



SKU: 0101-0066

Category:

# High Density Remote Power Supply Unit (HD R-PSU)

The Tellabs 1000 Multi-service Access Platform (MSAP) Series High Density Channel Bank Assembly (HD CBA) Remote Power Supply Unit (HD R-PSU) plug-in card converts standard -48 V DC from batteries or a rectifier into the voltages required by the common control equipment and plug-in cards located in a HD CBA.

## Features

- Low thermal dissipation
- Low output voltage alarm
- Over-voltage/over-current shutdown
- Thermal overload protection
- Reverse input polarity protection
- Programmable ringing generator
- High-efficiency switching DC-DC converter
- Compatibility with the Tellabs 1000 series HD CBA only

## Highlights

### Superior Reliability

A Tellabs 1000 series HD CBA requires only one HD R-PSU card; however, a second dedicated power supply slot allows for redundancy. When two HD R-PSUs are installed, they share the total power load to the HD CBA. In addition, if one HD R-PSU fails, the second carries the total power load. The HD R-PSU card features input fusing to protect redundancy.

### Efficient Operations

The HD CBA R-PSU card also generates sine wave ringing voltage for use by the subscriber interfaces. The card uses a DC-to-DC switching converter for high efficiency and low thermal dissipation.

### Ease of Maintenance

LEDs and receptacles on the faceplate of the HD R-PSU plug-in card have the following uses. Visual LEDs to identify quick operations, troubleshooting and fusing conditions. Three system voltage sampling jacks are also present for +5Vj ack, -48V jack, and Ground.

## Specifications

### LED Indicators

- Red FUSE: Failed fuse on plug-in card
- Green ACTV: Plug-in card is active
- Red FAIL: Plug-in card failure

### Test and Measurement

- +5V jack
- 48V jack
- GND jack

### DC-DC Converter

- Low voltage disconnect: -37 V DC
- Low voltage alarm: -44 V DC
- Output: +5.15 V DC 31.5% and -5.15 V DC 310.0%
- Input: -42.0 to -60.0 V DC

## Regulation

- 35.15 V DC:  $x < 1.5\%$  load,  $x < 1.5\%$  line and  $x < 0.2\%$  per specified temp range
- $< 1.5\%$  line
- $< 1.5\%$  load

## Ripple and Noise (DC – 20 MHz)

- 52 V DC, -32 V DC:  $< 100$  mV peak-to-peak
- 35 V DC: 1.0% peak-to-peak

## Output Current

- Total available output: 165 W
- 32 V DC: 3 A
- 52 V DC: 2 A
- 5 V DC: 3 A
- +5 V DC: 20 A

## Isolation

- Output ground: Referenced to input battery ground
- Internal converter: 500 V input to output

## Ringing Generator

- Power (continuous) 5 REN
- Frequency tolerance  $\pm 2.5\%$
- Output frequency in Hz (provisionable): 16.7, 17.7, 18.7, 20.0, 21.0, 22.3, 23.5, 25.0, 26.4, 28.0, 29.8, 31.6, 33.3, 35.4, 37.6, 40.0, 42.2, 44.4, 47.4, 50.0 Hz
- Voltage tolerance:  $\pm 5\%$
- Output voltage range: 60, 65, 85, 95 V AC
- Pedestal voltage: -48 V DC

## Environmental

- Humidity: 5% – 95%, non-condensing
- Storage temperature:  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+158^{\circ}\text{F}$ )
- Operating temperature:  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+149^{\circ}\text{F}$ )

## Physical

- Weight: 1.0 lb (0.45 kg)
- Depth: 10.5 in (26.67 cm)
- Width: 1.0 in (2.54 cm)
- Height: 5.125 in (13.018 cm)

## Compliance

- GR-1089-CORE