



global technology recruitment partner since 1999

2022 Second half UK SALARY GUIDE

**SOFTWARE | SEMICONDUCTOR | ELECTRONICS | IT | SCIENTIFIC
TECHNICAL OPERATIONS | SALES & MARKETING**

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“Every company is now a technology company”. This simple statement has had a profound effect on the skills landscape.

From high level software (full stack, back end, front end, etc.) all the way down to the fundamental physics of the most advanced semiconductors, there is global demand for innovation and therefore innovative individuals.

Talent shortages have made headline news across multiple industries during 2021. We envisage no ‘loosening’ in the 2nd half of 2022 even though we have seen some technology lay-offs predominantly in companies focussed on the B2C marketplace. The appetite for investment and activity in deep-tech/hard-tech start ups is still strong. This is not specific to the UK – with approximately 40% of our activity in mainland Europe, China and increasingly the US, we see similar patterns globally.

With global brands and start-ups all competing for the same talent, candidates are often in multiple processes and obtain more than one offer. Hence the candidate journey/process is becoming increasingly important and a key influencer as candidates choose their future employer. It’s important that companies remember that they are selling as well as assessing. Quick, transparent processes with regular communication between all parties will result in more successful outcomes for all involved.

A specific trend of note is the recent re-emergence of the value placed on developing and owning proprietary hardware. The ever-swinging software/hardware pendulum is currently in the hardware sector, as more companies become vertically integrated and seek competitive advantages from the fundamental physical design of their products. This has resulted in a plethora of hardware roles and a significant increase in salaries.

Additionally, as the ecosystems supporting UK and European start-ups continue to mature, the incentives to move to the US to start a company diminish. The UK's thriving start-up ecosystem is beginning to compete globally; employment regulation also makes the UK more attractive to incorporate a start-up compared to many other European countries. This, combined with executives / employees from notable exits now investing or starting their own ventures, again creates additional demand of hardware and software skills to drive technology innovation.

The 2nd half of 2022 will still be a candidate driven market, even with the rising macro economic challenges. In fact, talk of a 'recession' will adversely impact the number of candidates looking to make a career changes. Hence it's imperative for potential employers to focus on the candidate journey / interview process as this will give them the best chance to secure the right talent to help their businesses grow and succeed.

If you would like more info
or to talk to us, please call
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All figures shown are UK averages with a 10% +/- variation and don't take into account regional variations. Salaries in mainland Europe can be significantly higher than the UK (up to 20%). However it is difficult to quote an exact percentage as location, sector and skill-set are contributing factors. Data as at June 30th 2022. Salary ranges are based on up to the minute placements being made by our team of 60 specialist consultants.

SOFTWARE

We are currently seeing huge demand for engineers across all technology markets. Location is less relevant than ever before, due to hybrid and remote working models. We are seeing companies who need engineers to be on-site 5 days per week struggling to fill roles.

Salaries have increased to unprecedented levels and we are seeing the overall value of benefits packages become much more important as a way to differentiate a company offering over salaries alone. We are seeing more clients adopt agile recruitment processes and condensing overall time to hire. Such is the demand within the permanent market, we are seeing contractors become an attractive solution to meet project deadlines and ensure continuity of delivery.

Experience	Graduate MSc	Graduate PhD	Mid-level	Senior	Principal	Senior Principal	Technical Team Lead	Technical Manager (team of 5+ engs)	Eng. Director/ Design Centre Manager/ VP Eng
			2-5yrs	6-10yrs	11-15yrs	12-20yrs	15+yrs		
Embedded	£30-40,000	£35-45,000	£45-55,000	£55-70,000	£70-80,000	£80-90,000	£75-90,000	£85-110,000	£110,000+
Linux Kernel	£35-40,000	£35-45,000	£45-65,000	£65-80,000	£80-100,000	£100,000+	£120,000+	£120,000+	£150,000+
DSP Algorithms	£32-35,000	£35-40,000	£40-50,000	£50-70,000	£70-80,000	£70-80,000	£80-85,000	£90,000+	£100,000+
PC Applications <i>C#, Java, C++, Python</i>	£30-40,000	£35-45,000	£45-60,000	£60-70,000	£70-80,000	£80-90,000	£80-90,000	£85-110,000	£110,000+
Data Science <i>Big Data, Analytics, Engineering</i>	£45-55,000	£55-65,000	£65-85,000	£85-95,000	£95-110,000	£95-110,000	£120,000+	£130,000+	£160,000+
Machine Learning <i>Vision, AI, Deep Learning</i>	£45-55,000	£55-65,000	£65-85,000	£85-95,000	£95-110,000	£95-110,000	£120,000+	£130,000+	£160,000+
Test	£30-35,000	£35-£40,000	£40-50,000	£50-65,000	£65-75,000	£75-80,000	£80-85,000	£85-90,000	£100,000+
Web <i>Front-end, Back-end</i>	£30-35,000	£35-45,000	£45-65,000	£65-80,000	£80-90,000	£90-100,000	£90-110,000	£120,000	£120,000
Mobile App	£28-32,000	£32-38,000	£38-50,000	£50-80,000	£80-90,000	£90-100,000	£100-120,000	£120,000+	£120,000+

