

# **KNUDSEN**

# **CHIRP RACK SERIES**



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Knudsen CHIRP Systems are the next benchmark in scientific sub-bottom profiling echosounders. The CHIRP Rack system, a blackbox system which interfaces to your computer via a USB connection, incorporates the latest in digital signal processing technology and includes Knudsen SounderSuite Windows application software and chirp and correlation processing algorithms to enhance sub-bottom capability. The unit, housed in a 3U rackmount case, is ideal for quick installation to a standard equipment rack on your survey platform.

Available in a 2 or 4 channel configuration, the versatile system is particularly well suited to multiple survey roles and includes a wide range of standard bathymetry and sidescan frequencies for both shallow and deeper depths.

## Technical Specifications: *(subject to change without notice):*

### Available Channels

- Chirp 3200: 1 channel
- Chirp 3202: 2 channels
- Chirp 3204: up to 4 channels

### Frequency

- All channels: 3.5kHz - 210kHz

### Output Power

- Up to 2kW on Channels 1 and 2
- Up to 1kW on Channels 3 and 4

### Input Power

- 85 - 265 VAC (DC Optional)

### Pulse Length

- Up to 64ms

### Gain

- Manual, automatic (AGC), and time varied (TVG)
- 96db range of programmable analog gain

### Ranges

- 5, 10, 20, 50, 100, 200, 500, 1000, 2000, 5000

### Phasing

- Manual and automatic (up to 50% overlaps)

### Units

- Meters, Feet, or Fathoms

### Resolution

- 1cm (0-99.99), 1dm (100-999.9), 1m (>1000)
- 1/100ft (0-99.99), 1/10ft (100-999.9), 1ft (>1000)
- 1/100m (0-99.99), 1/10m (100-999.9), 1m (>1000)

### Sound Velocity

- 1300 - 1800 m/s Resolution 1m/s
- 4265 - 5906 ft/s Resolution 1ft/s
- 710 - 984 fm/s Resolution 1 fm/s

### Draft

- 0-100m Resolution 1cm
- 0-328ft Resolution 0.01ft
- 0-54fm Resolution 0.01fm

### Interface

- USB 2.0 Full Speed (12Mbps)

### Output Data

- Full resolution envelope data in KEB binary format and XTF (for sidescan only)
- Industry standard SEG-Y in 16-bit fixed point in user selected raw, filtered, or envelope detected form
- User configurable ASCII digital depth strings

### Dimensions

- 533mm (21") x 483mm(19") x 133mm (5.25")

### Weight

- Chirp 3200: 11kg (24lbs)
- Chirp 3202: 12kg (26lbs)
- Chirp 3204: 14kg (30lbs)

### Installation

- 3U Rackmount case

### Operating Temperature

- 0 - 50 °C

### Additional Features

- Frequency agility on all channels
- Chirp and correlation processing
- Transmit signal generation control
- Advanced digital filter control
- Built-in drivers for all popular GPS
- Built-in test signal generator
- Compatible with industry standard dataloggers and processing software (Hypack, QINSy, SonarWiz)
- Heave compensated echogram

### Options

- Sidescan option
- Network option for multiple PC operation
- Remote Display Indicators
- EchoSim Sonar Signal Simulator

### SounderSuite Software (included)

- Compatible with Windows Vista or higher
- Easy to use Graphical User Interface (GUI)
- Postsurvey Display and Printing Software
- Large Digitized Depth Display
- Print to standard Windows printers and select thermal printers

