The SpacePath Communications Intelligent Frequency Converters (IFC™) 1:2 Redundant system shape the next-generation satellite transmission with its breakthrough leading edge technology, state of the art design, and unprecedented reliability with 3 years warrant for this product line!

The system consists of three IFC units, featuring best in class RF performance, and a Redundancy Control Unit (RCU), providing users with an extensive set of control and monitoring features via front panel, serial ports EIA232/EIA485 and Ethernet.

Features
- Available in all converter types: 70/140MHs to L-Band Up/Down; 70/140MHz to C/X/Ku RF Up/Down and L-Band to C/X/Ku/Ka RF Up/Down configurations
- Superior RF performance:
  - Phase noise up to 15dB better than IESS308/309
  - In Band Spurious below –60dBc
  - Superior Gain flatness
- State of the art front panel controls with display, navigation wheel, push buttons and LEDs
- Full featured M&C Interface via RS-232 serial console, packet protocol RS-485 and user friendly HTTP based GUI and SNMP:
  - Auto Manual, Remote, Manual Override redundancy operation modes
  - Manual Switch-Over Button
  - Gain equalization feature
# IFC™ Series IF to L-Band, IF to RF and RF to L-Band Rack Mount System Specification

## IF / RF Features

<table>
<thead>
<tr>
<th>Frequency Available</th>
<th>70MHz IF: 70MHz +/-18MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>140MHz IF: 140MHz +/-36MHz</td>
</tr>
<tr>
<td></td>
<td>L-Band: 950-2100MHz</td>
</tr>
</tbody>
</table>

**RF Frequency Options:**
- Ka-Band TX: 27.5-31.0GHz
- C-Band TX: All sub-bands 5.85-7.025GHz
- C-Band RX: 3.4-4.3GHz
- X-Band TX: 7.3-8.4GHz
- X-Band RX: 7.25-7.75GHz
- Ku-Band TX: 13.75-14.5GHz
- Ku-Band RX: All sub-bands 10.7-12.75GHz

**RF/IF parameters to synchronize from A/B to A/B unit:**
- Frequency setting: 1kHz step
- Attenuation/Gain setting: 0.1dB step
- LO set: In L-Band to RF Up/Down converters
- Conversion (inv-non inv): In 70/140MHz to L/RF converters
- Gain equalization: 0-3dB unit S to units A and B

## Monitor & Control Features

**Interfaces:**
- Serial – EIA485: DB9 Connector rear panel
- Serial – EIA232: RS45 or DB9 Connector rear panel
- 10/100 Base-T Ethernet: RJ45 Connector rear panel
- Alarm and Control: DB9 Connector rear panel
- Redundant protection interface: HD15 Connector rear panel

**Controls:**
- Gain Control: via Serial, Ethernet, Front Panel
- Uplink / Downlink Freq Control: via Serial, Ethernet, Front Panel
- Mute Control: via Serial, Ethernet, Front Panel, Redundancy Interface
- A/S and B/S Redundancy Toggle: via Serial, Ethernet, Front Panel
- Local / Remote Toggle: via Serial, Ethernet, Front Panel
- Auto / Manual Toggle: via Serial, Ethernet, Front Panel
- Clear Alarm: via Serial, Ethernet, Front Panel

**Indicators:**
- Uplink / Downlink Frequency: via Serial, Ethernet, Front Panel
- Gain Status: via Serial, Ethernet, Front Panel
- IF & RF Power Detect: via Serial, Ethernet, Front Panel
- Temperature: via Serial, Ethernet, Front Panel
- Active / Standby Status: via Serial, Ethernet, Front Panel
- Switches Position: via Serial, Ethernet, Front Panel
- Summary Alarm Status: via Serial, Ethernet, Front Panel, Redundancy Interface
- Mute Status: via Serial, Ethernet, Front Panel, Redundancy Interface

## Power Supply

<table>
<thead>
<tr>
<th>Input Voltage</th>
<th>90-265VAC 50/60Hz PFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>48VDC isolated Optional</td>
</tr>
</tbody>
</table>

## Mechanical

<table>
<thead>
<tr>
<th>Width</th>
<th>19” Rack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>4 Shelves 3RU each</td>
</tr>
<tr>
<td>Depth</td>
<td>20”</td>
</tr>
</tbody>
</table>

## IF/RF Connectors

<table>
<thead>
<tr>
<th>IF</th>
<th>BNC (other options available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF</td>
<td>N-type (other options available)</td>
</tr>
<tr>
<td>L-Band Monitoring (Optional)</td>
<td>N-type (other options available)</td>
</tr>
</tbody>
</table>

## Operating & Storage

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>0 to 60 deg. C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temperature</td>
<td>-40 to +85 deg. C</td>
</tr>
</tbody>
</table>