

# References

## *Airborne Projects*



## References

### Most important airborne projects

The following list represents a record of the most relevant airborne projects conducted by OPTIMARE:

Pos.	Year	End User	Reference Project
48	2021	FOTOTERRA Atividades de Aerolevantamento Ltda.	One MEDUSA System for an oil spill surveillance aircraft of type EMB-110.
47	2020	Irish Air Corps	Two MEDUSA Systems (subsystem configuration).
46	2020	German Armed Forces	Major upgrade of the MEDUSA Systems of the two German Dornier 228 maritime surveillance aircraft. This includes the mission management systems, the sensor suites, the communication systems, the spares package, and the ground segment.
45	2019	Undisclosed, UK	One MEDUSA-based airborne sensor system (2nd system) including adaption of an Inertial Measurement Unit.
44	2019	Undisclosed, UK	One MEDUSA-based airborne sensor system (1st system) including adaption of an Inertial Measurement Unit.



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Pos.	Year	End User	Reference Project
43	2019	Polish Border Guard	Two MEDUSA Systems for integration into two new L410 UVP E-20 aircraft.
42	2018	Bangladesh Navy	Two MEDUSA systems for RUAG for installation into Dornier 228 aircraft. Per aircraft the supply includes two work stations, integrating e. g. Search Radar, EO/IR sensor, Automatic Identification System as well as Search and Rescue Direction Finder.
41	2018	Undisclosed, Asia	One MEDUSA system including Mission Computer System, SLAR, IR/UV Line Scanner, VIS Line Scanner and Laser Fluorosensor.
40	2016	Fototerra Survey SCP	One MEDUSA system for an oil spill surveillance aircraft of type EMB-110. The configuration includes the MEDUSA Mission Management System, SLAR, IR/UV Line Scanner, VIS Line Scanner, Microwave Radiometer, Laser Fluorosensor and EO/IR sensor.





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Pos.	Year	End User	Reference Project
39	2013	Undisclosed	Two MEDUSA systems for AIRBUS MILITARY for installation into two multi-purpose maritime patrol aircraft of type C-295. The configuration includes SLAR, IR/UV Line Scanner and Central Operating Unit. The ground segment contains a ground processing station and a simulator unit for operator training.
38	2011	Undisclosed	One MEDUSA system in maritime security configuration for installation into a Saab 340. The configuration contains the MEDUSA Mission Management System, Maritime Search Radar, Automatic Identification System, Direction Finder and EO/IR sensor.
37	2011	State Oceanic Administration of the People's Republic of China	Two MEDUSA systems each including SLAR, IR/UV Line Scanner, VIS Line Scanner, Mission IMU, SATCOM, and Mission Operator Console for installation into two aircraft of type Harbin Y-12 (IV).
36	2011	Undisclosed	Demo campaign in cooperation with Diamond Airborne Sensing: Installation of the MEDUSA system and sensors of type IR/UV Line Scanner and VIS Line Scanner in conjunction with a mission IMU into a belly pod of a DA42 MPP; test flights in Austria and over the German Bight.





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Pos.	Year	End User	Reference Project
35	2011	Royal Belgian Institute of Natural Sciences	MEDUSA system including SLAR upgrade (transceiver replacement) and new mission operator console for the Belgium maritime surveillance aircraft of type Britten-Norman Islander (Identification: OO-MMM).
34	2010	Undisclosed	MEDUSA system including SLAR, Microwave Radiometer (MWR), Mission Operator Console, IR/UV Line Scanner, VIS Line Scanner, EO/IR sensor, AIS, Digital Still Camera and Digital Video Camera and Ground Segment.
33	2010	Central Command for Maritime Emergencies	MEDUSA system including SLAR, IR/UV and VIS Line Scanner, EO/IR sensor, AIS, Digital Still Camera and Satcom for a new Do228 NG operated by the German Navy.
32	2009-2010	German Aerospace Establishment	Support of the certification activities of the German Aerospace Establishment for the installation of sensing equipment into the jet-propulsed High Altitude and Lng Range Research Aircraft (HALO) of type G550 from Gulfstream Cooperation.



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Pos.	Year	End User	Reference Project
31	2008-2009	Portuguese Airforce	MEDUSA system including SLAR, IR/UV and VIS Line Scanner for three multi-purpose maritime patrol aircraft of type EADS-CASA C-295 for the Portuguese Airforce. The delivery includes provisions for a total number of five aircraft (LRUs can be interchanged). MEDUSA in this configuration is installed as subsystem of a higher-level tactical mission system.
30	2008	Alfred Wegener Institute	OPTIMARE IR/UV Line Scanner (50Hz, 1024 pixel per line) and VIS Line Scanner into Polar 5 aircraft.
29	2008	Alfred Wegener Institute	OPTIMARE IR/UV Line Scanner (high resolution mode, 100Hz, 1024 pixel per line) into airborne sensing aircraft.
28	2007/2008	Alfred Wegener Institute	Conducting geophysical airborne survey in Antarctica for Alfred Wegener Institute – DOCO/VISA – High altitude connecting flights of all actual drilling position of Antarctic ice domes.
27	2007	Alfred Wegener Institute	MEDUSA system for geophysical, meteorological and aerochemical sensing for German polar survey aircraft Polar 5 of type Basler BT-67 (refurbished DC-3; Identification C-GAWI).



