12-port sector antenna, 4x 790–960 and 8x 1695–2690 MHz, 65° HPBW, 6x RET with manual override. Bands cascaded SRET.

- Integrated Internal Remote Electrical Tilt (RET), with independent control of electrical tilt with manual override on all arrays
- All Internal RET actuators are connected in “Cascaded SRET” configuration

This product will be discontinued on: March 27, 2020

**CCV4PX310.11R**

**Electrical Specifications**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain, dBi</td>
<td>15.8</td>
<td>16.4</td>
<td>16.7</td>
<td>16.8</td>
<td>17.4</td>
<td>18.1</td>
<td>18.1</td>
</tr>
<tr>
<td>Beamwidth, Horizontal, degrees</td>
<td>73</td>
<td>62</td>
<td>63</td>
<td>66</td>
<td>67</td>
<td>62</td>
<td>64</td>
</tr>
<tr>
<td>Beamwidth, Vertical, degrees</td>
<td>8.9</td>
<td>8.1</td>
<td>7.6</td>
<td>7.0</td>
<td>6.6</td>
<td>5.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Beam Tilt, degrees</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
</tr>
<tr>
<td>USLS (First Lobe), dB</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Null Fill, dB</td>
<td>-22</td>
<td>-22</td>
<td>-22</td>
<td>-22</td>
<td>-22</td>
<td>-22</td>
<td>-22</td>
</tr>
<tr>
<td>Front-to-Back Ratio at 180°, dB</td>
<td>35</td>
<td>34</td>
<td>33</td>
<td>38</td>
<td>39</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>Isolation, Cross Polarization, dB</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Isolation, Inter-band, dB</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>VSWR</td>
<td>Return Loss, dB</td>
<td>1.5</td>
<td>14.0</td>
<td>1.5</td>
<td>14.0</td>
<td>1.5</td>
<td>14.0</td>
</tr>
<tr>
<td>PIM, 3rd Order, 2 x 20 W, dBC</td>
<td>-150</td>
<td>-150</td>
<td>-150</td>
<td>-150</td>
<td>-150</td>
<td>-150</td>
<td>-150</td>
</tr>
<tr>
<td>Input Power per Port, maximum, watts</td>
<td>300</td>
<td>300</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Polarization</td>
<td>±45°</td>
<td>±45°</td>
<td>±45°</td>
<td>±45°</td>
<td>±45°</td>
<td>±45°</td>
<td>±45°</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 ohm</td>
<td>50 ohm</td>
<td>50 ohm</td>
<td>50 ohm</td>
<td>50 ohm</td>
<td>50 ohm</td>
<td>50 ohm</td>
</tr>
</tbody>
</table>

**Electrical Specifications, BASTA**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain by all Beam Tilts, average, dBi</td>
<td>15.5</td>
<td>16.2</td>
<td>16.4</td>
<td>16.4</td>
<td>16.9</td>
<td>17.8</td>
<td>17.8</td>
</tr>
<tr>
<td>Gain by all Beam Tilts Tolerance, dB</td>
<td>±0.5</td>
<td>±0.3</td>
<td>±0.4</td>
<td>±0.5</td>
<td>±0.8</td>
<td>±0.4</td>
<td>±0.4</td>
</tr>
<tr>
<td>Gain by Beam Tilt, average, dBi</td>
<td>0 °</td>
<td>15.5</td>
<td>0 °</td>
<td>16.2</td>
<td>0 °</td>
<td>16.3</td>
<td>0 °</td>
</tr>
<tr>
<td>Beamwidth, Horizontal Tolerance, degrees</td>
<td>±5.7</td>
<td>±4.7</td>
<td>±3.4</td>
<td>±7.3</td>
<td>±4.6</td>
<td>±3.7</td>
<td>±3.7</td>
</tr>
<tr>
<td>Beamwidth, Vertical Tolerance, degrees</td>
<td>±0.4</td>
<td>±0.3</td>
<td>±0.5</td>
<td>±0.5</td>
<td>±0.3</td>
<td>±0.2</td>
<td>±0.2</td>
</tr>
<tr>
<td>USLS, beampeak to 20° above beampeak, dB</td>
<td>18</td>
<td>18</td>
<td>17</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Front-to-Back Total Power at 180° ± 30°, dB</td>
<td>23</td>
<td>24</td>
<td>26</td>
<td>30</td>
<td>30</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>CPR at Boresight, dB</td>
<td>19</td>
<td>18</td>
<td>20</td>
<td>20</td>
<td>19</td>
<td>17</td>
<td>18</td>
</tr>
</tbody>
</table>
*CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.*

