


Tranquil PC
a 2crsil company

RUGGED EMBEDDED  IT SOLUTIONS





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All Terrain IT

Tranquil PC is a UK based company founded in 2003, which was formed on the vision that PCs should be more reliable and produce less noise.

Our expertise

Tranquil PC specializes in the field of rugged, low energy IT systems - providing a range of innovative solutions, bespoke models and micro clusters.

Our products offer high reliability and achieve outstanding performance in various applications and demanding environments with **little to no maintenance**.

Tranquil PC's solutions are **compact and easy to transport**. The aluminium chassis for our solutions are built for the **harshest environments**.

The level of protection of our products is upheld by our PCs being **fanless** and having **no moving parts**. **Dust or dirt** is no longer a problem for Tranquil PC's products making them a **durable and reliable** choice in situations where normal PCs would fail.

Designing the products that suit your needs

Our over 15 year experience allows us a tailor made approach in the development and the production of our products. Developing **bespoke designs** is also part of our company DNA: we have the transparent ambition to meet our **clients' unique needs**, thanks to the close relationships with customers, external partners and suppliers.

With powerful platforms that use the innovative processing solutions provided by both Intel and AMD, our range is extensive. We aim for flexibility and responsiveness to changing trends with a **fast technology adoption strategy**. As a member of the 2CRSi group, we benefit from an advanced access to the newest technologies available on the market, thus leveraging our strong development resources to shape them into solutions.

We take great pride in creating our systems and it is important to us that our partners are completely satisfied with their products and services.





Partnerships



We have established close relationships with strong partners. They help us by offering solutions to further our business goals as well as develop new technologies to build our portfolio.

Our esteemed partner Grassfish are world leaders in the retail and digital signage sector: dedicated and innovative, they aim to provide thought leading solutions to the players in those industries. Together, we develop and deliver our IT solutions to these markets.

Clients that have trusted us



Your industries, environments and applications

Tranquil PC provides reliable and powerful industrial PCs that achieve innovative performance in various industries, environments and applications.



Industries

- Medical & Healthcare
- Manufacturing
- Energy
- Defense & Government
- Advertising & Media
- Automotive & Transportation
- Maritime & Offshore

Environments

- Office
- Sterile or high hygiene requirements
- Heavy dust / oil / saline
- Extended temperature range
- Shock and vibration
- Space-constrained

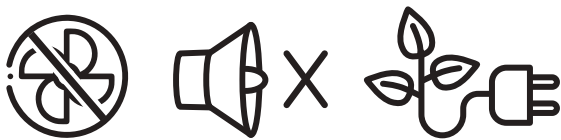


Applications

- Digital Signage
- Security and surveillance
- HMI (Human Machine Interface)
- Embedded IT
- Desktop & Administration

Key benefits of fanless PCs

Fans are the most common way to remove the heat generated by electronic components. There are numerous advantages to fanless computers.



Tranquility

Eliminating fans means we can **eliminate noise**.

Sustainability

Without fans, power consumption is automatically decreased. Maintenance decreases drastically and the failure rate is reduced. This results in a longer lifespan than most other industry-built PCs, ultimately giving the product a lower total cost of ownership.

The aluminium used for the chassis production is repurposed and recycled and the waste aluminium throughout production is also recyclable, making the whole process **highly sustainable**.

No Failure Caused By External Debris

Typical fanned PCs can draw in dust and dirt from the environments in which they operate, potentially causing them to fail and cause costly downtime. Using a fanless computer eliminates this risk.

Limited Maintenance

As it has no moving parts, a fanless computer eliminates a potential mechanical breakdown, as well as the downtime and damage to electronic components that can come with it.

Shock and Vibration Resistance

The absence of moving parts makes the solution even more rugged: it can **resist shocks and vibrations**.

Portability and Location Flexibility

Shock-proof fanless computers can be placed in situations where normal PCs would fail. From a sterile operating room in the medical industry to harsh out-at-sea conditions, they can tolerate the exposure to **demanding applications** and **extreme elements**.

User-centric rugged products

Rugged hardware is designed to operate in extremely harsh environments and conditions.



