



# RDR-1700B Radar Series

Search, Surveillance, Tracking, Imaging and Weather Avoidance Radar Systems



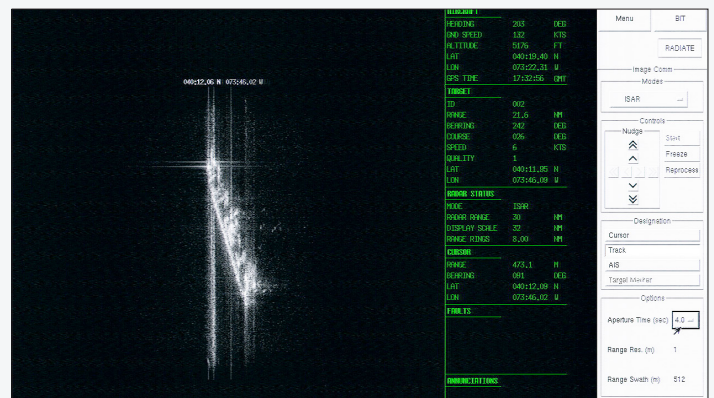
Photo courtesy of DVIDS

The RDR-1700B radar series has three capability tiers to satisfy diverse land and sea mission needs. Our radar detects small maritime targets in high seas and provides superior sea-search mode performance, Inverse Synthetic Aperture Radar (ISAR) imaging of maritime targets as well as weather detection and avoidance modes.

## Satisfying Diverse Mission Needs Over Land & Sea

Being on alert for unpredictable threats demands high-performance surveillance systems that can deliver automated situational awareness at sea, in the littorals and overland. Telephonics' radar detect small maritime targets in high seas and provide superior sea-search mode performance, Inverse Synthetic Aperture Radar (ISAR) and Synthetic Aperture Radar (SAR) imaging of maritime targets, Search and Rescue Transponder (SART) beacon detection, Automatic Identification System (AIS) and a weather detection mode.

With a solid-state transmitter, the radar system provides higher power output and reliability at a small fraction of the cost of competing technologies. On the RDR-1700B and RDR-1700B(V)X models our solid-state transmitters offer markedly lower weight and higher power conversion efficiency over other technologies. As a result, the systems require less than 1 kw of electrical power from the platform.



RDR-1700B ISAR image.

These systems perform critical missions overland with SAR imaging and Ground Moving Target Indicator (GMTI) mode which greatly enhances operational flexibility and enables seamless operation. Our all-weather radar perform by operating in X-Band, a superior weather penetration system that delivers detection and imaging ranges far in excess of systems operating in K-Band, while still delivering high-image resolution.



# Customizable to Meet Your Platform Requirements



## RDR-1700B

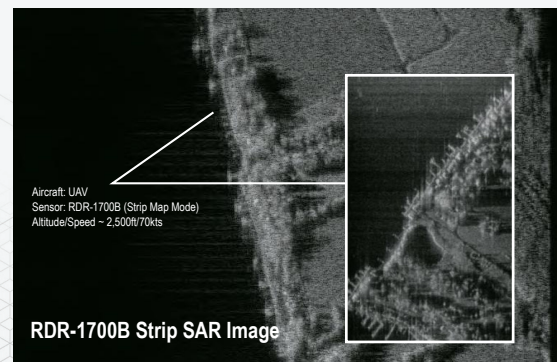
- Maritime surveillance
- SAR/ISAR imaging (1 meter)
- Weather detection
- SART beacon detection
- Unsurpassed ease of integration
- AIS overlay capability

## RDR-1700B(V)X

- All RDR-1700B capabilities
- More powerful, solid-state transmitter
- SHARC® (Scalable Hierarchy for Advanced Radar Control) software displays and tracks six types of embedded, moving maps
- Laptop, mission computer, or remote UAV command interfaces
- Web-browser interface

## RDR-1700G(V)2

- All RDR-1700B(V)X capabilities
- GMTI mode for overland moving target detection and tracking
- Optional advanced maritime classification aids

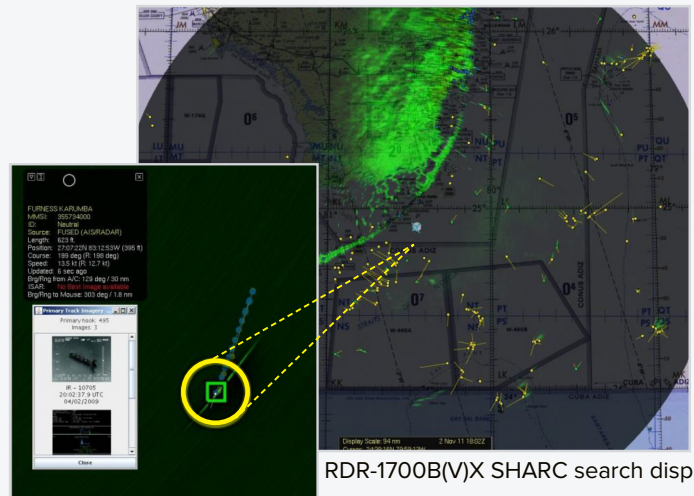


Programmability enables flexibility for maritime surveillance missions.



