

# TC-100L/LR

SATCOM 100 watts maximum with LNA (Lightweight)



The Elbit Systems of America C4I Solutions TC-100L SATCOM PA is a 100 watt power amplifier for the SATCOM uplink band. The low-noise PA with a high dynamic range of 25 dB gain preamp (adjustable) in the SATCOM downlink band, this PA is designed for the tactical environment. Housed in a rugged, weatherproof case, it is capable of operation in vehicles, shelters, aircraft, transit cases, and racks or on the ground at the base of antennas.

## Features

- 292-318 MHz transmit mode
- 243-270 MHz receive mode
- Selectable, 8 steps; 10 to 100 watt output power
- 25 dB gain preamp with <3 dB noise figure
- DC supplied over coax capable
- Multiple mounting configurations
- DAMA compliance
- Size: 5.5"W x 3"H x 12"D
- Weight: <7 lbs.



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SATCOM 100 watts maximum with LNA (Lightweight)

## Technical Description

The Elbit Systems of America C4I Solutions TC-100L SATCOM PA is a 100 watt power amplifier for the SATCOM uplink band. The TC-100L also provides a low noise, high dynamic range 25 dB gain preamp (adjustable) in the SATCOM downlink band. The TC-100L HPA is designed for continuous operation in a tactical environment. It is housed in a rugged, weatherproof chassis and is capable of operation in vehicles, shelters, aircraft, transit cases and racks or on the ground at the base of the antenna mast. The TC-100L HPA is compatible with only an RF connection to standard SATCOM radios having a 2 to 20 Watt RF output. ALC maintains the output to the selected level. DC power may be supplied through the RF cable using a Bias T or through an external connector.

## Physical Description

Height	3.0 in.
Width	5.5 in.
Depth	12.0 in.
Weight	<7 lbs.
Finish	Black Anodize

## Electrical Specifications

### Frequency Range

TX	292 to 318 MHz
RX	243 to 270 MHz
Duty Cycle	Continuous
RF Input Power	2 to 20 watts

RF Output Power	10 to 100 watts
Transmit Noise Floor	-140 dBc/Hz @ 10 MHz offset with an in out noise floor equal to 153 dBc/Hz
Out of Band Spurious	-70 dBc
Input Impedance	50 Ω, VSWR < 2.0:1
Output Load Impedance	50 Ω
Output into VSWR	4:1 Max with 1 dB degradation
RX Preamp Gain	25 dB gain (adjustable)
RX Preamp Noise Figure	<3.0 dB
Bypass Insertion Loss	0.5 dB typical 30-512 MHz
Primary Power	22-32 VDC
Power Consumption	350 watts max. – TX mode 10 watts max. –RX mode 0 watts Bypass mode

## Environment & EMI Specifications

MIL-STD-810
ADS-37A-PRF
MIL-STD-704
MIL-STD-461
MIL-STD-464



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