ACION 210
1002 MHz Indoor Optical Nodes

ACI’s ACION 210 is one of the smallest fully featured bi-directional nodes on the market. The optical receiver has an amazing high output level of 22 dBmV at a 0 dBm optical input. With LED’s for power on, laser on, and optical power, forward and reverse -20 dB test points, input and output optical level test points, this node has all of the setup features that are included in a conventional node in a housing the size of a standard drop amplifier. This node also offers a complete selection of reverse transmitter options including 1310 nm or 1550 nm DFB, DFB CWDM (1471 to 1611 nm) and a 1550 nm DFB with an internal WDM.

Features
- Forward 54-1002 MHz/Reverse 5 to 42 or 55 or 65 MHz
- DFB & DFB CWDM transmitters available
- Forward and reverse -20 dB RF & 1 V/mW input/output optical test points
- Forward receiver operates at -6 to +2 dBm optical input and from 1200 to 1600 nm wavelength
- 1 fiber input version with a built-in 1310/1550 WDM is available

Applications
- RF reverse upstream insertion port for applications such as distance learning, live events coverage, and security or traffic monitoring
- Cost affective for use in high density application such as business parks, hospitals, schools/universities, PEG and MDU applications
- Perfect for high security LAN network applications
### Station Parameters: Forward Path

<table>
<thead>
<tr>
<th>General Performance</th>
<th>Conditions</th>
<th>Units</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>MHz</td>
<td></td>
<td>54 to 1002</td>
</tr>
<tr>
<td>Flatness</td>
<td>Worst Case</td>
<td>dB</td>
<td>0.5</td>
</tr>
<tr>
<td>Impedance</td>
<td>Ohm</td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>RF return loss</td>
<td>Worst Case</td>
<td>dB</td>
<td>17</td>
</tr>
<tr>
<td>RF test point</td>
<td>Directional coupler</td>
<td>-dBc</td>
<td>20.0 ±0.5</td>
</tr>
<tr>
<td>Optical test point</td>
<td>V/mW</td>
<td></td>
<td>1.0 ±0.1</td>
</tr>
<tr>
<td>RF output level</td>
<td>dBmV</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Carrier-Noise-Ratio (CNR)</td>
<td>@ -1 dBm Optical input</td>
<td>dB</td>
<td>&gt;51</td>
</tr>
<tr>
<td>Composite Triple Beat (CTB)</td>
<td>OMI=3.4% 78 channels</td>
<td>-dBc</td>
<td>&lt;65</td>
</tr>
<tr>
<td>Composite Second Order (CSO)</td>
<td></td>
<td>-dBc</td>
<td>&lt;65</td>
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<tr>
<td>Cross Modulation (XMOD)</td>
<td></td>
<td>-dBc</td>
<td>&lt;65</td>
</tr>
</tbody>
</table>

### Optical Parameters

- Optical receive power: dBm -6 to +2
- Wavelength: nm 1200 to 1611

### Station Parameters: Reverse Path

<table>
<thead>
<tr>
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<th>Conditions</th>
<th>Units</th>
<th>Specifications</th>
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</thead>
<tbody>
<tr>
<td>Bandwidth</td>
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<td>5 to 42</td>
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<tr>
<td>RF input level</td>
<td>dBmV</td>
<td></td>
<td>20</td>
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<tr>
<td>Flatness</td>
<td>Worst Case</td>
<td>dB</td>
<td>0.75</td>
</tr>
<tr>
<td>Impedance</td>
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<td></td>
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<td>Optical test point</td>
<td>V/mW</td>
<td></td>
<td>1.0 ±0.1</td>
</tr>
</tbody>
</table>

### Link Performance

- Type of transmitter: N/A DFB
- Reverse channel loading: @ -4 dB with standard receiver

### Environmental

- Operating temperature: °F (°C) -40 to 140 (-40 to +60)
- DC voltage input range: VDC 12 to 15
- Power consumption: Watts 3.1
- RF ports surge protection: A3 ring wave
- Transformer port surge protection: B3 combination wave
- RF output stability over temperature: ±dB

### Physical

- Optical connectors: SC/APC standard
- LED's: N/A Power on & Optical input power & Laser on
- Dimensions (H X W X D): 5 X 4.8 X 1.5 (12.7 X 12.1 X 3.8)
- Weight: lbs. (kg) 2.2 (1.0)
ACION 210 Configuration Sheet

Customer: __________________________
Created By: ________________________
Order Date: ________________________

ORDERING MATRIX

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2, 3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>PART NUMBER</td>
<td>A</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2-3-4 | CONFIGURATION | | | | | | | |

210 = Transmitter and Receiver 1002 MHz

6 | DIPLEX FREQUENCY SPLIT | | | | | | | |

4 = 42/53 1002 MHz

7 | OPTICAL CONNECTOR TYPE | | | | | | | |

1 = SC/APC (Standard)
2 = SC/UPC
3 = FC/APC
4 = FC/UPC

8 | TRANSMITTER TYPE FP & DFB | | | | | | | |

J = Uncooled 1310 nm DFB (1.0 mW)
B = Uncooled 1310 nm DFB (3.0 mW)
C = Uncooled 1550 nm DFB (2.0 mW)
E = Uncooled 1550 nm DFB (2.0 mW) w/ WDM

9 | TRANSFORMER TYPE | | | | | | | |

0 = None
1 = North America
2 = International/Europe
3 = Japan
4 = Australia
5 = Argentina
X = Other (Contact Product Management)

10 | CUSTOM FEATURE | | | | | | | |

0 = None
X = Determined by Product Management

NOTES:

April 5, 2019