



Photonics Integrated Circuit (PIC) designer

Responsible for design of high-frequency Photonics Integrated Circuits (PICs) for fiber-optic transmitters and Quasi-Coherent Receivers

**Workplace:**

Lyngby (Denmark)

**Company:**

Bifrost Communications Aps is a modern start-up enterprise spun out from Technical University of Denmark (DTU) north of Copenhagen. With our Quasi-Coherent Transceiver Technology, we facilitate the need for higher data rates in 5G and 6G DWDM Fronthaul networks, Metro ring networks, and ultra-high sensitivity burst-mode OLT receivers for TWDM-Pon links

In a plug and play cost effective solution customers can upgrade the DWDM links from 10G to 25G with reach up to 40 km in Fronthaul applications and up to 60 km in Metro-ring networks. In addition, we are currently developing 50 Gbps and 100 Gbps solutions based on a higher level of photonics- and electronic integration and co-packaging.

Bifrost has gained significant customer traction on its first-generation receivers and have obtained Grant and Funding from the EIC accelerator and other investors to substantially pursue upscaling of development and production of its next generation products. The company is managed by experienced entrepreneurs with successful track records from similar start-ups in the optical and opto-electronic space.

**Job description:**

You will be part of a team that has developed and patented an Optical Receiver which increases reach and capacity in fiberoptic networks. The receiver is well renowned for its unique capabilities at data rates of 25 Gbps, and the next steps for us are scale-up from prototype, and upgrades 50 Gbps and 100 Gbps solutions. Both this scale-up and upgrade requires a transition from the existing "optical bench" platform to a PIC platform, where lasers, photodetectors and combining optics are integrated to one or a few chips using Silicon Photonics, III-V materials or a heterogenous combination of those.

You are a skilled PIC designer with experience from Silicon Photonics as well as III-V technologies. You also have experience with other areas of PIC development, including packaging, pig-tailing, heterogenous integration, transfer-printing etc. We expect you to lead our PIC efforts in close collaboration with our existing optical, RF and mechanical design team. Your tasks will include:

- 1) Development of high-speed (>100 Gbps) photonics integrated circuits
- 2) PIC layout and simulations
- 3) Development of PIC packaging together with optical and mechanical designers
- 4) Tests and analysis of test results
- 5) Responsibility for various documentation material, BOM, drawings, contact to PIC foundries, revision control and tracking of design changes.
- 5) You will work closely together with your colleagues internally in the organization as well as externally with customers and partners.

<b>Personal characteristics:</b>	You are a highly self-motivated person who shows initiative by yourself. You work in a structured manner and you are capable of working highly independently.
<b>Education:</b>	You have an educational background as M.Sc. or Ph.D. in engineering, physics or another relevant field.
<b>Work experience:</b>	You have previous experience designing and developing photonics integrated circuits
<b>Language &amp; IT skills:</b>	You are fluent in English (spoken and written), and you are experienced user of PIC design, simulation and layout software
<b>Salary:</b>	You will receive a good remuneration corresponding to your qualifications, and you will have the opportunity to be part of a warrants program.
<b>You are offered:</b>	You will be offered an exciting full-time position with good development potential both professionally and personally. In addition, you will get a chance to become part of a unique start-up with huge potential for growth.
<b>How to apply</b>	Send your CV and cover letter to CTO Jesper Bevensee Jensen at <a href="mailto:jbj@bifrostcommunications.com">jbj@bifrostcommunications.com</a>