



Type Approved
n. e-01-020
n. R-4-020



WSV.de

RIVER RADAR

*GEM's new and innovative LD2204R/RK river radar series:
the new system for a perfect inland navigation*

- Digital technology
- Mini conning:
 - Compass
 - GPS
 - AIS view
 - Depth
 - Navigation Info
- IVP - Intelligent Video Processing
- Real Time Head-Up
- Foolproof
- Ship & Barge Editor
- Compliance ETSI EN 302 194

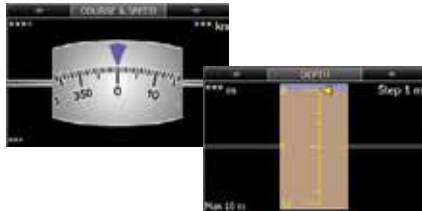
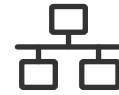
By means of its experience and capacity our company has developed an unrivalled, high resolution and high discrimination radar model LD-2204R series delivering a complete and safe day/night river and narrow waterways navigation. With its exclusive processing technology and a new man-display graphics interface, this equipment meets full standards of Rhine river radar specification, and assures target detection, particularly in very close range and congested areas. Easy to install, the river radar Model LD-2204R series is designed, manufactured and tested against high performance, reliability and quality requirements.





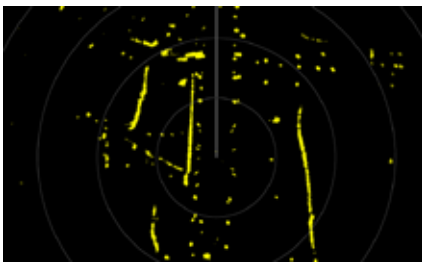
DIGITAL TECHNOLOGY

The video signal is transmitted from the radar display via Ethernet.



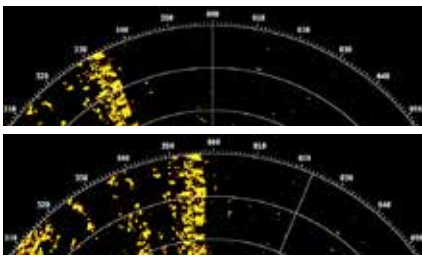
MINI CONNING

One of the many advantages of the screen 22 "is the mini-conning display. Possibility of having more space for menu, including Compass, GPS, AIS, Depth.



IVP - Intelligent Video Processing

Clear display through the application of intelligent filters. The processor implements the techniques of digital filtering of the signal making the image clearer and without false echoes (autoSTC - integration Scan to Scan - False Alarm Reduction, etc ...)



REAL TIME HEAD-UP

The radar image is continuously updated with information from a heading sensor



Screen Capture Mode



FOOLPROOF

Particular attention is given to the ease radar operation, with a simple and intuitive interface. In addition, all functions are easily accessible via Track-ball (optional) keyboard and TouchPad.

Wide range of graphic interface customization.



SHIP & BARGE EDITOR

Ability to graphically change the profile of the boat on the radar display by entering the size and the placement of the barges transported.

TYPE APPROVED

The River Series Radar LD-2204R/RK complies with ETSI EN 302 192

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RIVER RADAR LD-2204R /RK SERIES