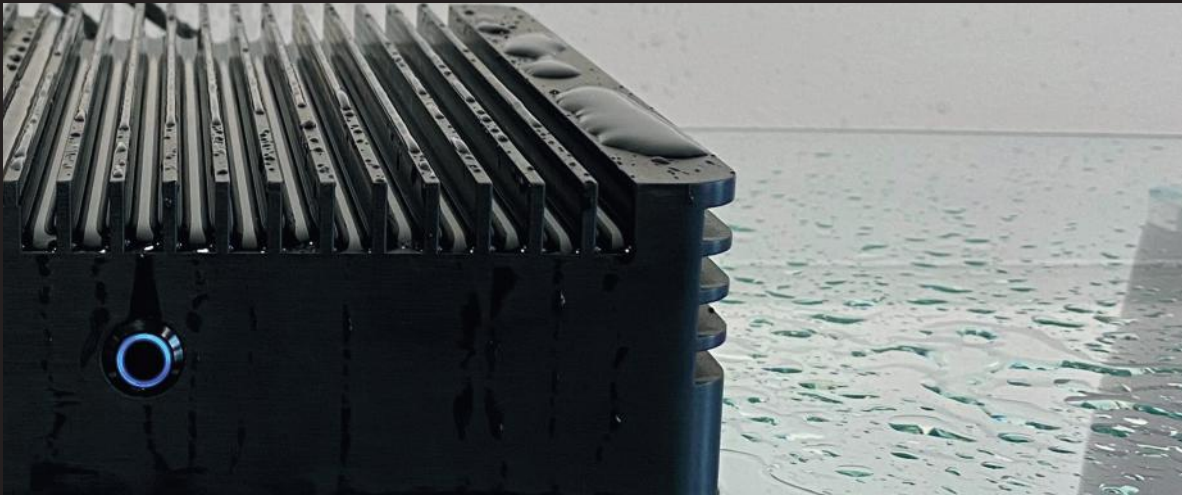
Our clients' feedback informs our development process: we start by meeting a specific need for a rugged device. Then, we improve our solution, bringing us to solve the demands of new customers.

The key is experience and expertise. We listen to our customers and translate their issues into products that work in increasingly harsher environments, thus reaching higher IP ratings.

Our latest products is therefore rated IP66.

Following years of designs and customer input, our unique expertise is the groundwork upon which we will continue to build the next generations of rugged products.





The most common way to evaluate the level of protection offered by the products is the Ingress Protection (IP) rating, a system classifying the degrees of protection against both solids and liquids in electrical enclosures.

The rating consists of a two-digit number published by the International Electrotechnical Commission (IEC) / equivalent European standard EN 60529.

IP First number - Protection against solid objects

0	No special protection
1	Protected against solid objects over 50mm e.g. hands, large tools
2	Protected against solid objects over 12.5mm e.g. hands, large tools
3	Protected against solid objects over 2.5mm e.g. wire, small tools
4	Protected against solid objects over 1.0mm e.g. wires
5	Limited protection against dust ingress (no harmful deposit)
6	Totally protected against dust ingress

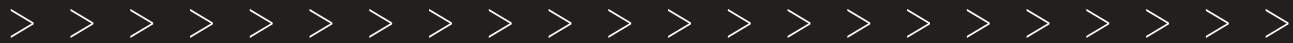
IP Second number - Protection against liquids

0	No special protection
1	Protected against vertically falling drops of water or condensation
2	Protected against falling drops of water, if the case is disposed up to 15° from vertical
3	Protected against sprays of water from any direction, even if the case is disposed up to 60° from vertical
4	Protected against splash water from any direction
5	Protected against low pressure water jets from any direction. Limited ingress permitted
6	Protected against high pressure water jets from any direction. Limited ingress permitted

In-house capabilities: Product design...

With over 15 years of experience in the design and manufacturing of custom IT equipment, Tranquil PC has grown its in-house production facilities and services to better support clients.

We invested in our own engineering and manufacturing facilities in order to create our system chassis entirely within our Manchester based factory. First, raw aluminium billets are precisely CNC-milled. Hand finished, anodised and laser etched, they are then assembled into a final unit, before being tested and validated, ensuring it will be functional in its intended environment.

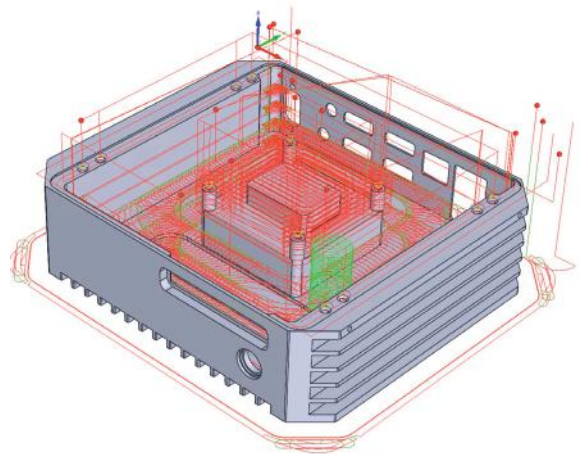


1 Standard Product Specifications or Custom Design

Be it proof of concept or full production runs, Tranquil PC can help.

Using our in-house services, we excel in turnaround time and have control of both manufacturing and the quality standards of our products.

2 Conception



Specific to OEM

Send us your design specifications and we will provide you with our expert opinion on how we can help you.

Specific to OEM

When you are happy on our joint proposal we will get to work with CAD.

... and simulation

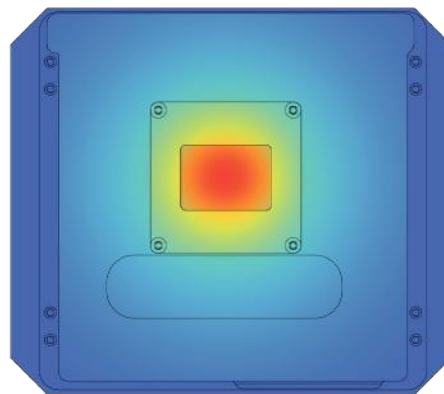
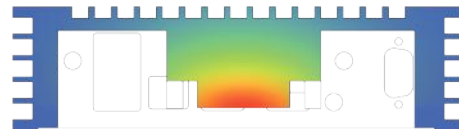
Fanless computers cool based on the principle of conduction. The concept is to put heat-generating components in contact with a heat sink, so that the heat created by the electronic components flow through it and eventually into the surrounding air.

