TRANQUIL

ALL TERRAIN IT

MICROCLUSTERS

All Terrain IT

Tranquil 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 specializes in the field of rugged, low energy IT systems - providing a range of innovative solutions, bespoke models and portable data centers.

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

Tranquil'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's products making them a **durable and reliable** choice in situations where normal PCs would fail.

Designing the products that suit your needs

With over 15 years of experience our tailor made approach allows us to help 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 substantial 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.

MADE IN BRITAIN

QMS
ISO
9001 : 2015
REGISTERED
Certificate No:328902019

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 digital signage in the retail 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

Microclusters overview

The Microcluster was created as a portable device which would mimic a data center. It is low power, high performing and can be configured to suit every need you searched for in a data center solution.

Everywhere there is no IT infrastructure

The Microcluster has a multi-node structure and is conceived to offer high flexibility for various applications thanks to its integrated switches and power supplies. The multiple node options increase storage or PCIe capability according to the chosen motherboard. Processor options include Intel® Core™ up to i7 and Intel® Xeon® .
Every Microcluster is equipped with a low-profile graphic card, but additional GPU is available.
Customization is possible through colour options and personalised laser engraving.
The Microcluster comes with a storage case to increase transportability. It can even be taken as carry-on for most domestic and international airlines.

Applications

Thanks to its various configurations, the Microcluster can answer specific needs: it can be used as external cloud solution, for AI applications, to create an internal security network or to create a common workspace.
It can also be used as a personal cloud, secured and with only internal accessibility. Data gathering for any situation is therefore possible, be it in emergency situations, on-site computation, or in situations that need additional computing power.
The simplicity in the structure and deployment makes it a processing tool as well as an interface to develop new technologies.
The versatile design of the Microclusters can be shaped in the way you need. Name your purpose and we make it possible.

Overview

	Management Node	Compute Nodes	Max. RAM per C node	Max. storage per C node	Internal Network	GPU support
V4N-7	I5 7300U (x1) or I7-8650U	I5 7300U (x10) or i7-8650U	32 GB	1x M.2 SSD / 1x 2.5'' SSD	1 Gbe	-
V6XD-7	I5 7300U (x1) or I7-8650U	Xeon® D1541 (x4)	128 GB	1x M.2 SSD / 4x 2.5'' SSD	1 Gbe	-
V6XD-7+	I5 7300U (x1) or I7-8650U	Xeon® D1541 (x4) or Xeon® D-2141I (x4) or Xeon® D-2183IT (x4)	128 GB	1x M.2 SSD / 4x 2.5'' SSD	10 Gbe	-
V6XD-7G	I5 7300U (x1) or I7-8650U	Xeon® D1541 (x4)	128 GB	1x M.2 SSD / 2x 2.5'' SSD	1 Gbe	Yes (low profile)
V6XD-7G+	I5 7300U (x1) or I7-8650U	Xeon® D1541 (x4)	128 GB	1x M.2 SSD / 2x 2.5'' SSD	10 Gbe	Yes (low profile)

V4N-7

The versatile multi-tasker

The V4N is a CPU intensive Microcluster which can handle a multitude of entry level tasks. With Intel® vPro technology, this portable solution includes remote access, offering a reliable and adaptable cluster solution.

MOTHERBOARD SPECIFICATIONS

	Management Node (1x)	Compute Nodes (10x)
Motherboard	NUC7i5DNBE or NUC7i7DNBE	NUC7i5DNBE or NUC7i7DNBE
Processor options	Intel® Core™ i5-7300U Dual Core™ - 2.60GHz Base 3.50GHz Max – 3MB or Intel® Core™ i7-8650U Processor (8M Cache, up to 4.20 GHz)	Intel® Core™ i5-7300U Dual Core™ - 2.60GHz Base 3.50GHz Max – 3MB or Intel® Core™ i7-8650U Processor (8M Cache, up to 4.20 GHz)
Memory	2x DDR4 SO-DIMM 1.2V Dual Channel 2133MHz for i5 Dual Channel 2400MHz for i7 Maximum supported memory: 32GB	2x DDR4 SO-DIMM 1.2V Dual Channel 2133MHz for i5 Dual Channel 2400MHz for i7 Maximum supported memory: 32GB
Storage	1x M.2 2280 SSD - Up to 2TB 1x 2.5" SSD – Up to 4TB	1x M.2 2280 SSD - Up to 2TB 1x 2.5" SSD – Up to 4TB
Graphics	Intel® HD Graphics 620	Intel® HD Graphics 620
Network connectivity	2x ASIX AX88179 (via USB 3.0) - to internal switch, 1x Intel® i219-V-LM - to rear IO	1x ASIX AX88179 (via USB 3.0) - to internal switch 1x Intel® i219-V-LM - to internal switch

