

3rd Generation IR Integrated Dewar Cooler Assembly

PROBLEM / OBJECTIVE

Improve the affordability and producibility of the compact 3rd Gen Infrared Integrated Dewar Cooler Assembly (3rd Gen IR IDCA) with an overall cost reduction goal of 28%. The 3rd Gen IR IDCA provides dual f/#, multispectral (MW/LW) sensor capability designed to meet performance and packaging requirements for future air and ground platforms. The multiple f/# capability is achieved with a critical new component of 3rd Gen IR technology called the Variable Aperture Mechanism (VAM). The focus was on improved manufacturing processes, precision tooling, and testing to enable an affordable VAM and compact 3rd Gen Dewar and this program supported the strategy of a common 3rd Gen IR IDCA for both air and ground sensor applications.

ACCOMPLISHMENTS / PAYOFF

Process Improvement: The 3rd Generation IR IDCA ManTech project enabled 52% VAM cost reduction and 25% 3rd Gen IDCA cost reduction to date. Cost avoidance was demonstrated through:

- VAM component manufacturing improvements
- VAM tooling and test station development
- 3rd Gen IDCA fixture & tooling development
- 3rd Gen IDCA manufacturing pilot line

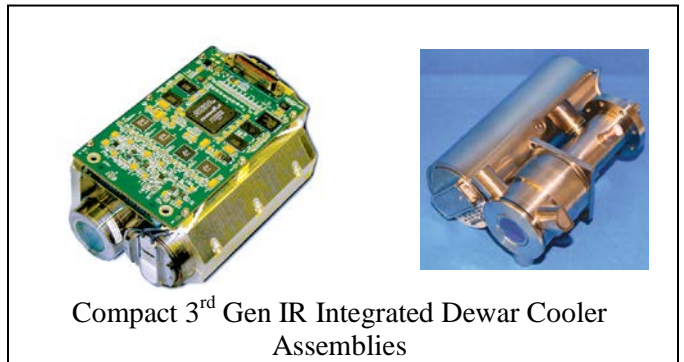
Implementation and Technology Transfer:

The program transitioned manufacturing improvements to PM FLIR's 3rd Gen FLIR Engine SDD program. Industry Days were held to present program status and transition the developed manufacturing technology to industry.

Expected Benefits and Warfighter Impact:

As a result of this program, there is an improvement in the manufacturability and affordability of 3rd Gen IR IDCAs in providing:

- Combat Overmatch – Long Range Target ID
- Increased Survivability & First Shot Lethality – Rapid Wide Area Search
- Reduced Crew Burden – Multi-Spectral AiTR
- On-The-Move Capabilities



AN/ZSQ-2 3rd Gen Demonstrator



Mini LRAS3 Demonstrator

TIME LINE / MILESTONE

Start Date	August 2006
Final Industry Day/Technology Transfer	January 2012
End Date	January 2012

FUNDING

U.S. Army ManTech	\$12.2M
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PARTICIPANTS

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