Mini-Typhoon Remote Operated Small Arms Mount (ROSAM)

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Mount Heritage

- GR Dynamics marketing Mini-Typhoon in the U.S.
  - RAFAEL Development Ltd, Israel
  - General Dynamics Armament & Technical Products, U.S.A.
- Mini-Typhoon remote stabilized gun mount for naval applications
  - Derivative of the Typhoon medium caliber gun mount
  - Developed by RAFAEL in Israel
  - Delivered to multiple foreign navies
- Mini-Typhoon selected as the stabilized mount of choice for U.S. Navy based on performance and price
Current U.S. Application

- U.S. Special Operations Command (USSOCOM)
  - 7 & 11 meter Rigid Hull Inflatable Boat (RHIB)
  - MK V Patrol Boat
System Architecture

Command and Control Subsystem – Installed Below Deck

- MFD
- MCP
- IBS
- CSP

Weapon Station Subsystem – Installed above Deck

- WSGU

GENERAL DYNAMICS
Armament and Technical Products
System Attributes

- Stabilized, 2-axis mount, n x 360 degree traverse, -20 to +60 degree elevation range
- Lightweight: less than 250 lbs
- Marinized and ruggedized for demanding USSOCOM applications
- Crew serviceable in case of electrical failure
- Integrated fire control computer
- Sophisticated auto tracking capability
- Navy standard power, mounting, and communications interfaces
Performance

- MK III Patrol Boat (20m) fire testing at Pax River
  - Multiple closing, fading, and crossing scenarios
  - Target range 400 meters to 1200 meters
  - Sea State 2-3
  - Probability of hit for crew served M2: 2%
  - Probability of hit for ROSAM with M2: 35%

- Large ship (6000 tons) sea trials for Australian Navy
  - Multiple closing, fading, and crossing scenarios
  - Target range 500 meters to 1200 meters
  - Probability of hit for ROSAM with M2: 40-70%
**Flexibility – Detection & Lethality**

- **Current Sighting System**
  - CCD Camera with continuous 10x zoom
  - Fixed field of view uncooled microbolometer infrared camera

- **Current weapon selection**
  - M2HB 0.50 caliber machine gun
  - MK 19 40mm automatic grenade launcher
  - GAU-17 7.62mm minigun
  - M240 7.62mm machine gun

- **Future sighting possibilities**
  - Daytime camera with greater detection range
  - Continuous zoom extended range Forward Looking IR camera

- **Future weapon possibilities**
  - MK 47 40mm automatic lightweight grenade launcher
  - GAU-19 0.50 caliber gatling gun
  - Missiles
Flexibility – Command and Control

- Integrated Bridge System
  - All mount functionality passed to user developed interface
  - Auto tracking and ballistic calculations retained by ROSAM
  - Standard communication protocol (RS-422)

- Advantages
  - Integrator defined control station
  - ROSAM can be slaved to an Electro Optical Director
  - Local control always available
Program Status

- USSOCOM has a 100 mount IDIQ contract through NSWC Crane
  - 14 mounts delivered
  - Mounts undergoing environmental qualification
  - WSES RB approval expected May 2005
  - User evaluations scheduled for June 2005
- Demonstrations using Integrated Bridge System interface
  - SPARTAN unmanned boat April 2005
  - Army Theater Support Vessel May 2005
Shipboard Protection System (SPS)

- Mini-Typhoon the lethality solution for SPS
  - Supports force protection and anti-terrorism efforts for destroyers in port
  - Level of integration dependent on SPS winner
    - RFP down select May 2005
  - Minimum of two units per ship
Questions?