NETWORK

Switch	Internal MikroTik CRS125-24G-iS-2HnD-IN – Layer 3
Management	Optional: Intel® vPro™ Technology

I/O

Front LED Indicator	Management Node: Power/HDD Compute Nodes: Power
Front	Compute Nodes: Reset switch, 2x USB3.0, HDMI (behind front cover)
Rear	Management Node: Reset switch, 2x HDMI, 2x USB 3.0, 1x RJ45 for LAN, 2x USB 2.0 Switch: 3x RJ45 Ethernet, 1x RJ45 serial port, Micro USB, 2x Wifi Other: 1x Fused IEC input (with switch)

HOUSING

Cooling	Fanned system
Dimensions (h x w x d mm)	186mm (7.32") x 452mm (17.8") x 274mm (10.8")
Weight	17.5 kg (38.6 lbs)

POWER

Power supply	Internal 450W 85-264VAC 50/60Hz / Active PFC / High efficiency (89.5%) / High reliability
Consumption	Up to 420W

ENVIRONMENTAL

Operating temperature	0°C to 40°C (32°F to 104°F)
Non-operating temperature	-10°C to 60°C (14°F to 140°F)
Acoustics	Up to 26dBA
Protection level	IP31

MISCELLANEOUS

Included accessories	Power supply cable
Certification	CE
Warranty	3 years

Motherboards overview V6 product family

Management Node specifications (1x)

	V6XD-7 | V6XD-7+ | V6XD-7G | V6XD-7G+	
Motherboard	NUC7i5DNBE	NUC7i7DNBE
Processor	Intel® Core™ i5-7300U Dual Core™ - 2.60GHz Base 3.50GHz Max – 3MB	Intel® Core™ i7-8650U Processor (8M Cache, up to 4.20 GHz)
Memory	2x DDR4 SO-DIMM 1.2V Dual Channel 2133MHz for i5 or Dual Channel 2400MHz for i7 Maximum supported memory: 32GB	
Storage	1x M.2 2280 SSD - Up to 2TB 1x 2.5" SSD – Up to 2TB	
Graphics	Intel® HD Graphics 620	
Network Connectivity	2x 1Gbe ASIX AX88179 (via USB 3.0) - to internal switch, 1x 1Gbe Intel® i219-V-LM - to rear IO	

Compute Nodes specifications (x4)

	ASRock			SUPERMICRO	
	V6XD-7 | V6XD-7G	V6XD-7 | V6XD-7G	V6XD-7+ | V6XD-7G+	V6XD-7+	V6XD-7+
Motherboard	ASRock D1521D4I	ASRock D1541D4i	ASRock D1541D4i-2L2T	Supermicro X11SDV-8C-TLN2F	Supermicro X11SDV-16C-TLN2F
Processor	Intel® D1541 4 Core™ (8 threads) – 2.4 GHz Base/2.7 GHz Max – 12MB	Intel® D1541 8 Core™ (16 threads) – 2.1 GHz Base/2.7 GHz Max – 12MB	Intel® D1541 8 Core™ (16 threads) – 2.1 GHz Base/2.7 GHz Max – 12MB	Intel® Xeon® Processor D-2141I, 8-Core, 16 Threads	Intel® Xeon® Processor D-2183IT, 16-Core, 32 Threads
Memory	4x DDR4 DIMM 1.2V			4 x RDIMM or LRDIMM	
	Dual Channel 2400MHz			2666/2400/2133MHz ECC DDR4 RDIMM, LRDIMM (Operating speed up to 2133MHz)	2666/2400/2133MHz ECC DDR4 RDIMM, LRDIMM (Operating speed up to 2400MHz)
	Maximum supported memory: 128GB			Up to 256GB Registered ECC RDIMM or 512GB ECC LRDIMM, DDR4-2133MHz in 4 DIMM slots	
Storage	1x M.2 2280 NVMe - Up to 2TB			RAID 0,1,5,10	RAID 0,1,5,11
	4x 2.5" SSD – Up to 4TB each			4x 2.5" SSD – Up to 4TB each	
Expansion for graphic solution (V6XD-7G and V6XD-7G+)	1 x PCIe 3.0 x16			N/A	
Graphics	ASPEED AST2400			ASPEED AST2500	
Network connectivity	2x Intel® i210 1Gbe / VLAN support / Jumbo Frame Support / PCIe v2.1 / iNVM / IEEE 802.3az			2 x RJ45 10GBase-T ports	2 x RJ45 10GBase-T ports
IPMI management	IPMI management is provided by first i210 interface			1 x RJ45 Dedicated IPMI LAN port	

V6XD-7 / V6XD-7+

Microcluster

Portable computing solution

The V6XD-7 is a powerful server grade solution that can handle in-depth tasks. This solution offers high connectivity and incredible performance. With IPMI, this solution is the perfect tool for intensive remote access and management.

