within a band can be changed and renamed.
- A receive-only block selection has been added for those cases where an RRU receive port shares a common RF path with other transmit (and receive) bands/blocks.
- Any custom calculator can be renamed and saved.

* For any customization requests, please contact your local CommScope representative.

How is the Universal PIM Calculator different from previous versions?

As in the previous calculators, the various blocks are color coded. For Frequency Division Duplex (FDD), the downlink is white and the uplink is grey with a red border. Time Division Duplex (TDD) blocks for both uplink and downlink are light blue. When an FDD downlink block is selected, both it and its companion uplink block turn green. The uplink block can be deselected by clicking on it. Likewise, additional uplink blocks can be selected by clicking on them. Selecting an FDD downlink-only or uplink-only block also turns it green. Selecting a TDD uplink/downlink block turns it green, while a second click turns it dark blue for uplink only. The green blocks are the only offending frequencies considered in the calculations. After selecting various blocks, an orange bar will appear under all block downlink frequencies. Once any Start "x" Order button is clicked, the orange bars disappear.

The buttons in the right-side column are used to start the search for the specified PIM order. Once a given button is clicked, any PIM hits of that order will display a color-coded bar below the affected uplink frequencies:

violet for second, red for third, purple for fourth, and green for fifth. When the Check if TDD blocks synchronized box is checked, it will synchronize all transmitters in all TDD Bands on that tab, thus eliminating any self-imposed PIM hits across all TDD Bands. Cross-band hits involving TDD and FDD blocks will still be shown. The Reset button clears all inputs and the Cancel Search button can be used if a calculation seems to be taking too long. It can take as long as 10 seconds to react after the cancel button is clicked.

If the Calculator finds PIM hits for the order requested, numbers will appear below the downlink and uplink frequencies involved, indicating the percentage of PIM hits occurring in that block. The numbers under the transmit blocks represent the percentage of the total hits where this block is contributing.

The View File is a Notepad summary of the input blocks selected, the block combinations that produce the requested PIM order, and the portion of each uplink block affected.

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