



## **Lumistar LS-29-R2 Series Rack Mount Radio Frequency Recording & Playback System**

**A Complete Two/Four Channel System  
Capable of Capturing & Reproducing Up to 200 MHz  
of RF Spectrum from 200 MHz to 6 GHz & 70 MHz**



### **Two Options:**

- > Standard Version**
- > Standard Version, with Demodulation Option**

# LS-29-R2 Series Rack Mount Radio Frequency Recording & Playback System

Applications include RF Signal Recording & Playback, Signal Analysis, Interference Analysis, Remote Spectrum Monitoring, Training, Receiver Design and Test, Spectrum Allocation, and More

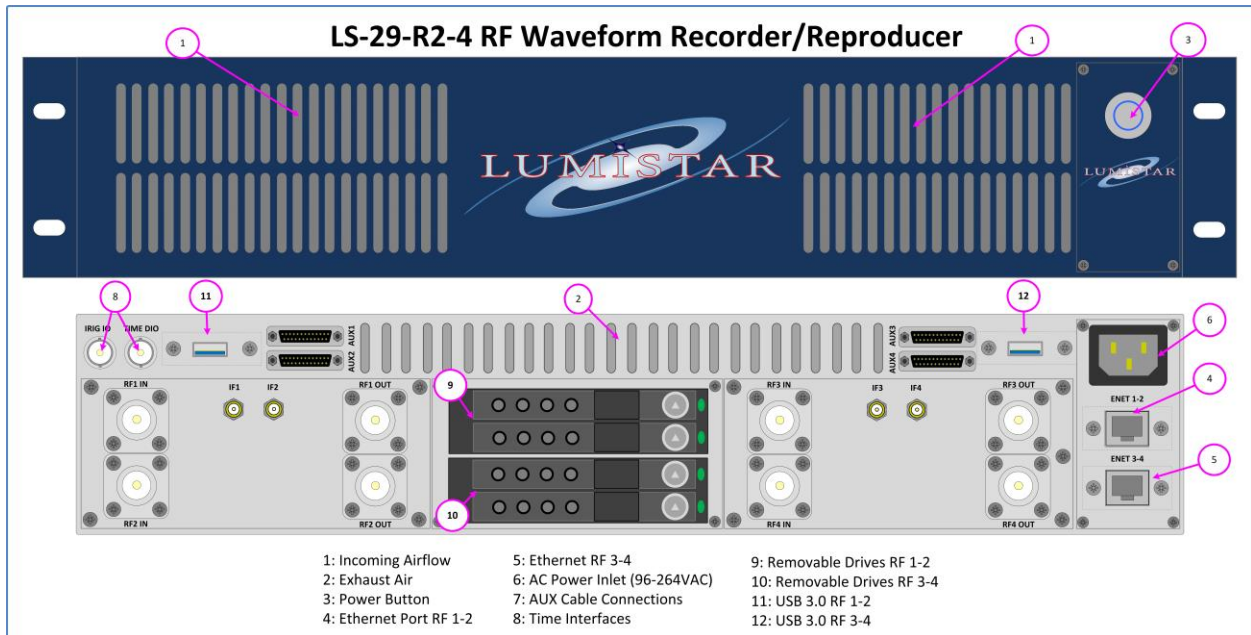
## Features:

- Number of Channels: 2 or 4 per system
- Frequency Range: 200 MHz to 6 GHz and 70 MHz Receiver IF
  - Record Center Frequency Can Be Changed on Playback to Any Center Frequency
  - e.g. Record at Lower Lband, Playback at C band
- Instantaneous Channel Bandwidth (IBW): up to 50 MHz per channel
- Instantaneous System Bandwidth:
  - 100 MHz (2-channel version) / 200 MHz (4-channel version)
- Instantaneous Dynamic Range (IDR): 120 dB
- Internal 1 PPS Accuracy: +/- 20 nanoseconds
- Processor: i7 Dual Core, 32 GB RAM, Linux OS
- Solid State Removable Storage - 8 TB standard @ 6 GB/sec 4 TB per channel)
  - Optional up to 16 TB
- Sampling Rate: variable as a function of bandwidth selection
  - 61 MS/s (at 50 MHz bandwidth)
  - Record time is inversely proportional to recording bandwidth
- Remote Control / Data Transfer via Network Attached PC
- Data File Format: VITA 49
- Spectrum Analysis (available during recording and playback)
- Demodulation Format Options: PCM/FM, SOQPSK-TG, Multi-H CPM, BPSK, QPSK, AQPSK, AUQPSK, UQPSK, PCM/PM, others upon request
- Power Consumption: 150 W (typical, standard version, 4 channels)
- Power Supply: 100-240 VAC, 47-63 Hz
- Temperature: 0 to 50°C (Op); -25 to +65C (Non-Op)

