# HD32130
# SOLID STATE PULSE HIGH POWER AMPLIFIER

Communications Corp.

**FEATURES**

Rack mounted cabinet
High power LDMOS pulse devices
Suitable for VHF high power linear pulse applications
Built-in Ethernet, Control and Protection circuits
High reliability and ruggedness

**ELECTRICAL SPECIFICATIONS**

| Parameter | Specification | | | Notes |
|---|---|---|---|---|
| Operating Frequency Range | 150 - 225 MHz | | | |
| Peak Output Power | 10 KWatt Min | | | 15% Duty Cycle |
| Input Power | 0 dBm Nom | | | Pulsed |
| Saturated Gain | 70 dB Min | | | |
| Gain Adjustment Range | 20 dB Min | | | |
| Pulse Characteristics | **Duty** | **Width** | **Rise / Fall** | |
| | 15 % Max | 4 - 650 µSec | <100 nS | |
| Pulse Droop | 1.0 dB Max | | | @ 650 µSec |
| Input / Output VSWR | 2 : 1 | | | Relative to 50 Ohm |
| Harmonics $2^{nd}$ / $3^{rd}$ | -15 / -12 dBc Max | | | Internal Harmonics Filter |
| Out of Band Spurious levels | -50 dBc Max | | | |
| Load VSWR protection | 2.5 : 1 | | | Without damage |
| Maximum Input Power Protection | + 5 dBm | | | <10 Sec |
| Gate Control Inputs | TTL - gating pulse must precede RF by 2 µSec | | | Optional |
| AC Input Voltage | 208 VAC, 3 Phase, 60 Hz | | | |
| AC Power Consumption | 6 KW Avg. Max | | | |

**ENVIRONMENTAL CHARACTERISTICS**

| Parameter | Specification | Notes |
|---|---|---|
| Operating Ambient Temperature | 0 to +50°C | |
| Relative Humidity | 5 - 95 % | Non-condensing |
| Shock and Vibrations | See notes | Off-road wheeled vehicle |
| Altitude | 10,000 feet | |

**MECHANICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions | See preliminary outline drawing | 18U, 19” rack |
| Weight | <450 lb. Nom | |
| RF Input Connector | Type N-F | |
| RF Output Connector | SC-F | Waveguide pressure sensor |
| AC Power | MS3122E14-5P | Or similar |
| Transmit Gating Connector | MS circular or similar | |
| Monitor & Control | Ethernet RJ-45 circular connector TCP/IP<br>RS422/485 D-sub 9S port for redundancy | |
| Cooling | Built in forced air Cooling | Front Inlet, Rear outlet |
| Elapse Hour Meter | Internally tracked via software | Ethernet status message |

332C Dante Ct. Holbrook, NY 11741 Phone: 631-588-3877 Fax: 631-648-0518
www.rfcomp.comwww.rfamplifiers.comsales@hdcom.com

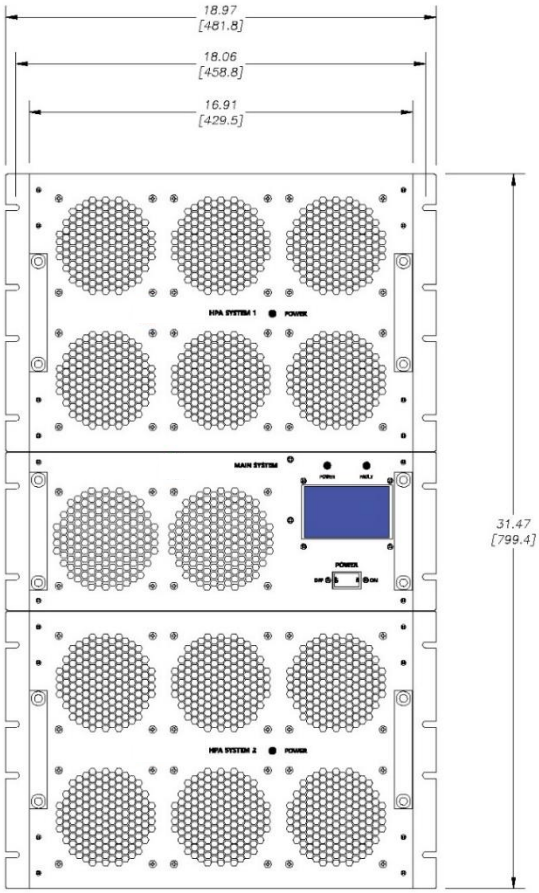
**Shock Protection**

The tests shall be conducted in accordance with MIL-STD-810F, Method 516.5:
Shocks: Proc. I, 11 mSec, 18 sawtooth pulses with peak value of 20 g.
Maintenance shocks: According to Proc. VI.
Drops: According to Proc. IV - In case the weight shall exceed 45.4 kg, the height shall be 76 cm, otherwise the height shall be 122 cm.

