TELEDYNE FLIR FLIR SYSTEMS AB

2023-06-14





ABOUT TELEDYNE TECHNOLOGIES

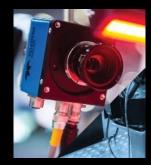
Diversified high-technology company with a broad, balanced portfolio of highly-engineered products. A proven track-record, hands-on management, and consistent performance

Markets: aerospace and defense, factory automation, air and water quality environmental monitoring, electronics design and development, oceanographic research, energy, medical imaging and pharmaceutical research

2022 Turnover \$5,5bn with approx. 14,700 employees in more than 37 countries (NYSE – TDY)



















TELEDYNE TECHNOLOGIES

BUSINESS SEGMENT OVERVIEW





Oscilloscopes, Protocol Analyzers, Air and Water Quality Analyzers, Marine Instrumentation, Sonar, Acoustic Doppler Current Profilers, AUVs

SP Devices, Linköping



Digital Imaging

Image Sensors, Cameras, Image Processors, Software, X-Ray and RF Systems, Lidar, GIS, MEMS, Chipsets, Integrated Solutions, Unmanned Aerial and Ground Solutions, Radars, Surveillance and Targeting



Aerospace & Defense Electronics

Avionics, Communication Components and Subsystems, Interconnects



Engineered Systems

System Engineering, Advanced Manufacturing, Energy Systems, Turbines



TELEDYNE TECHNOLOGIES BUSINESS SEGMENTS

Instrumentation

Digital Imaging

Aerospace and Defense Electronics

Engineered Systems

FOCUS on the success of our customers, leveraging a remarkable portfolio of technology in sensing, signal generation and processing



Machine Vision DALSA | e2v | TS&I | ICM

Image sensors, cameras, processing hardware and software, Infrared, Visible, UV, X-Ray



Medical and Life Sciences DALSA | e2v

Radiography detectors, Radiotherapy generators



Aerospace & Defense e2v | TS&I | DALSA | FLIR

Sensors and systems for astronomy, earth science, and defense, High reliability chipsets & subsystems



Geospatial Optech | CARIS

Lidar & Sonar 3D Surveying, Geographic Information Systems Software



Semiconductors DALSA | e2v

MEMS foundry, CCD foundries, Packaging services



Scientific

Cameras and software for scientific research, including spectroscopy and microscopy



TELEDYNE DIGITAL IMAGING BUSINESS UNITS

Instrumentation

Digital Imaging —

Aerospace and Medical an Defense Electronics

Engineered Systems

Aerospace & Defense -

Machine Vision

Medical and Life Sciences

Geospatial

Semiconductors

Scientific

Teledyne FLIR

DEFENSE









Unmanned and Integrated Solutions | Surveillance | Detection

Develops and manufactures solutions for enhanced imaging, advanced surveillance and security, and the accurate detection, identification, classification, and suppression of CBRNE threats for global military, law enforcement, public safety and other government entities

INDUSTRIAL TECHNOLOGIES









Develops, manufactures and services cameras, camera cores, related software and other offerings to create thermal, industrial, and other types of imaging system solutions