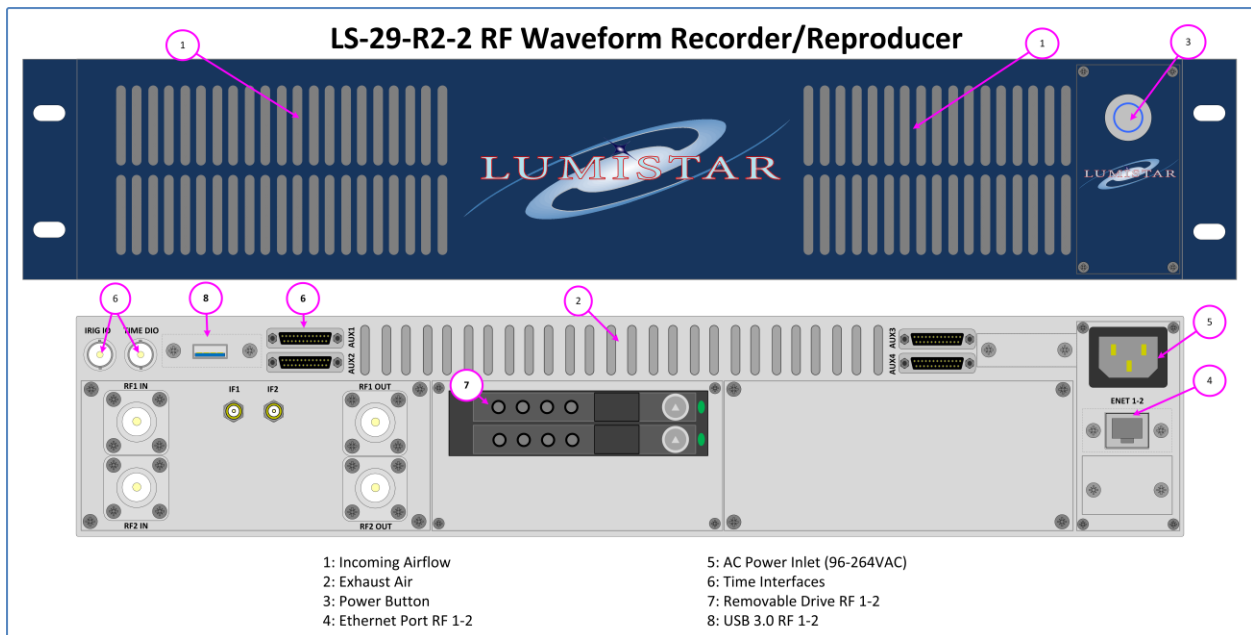


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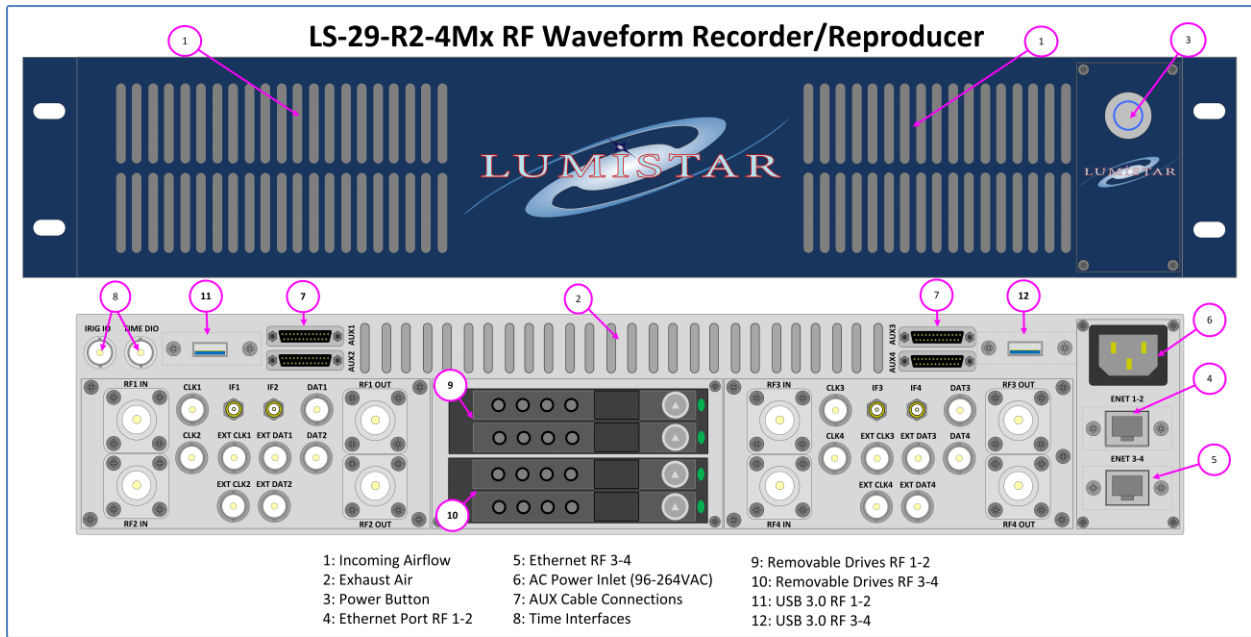
- **Aggregate Recoding Time (8 TB Memory):**
  - Bandwidth 100 MHz: 312 minutes (5 hr 12 min)
  - Bandwidth 80 MHz: 390 minutes (6 hr 30 min)
  - Bandwidth 40 MHz: 780 minutes (13 hr 0 min)
  - Bandwidth 25 MHz: 1180 minutes (19 hr 0 min)
  - Bandwidth 10 MHz: 2952 minutes (49 hr 12 min)
  - Bandwidth 1.0 MHz: 29,520 minutes (492 hr 0 min)
  
- **Signal and Control IO:**
  - RF Record In, Channel 1-4: N-Female
  - RF Playback Out, Channel 1-4: N-Female
    - Real-Time copy of RF on Playback Out I/O
  - 1 PPS: BNC-Female
  - IRIG Time I/O: BNC-Female (HDR and Demod options)
  - USB 3.0: 1 for two-channel/ 2 for four-channels
  - Removable Solid-State Drives: 1 for two-channel, 2 for four-channel
  - Giga-Bit Ethernet: 1 or 2 - Data/Control/Status (CH 1-2 and CH 3-4)
  - Real-Time 70 MHz IF Output: SMA-F
  - Real Time & Playback TTL Clock/Data: BNC-F (with Demod option)
  - Real Time RS-422 Clock/Data: Micro-D Sub-25 (with Demod option)
  - Real Time and Playback UDP Data Streaming: (with Demod option)
  - Auto-Tracking Receiver Available in All Models
  
- **Control / Status over Giga-Bit Ethernet**
- **Complete redundancy between CH 1-2 and CH 3-4**
- **Data Recording**
  - Demodulation Option includes an option to Record Demodulated Data
  
- **Size and Weight**
  - 19" W x 3.5" H 22" D (Standard 2U E.I.A. Rack Mount)
  - Approx. 25 pounds
  - Forward Mount and Rear Mounting Options Available



