



**Teledyne Paradise Datacom** manufactures a wide array of rack mountable Solid State Power Amplifiers (SSPAs) in output power levels ranging from 20 Watts to 2 kilowatts. Many of these SSPAs use an external 1RU power supply, which adds redundancy to the input power to the amplifier.

Rack mountable SSPAs are available in 3RU, 5RU and 7RU configurations, and may be arranged in redundant or phase combined system arrays.

### Rack Mounting

The SSPA and accompanying power supply chassis both may be installed in a standard IEC 19" equipment cabinet. The SSPA chassis is available with optional rack slides. The slide extenders connect to mounting holes in the sides of the chassis. Follow the rack slide manufacturer's instructions on installation of the slide rails into the equipment cabinet.

Secure the front panel of the amplifier and power supply to the cabinet frame mounting rails using 10-32x0.5 pan head screws, #10 flat washer and #10 nylon washer (against the surface of the amplifier).

Never enclose the amplifier in any manner that prevents air from circulating, or that restricts airflow. The fans require at least a 6-inch clearance. Normal operating temperature range is 0 to +50 °C ambient.

### Connect RF Input and Output

The RF Input connector is a Type N (F) connector. The RF Output connector is band specific. Before applying power, ensure the RF Output connector is properly terminated to a load capable of handling the saturated output power of the amplifier or an antenna feed.

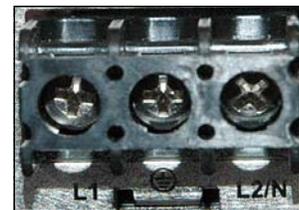
**WARNING! Radiation hazards exist when not terminated. Do not operate the amplifier without terminating the RF Output (J2). NEVER look directly into the RF Output waveguide.**

Follow proper installation and maintenance procedures for all waveguide connected to the amplifier. For pressurized waveguide, install a pressure window at the output of the amplifier.

### Providing Prime Power

In most cases, prime power to the amplifier is provided through a separate 1RU redundant power supply. Power cables connect from the power supply bus bar to quick connect power pole connectors on the SSPA.

Each of the four (4) power module slots in the power supply chassis has its own terminal block input connector, to which prime power is applied.



**WARNING! Risk of electrical shock and energy hazard. Disconnecting one power supply line disconnects only one power supply module. To isolate the power supply chassis completely, disconnect all power supply lines.**

The specification sheet for your amplifier lists the prime input power required to operate the amplifier. Consult the Operations Manual for instructions on connecting power to the amplifier or power supply chassis.

### Local Communication

All Teledyne Paradise Datacom rack mountable SSPAs share a common local menu structure, which is detailed in the Operations Manual.

Settings for Communication, Operation, Fault Monitoring, Options and Redundancy may all be selected from the front panel menu. Operating conditions are also available for review in the 2x40 front panel display.

Mute status and attenuation control are available from the front panel. Up to 20 dB of attenuation adjustment may be made, in 0.1 dB steps.

### Remote Communication

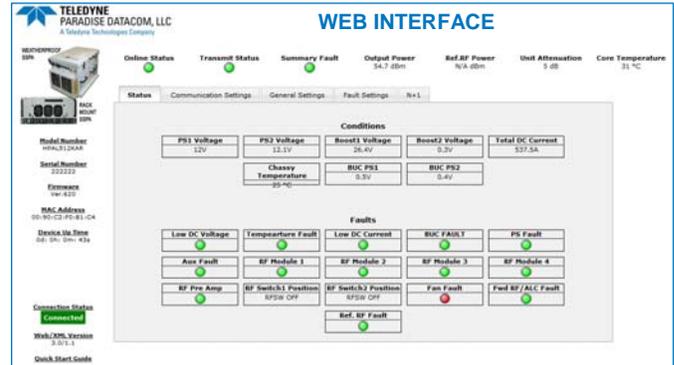
The amplifier has a wide range of remote communication capability, including serial interface over RS-485 or RS-232, and an Ethernet interface which supports IPNet, SNMP and a HTTP web interface. Parallel alarm contacts are also available.

Before connecting to the amplifier over Ethernet, the remote PC must be set up with the following network parameters: TCP/IP v4; IP address 192.168.0.1; Subnet Mask: 255.255.255.0.

On the SSPA front panel, press the **Main Menu** key, select **2.ComSetup** and press the **Enter** key; select **4.Interface** and press the **Enter** key; select **3.IPNet** and press the **Enter** key.

Connect a RJ45 cable between the SSPA's Ethernet port and the PC and open a web browser (Internet Explorer, Google Chrome or Firefox). Enter the default IP address (**192.168.0.9**) in the web browser to launch the web-based M&C window.

The web interface allows the operator to mute or unmute the connected amplifier, and adjust the gain at-



tenuation. Other communication and operational settings also may be adjusted.

A detailed description of the remote control interface, including the serial communication protocol, is provided in the Operations Manual. Teledyne's free M&C software is available for download from the web site.

### Maintenance

The front panel intake fan assembly and the exhaust fans at the rear of the chassis should be inspected and cleaned regularly (suggested monthly). Failure to keep the fans and heatsink clean will void the warranty.

### Safety Considerations

Potential safety hazards exist unless proper precautions are observed when working with this unit. To ensure safe operation, the operator must follow the information, cautions and warnings provided in the Operations Manual, and observe the warning labels placed on the unit itself.

### Electrical Discharge Hazards

An electric spark can not only create ESD reliability problems, it can cause serious safety hazards. Follow all ESD precautions when working with this unit.

### High Voltage Hazards

High voltage is any voltage in excess of 30V. Voltages above this value can be

hazardous and even lethal under certain circumstances. Care should be taken when working with devices that operate at high voltage.

### High Current Hazards

Many high power devices are capable of producing large surges of current. This is true at all voltages, but needs to be emphasized for low voltage devices. Low voltage devices provide security from high voltage hazards, but also require higher current to provide the same power. High current can cause severe injury from burns and explosion.

### RF Transmission Hazards

RF transmissions as high power levels may cause eye damage and skin burns. Prolonged exposure to high levels of RF

energy has been linked to a variety of health issues. Use proper safety procedures when operating the unit.

### Warranty

Refer to the manufacturer's warranty document for specific warranty coverage by product. The warranty does not apply to any goods that, upon examination by the manufacturer, are found to have been (i) mishandled, misused, abused, or damaged by the Buyer or Buyer's customer, (ii) altered from their original state, (iii) repaired without the manufacturer's prior written approval, or (iv) improperly stored, installed, operated, or maintained in a manner inconsistent with the manufacturer's instructions.

This warranty does not apply to defects attributed to normal wear and tear.

### Use and Disclosure of Data

The information contained herein is classified as EAR99 under the U.S. Export Administration Regulations. Export, re-export or diversion contrary to U.S. law is prohibited. Specifications are subject to change without notice.