**Symphony-SP™**

Wideband (617-6000MHz) Directional MIMO Venue Antenna

- Flagship directional antenna for stadiums & high capacity venues
- Dual-port MIMO with dual-polarization and minimal sidelobes
- Continuous wideband coverage across all sub-6GHz cellular and WiFi bands; enabling 5G and future-proofing your system
- Fraction of the size of other solutions
- Tested and excelled in live stadium environment

### Applications

- Stadium and Venue DAS
- Single & Multi-Carrier Systems
- Microcells & Metrocells
- WiFi systems

### The Fractal Advantage™

- Super-wide bandwidth for essentially all frequency applications in single antenna
- "Future proof" design ready for LTE, 5G, CBRS, LAA, C-band
- Excellent RF performance with ultra-wide bandwidth
- Smallest form factor (both size and weight) for given performance on the market

### Frequency-Dependent Specifications

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>617-806</th>
<th>806-896</th>
<th>1695-2200</th>
<th>2200-2700</th>
<th>3550-3700</th>
<th>3700-4200</th>
<th>5100-6000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Gain (dBi)</td>
<td>9.6</td>
<td>9.0</td>
<td>13.8</td>
<td>14.7</td>
<td>12.1</td>
<td>13.7</td>
<td>12.8</td>
</tr>
<tr>
<td>Avg Gain (dBi)</td>
<td>8.4</td>
<td>8.3</td>
<td>12.9</td>
<td>13.5</td>
<td>11.6</td>
<td>11.7</td>
<td>12.1</td>
</tr>
<tr>
<td>Horizontal beamwidth</td>
<td>56</td>
<td>41</td>
<td>32</td>
<td>23</td>
<td>25</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Vertical beamwidth</td>
<td>69</td>
<td>61</td>
<td>25</td>
<td>27</td>
<td>29</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>Avg VSWR</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
</tr>
<tr>
<td>Front-to-back (dB)</td>
<td>18</td>
<td>12</td>
<td>28</td>
<td>30</td>
<td>23</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>Max Power (per port)</td>
<td>25W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.2W</td>
</tr>
<tr>
<td>Isolation (typ. dB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>PIM, 3rd Order (dBc)</td>
<td>&lt;153</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Specifications**

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>SYMSPV01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Polarization</td>
<td>Dual +/−45</td>
</tr>
<tr>
<td>Antenna Weight</td>
<td>6 lbs (2.7 kg)</td>
</tr>
<tr>
<td>Antenna Height x Width</td>
<td>13” x 13”</td>
</tr>
<tr>
<td>Antenna Depth</td>
<td>15”</td>
</tr>
<tr>
<td>Input Connect.</td>
<td>2 X 4.3–10</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>-40°F to 130°F</td>
</tr>
<tr>
<td>Radome Material</td>
<td>Kydex, UL94 V-0 rating</td>
</tr>
<tr>
<td>Color</td>
<td>White or Black (Custom color available upon request)</td>
</tr>
</tbody>
</table>

For inquiries, contact us at sales@fractenna.com

Applicable Fractal Antenna Systems Patents: 7,145,513; 9,482,474; and Patents Pending

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Antenna Power Patterns For Common Frequencies

672 MHz

737 MHz

1734 MHz

2112 MHz

2355 MHz

2544 MHz

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Antenna Power Patterns For Common Frequencies

**3624 MHz**
- Horizontal Plane (dBi)
- Vertical Plane (dBi)

**4029 MHz**
- Horizontal Plane (dBi)
- Vertical Plane (dBi)

**5244 MHz**
- Horizontal Plane (dBi)
- Vertical Plane (dBi)

**5838 MHz**
- Horizontal Plane (dBi)
- Vertical Plane (dBi)

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**Ordering Information**

<table>
<thead>
<tr>
<th>Antenna part number</th>
<th>SYMSPV01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simulation files</td>
<td>Contact us at <a href="mailto:sales@fractenna.com">sales@fractenna.com</a> for VEX file</td>
</tr>
<tr>
<td>Color options</td>
<td>Custom color available upon request—may be subject to additional lead time</td>
</tr>
<tr>
<td>Mounting bracket</td>
<td>Mounting bracket part number: SYMSPMB01</td>
</tr>
</tbody>
</table>

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Additional mount information on next page
MOUNTING BRACKET COMPONENTS

1. Antenna mount

2. Rotation insert

3. Wall/pole mount

### Mounting Bracket Information

<table>
<thead>
<tr>
<th>Mount part number</th>
<th>SYMSPMB01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>1/8&quot; Carbon steel</td>
</tr>
<tr>
<td>Hardware</td>
<td>Included with mount</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Mounting style</td>
<td>Pole Mount (fits 2&quot;-4&quot; OD) or Wall Mount</td>
</tr>
<tr>
<td>Dimensions (full assembly)</td>
<td>H: 7.5&quot; ; W: 6.5&quot; ; L:12&quot;</td>
</tr>
<tr>
<td>Tilt</td>
<td>Vertical: +/- 30° ; Horizontal: +/- 60°</td>
</tr>
<tr>
<td>Rotation</td>
<td>+/- 25°</td>
</tr>
</tbody>
</table>

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