MOTHERBOARD OPTIONS - for in-depth specifications see Motherboards Overview (p.24)

Management Node		NUC7i5DNBE or NUC7i7DNBE
Compute Nodes	**V6XD-7**	ASRock D1521D4I or ASRock D1541D4i
	V6XD-7+	ASRock D1541D4i-2L2T or Supermicro X11SDV-8C-TLN2F or Supermicro X11SDV-16C-TLN2F

NETWORK

Switch	**V6XD-7**	Internal MikroTik CRS125-24G-iS-2HnD-IN – Layer 3
	V6XD-7+	Internal Netgear XS716T – Layer 3 512MB RAM

I/O

Front LED Indicator		Management Node: Power/HDD Compute Nodes: Power/HDD/LAN1/LAN2
Front		Compute Nodes: Reset switch
Rear		Management Node: Reset switch, 2x HDMI, 2x USB 3.0, 1x RJ45 for LAN Other: 1x Fused IEC input, I/O for nodes accessible behind service panel
	V6XD-7	Switch: 2x RJ45 Ethernet, 1x RJ45 serial port, USB to Switch, 2x Wifi
	V6XD-7+	Switch: 2x RJ45 Ethernet, USB to Switch

HOUSING

Cooling	Fanned system
Dimensions (h x w x d mm)	192mm (7.32") x 465mm (17.8") x 284mm (10.8")
Weight	15kg (33lbs)

POWER

Power supply	Internal 750W 85-264VAC 50/60Hz / Active PFC / High efficiency (89.5%)
Consumption	Between 500W and 700W, depending on motherboard

ENVIRONMENTAL

Operating temperature	ASRock motherboards: 10°C to 35°C (50°F to 95°F) - Supermicro motherboards: 0°C to 40°C (32°F to 104°F)
Non-operating temperature	ASRock motherboards: -10°C to 60°C (14°F to 140°F) - Supermicro motherboards: -20°C to 60°C (-4°F to 140°F)
Acoustics	Up to 25dBA
Protection level	IP31

MISCELLANEOUS

Certification	CE
Warranty	3 years

V6XD-7G / V6XD-7G+

Microcluster

Portable graphic solution

The V6XD-7G is a powerful server grade solution that can handle challenging tasks. With individual graphics card configuration and increased applications, this is the perfect portable graphic solution.

MOTHERBOARD OPTIONS - for in-depth specifications see Motherboards Overview (p.24)

Management Node		NUC7i5DNBE or NUC7i7DNBE
Compute Nodes	**V6XD-7G**	ASRock D1521D4I or ASRock D1541D4i
	V6XD-7G+	ASRock D1541D4i-2L2T

GRAPHIC CARD

Form Factor	2,713'' H, 5,70'' L single slot for graphic card

NETWORK

Switch	**V6XD-7G**	Internal MikroTik CRS125-24G-iS-2HnD-IN – Layer 3
	V6XD-7G+	Internal Netgear XS716T – Layer 3 512MB RAM

I/O

Front LED Indicator		Management Node: Power/HDD Compute Nodes: Power/HDD/LAN1/LAN2
Front		Compute Nodes: Reset switch
Rear		Management Node: Reset switch, 2x HDMI, 2x USB 3.0, 1x RJ45 for LAN Other: 1x Fused IEC input, I/O for nodes accessible behind service panel
	V6XD-7G	Switch: 2x RJ45 Ethernet, 1x RJ45 serial port, USB to Switch, 2x Wifi
	V6XD-7G+	Switch: 2x RJ45 Ethernet, USB to Switch

HOUSING

Cooling	Fanned system
Dimensions (h x w x d mm)	192mm (7.32") x 465mm (17.8") x 284mm (10.8")
Weight	15kg (33lbs)

POWER

Power supply	Internal 750W 85-264VAC 50/60Hz / Active PFC / High efficiency (89.5%)
Consumption	Between 500W and 550W, depending on PCIe cards

ENVIRONMENTAL

Operating temperature	10°C to 35°C (50°F to 95°F)
Non-operating temperature	-10°C to 60°C (14°F to 140°F)
Acoustics	Up to 25dBA
Protection level	IP31

MISCELLANEOUS

Certification	CE
Warranty	3 years

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