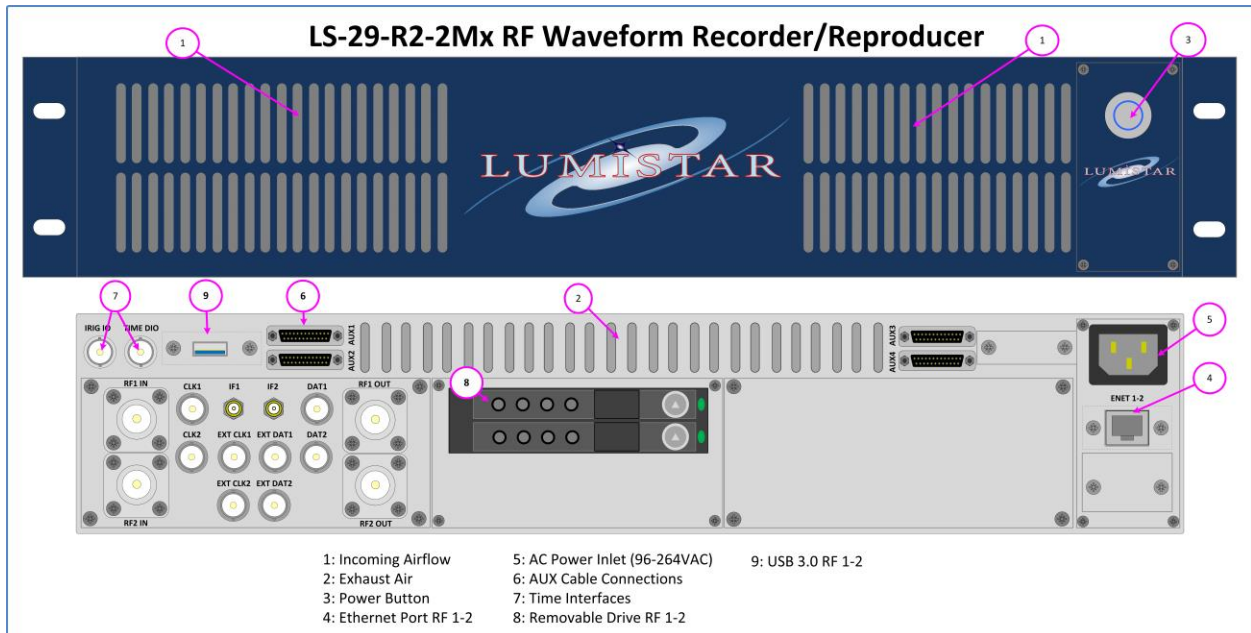
**LS-29-R2 Series RF Recording/Playback System**  
**Four Channel / Standard Version**  
**Front and Rear Panel Elevations**



**LS-29-R2 Series RF Recording/Playback System**  
**Two Channel / Standard Version**  
**Front and Rear Panel Elevations**



**LS-29-R2 Series RF Recording/Playback System  
Four Channel with Demodulation Option  
Front and Rear Panel Elevations**



**LS-29-R2 Series RF Recording/Playback System  
Two Channel with Demodulation Option  
Front and Rear Panel Elevations**



All models are available in up to five frequency bands. Examples of standard bands are Lower L (1435-1540 MHz), Upper L (1710-1850 MHz), S Band (2200-2400 MHz), C1 band (4400-4940 MHz), C2 band 5091-5250 MHz). Custom bands are available, please contact Lumistar Sales to discuss your specific requirements

## Ordering Information:

Model Number	Description
LS-29-R2-2-LUS	2 channel, standard version, tri-band (L/U/S)
LS-29-R2-4-PLSC	4 channel, standard version, quad-band (P/L/S/C)
LS-29-R2-2M1-LUS	2 channel, demodulation option, tri-band, FM demod
LS-29-R2-4M6-PLSC	4 channel, demodulation option, quad-band, FM+SOQPSK

The model numbers listed are examples, of which there are many possibilities. Please consult Lumistar Sales with your specific application.

## Standard RF Bands:

Lower L: 1435-1540 MHz, Upper L: 1710-1850 MHz, S: 2200-2400 MHz  
NATO-E: 2185-2485 MHz, C1: 4400-4950 MHz, C2: 5091-5250 MHz  
Custom RF Bands Available from 200 MHz to 6 GHz: please consult Lumistar

For More Information, please contact:

[Sales@Lumistar.net](mailto:Sales@Lumistar.net)

*Specifications are subject to minor changes, please consult factory at the time of the order*