## Wide Base of Deployed Systems

Rapidly identifying and managing unpredictable threats in complex environments demands next generation situational awareness tools, which are available on the RDR-1700B(V)X and RDR-1700G(V)2 radar models with Telephonics' SHARC software. Building on the broad-area detection capabilities of the RDR-1700B series, SHARC software fulfills a critical need in real-world surveillance missions to sort, filter, label and archive target tracks, rapidly identify threats for imaging and classification, while providing situational context with high-resolution surface and bathymetric map underlay. In addition, the SHARC software aligns a ships' AIS and radar information into the background.



RDR-1700B(V)X SHARC search display.

Capabilities of the SHARC radar target management include:

- Auto track initiate up to 1,000 targets/land mass rejection with integrated underlay of six selectable map types
- High level of track management, including track histories and multi-criteria track filtering
- Radar image scheduling
- ISAR mensuration tools
- Operator ship classification aids
- Callable image database archiving

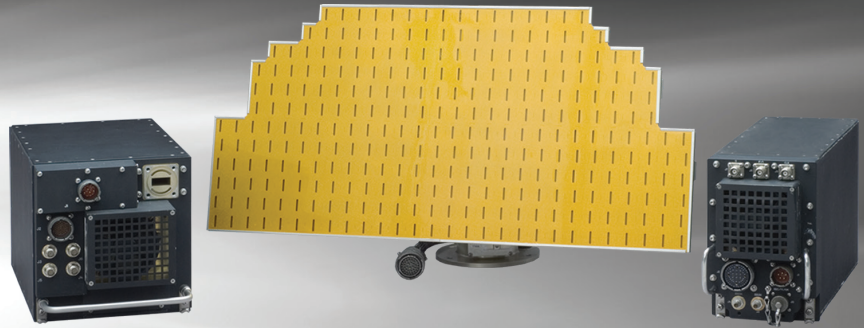


RDR-1700B(V)X SHARC display during ISAR collection.



# RDR-1700B Systems Key

Being on alert for unpredictable threats demands extraordinarily diverse radar, signal processing and information management capabilities to be effective across mission types and against constantly changing threats.



		RDR-1700B	RDR-1700B(V)X	RDR-1700G(V)2
<b>Maritime</b>	Maritime surveillance modes	X	X	X
	ISAR imaging of vessels (resolution)	1 m	1 m 0.3 m optional	1 m 0.3 m optional
	AIS contact data ingest/display	X	X	X
	Maritime classification - basic		X	X
	Maritime classification - advanced			Optional
<b>Overland</b>	SAR imaging - Spot mode (resolution)	1 m	1 m 0.3 m optional	1 m 0.3 m optional
	SAR imaging - Strip mode (resolution)	1 m	1 m 0.3 m optional	1 m 0.3 m optional
	GMTI - vehicle detection and tracking			X
<b>Track Manage</b>	Manual track initiate (# tracks)	200		
	Auto track initiate w/land mass rejection (# tracks)		1,000	1,000
	Moving map underlays		6 types	6 types
	Radar/AIS track alignment		X	X
	Display track history		X	X
	User-defined multi-criteria track filtering		X	X
	Image-track association and storage		X	X
<b>Interface</b>	SXGA monitor video/mouse control	X		
	Telephonics radar SHARC/display laptop control		X	X
	Interface to A/C mission computer C2/display (Ethernet)		Optional	Optional
	Web browser interface (Ethernet)		X	X
	Output of net-ready track/image products (Ethernet)		X	X
<b>Other</b>	Microwave power module	TWT	Solid state	Solid state
	Average output power	40 watts	80 watts	80 watts
	Weight	<32 kg	<34 kg	<37 kg
	Weather mode	X	X	X
	EO sensor cueing	X	X	X
	Sector or 360° antenna drive	X	X	X

x = Available capability. Information is subject to change in final product release. All capabilities are subject to USG export approval to specific end-users.

For additional information, contact Telephonics at 631.755.7000 or visit [www.telephonics.com](http://www.telephonics.com).