SEMICONDUCTOR

In 2021 the semiconductor and electronics sector saw unprecedented demand for skills. This is not abating; if anything the market in 2022 is even more competitive. The result, as shown below, is unrelenting wage inflation. The most important trend to highlight is a shift away from 'years experience' toward 'value add'. For example, an IC processor designer or analog power management designer with 3 years experience may be on a similar salary to a 'non-specialist' electronics engineer with 15 years experience. Therefore, it may be more helpful to think in terms of junior engineer / senior / principal engineer levels, where someone with 5 years experience could be a principal engineer.

In summary, the 'take aways' for 2022 are: 1) No end in sight to unprecedented competition for skills. 2) Engineers being remunerated for the value they contribute rather than years experience. 3) Employers need to move quickly and proactively sell their opportunities (and sign-up IC Resources as their ally in the skills battle).

Experience	Graduate MSc	Graduate PhD	Mid-level	Senior	Principal	Senior Principal	Technical Team Lead	Technical Manager (team of 5+ engs)	Eng. Director/ Design Centre Manager/ VP Eng
			2-5yrs	6-10yrs	11-15yrs	12-20yrs	15+yrs		
Digital IC Design	£38-45,000	£45-50,000	£50-55,000	£55-70,000	£70-80,000	£80-90,000	£85-95,000	£95-130,000	£130,000+
Digital IC Verification	£38-45,000	£45-50,000	£50-55,000	£60-75,000	£75-85,000	£85-95,000	£95,000+	£95-130,000	£130,000+
Physical Design	£38-45,000	£45-50,000	£50-55,000	£55-70,000	£70-80,000	£80-90,000	£85-95,000	£95-130,000	N/A
FPGA Design	£38-45,000	£45-50,000	£50-55,000	£55-70,000	£70-80,000	£80-90,000	£85-95,000	£95-130,000	N/A
Analog/Mixed Signal IC Design	£38-45,000	£45-50,000	£50-55,000	£55-70,000	£70-80,000	£80-90,000	£85-95,000	£95-130,000	£130,000+
RF IC Design	£38-45,000	£45-50,000	£50-58,000	£58-75,000	£75-85,000	£85-95,000	£85-100,000	£100-130,000	£130,000+
Analog / RF Layout	£35,000	£35-38,000	£38-50,000	£50-65,000	£65-70,000	£70,000+	£70,000+	£85-95,000	N/A
IC Test	£30-35,000	£30-37,000	£37-45,000	£45-55,000	£55-70,000	£70-80,000	£80-90,000	£90-100,000	£100,000+
IC Process	£28-33,000	£28-35,000	£35-42,000	£42-50,000	£50-60,000	£60-65,000	£65-70,000	£70-80,000	£80,000+

ELECTRONICS

The electronics industry drove the global economy in 2021. This has not changed in 2022 (so far).

Traditionally, there has been one industry - possibly two - really driving demand for electronics systems. At the moment there are at least 6: space exploration and communication, IoT / remote sensing, medtech, smart cities and integrated data systems, electrification and autonomous driving.

The impact on skills is of course an ever increasing demand for skills and the resulting increase in salaries. Power management, sensor design and systems design / integration are in particularly high demand. On the contract side, clarity on IR35 - who is inside / outside - has stabilised the contract market and demand for contractors is also high.

Experience	Graduate MSc	Graduate PhD	Mid-level 2-5yrs	Senior 6-10yrs	Principal 11-15yrs	Technical Team Lead 15+yrs	Technical Manager (team of 5+ engs)	Eng. Director/ Design Centre Manager/ VP Eng
Electronics Design <i>(RF, Digital, Analog, FPGA)</i>	£32-35,000	£36-45,000	£40-60,000	£60-70,000	£70,000+	£75,000+	£85,000+	£100,000+
Power Electronics	£30-35,000	£35-45,000	£40-50,000	£50-65,000	£60-70,000	£65-75,000	£70-90,000	£100,000+
RF / Antenna	£25-35,000	£35-40,000	£40-50,000	£50-60,000	£60-75,000	£75,000+	£80-100,000	£120,000+
Electronics Test Validation	£25-28,000	£28-35,000	£35-45,000	£45-55,000	£55-70,000	£75-80,000	£80-100,000	£100,000+

SALES AND MARKETING

Carrying on from the huge demand increase for electronics seen in 2021, 2022 is continuing in much the same vein. Where in previous 'peaks' the demand was driven by a single 'en vogue' product type (e.g ever faster pc's) there are now multiple drivers all becoming ever more connected and reliant on other electronic systems within the same ecosystem. Simultaneous demand for experienced talent in the IP, RISC-V, high speed optical, 5G, compound semiconductors, security, EDA, AI/ML, VR, AR, MedTech, Automotive, e-vehicles markets is creating some serious competition – it's a fascinating world to watch right now!