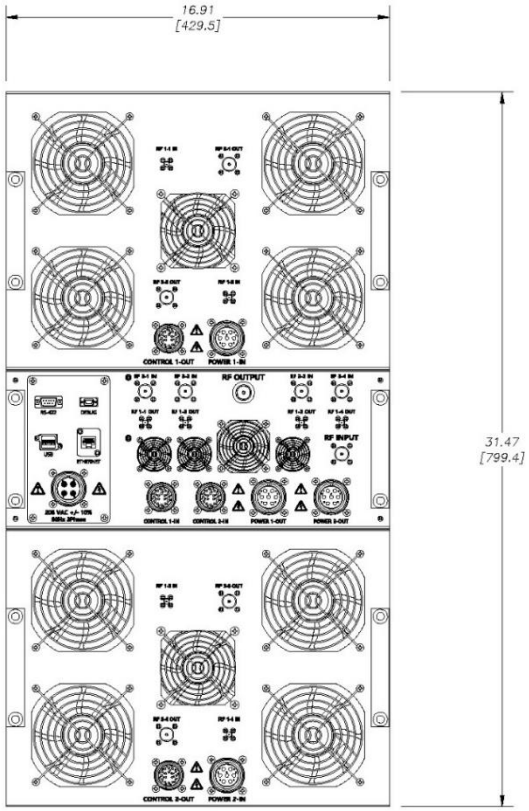
**Vibration Protection**

The test shall be conducted in accordance with MIL-STD-810F, Method 514.5, Cat. 20, fig. 514.5C-1 tailored for installation within off-road wheeled vehicle. Test duration is 3 hours per axis.
Loose Cargo Transportation
The test shall be conducted in accordance with MIL-STD-810F, Method 514.5, Cat. 5. Test duration is 3 hours.