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Pos.	Year	End User	Reference Project
26	2006-2007	KUSTWACHT, The Netherlands	Two Mission Operating Units (2-console configuration), Data Management Unit, and Digital Video & Voice Recorder for maritime surveillance aircraft of type Dornier 228 of the Netherlands Coast Guard (KUSTWACHT).
25	2006-2008	Spanish Maritime Safety Agency	MEDUSA system including SLAR, IR/UV, LFS, and MWR to for three multi-purpose maritime patrol aircraft of type EADS-CASA CN-235 for the Spanish Maritime Safety Agency. MEDUSA in this configuration is installed as subsystem a higher-level tactical mission system.
24	2005/2006	NIPR, Japan	Conducting geophysical airborne survey at SOWYA Antarctica for Alfred Wegener Institute, collaboration of Japan, Canada and Germany.
23	2005	Alfred Wegener Institute	Laser Fluorosensor for algae detection for a helicopter of type BO-105.
22	2005	Alfred Wegener Institute	Conducting ASIRAS Finland Campaign for the European Space Agency, Oulu Finland, Laser Scanner, Laser Altimeter and Interferometric SAR systems.



Photograph Courtesy by EADS-CASA



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Pos.	Year	End User	Reference Project
21	2004/2005	Alfred Wegener Institute	Conducting of geophysical airborne survey in Antarctica for Alfred Wegener Institute - VISA IV Project, 90 flight hours with 22 000 profile km
20	2004	Alfred Wegener Institute	Conducting ASIRAS Grand Tour Campaign for the European Space Agency, Svalbard, Greenland, North Canada, Laser Scanner, Laser Altimeter and Interferometric SAR systems.
19	2004	Alfred Wegener Institute	Conducting ASIRAS Spring Campaign for the European Space Agency, Svalbard, Laser Scanner, Laser Altimeter and Interferometric SAR systems.
18	2004	Alfred Wegener Institute	Follow-up: MEDUSA system for air chemistry sensing into German polar survey aircraft of type Dornier 228 – 100 (Identification POLAR 2).
17	2004	German Aerospace Establishment	MEDUSA system into German polar survey aircraft of type Dornier 228 – 100 (Identification D-CODE).



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Pos.	Year	End User	Reference Project
16	2004	Royal Thailand Navy	Follow-up for Royal Thailand Navy including additional Track-While-Scan System, FLIR system, and digital video recorder.
15	2003/2004	Alfred Wegener Institute	Conducting geophysical airborne survey in Antarctica for Alfred Wegener Institute - VISA III Project, 133 flight hours with 31,150 profile km.
14	2003	Alfred Wegener Institute	MEDUSA system for topography sensing based on interferometric SAR and laser scanning for German polar survey aircraft of type Dornier 228 – 101 (Identification POLAR 4).
13	2003	Alfred Wegener Institute	Integration of Laser Scanner LMSQ280 and Interferometric SAR ASIRAS in the MEDUSA-P Network.
12	2003	Royal Thailand Navy	Track-While-Scan System (developed by OPTIMARE) for Telephonics search radar for coastal surveillance aircraft of Dornier 228 type of the Royal Thailand Navy.





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Pos.	Year	End User	Reference Project
11	2002/2003	Alfred Wegener Institute	Realization of geophysical airborne survey in Antarctica for Alfred Wegener Institute - VISA II Project, 54.5 flight hours with 13,300 profile km.
10	2002	Weser-Bildmessflug GmbH & Co. KG	Integration of VIS Line Scanner into airborne sensing aircraft of Weser-Bildmessflug GmbH & Co. KG for aerial survey campaigns.
9	2002	Alfred Wegener Institute	Installation of MEDUSA-P system into German geophysical survey aircraft for polar research of type Dornier 228 - 100 (Identification POLAR 2).
8	2001/2002	Alfred Wegener Institute	Realization of geophysical airborne survey in Antarctica at SANAE E-BASE for the Alfred Wegener Institute - VISA I Project, VISA I, lasted from 12/2001 to 02/2002 and contained 100 flight-hours with 27,700 profile km.
7	2001	Federal Institute of Hydrology, Germany	Phase II: Integration of MWR and IALFS into the MEDUSA network of German Maritime Surveillance Aircraft of type Dornier 228 - 212 (Identification 57+04).



