

# SKY LYNX

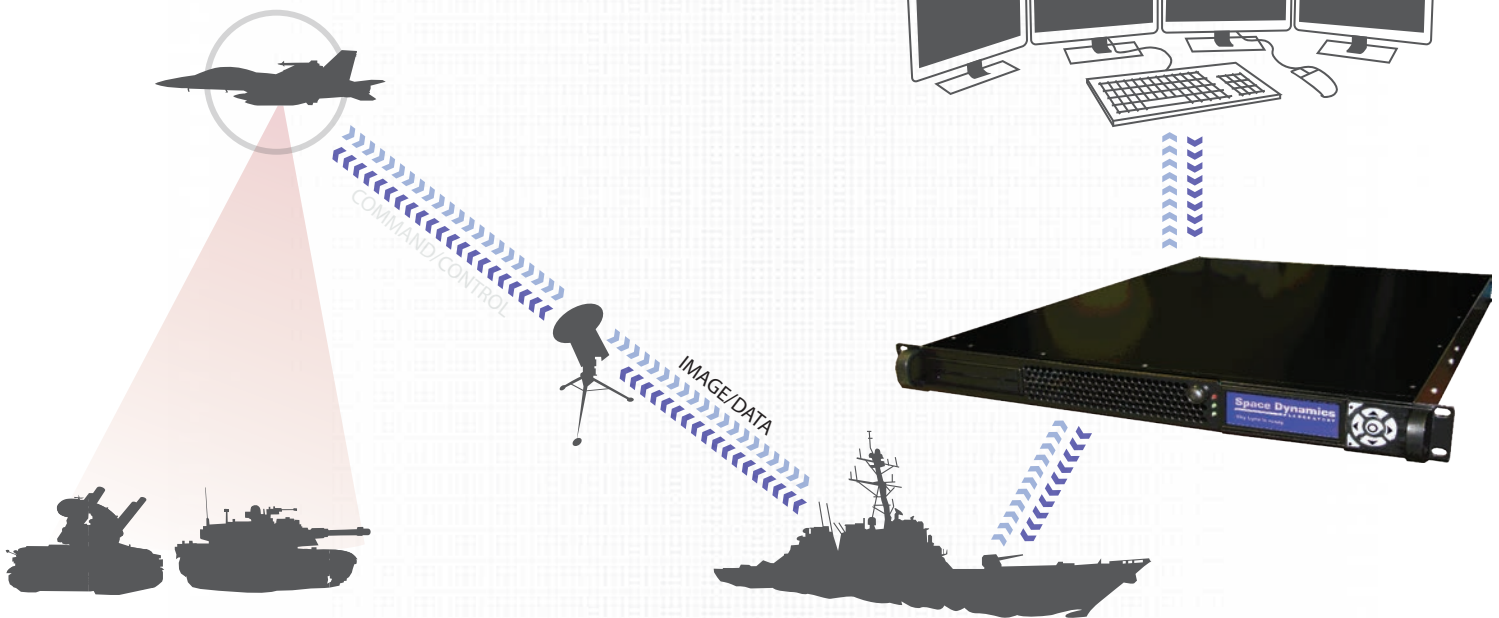
Sky Lynx receives, synchronizes, routes, and simulates various sensor data. Sky Lynx is the next generation Common Data Link (CDL) Interface Box (CIB). Where CIB was originally developed for receiving and processing CDL data, Sky Lynx's capabilities have been expanded to implement additional interfaces including support of ATM-based sensors. This new generation processing hardware supports CDL sensors SHARP, ATARS, and Global Hawk, as well as ATM sensors ASARS and SYERS.

When the aircraft acquires imagery and navigational data, the data are sent via radio frequency link to a data link receiver. Sky Lynx then retrieves and converts the data to Gb Ethernet for ground processing. The data can be viewed through a ground station running SDL's VANTAGE™ software or another compatible image screening software package.

Sky Lynx capabilities facilitate maintaining and troubleshooting ground stations. Its simulation functionality allows ground station operators to simulate real sensor flights for mission training exercises.

