

- Título de publicación de puesto
Título de publicación de puesto
CMOS Physical Design Engineer
- Resumen de descripción de puesto
Resumen de descripción de puesto
Electronic Design Engineer: Designs, develops, modifies and evaluates electronic parts, components or integrated circuitry for electronic equipment, or other hardware systems and/or electrical engineering applications. Determines design approaches and parameters. Analyzes equipment to establish operating data, conducts experimental tests and evaluates results. Selects components and equipment based on analysis of specifications and reliability. May also review vendor capability to support product development. Survey Tip: If 75 percent of the time is spent performing a specific engineering function such as analog or digital circuitry design, match to Analog Engineer (4891-4896) or Digital Engineer (5031-5036).
- Descripción de puesto
Descripción de puesto
Teledyne e2v *Space Imaging* has been trusted to design and deliver CCD and CMOS imaging sensors and sub-systems for over 150 space missions by the world's largest space agencies, including NASA, ESA, JAXA, CSA and recently for the Russian-led World Space Observatory. We offer space imaging supply chain solutions, including space qualified imaging sensors, arrays and sub-systems for space science, earth observation and astronomy; helping solve the mysteries of the Universe and understanding climate change on Earth. Teledyne e2v is committed to delivering customer satisfaction through continuous improvement in the quality of our products and services. We are dedicated to our core values of customer focus, innovation, excellence throughout with agility, resolution and integrity. Teledyne e2v ensures that our products fulfil the customer, regulatory and statutory product requirements for the protection of people, property and the environment. Teledyne e2v *Professional Imaging* is an international leader in high performance, ultra-high resolution, and ultra-high speed image sensors and systems with approximately 220 employees globally. Acquired by Teledyne Technologies in 2017, Teledyne e2v *Professional Imaging* designs, develops, manufactures, and markets CMOS image sensors, modules, and imaging solutions for a variety of applications including machine vision and automation, medical and life sciences, logistics and robotics, and the environment, food and recycling. From 1D, 2D and 3D sensing to multi-spectral imaging, ultra-low noise, high sensitivity sensors rivalling EMCCDs, the range of our capabilities makes us a preferred innovation partner amongst our customers.

Our unique approach involves listening to the market and application challenges of our customers and partnering with them to provide the most leading-edge standard, semi-custom, and fully custom imaging solutions.

Teledyne e2v *Professional Imaging* sensors, systems, and subsystems are designed, manufactured, tested and characterized in Grenoble (France) and Seville (Spain) and are supplied to leading customers, worldwide.

Working with us means engaging with a very talented and international team in the challenging world of high technology imaging. Join us to brighten your future!

At Teledyne, we believe that Equality, Diversity and Inclusion mean Opportunity – the opportunity to cherish and celebrate the value of diversity, to bring our full and authentic selves to work and to feel fully involved and respected – and we are committed to this journey. Occupational health and safety and environmental sustainability are also an integral part of our business strategy, and we believe in implementing environmental, health and safety improvements to continually enhance the working environment for staff, visitors and contractors.

This role is suited for a SoC Physical Design Engineer looking for a new challenge and the opportunity to work within an experienced team, with analog and digital design embedded to achieve the best solution for standard and custom image sensors.

The candidate should have the potential to work with CMOS Image Sensors in several technologies and architectures, and should be able to work within a team of digital and analog designers, both internal and external subcontractors.

Personal development opportunities will be available throughout our global international organisation for high performers.

Your personal values must be in line with ours: Agility, Integrity, Excellence throughout and Customers first.

MAIN ACCOUNTABILITIES

Digital Design

- Responsible for physical design of any sub-block or digital top within an image sensor, from synthesis to gds. Including constraints definition, floorplan, clock tree, scan insertion, parasitic extraction, physical verification and chip closure
- Responsible for padding definition and implementation. Ensure meeting of ESD and electromigration requirements.
- Run static timing analysis, DFT, formal equivalence, IR drop and static power analysis.
- Comply with methodology for robustness and DFM.
- Work to ensure that designs are right first time or that only a metal fix is required.
- Ensure that newly designed circuits have been designed for ease of testability.

Continuous Improvement

- To participate in the continuous improvement of the design flow for space and professional imaging business units.
- To ensure that the right tools and methodology are put in place to satisfy the flow requirements.

Innovation

- Protect our intellectual property.
- To contribute to the design of new technology building blocks to ensure that T-e2v can meet the needs of space & professional image customers in the future.

Key Internal interfaces:

- CMOS Technical Design Leader
- Layout Team
- Frontend Digital Team
- Physical Design Team
- Analog & Mixed Signal Design Team
- Package Designer
- Foundry contact

Mobility/ travel: <10% of the working time

Qualifications

- At least a Bachelor's Degree in Robotic/Electronics/Telecommunications Engineering or Physics, electronics specialty
- Basic knowledge of CMOS digital design and flow
- Basic knowledge of Physical Digital Design tools for synthesis, P&R, STA, Power Analysis, IR Drop, Physical verifications.
- Knowledge of Hardware languages: Verilog and/or VHDL
- English: good level written and spoken

Essential Competencies

Able to:

- Understand and follow design flow methodology.
- Write technical documentation for internal use.

Non-technical skills:

- Adaptability with strong problems solving skill
- Good team working, communication, presentation, and interpersonal skills
- Team player spirit.
- Proactive approach

Desired Experience/Competencies

- Some experience in the design of image CMOS sensors.
- Experience on different chip assembly techniques as stitching, FSI/BSI, 3D stacked.
- Cadence EDA tool knowledge: Genus, Innovus, Modus, Tempus, PVS.
- Mentor EDA tool knowledge: Calibre
- Knowledge of script languages: TCL, Bash, Python, Perl
- Knowledge of device physics and CMOS technology and their interaction with VLSI circuits.
- Experience in physical design from 180 down to 40 nm technologies.
- Understanding of radiation effects in a space environment