

U. S. Navy Cruiser and Destroyer Modernization



Cruiser Modernization

CG Modernization Program Description



- ❑ Delivers introduction of critical new warfighting capabilities
 - ❑ Enhances Air Dominance and C4I through numerous system improvements
 - CEC, SPY, AEGIS Weapon System Improvements, & Next Generation Consoles
 - ❑ Enhances Gun Weapon System capability
 - 5"/62 Caliber Gun Mounts, Naval Fires Upgrades: Optical Sight & MK 160 FCS
 - ❑ Improves force protection/layered defense
 - ESSM, CIWS Block 1B, & SPQ-9B (ASMD)
 - ❑ Provides COTS computing architecture as first step to Open Architecture positioning CGs to more affordably receive future BMD, air defense, and other upgrades

- ❑ Provides Operational Availability improvements through reduced maintenance and mission life extension
 - ❑ Reduces combat system and computer program maintenance costs through baseline commonality and consolidation
 - ❑ Achieves mission relevant service life of 35-years (Combat Systems, Smart Ship, All-Electric, Digital Fuel Controls, Aviation Mods, Corrosion Ctrl, QoL Improvements)

- ❑ Applies to AEGIS Class CGs 52 through 73



Cruiser Modernization

Baseline 2 Requirements

Warfighting Upgrades

C4I
CEC
SGS A/C
CDLMS

AAW
ACB-08 Computer Program
TI-08 OA/COTS Computing Plant
Radar and Display Upgrades
VLS Modifications

SHIP/FORCE PROTECTION
ESSM
*CIWS BLK 1B
SPQ-9B (ASMD)
SARTIS
MK-116 Mod 7

GUN WEAPON SYSTEM
(2) 5 inch/62 Guns
MK-160 Gun Computing System
EOSS

Integrated Ship
Control Upgrades

HM&E Modernization
All Electric Modifications
IBS Upgrade
MCS Upgrades
Structural Modifications
Quality of Life Upgrades

*Funded outside of Modernization Program



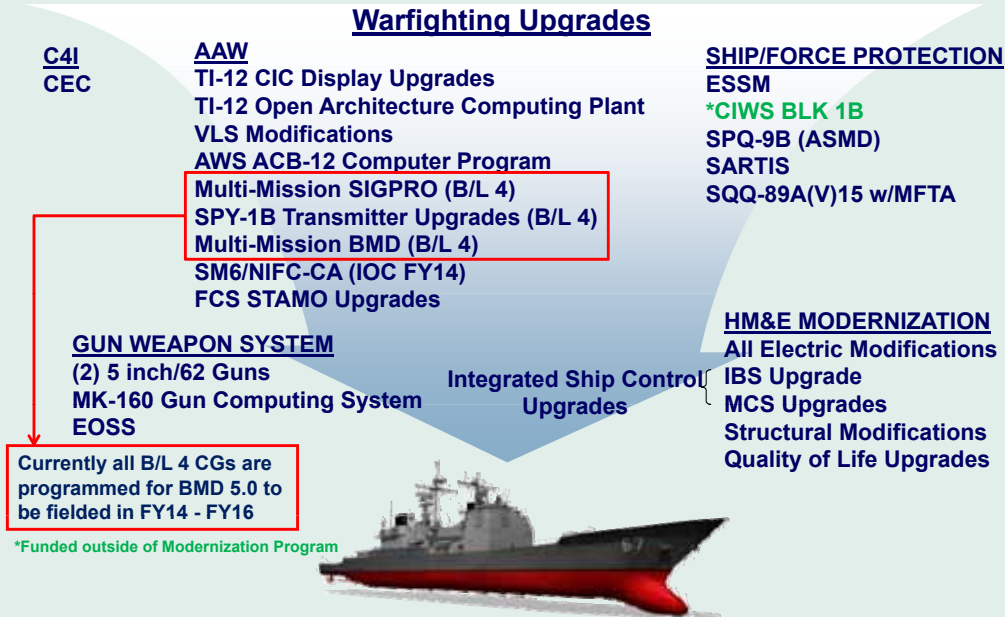
Source: U.S. Navy

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Baseline 3 & 4 Requirements



Destroyer Modernization

DDG Modernization Program Description



- Mission:** Provide a comprehensive modernization strategy for the DDG 51 Class ships to ensure a mission relevant service life of 35-years
- Description:** Primary objective is to reduce workload and total ship class ownership costs via HM&E technology insertion and to provide core combat system open architecture COTS computing environment and warfighting improvements
- Ships:** DDG 51 Class (Flight I & II first, DDG 51 – 78)
- Employment:** Will provide critical foundation for various other SeaPower 21 efforts
- Status:** DDG Modernization is in the execution phase
 - HM&E Availabilities began in 2010
 - First Combat Systems upgrade scheduled for FY 2012

Source: U.S. Navy

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Destroyer Modernization

Warfighting Upgrades

C4I

*NAVSSI BLK 4

*IFF Mode 5

CEC

AAW

CIC Display Upgrades

Open Architecture Computing Plant

VLS Modifications

AWS ACB 12 Computer Program

Multi-Mission SIGPRO

SPY-1D Transmitter Upgrades

Multi-Mission BMD

SM6/NIFC-CA (IOC FY14)

FCS STAMO Upgrades

SHIP/FORCE PROTECTION

ESSM

*CIWS BLK 1B

*NULKA

*SEWIP

*SSTD (ATT) – IOC FY13

MK 54 Torpedo/DFCI

SQQ-89A(V)15 w/MFTA

GUN WEAPON SYSTEM

MK 160 Mod 15 Gun Computing System

*Funded outside of Modernization Program



HM&E Modernization

Full IBNS Upgrade

MCS/DCS Upgrades

GEDMS

Wireless Communications

Digital Video Surveillance

Quality of Life Upgrades

Advanced Galley

Mission Life Extension Upgrades



Summary

- CG and DDG Modernization Programs being budgeted and executed to fulfill requirements established by N86
- Fielding for both programs is underway
 - CG:
 - CG 56 Combat System upgrade in progress
 - CGs 52, 53, 54 & 58 complete
 - HM&E upgrades in progress for all CG baselines
 - Baseline 3 CG Combat System upgrades commence in FY12
 - CG 62 in January 2012, CG 60 in April 2012
 - Baseline 4 CG Combat System upgrades commence in FY14
 - CG 65 January 2014, CG 71 in January 2014 and CG 66 in February 2014
 - DDG:
 - First HM&E upgrades completed on DDG 53 and DDG 51
 - First Combat System upgrades will commence in FY12
 - DDG 53 in June 2012