Teledyne FLIR Täby, Sweden

Solutions headquarters in Täby Sweden

400+ employees

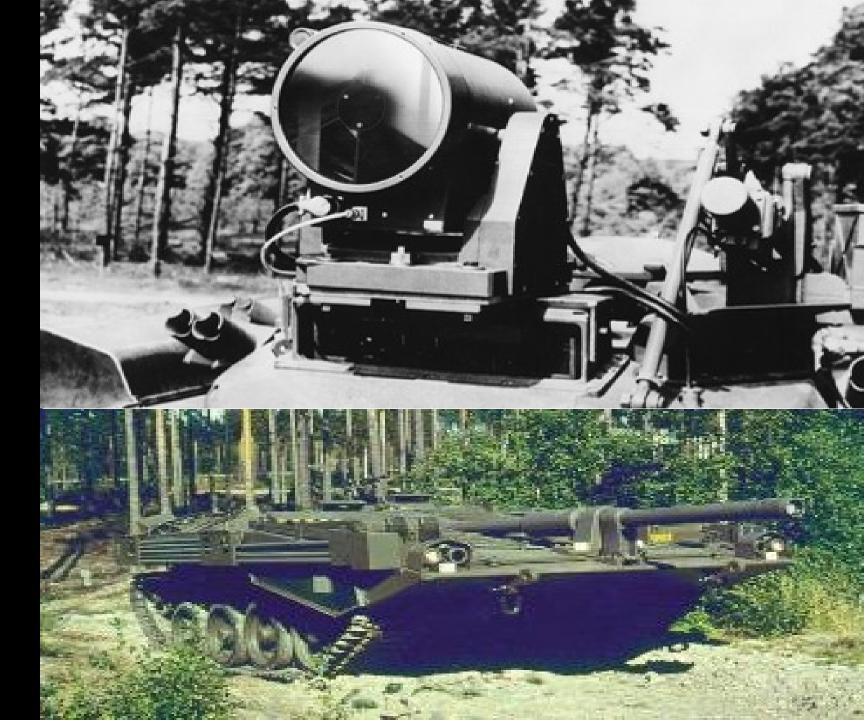
Surveillance R&D and Production Site

100+ employees



OUR HERITAGE

1958
AGA AND BOFORS COOPERATE
TO DEVELOP A THERMAL
IMAGING SIGHT FOR SWEDISH
S-TANK



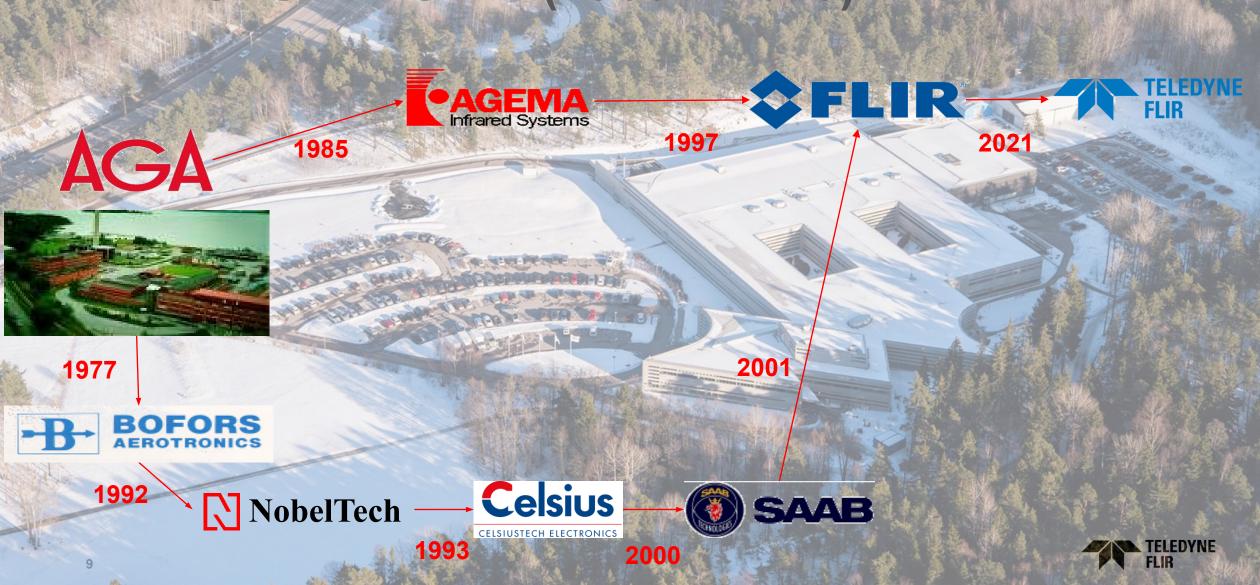
OUR HERITAGE

1965
THE FIRST COMMERCIAL
INFRARED CAMERA WAS SOLD
TO THE SWEDISH POWER
PROVIDER VATTENFALL.





FLIR SYSTEMS AB (1960 - 2023)





SURVEILLANCE – LAND SOLUTIONS



Ranger HDC and HDC MultiSensors

Ranger HDC thermal imaging systems offer extended range performance with HD (1280x720) MWIR sensors and powerful continuous-zoom telescopes. Available standalone or integrated with visible cameras, laser rangefinder, digital magnetic compass, and robust pan/tilt platform, the Ranger family of sensors provides precision geolocation and superior reliability. The HDC-MS also is also available in a pole-through configuration option to support integration with a radar system.