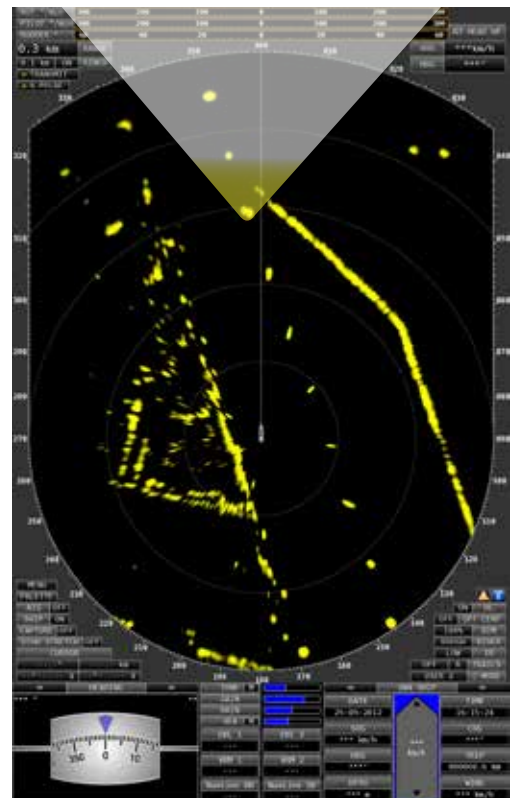
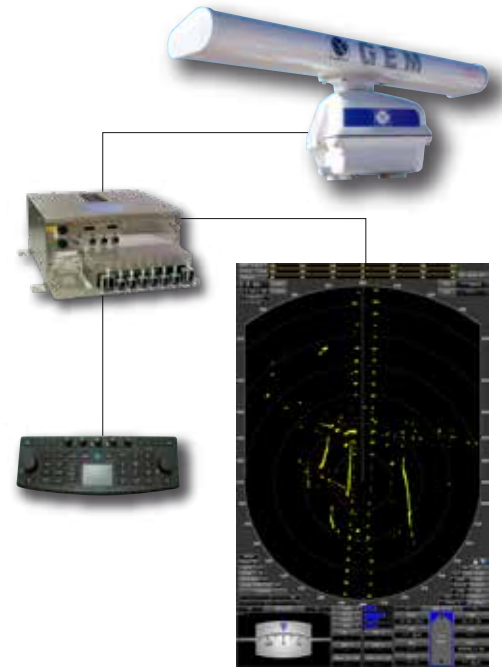
SPECIFICATIONS LD-2204R RK/7 RIVER RADAR
LD-2204R RK/9

| ARRAY UNIT | AU11-07NF | AU11-09NF |
|--|-------------------------|--------------|
| Type: | 7.5" (2300 mm) | 9" (2795 mm) |
| | slotted waveguide array | |
| Polarization: | Horizontal | |
| Horizontal beamwidth (-3 dB): | 1.05° ± 0.1° | 0.85° ± 0.1° |
| Vertical beamwidth (-3dB): | 23° ± 3° | |
| Sidelobe level within 10° from main lobe: | < -26dB | |
| Sidelobe level outside 10° from main lobe: | < -32dB | |
| Gain: | 30dB ± 1dB | 31dB ± 1dB |
| Rotation speed: | 30 r.p.m. nominal | |
| Resistance to the wind: | Up to 100 km/h | |

