

FEATURES

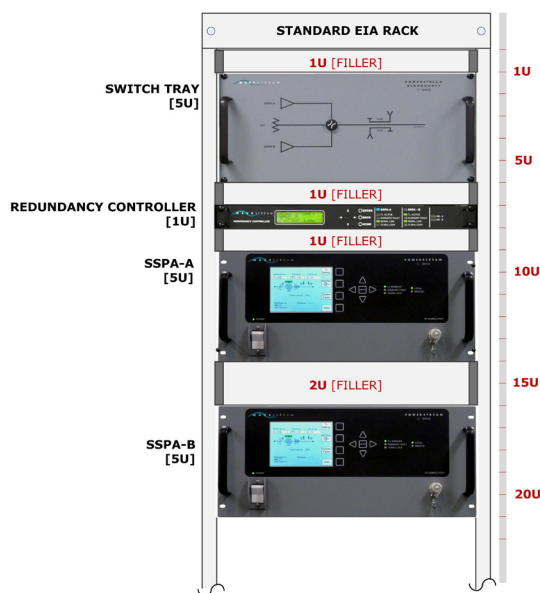
- ▶ Next Generation SSPA Technology
- ▶ Space-Saving, Plug and Play for Indoor System Upgrades
- ▶ High Linearity, Low Power Consumption
- ▶ Instant On, No Warm Up Time
- ▶ Field-Proven Reliability, Lower Lifecycle Costs
- ▶ Integrated BUC Option Available
- ▶ 1:1 Redundancy Kits Available



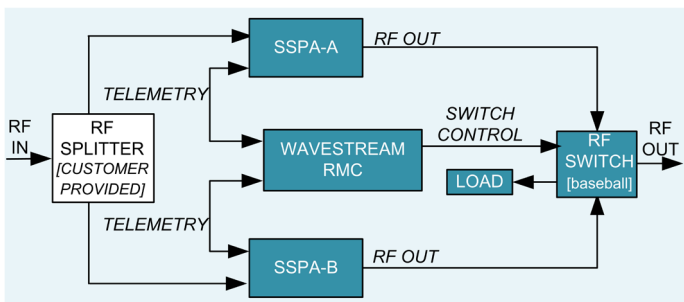
C-Band PowerStream 454C-i

The Wavestream Advantage:

- Higher output power with less energy usage.
- Compact product footprint to meet critical space and weight limitations.
- Proven reliability and efficiency.
- Reduced lifecycle maintenance costs.



1:1 Redundant Configuration



Wavestream's new indoor PowerStream® 454C-i Solid State Power Amplifier (SSPA) provides high output power in a compact rack-mount unit to support broadcast satellite communications systems worldwide. The PowerStream 454C-i is suitable for mobile and fixed satellite communications where space is limited and greater efficiency is essential.

Designed as a plug and play TWTA replacement to facilitate system upgrades, the PowerStream 454C-i incorporates Wavestream's proven, next generation Spatial Power Advantage™ technology to provide high output power and lower power draw. For system integrators looking to implement new technology while lowering operating costs, the PowerStream 454C-i offers improved reliability and significantly reduced energy costs over the lifecycle of the system.

The PowerStream 454C-i provides an easy-to-view front panel display screen and quick-touch function keys for convenient access to a variety of system status data, including power, temperature, fault, and local/remote information.

Optional 1:1 Redundancy Kits are available to provide an integrated solution for uninterrupted, reliable broadcast satellite transmissions. The 1:1 Redundancy Kit integrates the waveguide, switch and mounting hardware, and offers ease of installation and subsequent maintenance to accommodate standard 19" rack cabinets.

RF Specifications

Transmit Frequency	5.85 - 6.425 GHz
IF Frequency	950-1525 MHz (with BUC option)
Frequency Reference (10 MHz on IF)	0 dB \pm 5 dB
Small Signal Gain	75 dB minimum
Gain Adjustment	20 dB, 0.25 dB steps nominal
Gain Variation (over frequency at fixed temperature)	0.6 dB over 36 MHz 3 dB over full band
Gain Variation (over temperature at fixed frequency)	2 dB p-p over operating range
Saturated Output Power	+56.0 dBm nominal
P₁ dB Output Power	> +55 dBm
Rated Output Power	+55 dBm
Intermodulation * (Reference to single carrier level at +52 dBm total output power)	-25 dBc
Spectral Regrowth (For QPSK at 1.5x and OQPSK at 1.0x symbol rate offset at +52 dBm total Output Power)	-30 dBc
Phase Noise	Meets IESS-308/309 -2 dB (with BUC option)
AM/PM Conversion (at +52 dBm)	2.5 deg/dB maximum
Noise Power Density - Transmit	-70 dBW/4 kHz
Noise Power Density - Receive	-150 dBW/4 kHz
Output Spurious	-60 dBc

Power

AC Power	180-264 VAC, 50-60 Hz
AC Power Draw (typical) (at Rated Output Power)	2.1 kVA maximum
AC Power Draw (at 3 dB Back-off from Rated Output Power)	1.6 kVA
Power Factor	0.99 Typical (0.95 minimum)

* Guaranteed over temperature and frequency

Interfaces

IF Input Connection	Type N Female
IF Input Impedance	50 ohms
IF Input VSWR	1.3:1 maximum
RF Output Connector	CPR-137G Waveguide Flange
RF Output VSWR	1.25:1 maximum
RF Sample Port Connector	Type N Female
RF Sample Port	-40 dBc typical
AC Connector	IEC 320 Receptacle
Monitor & Control Connector	DB-9 Female or RJ-45 Ethernet
Monitor & Control	Serial RS-485 (SA-bus) serial control on 9-pin DB9 female socket, and RJ-45 Ethernet with SNMP support. Color display panel for access to forward and reverse power, temperature and current draw. Front panel LEDs indicate power, Tx enabled, summary fault, 10 MHz lock, local and remote status. Intuitive GUI interface for quick view, status updates. 15-Pin alarms and auxiliary equipment control interface.

Physical

Size	24"L x 19"W x 8.75"H
Weight	95 lbs
Operating Temperature (Ambient Air)	-10°C to +50°C
Cooling	Rear intake and exhaust
Relative Humidity	5 - 95% non-condensing
Shock & Vibration	Designed to withstand 20G at 11 ms 1/2 sine wave non-operating conditions, and MIL-STD-810E, method 514-4 transportation vibration
Altitude	10,000 ft above sea level (operating)

Options

BUC Option

1:1 Redundancy Kit - to include waveguide, switch, cable connectors and mounting hardware for standard 19" rack cabinet

Rack Mount Controller - 1U rack mount chassis to control any Wavestream amplifier in a 1:1 configuration with LCD display and key status LEDs

Base Model Number

PIA-CSA400



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