Ranger HDC MR

Sets a new standard for perimeter security applications, border surveillance and force protection. The system has a unique ability to mitigate degraded weather conditions with fog and turbulence filters and can provide increased uptime and reduce cyber risks. Includes an HD thermal imager with either a 1280 x 720 cooled MWIR detector or a 1024 x 576 uncooled detector along with a 1920 x 1080 HD Color TV camera and is designed for slew to cue integration with other sensors such as radars, making it ideal for C-UAS.



Ranger HRC and HRC MultiSensors

Ranger HRC thermal imaging systems offer extended range performance with high-resolution (640x480) MWIR sensors and powerful continuous-zoom telescopes. Available standalone or integrated with visible cameras, laser rangefinder, digital magnetic compass, and robust pan/tilt platform, the Ranger family of sensors provides a flexible platform for fixed or mobile installations.



SURVEILLANCE – VEHICLE SOLUTIONS



LIRC

A LWIR or MWIR camera for integration into IFV sighting solutions. Integrated into several CV90 UTAAS versions and other vehicle applications. MIL-STD-1275 and DEF STAN 00-82 compatible.



V4000

A compact long range MWIR sighting camera for remote weapon stations or turrets proven on both .50 cal and 30 mm weapons.



DV55/SA90 Family

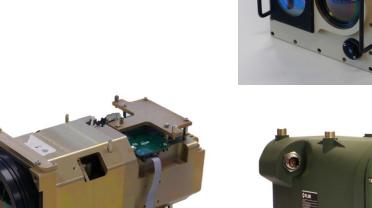
A family of ruggedized uncooled sensor solutions for driving and situational awareness. Family includes single (thermal) and dual sensor (thermal/color) configurations, with optional motorized lens cover.



C2-10 CORE

- 640x480 InSb MWIR Core
- 2°x1.5° NFOV
- 10x7.5° WFOV
- Qualified in several weapon sight applications:
 - Patria NEMO 120 mm mortar
 - Kongsberg 30 mm turret
 - Saab Trackfire RWS in maritime application

















SURVEILLANCE – AIRBORNE PRODUCTS



UltraFORCE 350-HD

With large-gimbal level performance at only 28 kg, the UltraFORCE 350-HD's trusted multi-spectral HD imaging performance is optimized for airborne homeland security, combat, patrol, surveillance, reconnaissance, and search and rescue programs. This durable surveillance system built to endure long missions mounts on rotary-wing, fixed-wing, and unmanned airborne platforms. Built in Europe with no U.S.-sourced components, the UltraFORCE 350-HD is ITAR-free, increasing exportability and freedom of movement within Europe.



UltraFORCE 275-HD

Extremely low SWaP makes the UltraFORCE 275-HD the optimal choice for weight, power and footprint constrained platforms. The system delivers multi-spectral HD imaging performance for airborne homeland security, combat, patrol, surveillance, reconnaissance, and search and rescue programs. Durable and built to endure long missions, it's designed for lightweight manned and unmanned airborne platforms. Built in Europe with no U.S.-sourced components, the UltraFORCE 275-HD is ITAR-free, increasing exportability and freedom of movement within Europe.



SURVEILLANCE – OEM (SAAB DYNAMICS) PRODUCTS



RBS70

Integral parts of the whole aiming and guidance chain including laser guidance beam optics and thermal imager. We were part of the initial design in the 1970's and have since developed and produced two generations of clip-on thermal sights.

In the RBS70 New Generation we supply NGOU – a combined laser guidance beam transmitter and LWIR thermal imager which is integrated in the RBS70 NG day sight.



RBS56 BILL

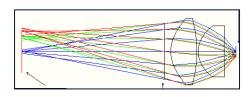
Integral parts of the whole aiming and guidance chain including day sight optics and thermal imager. We were part of the initial design in the 1980's and have since developed and produced three generations of clip-on LWIR thermal sights.



FULL IN-HOUSE DESIGN CAPABILITY

Unique competence in infrared optics design and production

Optical design



Lens production



Assembly



Test & Calibration



MANUFACTURE AND COATING OF SPHERIC, ASPHERIC, AND DIFFRACTIVE IR OPTICS



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