## SKY LYNX INTERFACES

- 10/100/1000 Ethernet
- 11 simultaneous CDL data channels (6 high-rate ECL & 5 low-rate TTL) via 55-pin MIL circular connectors on the rear panel
  - Supports multiple clock rates allowing individual phase adjustment
- Supports up to 4 ATM channels at OC-3/STM1 data rates via AMC expansion card (LC connector)
- RS-232 serial port (for testing with support computer)
- Expansion slot for PMC/XMC or AMC
- 2 USB ports
- 4-lane external PCIe
- 2 removable 2-1/2" SATA hard drives
- Menu-driven display for stand-alone mode



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**NOISE** Does not exceed a maximum noise level of 60 dBA, as measured from 3 ft in front of the unit

**POWER** 110-240 VAC, 50-60 Hz, typically 120 W, universal power supply

**VIBRATION** Conforms to MIL-STD-167-1, Type 1 for vibration

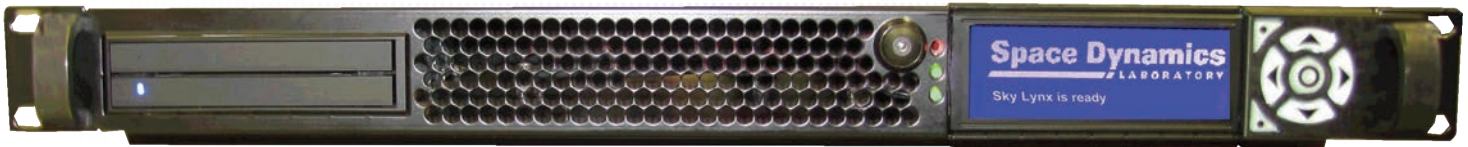
**WEIGHT** 24 lbs

**EMI/EMC** Meets the EMI/EMC requirements for FCC Class A equipment

**DIMENSIONS** 1U, 1.72" H x 16.1" W x 22.5" D

**TEMPERATURE** Can operate & maintain performance in an environment with a temperature range of 10°C to 40°C at sea level

Front Panel



Rear Panel



## BENEFITS

- Fulfills training needs by simulating many sensor types
  - Currently supports SHARP, Global Hawk Block 10/20/30, ASARS, SYERS, ATARS, & PRBS
  - Can be customized for other sensors
- Eliminates hassle of shipping classified hardware (Sky Lynx hardware is not classified)
  - Procedure to remove from a classified environment & update Sky Lynx firmware is Defense Security Service approved
- Features ability to adapt to new sensors as they become available (via firmware upgrade)
- Features the ability to transmit/receive data between interfaces (CDL, ATM, & Gb Ethernet)
- Integrates into any standard 19-in rack
- Supports 11 simultaneous CDL data channels or 2 ATM simulation channels at OC-3/STM1 data rates
- Features extensive front panel display that allows for system feedback & status in stand-alone mode
- Features reset/initialize function via software or hardware front panel push button
- Provides dramatic increase in computation capability over first generation hardware via state-of-the-art processors

## SIMULATION CAPABILITIES

- Offers continuous or finite simulation mode
- Generates pseudo-random bit sequence (PRBS) data
- Provides an individual clock signal for each channel, allowing operators to adjust the phase of each clock (assuming all channels are running at the same data rate), providing realistic CDL/ATM simulation (i.e., I and Q channels 90° out of phase)

## DIAGNOSTIC CAPABILITIES

### DEBUGGING/TESTING TOOLS

- Can inject known data/bit errors into a data stream, allowing systems to test robustness & error detection capabilities
- Offers a unique statistic-gathering feature that provides the exact number of frames sent by the simulator
- Can detect or pass through PRBS data

### TESTING CABLE INTEGRITY

- Can send a unique binary pattern on each channel (also facilitates integration with other systems)

### PACKET VERIFICATION

- Identifies the number of packets processed by Sky Lynx to verify all packets have been received

### LOOPBACK TEST

- Features extensive self-diagnostic loopback test & ability to monitor the speed & temperature of the Sky Lynx circuit board for easy maintenance & troubleshooting



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