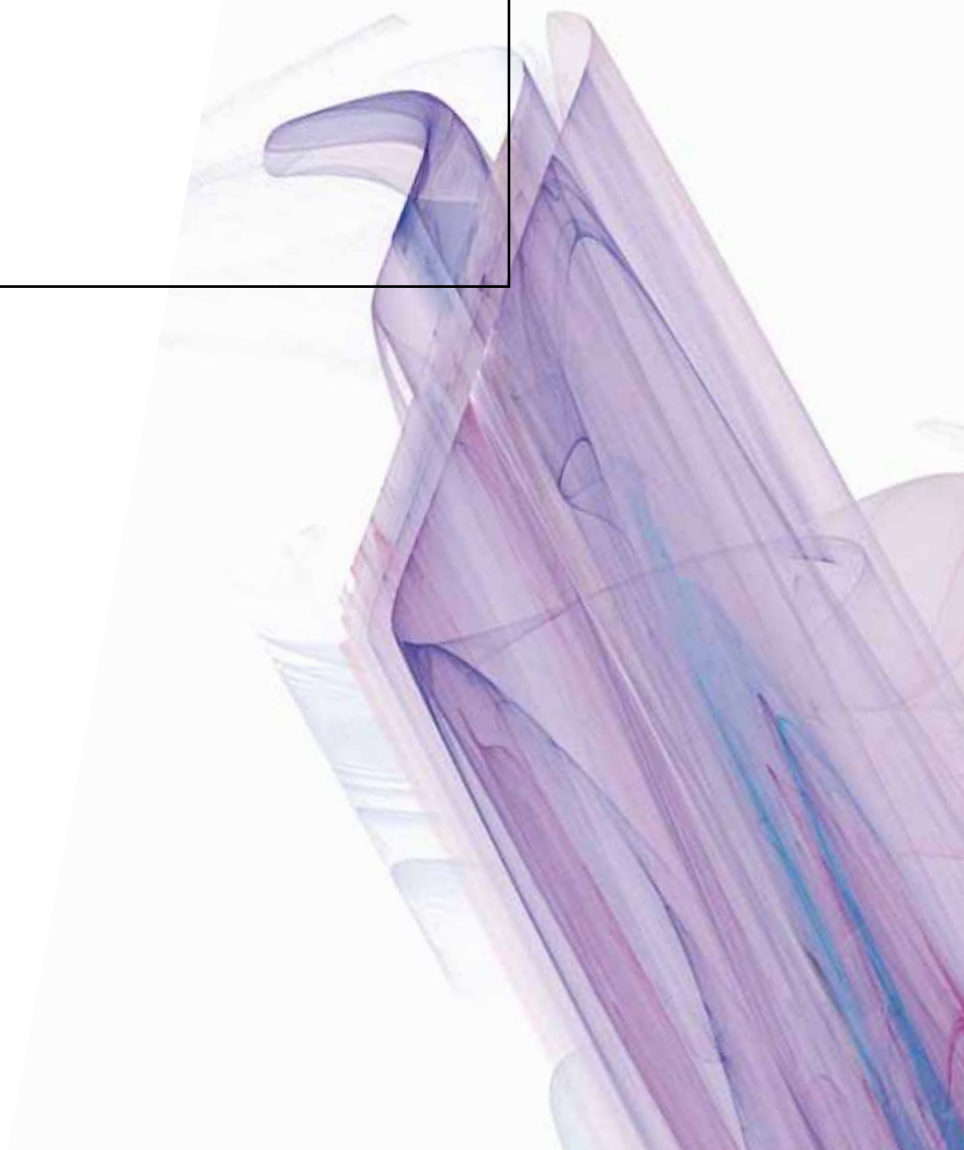
DEFENSE AND SECURITY

MK-XII/A IFF INTERROGATORS

Defense and security in five continents

indracompany.com



INT-2000
INT-25D

MK-XII/A IFF INTERROGATORS



INT-25D

IFF interrogators including the most advanced modes of operation according to STANAG 4193 that allow the platforms to identify targets and reduce fratricide

MK XII/A interrogators

In air defense operations an extremely important matter is the effective aircraft identification. This identification facilitates rapid engagement of enemy aircrafts, reduce fratricide and multiply situational awareness.

The interrogator sends out a coded radio interrogation signal that asks all platforms operating in the same area for identification and receives their replies. This information complements to the associated primary radar.

The interrogators INT-2000 and INT-25D are designed for different ranges.

- INT-2000: short range interrogator (SHORAD), with reduced size to be installed in anti-aircraft platforms.
- INT-25D: medium range interrogator (MERAD), designed for ships or land radars.