### Array Layout

![Array Layout Diagram]

<table>
<thead>
<tr>
<th>Array</th>
<th>Freq (MHz)</th>
<th>Conn</th>
<th>RET (SRET)</th>
<th>AISG RET UID</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>790-960</td>
<td>1-2</td>
<td>1</td>
<td>ARxxxxxxxxxxxxxxxxxxxxx1</td>
</tr>
<tr>
<td>R2</td>
<td>790-960</td>
<td>3-4</td>
<td>2</td>
<td>ARxxxxxxxxxxxxxxxxxxxxx2</td>
</tr>
<tr>
<td>Y1</td>
<td>1695-2690</td>
<td>5-6</td>
<td>3</td>
<td>ARxxxxxxxxxxxxxxxxxxxxx3</td>
</tr>
<tr>
<td>Y2</td>
<td>1695-2690</td>
<td>7-8</td>
<td>4</td>
<td>ARxxxxxxxxxxxxxxxxxxxxx4</td>
</tr>
<tr>
<td>Y3</td>
<td>1695-2690</td>
<td>9-10</td>
<td>5</td>
<td>ARxxxxxxxxxxxxxxxxxxxxx5</td>
</tr>
<tr>
<td>Y4</td>
<td>1695-2690</td>
<td>11-12</td>
<td>6</td>
<td>ARxxxxxxxxxxxxxxxxxxxxx6</td>
</tr>
</tbody>
</table>

Sizes of colored boxes are not true depictions of array sizes.

### General Specifications

**Operating Frequency Band**
- 1695 – 2690 MHz
- 790 – 960 MHz

**Antenna Type**
- Sector

**Band**
- Multiband

**Performance Note**
- Outdoor usage
- Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN

### Mechanical Specifications

**RF Connector Quantity, total**
- 12

**RF Connector Quantity, low band**
- 4

**RF Connector Quantity, high band**
- 8

**RF Connector Interface**
- 7-16 DIN Female

**Color**
- Gray

**Grounding Type**
- RF connector inner conductor and body grounded to reflector and mounting bracket

**Radiator Material**
- Low loss circuit board

**Radome Material**
- Fiberglass, UV resistant

**Reflector Material**
- Aluminum
RF Connector Location: Bottom

Wind Loading, frontal: 1,085.0 N @ 150 km/h | 243.9 lbf @ 150 km/h
Wind Loading, lateral: 380.0 N @ 150 km/h | 85.4 lbf @ 150 km/h
Wind Loading, maximum: 1,404.0 N @ 150 km/h | 315.6 lbf @ 150 km/h
Wind Speed, maximum: 200 km/h | 124 mph

Dimensions

Length: 2720.0 mm | 107.1 in
Width: 498.0 mm | 19.6 in
Depth: 197.0 mm | 7.8 in
Net Weight, without mounting kit: 54.0 kg | 119.0 lb

Remote Electrical Tilt (RET) Information

Input Voltage: 10–30 Vdc
Internal RET: High band (4) | Low band (2)
Power Consumption, idle state, maximum: 2 W
Power Consumption, normal conditions, maximum: 13 W
Protocol: 3GPP/AISG 2.0 (Single RET)
RET Interface: 8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity: 1 female | 1 male

Packed Dimensions

Length: 2906.0 mm | 114.4 in
Width: 565.0 mm | 22.2 in
Depth: 312.0 mm | 12.3 in
Shipping Weight: 78.8 kg | 173.7 lb

Regulatory Compliance/Certifications

Agency
RoHS 2011/65/EU
ISO 9001:2015
China RoHS SJ/T 11364-2014
CE

Classification
Compliant by Exemption
Designed, manufactured and/or distributed under this quality management system
Above Maximum Concentration Value (MCV)
Compliant with the relevant CE product directives

Included Products

CCV4PX310.11R
T-029-GL-E — Adjustable Tilt Pipe Mounting Kit for 2.0"-4.5" (60-115mm) OD round members for panel antennas. Includes 2 clamp sets.

* Footnotes

Performance Note  Severe environmental conditions may degrade optimum performance