## 1. Front and Rear Panel Outlines

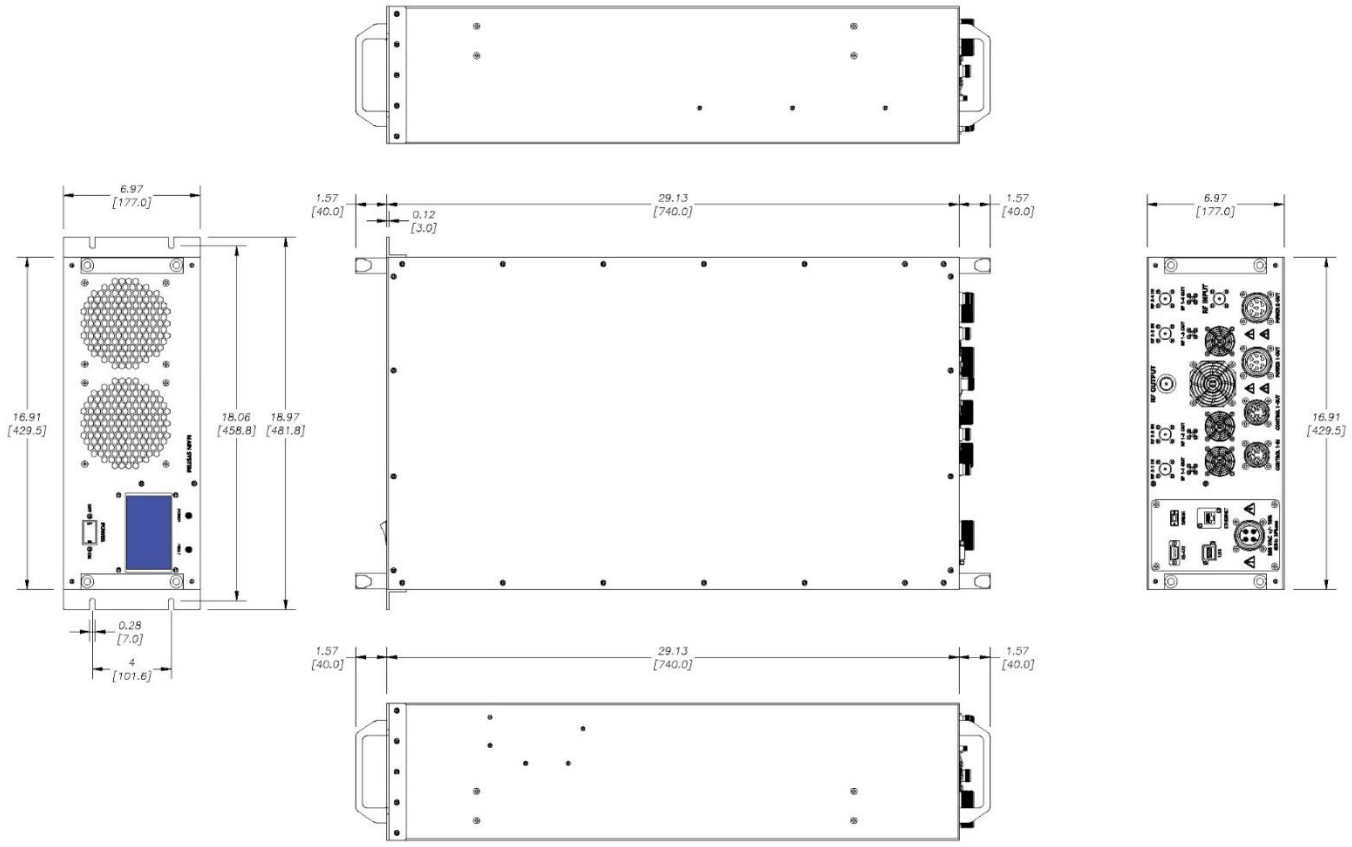



**FRONT**

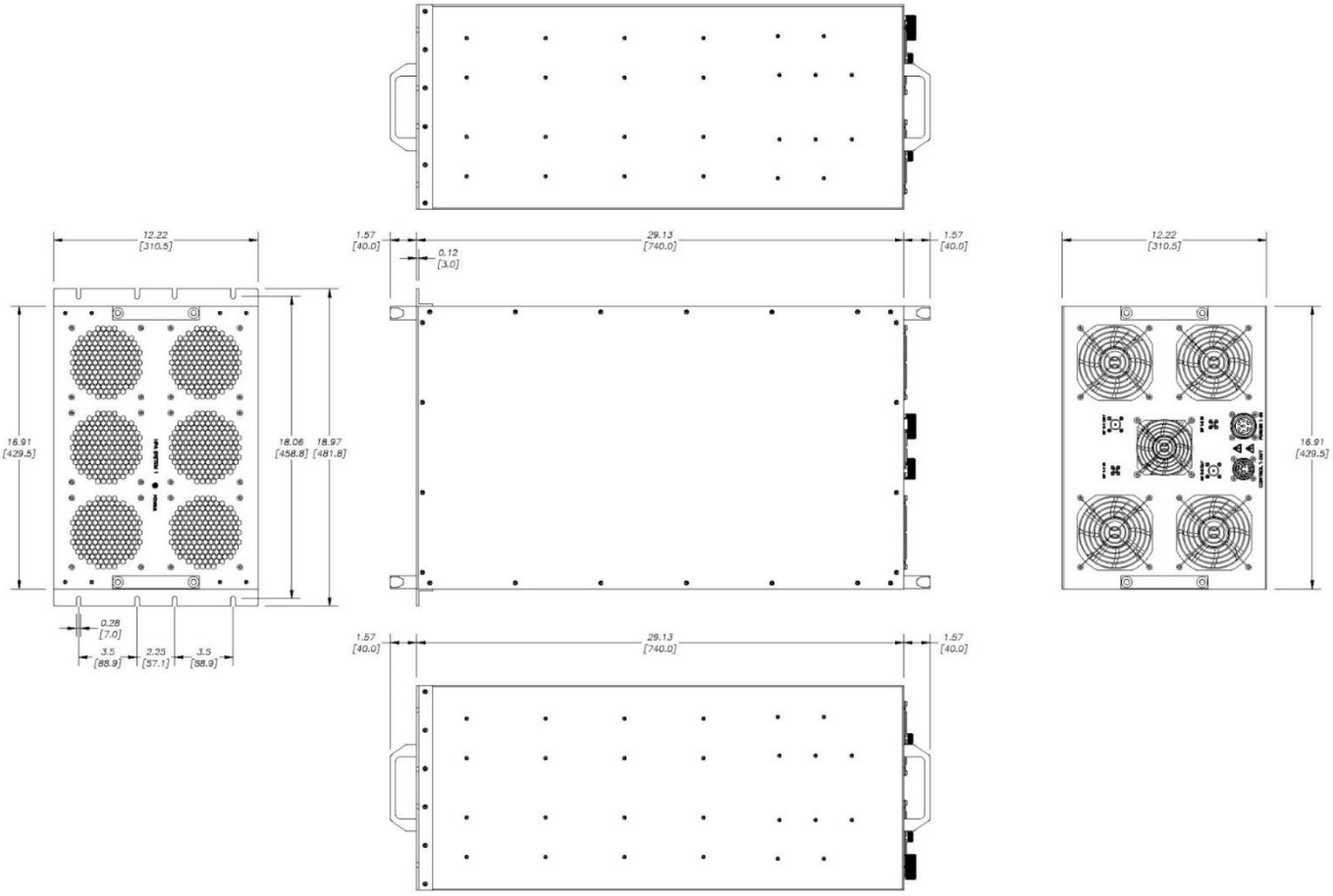



