



IPMS®

One Platform.
Seamless Control.

Integrated Platform
Management System



Stingray Tec

Intelligence That Controls the Platform

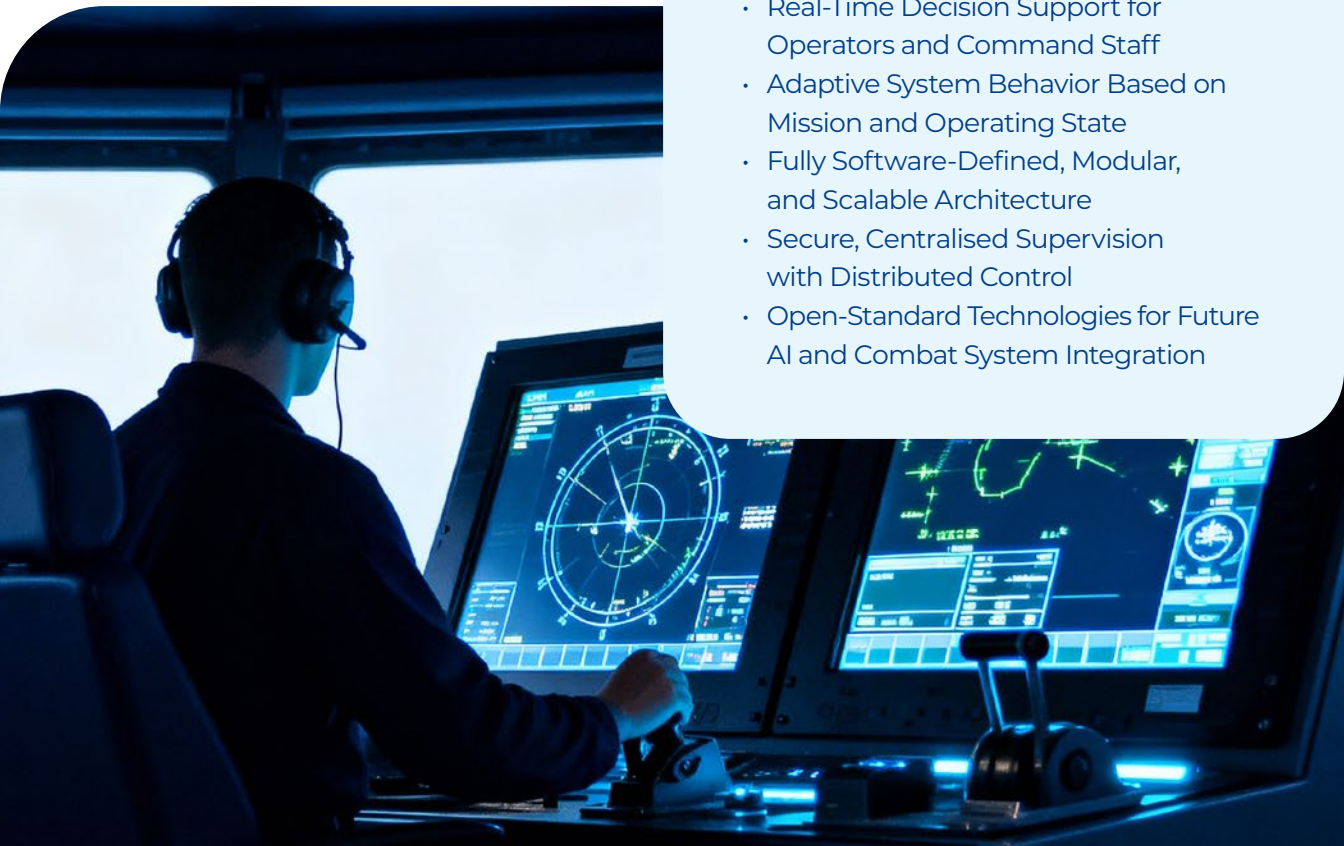
AI-Enabled IPMS®

The AI-Enabled Integrated Platform Management System (IPMS) is a distributed, software-defined control and supervisory system for modern naval vessels. By embedding artificial intelligence, machine learning, and advanced analytics, IPMS continuously interprets platform data to anticipate failures, optimise system performance, and accelerate operational decision-making — ensuring sustained mission readiness in demanding maritime environments.

We engineer AI-enabled, mission-ready platform intelligence that transforms naval ship operations from reactive control to predictive, adaptive command of the platform.