Consequentially, this has led to huge demand for quality Commercial / Technical candidates that can win the business and secure supply into these varied markets. This demand is resulting in very fast recruitment processes; top talent is moving quickly. The race this year will be won by companies that can make hiring decisions quickly.

Salary packages for those that receive a significant part of their total compensation as a performance related bonus are very hard to define as one-size does not fit-all!

The salaries shown are base salaries and are meant as a guide. Base salary is likely to vary depending on type of organisation and what total package is on offer.

An FAE may have a bonus, based on design-wins, of circa 20-30%. Likewise, sales professionals will have bonus' that vary from 20% - 100% of base and may be capped, or uncapped, depending on organisation and product type (e.g. SaaS roles tend to have a 50/50 split on OTE).

Typically, travelling roles will have a car or car allowance on top of base salary and bonus/commission. Start-ups or suppliers may offer equity, stock options or an RSU scheme but slightly lower bases.

Experience	Mid-Level	Senior	Manager	Director
External Sales (Supplier)	£60,000	£70,000	£90,000	£100,000+
External Sales (Distributor)	£50,000	£65,000	£75,000	£85,000+
Field Applications Pre-Sales (Supplier)	£60,000	£75,000	£90,000	£100,000+
Field Applications (Distributor)	£50,000	£65,000	£75,000	-
Product Marketing Management	£65,000	£80,000	£95,000	£110,000+
Marketing (Marcomms / Digital)	£50,000	£65,000	£80,000	£90,000+
Account Management	£50,000	£65,000	£75,000	£90,000+

SCIENTIFIC

The global skills shortage is prevalent across Scientific as with the majority of technology areas. Within Optical and Photonics we are seeing a significant demand and forever increasing need for industry and foundry experience with photonic integrated circuits. Perhaps the only area with an abundance of candidates is Bio Lab Technicians; where COVID labs gave unusual numbers of entry level candidates a chance to gain industry experience. Now that lab based testing has declined, these candidates are now becoming active in the market, especially when their current/former companies are struggling to pivot into new areas.

Experience	Graduate MSc	Graduate PhD	Mid-level	Senior	Principal	Senior Principal	Technical Team Lead	Technical Manager	Director / VP
Optical	£24-32,000	£33-42,000	£40-55,000	£50-65,000	£65-70,000	£70,000+	£75,000+	£80,000+	£100,000+
PICs	£28-34,000	£35-45,000	£45-60,000	£55-70,000	£70-75,000	£75,000+	£80,000+	£85,000+	£120,000+
Laser	£24-28,000	£30-40,000	£40-50,000	£50-60,000	£55-60,000	£60,000+	£65,000+	£70,000+	£80,000+
Bio Lab Technician	£22 - 25,000	£25-35,000	£25-38,000	£35-40,000	£40-45,000	£45,000+	£45,000+	£45,000+	£60,000+
Pre Clinical R&D	£24-28,000	£30-40,000	£40-50,000	£50-60,000	£55-60,000	£60,000+	£65,000+	£70,000+	£80,000+
Assay	£24-28,000	£30-40,000	£40-50,000	£50-60,000	£55-60,000	£60,000+	£65,000+	£70,000+	£80,000+
Applications	£24-32,000	£33-42,000	£40-55,000	£50-65,000	£65-70,000	£70,000+	£75,000+	£80,000+	£100,000+
Clinical Research	£22-25,000	£25-35,000	£30-45,000	£45-60,000	£60-70,000	£70,000+	£75,000+	£80,000+	£90,000+
Regulatory	£28-34,000	£35-45,000	£45-60,000	£55-80,000	£80-90,000	£90-100,000	£95,000+	£100,000+	£150,000+
Bioinformatics	£28-34,000	£35-45,000	£45-60,000	£55-70,000	£70-75,000	£75,000+	£80,000+	£85,000+	£120,000+

IT

In line with the majority of industries, a continued talent shortage within the IT sector has led to a continuation of rising salaries.