Mode S capability

Both interrogators are capable of detecting any civil aircraft in the interrogation range. They support Mode S All-calls, for compatibility with civil systems of Air Traffic Control (ATC).

Mode 5 capability

INT-2000 and INT-25D include Mode 5. Mode 5 employs spread spectrum data modulation and enhanced cryptographic algorithms with time of day authentication.

Mode 5 benefits

Robust to interferences and intelligent jamming

Significantly enhanced security to avoid exploitation

Highly confident ID reducing casualties and fratricide

Maximum military effectiveness

New cryptographic algorithms and security features with time of day authentication

Enhances the battlefield's situational awareness

Compatible with air traffic control systems

Technology

INT-2000 and INT-25D are based on a modular architecture. All modules are designed so as to reduce the adaptation costs to different platforms. It also facilitates new improvements and growth capability.

The processing modules include modern signal processors, superscalar micro-processors, and high density programmable devices. These provide the processing capacity needed for Mode 5 and quite a lot provisions for future upgrades or platform integration.

The majority of the software has been development in high-level languages, it improve the flexibility and versatility needed to comply with new platform integrations.

The RF power amplifiers modules are based on solid-state technology. They provide a low-noise figure and extended dynamic range.

Qualification

The INT-2000 and INT-25D have been tested under the most stringent environmental conditions: temperature, humidity, altitude, shock, vibration, acceleration, fungus, salt and fog, explosive atmosphere, lightning, acoustic noise and EMC.

Maintainability and reliability

INT-2000 and INT-25D include a Built In Test (BIT) capability designed to detect and isolate any module failure. These tests are executed either during the power-up, by request, or periodically to detect any fault. It also simplifies the maintenance activities. The maintenance concept is based on shop-replaceable modules, easily accessible and exchangeable.

All components of the IFF equipments have been selected to provide maximum reliability and minimize the maintenance costs.

Adaptation to platforms

In general, the interrogator integration is an important cost element into the platform, especially in ships or land radars when the number of units to share this non-recurring cost is usually low. This concern has been taken into account in the design of INT-2000 and INT-25D. Their modular architecture facilitates this adaptation and reduces the cost. It also ensures that minimum modifications and enhancements to platform cabling and equipment will be necessary.

Main features

Modes 1, 2, 3/A, C, 4

Mode S Intermode/All-call

Mode 5 Level 1

Appliqué crypto for Mode 4 and Mode 5 operation

Interlaced mode capability can be defined by the user

ISLS and RSLS functions for side lobes suppression

Technical characteristics	INT-2000	INT-25D
GENERAL CHARACTERISTICS		
Interrogation modes	Modes 1,2, 3/A, C, 4 Mode S Intermode / All-call Mode 5 level 1	Modes 1,2, 3/A, C, 4 Mode S Intermode / All-call Mode 5 level 1
Interrogation range	SHORAD	MERAD
Interfaces	Ethernet, RS422/232, discrete interfaces	Ethernet, RS422/232, discrete interfaces
Special functions	ISLS, RSLS Monopulse (upon request) Defruiting	ISLS, RSLS Monopulse (upon request) Defruiting
BIT/BITE	Included	Included
PHYSICAL CHARACTERISTICS		
Dimensions (W x H x D)	3 MCU per ARINC 600 193.5 x 90.4 x 332.5 mm	378.8 x 483 x 498/564.2 mm
Weight (without crypto)	< 5 Kg	< 36 Kg
RECEIVER CHARACTERISTICS		
Sensitivity (MDL)	-70 dBm	-81 dBm
Maximum signal level	-20 dBm	-20 dBm
According to	STANAG 4193	STANAG 4193
TRANSMITTER CHARACTERISTICS		
Carrier frequency	1030 MHz	1030 MHz
Peak power	50 dBm min	61 dBm min
Duty cycle (long-term)	1% max	1% max
According to	STANAG 4193	STANAG 4193
POWER SUPPLY		
Power consumption	129 W max.	300 W max.
Input voltage	+28 V DC +115 V AC (upon request)	+115 V AC
According to	MIL-STD-704A	MIL-STD-1399A
RELIABILITY / MAINTAINABILITY		
MTBF	4500 hr	1500 hr
According to	MIL-HDBK-217	MIL-HDBK-217
ENVIRONMENTAL CHARACTERISTICS		
Operating temperature	-40°C to +71°C	-25°C to +50°C
Maximum altitude	50000 ft	30000 ft
According to	MIL-STD-810E, MIL-STD-461/462	MIL-STD-810E, MIL-STD-461/462



F100 Frigate



LHD

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EADS DEFENCE & SECURITY

Indra reserves the right to modify these specifications without prior notice.