



# Maritime Classification Aid

Automatic Target Classification for Radar Imagery

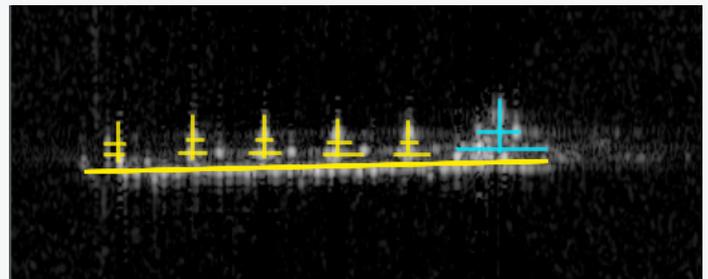


Telephonics' proprietary Maritime Classification Aid (MCA) software provides surveillance platform operators with prompt, accurate descriptions of nearby vessels. Able to operate in all weather conditions, MCA identifies ship type and class at ranges far exceeding Electro Optical/Infrared (EO/IR) limitations.

## System Description

MCA leverages the high-resolution video outputs of the radar's Inverse Synthetic Aperture Radar (ISAR) mode to perform identification of military combatants, non-combatants and civilian ships, using a database of 1,700+ templates that represent over 160,000 vessels.

MCA processes each ISAR dwell by extracting salient features and presenting the operator with a ranked list of ship types and classes. MCA automatically assigns the target type with the best database match and shows the result as a MIL-STD-2525 symbol on the display. In addition, the operator can manually display the list of candidate targets and overlay their templates on the measured data for a clearer interpretation of the results. Data can be saved to the operator's hard drive and revisited at a later time.

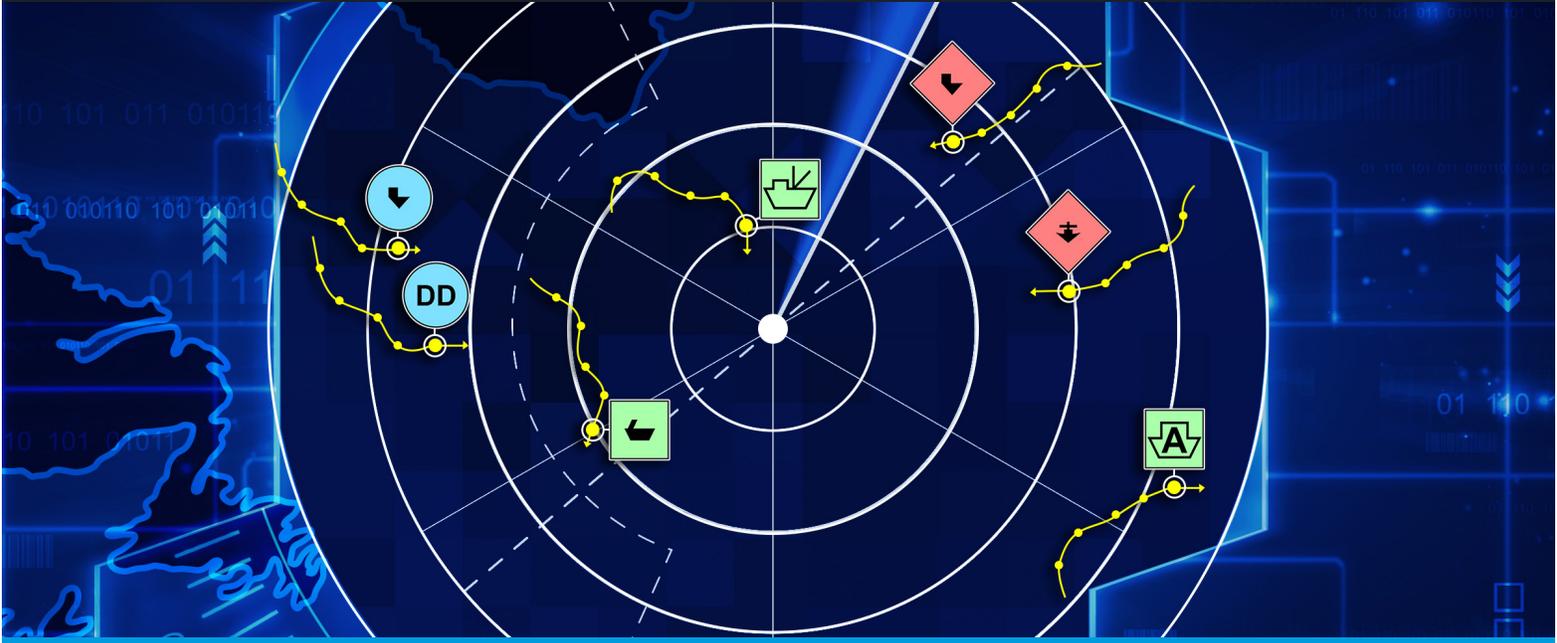


MCA template overlay on ISAR data

Ship details:	Ship graphics:
<b>Thumbnail:</b>	<b>Image type:</b> Photo
<b>Ship ID:</b> 147715	
<b>Name:</b> Hönigsdorf	
<b>Pennant Num:</b>	
<b>Grouped Type:</b> Commercial	
<b>Type:</b> Merchant	
<b>Class:</b> Bulk	
<b>Source Ship Type:</b> Bulk	
<b>Source Ship Subtype:</b> n/a	
<b>Ship Class (Owner):</b> (n/a)	
<b>Flag:</b> Germany	
<b>MMSI:</b>	
<b>IMO Number:</b> 8030072	
<b>LOA:</b> 178.0	
<b>LRP:</b>	
<b>Beam:</b>	

MCA ship database return

# Maritime Classification Aid



MCA External Rugged Computer

## System Design

Operators engage with the MCA software via an internet browser interface that can be hosted on the radar command and control station, or on an external rugged computer. When set to automatic mode, the MCA directly reports the identified targets to the display, without any required intervention by the operator. MCA also hosts a network drive for storage of ISAR files and templates.

The ship identification database is updated regularly, ensuring that operators have the most up-to-date library of ships for comparison and analysis. Ship data can also be entered manually, allowing operators to add new vessels and revise database information accordingly.

## System Specifications

- > 95% probability of classification of the ship group within the first five choices
- MIL-STD-2525 name hierarchy
- 1,700+ templates covering over 160,000 vessels
- No data training required
- Optional external rugged computer size: 8.7" L x 6.6" W x 3.4" H/9.5 lb.
- Interface: Ethernet
- Recommended target length > 60 m
- Recommended heading direction accuracy  $\leq 2^\circ$
- Aspect angle between  $0^\circ - 45^\circ$

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