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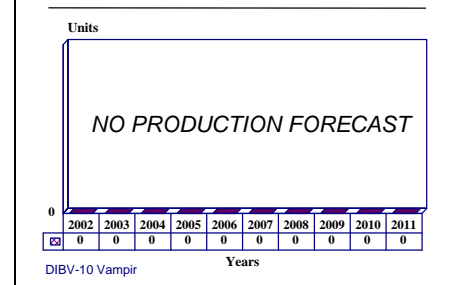
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DIBV-10 Vampir - Archived 06/2003

Outlook

- Only possible future production for spares and replacements
- There have been no confirmed export orders since the system's introduction
- More advanced systems have dominated the market

10 Year Unit Production Forecast
2002 - 2011



Orientation

Description. The Vampir (Veille Air-Mer Panoramique Infra-Rouge) is a threat-warning and target-indicating infrared sensor.

Sponsor

Delegation Generale de Armament
10/14 rue St. Dominique
F-75997 Paris Armees
France

Contractors

Societe Anonyme de Telecommunications (SAT)
Division Optronique et Defense
41 rue Cantagrel BP 389
F-75626 Paris Cedex 13
France
Tel: +33 1 45 82 31 11
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CSEE Defense

Z.A. de Courtaboeuf
6, Avenue des Tropiques BP-80
F-91943 Les Ulis Cedex A
France
Tel: +33 1 69 86 85 00
Fax: +33 1 69 07 03 70

Licensees. No known production licenses have been issued.

Status. In service.

Total Produced. Approximately 16 systems were produced through 2001.

Platform. Warships of FF class or larger.

Application. The DIBV-10 Vampir system was designed to provide an IR surveillance sensor for most classes of warships.

Price Range. No accurate price data are currently available. Based on the known costs of comparable systems, we estimate that a Vampir unit costs US\$1 million (FY00 dollars).

Technical Data

Characteristics

Scan rate	60 rpm (1 Hz)
Field of view	25 degrees
Frequency coverage	3-5 microns and 8-14 microns

Dimensions

Weight	450 kg (990 pounds)
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Design Features. The Vampir sensor head consists of a cylindrical array weighing 450 kilograms which scans at 60 rpm (1 Hz). The head has two windows, one covering the three-to-five-micron region, the other the 8-to-14-micron bracket. Each window has a 25-degree angle of view. The display is divided into three strips, one for each of the two sensor windows and a third for processed video. Comparison between the two optical windows reveals significant data about the inbound

target, while the processed video display can indicate an inbound missile before it becomes apparent to the infrared (IR) sensor heads.

Operational Characteristics. Vampir has a demonstrated capability to detect a helicopter-size target at ranges approaching 20 kilometers, and can detect inbound anti-ship missiles by picking up the heat plume of the missile while it is still over the horizon.



French Navy La Fayette class frigate

Source: Marine Nationale

Variants/Upgrades

VAMPIR ML-11. A lightweight, low-cost variant of Vampir with a target cost between one-third and one-half that of the DIBV-10. Weight is reduced from 450

kilograms to 80 kilograms, and the scan rate is doubled to 120 rpm in order to improve the ability to detect anti-ship missiles. Vampir ML-11 uses only a single

observation window and the operator can switch that window between the two viewing frequency ranges.

Elevation limits are -10° to $+60^{\circ}$.

Program Review

Background. The DIBV-10 Vampir system was introduced in 1980 and had been designed to meet a NATO requirement for an IR surveillance sensor to provide threat and target acquisition data to a ship's Combat Information Center (CIC) or command system. This requirement also led to the development of the Canadian SAR-8. The Vampir acronym stands for Veille Air-Mer Panoramique Infra-Rouge.

Atypically, it appears that much development work had already been done on the Vampir system by the time it was publicly announced. The first service installations took place on the last three frigates of the Georges Leygues class between 1986 and 1990.

By 1988, Vampir was set to become a standard installation on major French warships. However, the weight and movement of the system made it unsuitable for the smaller warships favored on the export market. In response, a downsized version, the Vampir ML-11, was introduced. This also included a higher scanning speed in order to improve detection capabilities (by doubling the data rate) against hypersonic and sea-skimming anti-ship missiles.

This was followed by the two destroyers of the Cassard class which had received their systems by 1991. The first four Georges Leygues class frigates were refitted with Vampir by 1995. It was rumored that the Tourville class destroyers had been retrofitted with Vampir, but this cannot be confirmed. The pattern of installations

suggests that a production rate of about two systems per year was being maintained.

Service experience with Vampir seems to have been successful, since the system was specified for the aircraft carrier FS *Charles de Gaulle* and the six La Fayette class light frigates. The frigates started to enter service in 1995. Additional ships of this class were sold to Saudi Arabia (two) and Taiwan (six), but Vampir was not selected as the Infrared Search and Track (IRST) sensor.

In 1997 several navies, including the US, Germany and Canada, enhanced their sensors with an IRST system. While Vampir appears to be a solid system, its age works against it. Furthermore, as some nations don't mind older generation hardware, it is doubtful that a major European power or the US would purchase this system due to its age. In addition, some countries have already developed their own IRST systems, which will most likely equip their ships as well as compete against Vampir in the world market.

With the news in 2000 that Singapore had placed an order for six La Fayette class frigates, there seemed to be new hope for the Vampir. However, with limited public source information on the system, it is difficult to confirm this activity.

In all likelihood, the last DIBV-10 Vampir for the French Navy was produced in 2001.

Funding

The Vampir system development was funded under a French government contract administered by the Direction Generale de l'Armement (DGA). Total funding spent is unknown.

Recent Contracts

No current contractual information is available through public sources.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Jul	1980	Vampir announced
	1986	Installation on new-build warships commences
	1988	Retrofit program started
	1989	Vampir ML-11 announced
	1990-1995	Vampir retrofitted onto many French ships of FF size or larger

1998	One system delivered for La Fayette class FFG
2001	One system to be delivered for La Fayette class FFG

Worldwide Distribution

France. Two on *Charles de Gaulle* aircraft carrier; seven on Georges Leygues class frigates; two on Cassard class destroyers; five on La Fayette class light frigates.

Forecast Rationale

The last known order for the French government's DIBV-10 Vampir IR sensor most likely was completed in 2001. This system was probably installed on the last of the French La Fayette class frigates. With little or no word forthcoming on the current status of the aging naval surveillance system, it is becoming apparent that more advanced systems have overtaken the market. Recent news of an order from Singapore for six La Fayette class frigates with the DIBV-10 appears doubtful. There have been no publicly announced contracts to confirm any production since the late 1990s.

Taiwan, Saudi Arabia, Qatar and Oman were all reportedly interested in the system; however, these nations have all apparently opted for more modern systems. Today, the only vessels known to be installed with Vampir remain those of the French Navy.

While the system does remain active and in service for several key assets of the French Navy, no significant future production of the system is expected. And, while spares and replacements may be produced for France, the long drought of export orders means that no future production is likely in this area.

Ten-Year Outlook

No new production forecast.

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