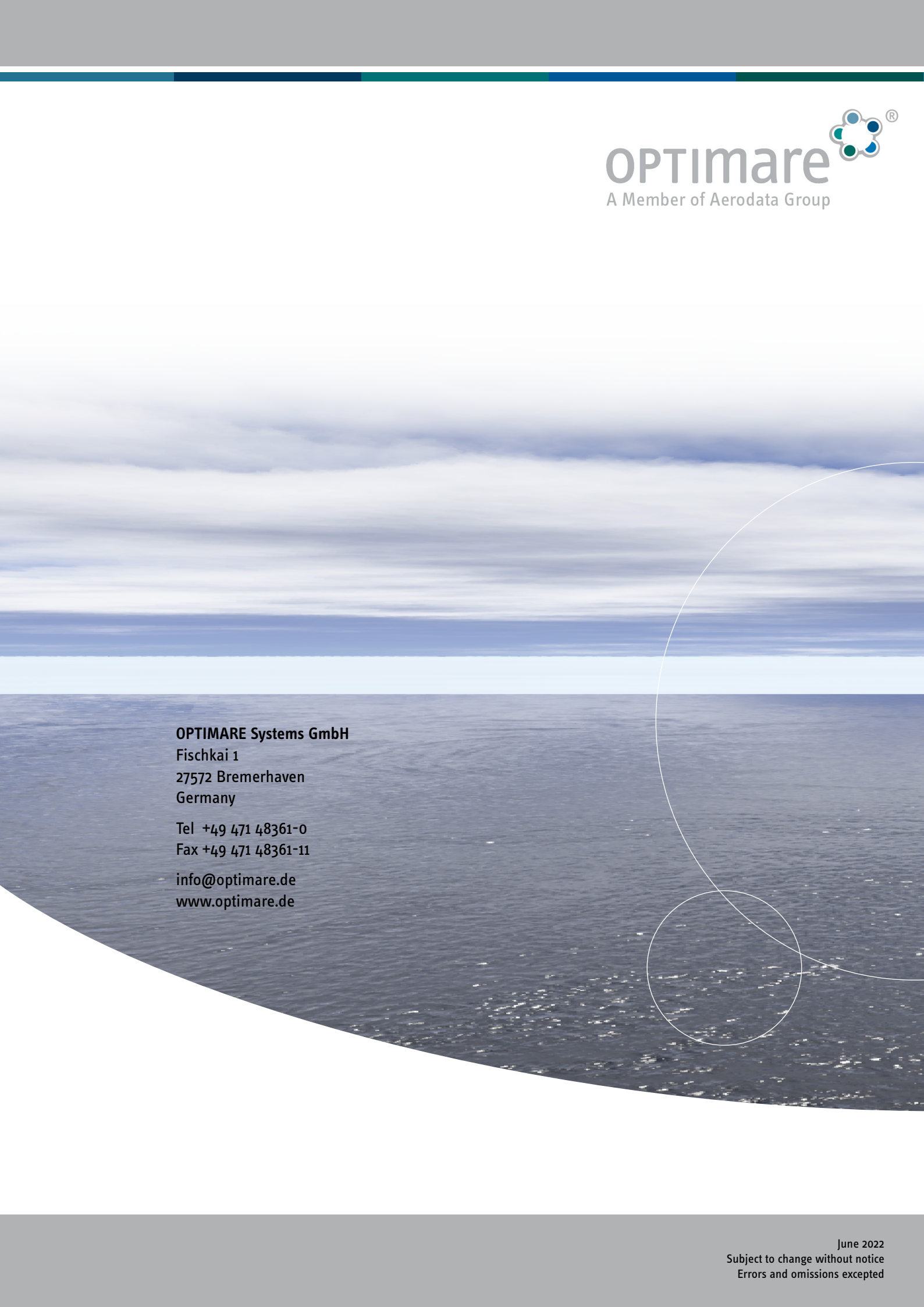


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Pos.	Year	End User	Reference Project
6	2000/2001	Alfred Wegener Institute	Assistance of geophysical airborne survey in Antarctica at SANAE E-BASE for the Alfred Wegener Institute – VISA I Project
5	1998	Federal Institute of Hydrology, Germany	Phase I: Integration of Operating Console, SLAR, IR/UV, and SATCOM link in conjunction with MEDUSA network into German Maritime Surveillance Aircraft of type Dornier 228 – 212 (Identification 57+04).
4	1997	German Ministry of Transportation	Integration of commercialized IALFS into German Maritime Surveillance Aircraft of type Dornier 228 – 212 (Identification 57+01).
3	1995	German Aerospace Establishment	Integration of SLAR, IR/UV and Operating Console in conjunction with MEDUSA network into Dornier 228 of German Aerospace Establishment.
2	1993	German Ministry of Transportation	Integration of Imaging Airborne Laser Fluorosensor (IALFS) prototype into German Maritime Surveillance Aircraft of type Dornier 228 – 212 (Identification 57+01).
1	1991	German Aerospace Establishment	First operational test flights with the IALFS prototype installed onboard a research aircraft of Dornier 228 type of German Aerospace Establishment.





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