PROCESSOR UNIT

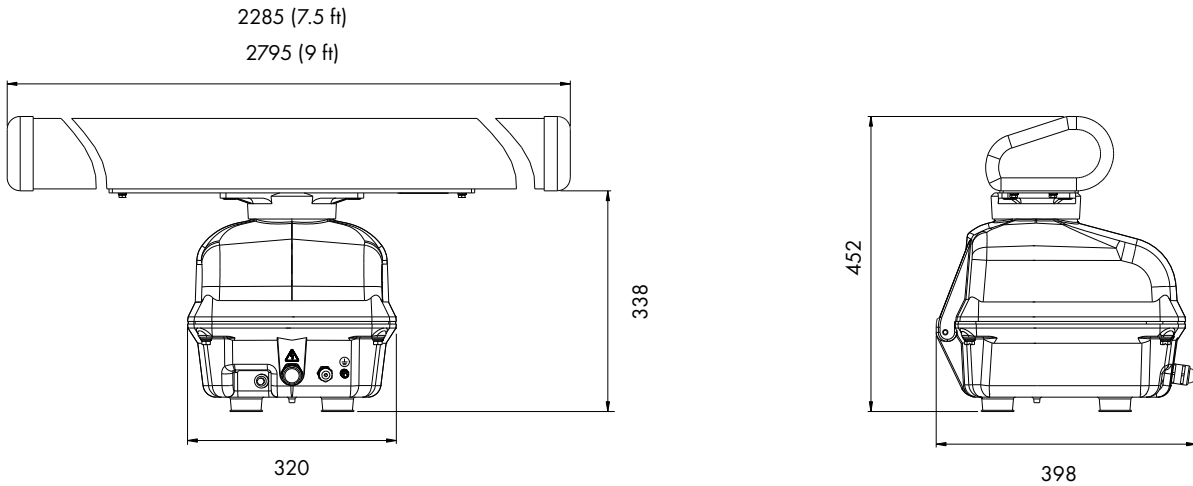
| | |
|--|---|
| AIS function | Yes, 200 targets (sensor required) |
| Range scales | 0.15, 0.3, 0.5, 0.8, 1.2, 1.6, 2, 4, 8, 16, 32, 64 km |
| Range resolution | less then 15m |
| Minimum detective range | less then 15m |
| Range accuracy | ± 1.5% or ± 5m |
| Bearing resolution | ± 1° max. |
| VRM | 2 pieces |
| EBL | 2 pieces |
| Cursor range, bearing and lat/long | |
| Tune | manual / Auto |
| STC | manual / Auto |
| FTC | manual |
| Bearing | scale 360° at 1° interval |
| Heading marker | Yes |
| Stern marker | Yes (for ferry boats) |
| Parallel line | 2 pieces, with readout |
| Off centre | 2 steps: 20% or 33% in addition to the 66% permanent fixed extension of the radar picture in the forward direction. |
| Mini conning display | with navigation Information on the bottom of the radar screen |
| Sector Blanking | Yes |
| Intelligent Filter | Yes |
| Display Control | Fully controllable by trackball or touchpad on the keyboard |
| Trails length | 2 different intervals (ETSI EN302-194) or 10 (No ETSI EN302-194) |
| Expansion | Yes |
| Display colour echo | 256 levels, 4 colors palette |
| Display colour background | 4 colors inside / 4 color outside |
| Display colours trail | 4 colors |
| Own mark | Yes |
| Ship and Barge Editor | |
| Extensive customization of the user interface colors | |
| Time Local or UTC | |
| Distance counter | From GPS (ground distance) |
| Screenshot Internal memory or USB Pen Drive | |
| INPUT SIGNALS | |
| GPS | NMEA |
| 2nd GPS | NMEA |
| Rate of turn | Analog (20mV/deg isolated) or NMEA |
| Rudder feedback | Analog (20mV/deg isolated) or NMEA |
| Automatic pilot | Analog (20mV/deg isolated) or NMEA |
| Depth | NMEA |
| Wind | NMEA |
| Course and heading | NMEA |
| AIS RX | NMEA V3 X |
| OUTPUT SIGNALS | |
| 2nd monitor | DVI |
| Analog Raw video | Video, Trigger, Bearing Signal (optional) |
| Digital Raw Video | Ethernet interface (optional) |
| POWER | |
| Supply Input | 24 Vdc -10% +30% |
| Power Consumption | < 400W |

System Diagram

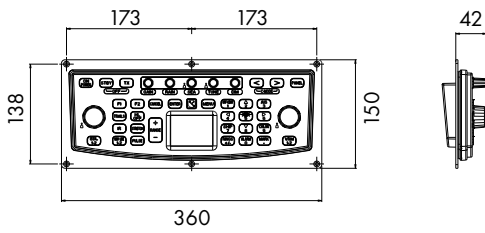


Clear display through the application of intelligent filters.

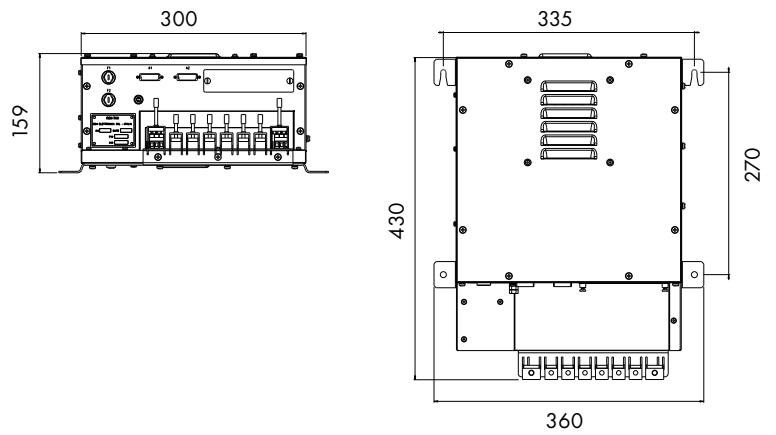
- 7.5' or 9' Array Unit



- Keyboard



- Processor Unit



Weight:

| | |
|------------------------------|--------|
| 7.5' Antenna + Scanner Unit: | 35 Kg |
| 9' Antenna + Scanner Unit: | 37 Kg |
| Keyboard: | 0.7 Kg |
| Processor Unit: | 7 Kg |

This brochure should not be considered a contractual offer to sell. The specifications given herein may be changed by the manufacturer, GEM elettronica, without notice.

