

Public Safety Diplexer / Crossband Combiner

138-520 / 698-960 MHz, DC Bypass, Low-PIM

Ventev's public safety diplexer allows band combination near donor antennas and band separation (in reverse) near BDA. The Port #1 takes frequency range of 138-520 MHz (VHF/UHF) and Port #2 takes 698-960MHz (700/800/850/900 bands). It eliminates extra Backbone (Riser) run in two BDA public safety ERCES resulting in cost-savings while improving network performance. The design offers low insertion loss, high isolation, and low PIM (-153dBc) with built-in lightning protection and DC bypass on all ports. The rugged construction (IP65) is ideal for indoor and outdoor applications. It is available in N-Female and 4.3-10 Female connector options.

Features & Benefits

- Frequency Bands: Port 1: VHF/UHF (138-520MHz) and, Port 2: 700/800/850/900 (698-960MHz)
- Eliminates extra Backbone (Riser) run in two BDA system resulting in cost-savings
- Allows Band Combination (VHF/UHF & 700/800/850/900) near Donor Antenna and Band Separation in reverse near BDA
- Low Insertion Loss and High Isolation for reliable and optimal system performance
- Low PIM (-153dBc) design
- Built-in lightning protection, and DC/AISG Bypass between ports
- Rugged construction ideal for indoor and outdoor applications (IP65)

Available Models

Connector Option	Ventev Part #
N-Female	VEN-DC-VU-L-NF
4.3-10 Female	VEN-DC-VU-L-4F

Electrical Specifications

Frequency Bands, MHz	138-520 MHz /698-960 MHz
Insertion Loss, dB	≤0.3 / ≤0.5
Pass Band Ripple, dB	≤0.5
VSWR	≤1.3
Isolation between Ports, dB	≥45
PIM, 3rd Order, dBc	≤-153dBc@2*43dBm
Average Input Power, W Max	200
Impedance, Ohm	50
DC Characteristics	DC bypass between all ports 8/20µs Wave Form, 20kA Surge Current
Lightning Protection	10/350µs Wave Form, 3kA Surge Current

Mechanical and Environmental Specifications

Product Dims (w/o bracket)	10.9 x 5.2 x 2.4 in (276 x 132 x 61 mm)
Connector	N-type or 4.3-10 Female
Material and Finish	Aluminum, Red
Mounting	Bracket & Hose Clamps, Included Mounts to wall or pole (3" - 4.5" OD)
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +85°C
Relative Humidity	Up to 100%
Application	Indoor & Outdoor, IP65
Grounding	Through Grounding Screw
Product Weight	~9lbs (4.1Kg) w/ Bracket



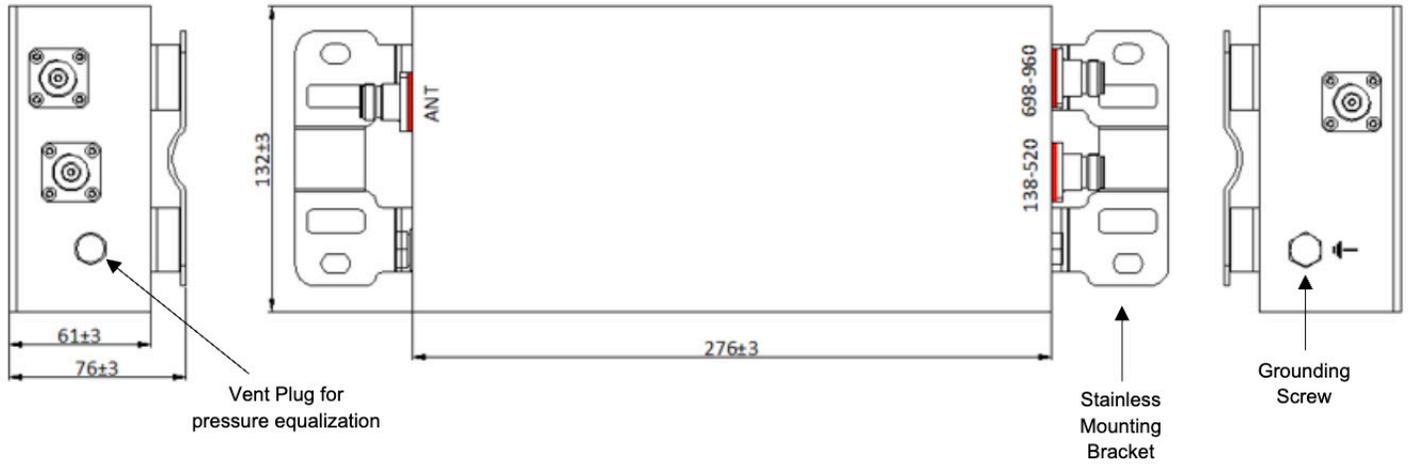
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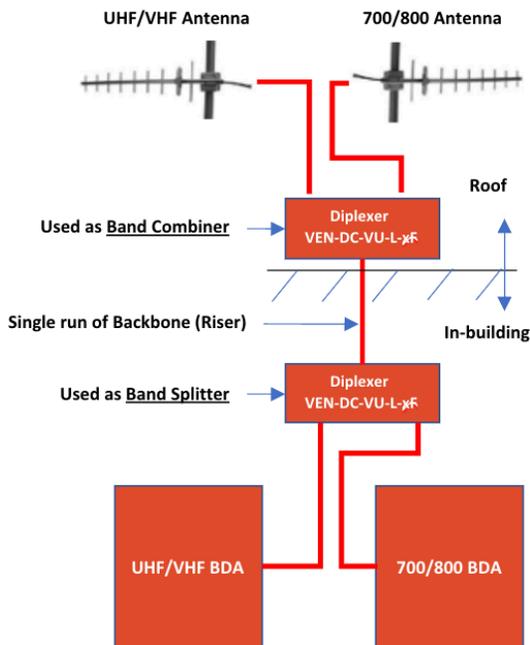
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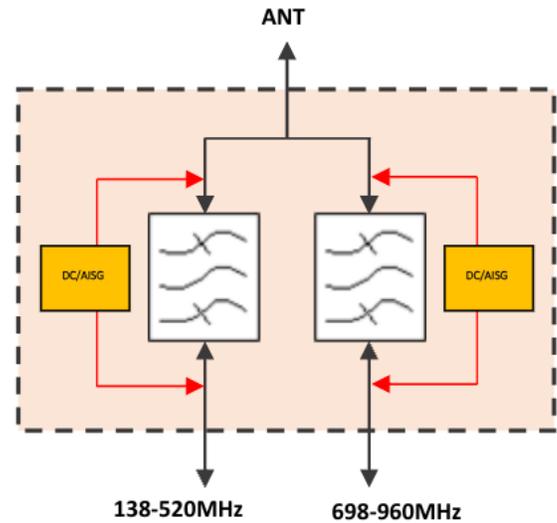
Outline Drawings



Installation Schematic



Block Diagram



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