

Contents

Welcome to Issue 220

Highlights

08 Advanced warning

AMD has revealed several details of its upcoming products, including its AM5 CPUs. Richard Swinburne picks apart what it might all mean.

10 Well well well

Is esports wellness the new must-have for gamers or just quackery? Track King has her thoughts.

16 Intel Alder Lake

We review Intel's latest 12th-gen CPUs, including Core i5, i7 and i9 K-series models, to see if Intel's brand-new hybrid processor design can bring the fight to AMD.

22 Asus ROG Strix Z690-I Gaming WiFi

Intel's new CPUs bring with them a new chipset and range of motherboards. We put Asus' first Z690 offering to the test.

26 DDR5 memory

Is DDR5 the future of the PC? Well, yes, probably at some point. But is it a bright future? We put the first sticks from Kingston and Corsair to the test in our Alder Lake test rig.

34 RGB storage

Give your PC 100 per cent RGB coverage with ADATA's illuminated M.2 SSD that offers decent value as well as added flair.

36 LG UltraGear 32GP850

This 32in gaming monitor offers big-screen fun, fantastic gaming performance and good image quality for a great price.



50 Graphics card Labs

Yes, graphics card prices are silly but sometimes needs must. We've tested nine sub-£1,000 cards to see which one is worth an arm or even a leg.

71 Quake Remastered

With sharper textures, updated models and a new expansion, there's plenty on offer with this bargain remaster of a true classic.

72 Psychonauts 2

Everything that made the first game so charming but with none of its frustrations. See why Double Fine's latest game has been given a score of 92 per cent.

78 Inside Alder Lake

What lies beneath that big heatspreader? Edward Chester picks apart the details of Intel's latest CPU microarchitecture.

86 Deep down in DDR5

Alder Lake brings the debut of DDR5 memory with it. Antony Leather explains what the new tech will mean for the next generation of PCs.

90 The Thing

Antti Väisänen's fully 3D-printed mini-ITX case is clever, compact and colourful.

114 Intel is back

James Gorbould revels in the return of proper competition – and availability – to the CPU market.



Cover guide



104

86

78

94



38



28



34

Regulars

- 3 From the editor
- 8 Richard Swinburne
- 10 Tracy King
- 12 Letters
- 14 Incoming
- 46 Custom kit
- 62 How we test
- 64 Elite products
- 70 Inverse look
- 76 Reality check
- 94 Hobby tech
- 100 Customised PC
- 102 How to guides
- 107 For the win
- 108 Retro tech
- 110 Readers' drives
- 114 James Gorbald

Reviewed

36
PRODUCTS
REVIEWED

PROCESSORS

- 16 Intel Core i9-12900K
- 18 Intel Core i7-12700K
- 19 Intel Core i5-12600K

MOTHERBOARDS

- 22 Asus ROG Strix Z690-I Gaming WiFi

MEMORY

- 26 Corsair Dominator Platinum RGB DDR5
- 27 Kingston Fury Beast DDR5

CPU COOLERS

- 28 Thermaltake Toughliquid Ultra 360
- 30 NZXT Kraken X73 RGB

SOLID STATE DRIVES

- 32 WD Red SN700
- 34 ADATA XPG Spectrix S40G

MONITORS

- 36 LG UltraGear 32GP850

GAMING MICE

- 38 Corsair M65 RGB Ultra Wireless

LAPTOPS

- 40 Razer Blade 14

PC SYSTEMS

- 42 CCL Horizon 5 3060 Ti Gaming PC
- 44 Stormforce Onyx Ryzen 5600G

Custom kit

- 46 Reusapad
- 46 Mionix Alioth
- 46 GC101 Game Controller
- 47 BoomPods Zero
- 47 TiMOVO 2 in 1 Headset Hook

Graphics card Labs

- 51 Nvidia GeForce RTX 2060
- 52 AMD Radeon RX 6600
- 53 AMD Radeon RX 6600 XT
- 54 Nvidia GeForce RTX 3060
- 55 Nvidia GeForce RTX 3060 Ti
- 56 AMD Radeon RX 6700 XT
- 57 Nvidia GeForce RTX 3070
- 58 Nvidia GeForce RTX 3070 Ti
- 59 AMD Radeon RX 6800

Games

- 71 Quake Remastered
- 72 Psychonauts 2
- 74 Aragami 2
- 75 The Forgotten City
- 76 Myst

Hobby tech

- 96 The MNT Reform Laptop
- 98 Computer Lib / Dream Machines