**REAR**

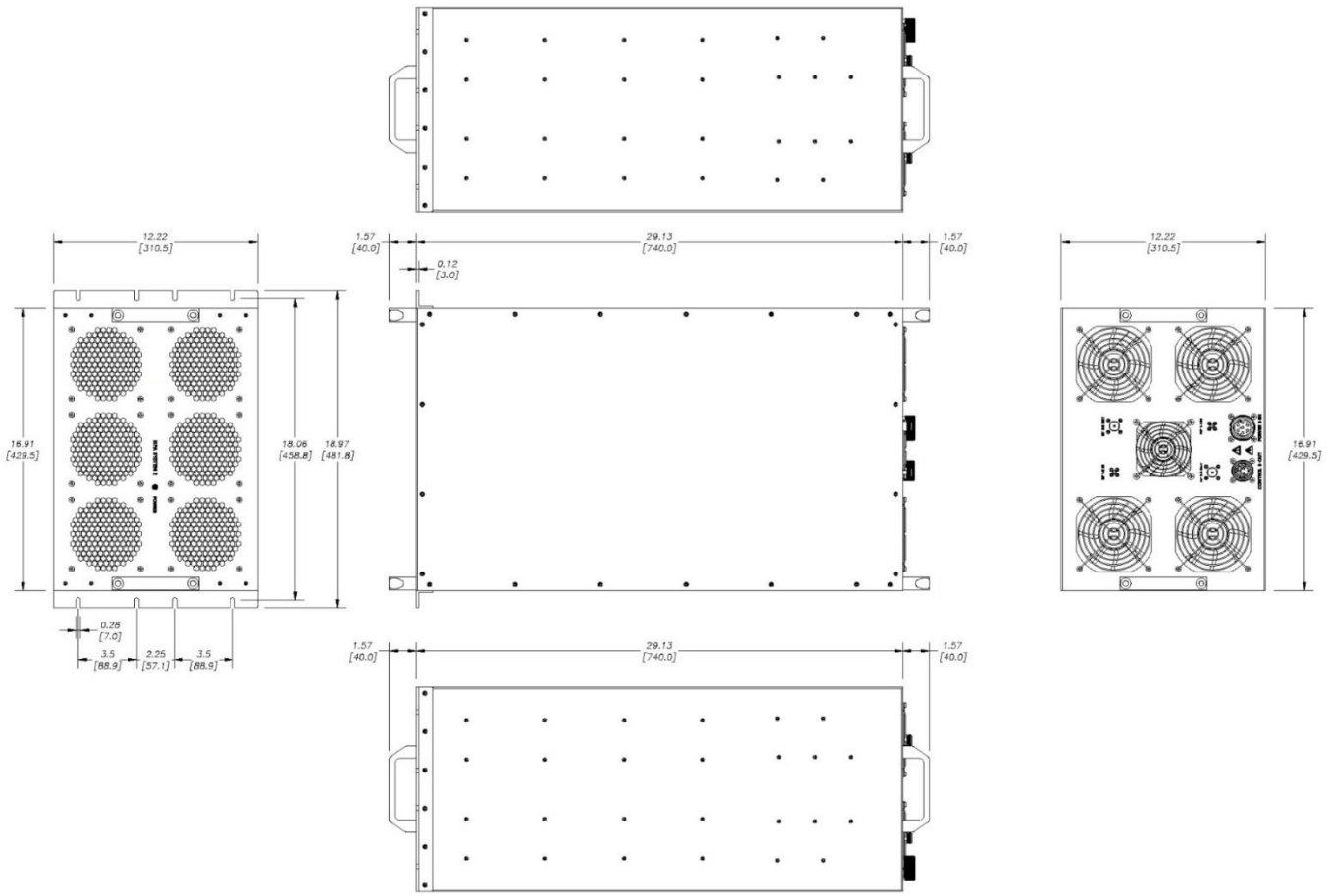
## 2 Main System Outline



## 3 HPA System 1 Outline



## 4 HPA System 2 Outline



## 5 System Complete Layout