Location and working model (i.e Office/Hybrid/Remote) fluctuates salary considerably. The expectation now is for a hybrid or remote working environment and employees are being paid higher salaries if they're expected in the office!

It's important to remember the headings outlined below are broad categories, and there can be much variation of role complexity within each. Salaries vary considerably depending on this.

Experience	Graduate	3 years	5 years	10 years	12+ years
IT Support	£22-25,000	£30-35,000	£40-45,000	£50-55,000	£55,000+
System Administration	£25,000	£35-40,000	£45-55,000	£60-70,000	£70,000+
Networking	£30,000	£40-45,000	£50-60,000	£65-75,000	£75,000+
Infrastructure	£30,000	£40-45,000	£50-60,000	£65-75,000	£75,000+
Cloud / AWS / Azure	£30-35,000	£45-55,000	£60-70,000	£75-85,000	£85,000+
IT Management	n/a	£65-75,000	£85-95,000	£100-150,000	£150,000+

TECHNICAL OPERATIONS

Any companies producing electronic and semiconductor components need staff within their operations teams that have good technical understanding and relationships within the industry.

With start-ups growing in size and demand increasing globally, companies that have not invested in their in-house project and operations teams' knowledge are now fighting for talent. Across all sectors the demand is pushing salaries higher and good candidates are getting multiple offers.

Making sure your company has the best Operations, Quality, Manufacturing and Project Management talent is of the upmost importance in the current landscape.

Experience	Graduate MSc	Graduate PhD	Mid-level 2-5yrs	Senior 6-10yrs	Principal 11-15yrs	Technical Team Lead 15+yrs	Technical Manager (team of 5+ engs)	Eng. Director/ Design Centre Manager/ VP Eng
Project Management	N/A	£30,000+	£50,000+	£65,000+	£75,000+	£85,000+	£90,000+	£100,000+
Functional Safety	£35-40,000	£40-45,000	£50-60,000	£60-70,000	£75-80,000	£80-100,000	£95-110,000	£120,000+
Quality Compliance	£30-35,000	N/A	£40-50,000	£55-65,000	£65,000+	£65,000+	£75,000+	£95,000+
Manufacturing Process	£35-40,000	N/A	£35-45,000	£45-55,000	£55,000+	£60,000+	£65,000+	£100,000+

CONTRACT

There's never been a better time to start contracting. As the demand for permanent candidates continues to grow we are seeing this have a knock on effect on contractor / freelance demand. The areas where this is most noticeable is IC verification, RF Antenna, Analog/RF Layout and all areas within Software.

N.B. Contractor rates can fluctuate as much as 10-15% depending on skill set, demand, availability, work location, the experience of the contractor and the location of the client. Although roles that are Inside IR35 have higher rates, due to the increased tax burden on the contractor the NET take home rate is actually around the same.

HARDWARE rates per hour	Outside IR35	Inside IR35
Digital IC Design	£55	£70
Digital IC Verification	£58	£75
Physical Design	£55	£70
FPGA Design	£55	£70
Analog/Mixed Signal IC Design	£58	£75
RF IC Design	£60	£80
Analog / RF Layout	£55	£70
Test Validation	£48	£65
Electronics Design	£50	£65
RF / Antenna	£55	£70
Power Electronics	£55	£70

SOFTWARE rates per hour	Outside IR35	Inside IR35
Embedded	£50	£62
Linux Kernel	£60	£100
DSP Algorithms	£55	£70
PC Applications C#, Java, C++, Python	£55	£65
Data Science Big Data, Analytics, Engineering	£75	£100
Machine Learning Vision, AI, Deep Learning	£75	£100
Test	£45	£55
Web Front-end, Back-end	£70	£88
Mobile App	£75	£90

IC INTELLECTUAL CAPITAL RESOURCES

HARDWARE

IC Design | Verification
IC Layout | Full Custom
RF | Analogue | Power
Digital | FPGA | Optical
Process | Test | Mechanical

SOFTWARE

Embedded | DSP | Linux Kernel
AI | Computer Vision | Machine Learning
Data Science | Analytics
C++ | Python | C# | Java
Toolchain | EDA

IT

Infrastructure | Support
System Administration
Networking | Cyber Security
Cloud | DevOps
Telephony | Wireless

SCIENTIFIC

Optics | Photonics | Laser
Pre-Clinical R&D | Clinical Research
Assay Development
Translational Medicine
Bioinformatics | Regulatory

SALES | MARKETING

Sales | Sales Management
Field Applications | FAE
Business Development
Marketing | Marcomms
Prod | Prog Management

TECHNICAL OPERATIONS

Supply Chain
Functional Safety
Project Management
Quality | Compliance
Manufacturing | Process

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