Our bespoke chassis were specially developed to passively dissipate heat. The specifically-engineered ridges of our aluminum products increase the total surface area exposed to the air and enable efficient heat dissipation.

3 Product Design and Simulation

Our in-house designers provide assistance in the conception and advanced simulation: our expertise allows us to quickly adapt the design of our cases to ensure the best heat dissipation while meeting technical requirements.

The use of Computational Fluid Dynamics (CFD) simulation then validates the construction of our products.



Specific to OEM

We then use advanced CFD simulation tools to check if your product meets your requirements.

In-house capabilities: Production...

Having all the processes in one place ensures the manufacturing possibilities are respected and understood at the point of design, for a smooth transition from concept to product.



4 Highspeed CNC Milling

Next, the model is implemented in our computer aided manufacturing systems, before being processed by our CNC milling machines to produce the most precise chassis.



5 Brushing and Anodising

We use advanced brushing and anodising techniques to ensure quality protection and to generate the distinct look of our products.



Specific to OEM

After the milling, your first off is ready.
This is where we will anodise it.

... and services

We pride ourselves in providing and conforming to the highest standards of quality. That's why we have been instated with the ISO 9001 accreditation since 2019.



6 CNC Laser Etching

Our CNC laser etching is an innovative tool used to create high contrast markings without damaging the products finish.



7 Product Assembly, Testing and Associated Services

During assembly, we integrate the electronic components and test your product at multiple stages so it's all up and running.



Specific to OEM

Once your OEM sample is finished, meeting your specification and standards, your approval preceeds mass batch production.

Portfolio overview

Our fanless portfolio comprises several products, which answer the demands various industries and applications can generate.

Rugged Servers



- Rugged Fanless Server (RFS)

Rugged Computers



- Mini Multi Display (MMD)



- Mini Rugged Computer (MRC)



- Rugged NUC (RN)



- Ultra Slim Nuc (USN)

We also offer two other IT solutions.
These are Workstations and Microclusters which can meet different industry needs.

Workstation



- New Fanless Tower (Pulsar) **NEW**

Portable Datacenter



- Microcluster (MCC)

Specifications overview

	RFS Rugged Fanless Server	MMD Mini Multi Display PC	MRC Mini Rugged Computer	MRC Mini Rugged Computer IP66	USN Ultra Slim NUC	RN Rugged NUC	MCC Microcluster
Fanless	x	x	x	x	x	x	
IP protection level	IP50	IP51	IP51	IP66	IP51	IP51	IP31
Operating Temperature	-15°C to 40°C (5°F to 104°F)	-15°C to 40°C (5°F to 104°F)	-15°C to 50°C (5°F to 122°F)	-15°C to 50°C (5°F to 122°F)	-15°C to 40°C (5°F to 104°F)	-15°C to 50°C (5°F to 122°F)	5°C to 25°C (41°F to 77°F)
Non-op Temperature	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-10°C to 60°C (14°F to 140°F)
Certifications CE / others	CE	CE	CE	CE	CE	CE, CB	
Chassis dimensions	84.5mm (3.3") x 221mm (8.7") x 335mm (13.18")	54mm (2.12") x 180mm (7.08") x 157mm (6.18")	54mm (2.12") x 208mm (8.18") x 180mm (7.08")	65mm (2.55") x 208mm (8.18") x 255mm (10.03")	26mm (1.02") x 200mm (7.87") x 116mm (4.56")	59 (2.32") x 185 (7.28") x 113 (4.44")	186 (7.32") x 452 (17.8") x 274 (10.78")
Weight	4.8kg (10.6 lbs)	1.8kg (3.96lbs)	2.4kg (5.2lbs)	3.4kg (7.4lbs)	1.1kg (2.2lbs)	1.8kg (3.96lbs)	From 12kg (26.45lbs)
Processor	Intel® Xeon® 8 Core™	AMD Ryzen™ Embedded V1202B AMD Ryzen™ Embedded V1605B	Intel® Celeron® 3865U Intel® Core™ i3 Intel® Core™ i5 Intel® Core™ i7	Intel® Celeron® 3865U Intel® Core™ i3 Intel® Core™ i5 Intel® Core™ i7	Intel® Core™ i3 7100U Intel® Core™ i5 7300U	Intel® Core™ i3 7100U Intel® Core™ i5 7300U Intel® Core™ i7 7500U	Intel® Core™ i5 Intel® Xeon® D
Important features	Half rack form factor	Multiple display ports	Rugged design	IP66 rating	Ultra small, vPro® technology (i5)	Rugged, small, vPro® technology (i5)	Portable data center

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