Amplus Communication has been serving the global VSAT industry, being continuously managed by the Most Experienced Personnel in Design, Engineering and Manufacturing of VSAT equipment in the Southeast Asia region.

**OHSAS 18001**

Cert No. E08093
ISO 9001
ISO 14001
OHSAS 18001

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**AM-2120 Series Hi Powered C-Band SSPA Rack Mount**

**High Powered SSPA with Liquid Cool Technology**

The unique AM-2120 High Powered Series SSPA liquid cool system comprises of a rack-mountable 4 RU high powered Solid State Power Amplifier (SSPA) and rack-mountable 3 RU Liquid Cool System LCS.

The AM-2120 High Powered Series SSPA operates in all C-Band frequency bands. Housed in a compact highly integrated 4 RU rack mountable unit, it is capable of producing 800W to 1000W output power with a Liquid Cooling System (LCS). The AM-2120 Series High Powered SSPA is designed with Built-In Redundancy Control System to support 1:1 or 2:1 Redundancy configurations, without the need for any external redundancy controller.

The uniquely designed liquid cooling baseplate and isolated cooling methodology developed by Amplus allows us to design and build this highly compact AM-2120 Series High Powered SSPAs, using external Liquid Cooling System. The LCS is simple to operate, economical and easy to maintain. Besides rack-mountable, it can also be deployed in a free standing configuration. There is no need for air conditioners, chiller, fins or even high powered fans on the SSPA unit.

Using the AM-2120 Series High Powered Liquid Cool SSPAs system for large RF power requirement, it offers many advantages as it reduces or eliminate maintenance issues, simplify Hub design eliminate large terminal load from Indoor HPAs, and reduces noise pollution.

The liquid cool SSPA comes with Drip-free connectors which allows easy, no-tool connect/disconnect for quick SSPA changeout. This eliminates spillage during installation and service maintenance, and avoid the need for specialised engineers or technicians.

The LCS is capable of providing 2700W of cooling with a 25 degree ambient delta. Connected through tubing and coolant to the High Powered SSPA unit, it allows SSPA to be operated without the need for any high powered Fans. A prominent white LED-lit reservoir displays the Coolant level, combining a waterfall effect when placed upright. The Coolant used in the LCS is a high performance, low-toxicity, reliable coolant with corrosion and biological inhibitors.
**Key Features & Benefits**
- High Gain & linearity
- Low Spurious Levels
- Temperature Gain Compensation
- Automatic Over Temperature Shutdown
- Easy Installation & Configuration
- RF Output Sample Port
- Redundancy Ready for 1:1 Without External Controller
- Built-In Waveguide Output Isolator
- Built-In Harmonics Reject Filter

**Applications**
- Broadcast
- Video Conferencing
- Rural Telephony
- Emergency Link Restoration
- Point-of-Sales
- Hub & VSAT Terminals

**Enhanced Monitoring & Control**
- Offers M&C via RS232/485, Ethernet, Web Interface
- Features Full Remote M&C through Windows Using PC which Include Tx Level Monitoring, Temperature Monitoring, RF Inhibit Selection, Gain Control and Automatic Fault Identification & Alarm

**Reliability**
- Able to Withstand Temperature Ranging from 0°C to +50°C with up to 5~95% Humidity Non Condensing

**Quality Assurance**
- Intensive Active Electrical Stress Screening with Performance Being Monitored During Screening
# AM-2120 Series
High Powered C-Band SSPA Rack Mount

## Technical Details

### Frequency Range (MHz)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std C</td>
<td>5850 - 6425</td>
</tr>
<tr>
<td>Ext-Palapa</td>
<td>6365 - 6725</td>
</tr>
<tr>
<td>Ext C</td>
<td>6425 - 6725</td>
</tr>
<tr>
<td>Full C</td>
<td>5850 - 6725</td>
</tr>
<tr>
<td>Insat C</td>
<td>6725 - 7025</td>
</tr>
</tbody>
</table>

### Transmit

- **Output $P_{sat}$ W (dBm)**: 800W (59), 1KW (60)
- **Gain (dB)**: 70
- **Power Consumption (VA)**: 800W (3000), 1KW (3450)
- **Gain Flatness Over Full BW**: ±1.0 dB max
- **Gain Slope Over 36 MHz**: ±0.3 dB max
- **Gain Stability Over Temperature**: ±1.5 dB max
- **Gain Control Range**: 0-20 dB
- **Input VSWR**: 1.25:1 max
- **Output VSWR**: 1.3:1 max
- **Inter-modulation**: -25 dBc max
- **(with 2 carriers each, 6dB BO, ±1MHz apart)**
- **Harmonics ($P_{acut}$)**: -60 dBc max at rated output
- **Spurious ($P_{acut}$)**: -60 dBc max at rated output
- **Maximum Input Power**: +10 dBm (without damage)
- **Display**: 24 x 2 LCD Display (Rack Mount SSPA)
- **Power Supply**: 230 VAC

### Redundancy

- Built-in, no external controller required

### LED Status

- Power, Mute, Local, Remote, Auto, Manual, Online, Standby, Summary, VSWR, Temperature, RF Power

### Environmental

- **Operating Temperature**: 0°C to + 50°C
- **Relative Humidity**: Up to 95°C (Non-condensing)

### Mechanical

- **Dimensions (L x W x H)**: 600 mm / 23.6 inches rack, 4U height (800W to 1KW)
- **Liquid Cool System**: 550 x 448.5 x 103 mm / 21.6 x 17.6 x 4 inches
- **Weight**: SSPA 24 kg / 52.9 lb (800W to 1KW), Liquid Cool System 13 kg / 28.6 lb

### Compliance Standard

- **IEC 60950C**: International Safety Standard for Information Technology Equipment
- **ETSI EN 300 673**: Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC)

### Interface

- **RF Input**: 50Ω N-Type Female
- **RF Output**: CPR137G
- **Monitor & Control**
  - **Monitor**: SSPA Temperature, Status Alarm / Reflected power, RF Output Power, RF Output monitor -40 dBc typical
  - **Control**: Temperature threshold setting, SSPA On/Off, Gain
  - **Protection**: Over temperature SSPA shutdown, Reflected power shutdown
- **Interface**: RS232 / RS485, Ethernet

*All specifications & designs are subject to changes without notice*

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