KEY CAPABILITIES

- AI-Based Condition Monitoring & Equipment Health Assessment
- Predictive Maintenance with Long-Term Trend Analytics
- Intelligent Alarm Correlation, Filtering, and Prioritisation
- Real-Time Decision Support for Operators and Command Staff
- Adaptive System Behavior Based on Mission and Operating State
- Fully Software-Defined, Modular, and Scalable Architecture
- Secure, Centralised Supervision with Distributed Control
- Open-Standard Technologies for Future AI and Combat System Integration



SYSTEM HIGHLIGHTS

Architecture

Distributed Control System (DCS) based control architecture with deterministic networking and an integrated AI analytics layer.

Control Scope

Propulsion systems, power generation and distribution, auxiliary machinery, damage control, CCTV, telegraph, and platform stability monitoring.

AI Functions

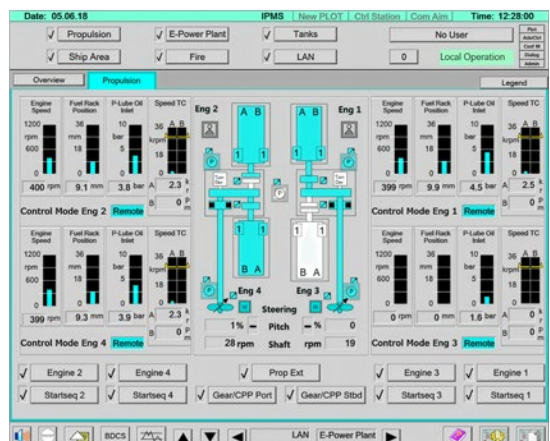
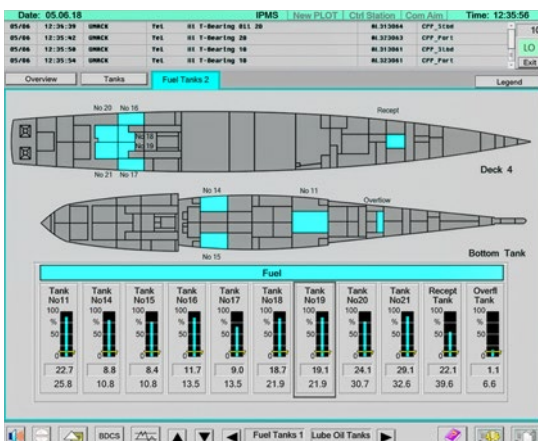
Anomaly detection, failure prediction, performance optimisation, alarm correlation, and operator decision assistance.

Reliability & Security

Fault-tolerant, cyber-secure, scalable, and mission-ready by design.

OPERATIONAL ADVANTAGES

- Predictive maintenance that minimises unplanned downtime and mission disruption
- Early fault detection through AI-driven anomaly and pattern analysis
- Optimised propulsion, fuel consumption, and power management
- Reduced crew workload via intelligent automation and decision support
- Accelerated fault isolation and recovery actions
- Enhanced survivability through distributed, fault-tolerant architecture
- Continuous operability supported by emergency hardwired control paths



AI THAT KEEPS THE SHIP OPERATIONAL AND IN THE FIGHT

The AI-Enabled IPMS transforms ship control into predictive platform intelligence, enabling naval forces to sustain mobility, power, and survivability, even under damage, degradation, or high operational stress.

APPLICATIONS



Naval Surface
Combatants



Patrol Vessels and
Fast Attack Craft



Auxiliary and
Mission-Support Ships



Submarines and
Underwater Platforms



AI-Assisted Training Systems
and Shore-Based Test Facilities

GENERAL FEATURES

- Open-Standard Technologies
- Flexible Modular Design
- Integrated Systems
- Distributed
- Advanced Networking
- Fault-Tolerant
- User-Friendly
- Affordable
- Scalable and Secure
- Centralised Management



Military Precision. Tactical Agility.

We engineer mission-ready systems that strengthen command, safeguard sovereignty, and empower defence forces across every domain.

Stingray Tec is a trusted technology partner to armed forces. With over two decades of experience across land, air, sea, and cyber, we develop state-of-the-art systems that enhance situational awareness, accelerate decision-making, and deliver operational superiority in high-stakes environments.

Our legacy builds upon resilient defence platforms, intelligent command systems, and integrated weapon solutions — engineered for precision, reliability, and control.



Stingray Technologies (Pvt.) Ltd.

Third Floor, PMSTP, Bahria University
National Stadium, Karachi 75260

T +92 213 340 2959-61

F +92 213 340 2950

info@stingraytec.com

stingraytec.com

