

Gooch & Housego [UK]

Gooch & Housego (LON:GHH) is a world-leading manufacturer of precision optical components and sub-systems based upon key enabling optical technologies. Gooch & Housego offers world class design, development and manufacturing expertise across a broad complementary range of technologies: fibre optics, electro-optics, photonic packaging and system integration. G&H has been supplying high-quality fibre optic components and optical modules into a variety of market sectors, including telecommunications, fibre laser, aerospace, and biomedical since 1985. The original core technology is fused biconical tapering and it has been a world leader in this field for a number of years. The photonic packaging business unit specialises in packaging of optical components, and optical module assembly operations. The Class 1000 cleanroom facility includes equipment for die attach, wire bonding, SM and PM fibre alignment and hermetic sealing and testing (fine and gross leak) to telecoms and MIL-STD requirements. The Systems Technology Group (STG) is a separate business unit with a remit to design, develop and prototype systems-level products. The STG involves a multi-disciplinary team with expertise in mechanical, electronic and software design and modelling that enables integration of these technologies with G&H's expertise in photonics.

Thales Alenia Space [France]

THALES ALENIA SPACE is the European leader for satellite systems and at the forefront of orbital infrastructures. Thales Alenia Space is owned by THALES (67%) and FINMECCANICA (33%) and forms with TELESPIAZIO the "Space Alliance". Thales Alenia Space is at the heart of the most high-performance satellite technologies in both civil and defence sectors. The company is deeply involved in commercial telecommunication satellites & systems, European institutional satellites & systems, satellite navigation systems, meteorological and oceanographic satellites & systems, radar and optical observation satellites & systems, scientific satellites, defence communications and observation satellites & systems, orbital infrastructures and transportation, with orders from the United States, Russia, Latin America, Africa and the Middle East, and growing business with Asian customers. In ROBIN, Thales Alenia Space is responsible for driving the development of the project according to specific end-user requirements and performs system validation of the optical interconnect sub-system

U-L-M Photonics [Germany]

PHILIPS Technologie GmbH U-L-M Photonics (ULM), located in Ulm, Germany, is part of ULM Lighting. ULM is developing, manufacturing, and selling VCSEL and Photodiode products for datacom, as well as VCSELs for sensing, and power applications. The operations include product development, epitaxy, processing, testing, control of assembly supply chain, and sales. The product portfolio covers VCSEL wavelengths from 760 to 1150 nm, single-mode and multi-mode emission, and modulation speeds for VCSELs and PDs up to 14Gbps. These products are available in several 1D or even 2D array arrangements. ULM is operating a 1200 m² cleanroom facility, dedicated to the manufacturing of III-V optoelectronic components. In

ROBIN, ULM designs and fabricates Photodiode and VCSEL arrays for operation from 25Gbit/sec up to 40 Gbit/sec.

OFS [Denmark]

OFS (part of OFS Specialty Photonics) is the industry leader in optical fibre design and modification for highly customized applications. OFS Specialty Photonics develops and supplies advanced optical fibres, including speciality multi-mode, specialty single-mode, rare-earth doped, polarization-maintaining and other non-standard fibres. It also manufactures specialty cables and connectors, and other specialty products, such as high-power laser components. In ROBIN, OFS designs and develops new radiation-hard multi-core fibers as well as single core to multi-core converters.

Institute for Innovative Microelectronics - IHP [Germany]

Leibniz Institute for Innovative Microelectronics (IHP) is a public research institute located in Frankfurt (Oder) in Germany. IHP has a team of 240 R&D professionals with core competence in micro-electronics process technology, circuit design, and systems. As a public research institute and member of the Gottfried Wilhelm Leibniz Society, the core funding comes from the German Federal Government and the State Government of Brandenburg. The institute aims at establishing the region of East-Brandenburg as a high-tech region and to create jobs through innovation. Therefore IHP uses its R&D to enhance the competitiveness of German and European businesses and works closely with the Federal and State Governments to attract international companies to the region. IHP owns a 1000 square meters, class-1 clean room and pilot line with production-grade tool-set for 0.25 and 0.13 μm technologies and offers its CMOS and SiGe BiCMOS technologies for Multi Project Wafer service and low-volume prototyping to external customers. In ROBIN, IHP designs and fabricates multi-channel electronic ICs, for the ROBIN lasers and receiver arrays.

VTT Technical Research Centre [Finland]

VTT is a non-profit government organisation established by law and operating under the auspices of the Finnish Ministry of Employment and the Economy. VTT is a multitechnological research organisation providing high-end technology solutions and innovation services. From its wide knowledge base, VTT can combine different technologies, create new innovations and a wide range of world-class technologies and applied research services, thus improving its clients' competitiveness and competence. In 2011, VTT's turnover was 280 million €, with personnel of 2800. VTT's key technology fields include: Applied materials, Bio- and chemical processes, Energy, ICT, Industrial systems, Microtechnologies and electronics, Services and the built environment, and Business Research. VTT is the technical manager of ROBIN and is responsible for the design and development of the ROBIN transmitter and transceiver modules.

Chalmers University of Technology [Sweden]

Chalmers (www.chalmers.se) is a leading technical university in Sweden. It is represented in ROBIN by its Photonics Laboratory, which is part of the Department of Microtechnology and Nanoscience. It houses 30 staff (senior scientists, postdocs and PhD students) and conducts applied, applications oriented research in the areas of optoelectronics and optical communication. Of particular importance for ROBIN is the work on high speed 850 nm VCSELs where Chalmers has a leading position in terms of modulation speed and data transfer. Chalmers is also recognized for its work on high power single-mode VCSELs, polarization control, integration for beam control, and models for VCSEL design and simulations. The Photonics Laboratory has recently participated in the VCSEL-oriented European FP6 and FP7 projects NEMIS (mid-infrared VCSELs), SUBTUNE (tunable VCSELs), and VISIT (high speed VCSELs). Chalmers designs and fabricates arrays of 850 nm VCSELs with operational speeds exceeding 40Gbit/sec.