Contents

Welcome to Issue 195

Highlights

08 Very expensive chips
Richard Swinburne analyses the cost of developing chips with smaller and smaller transistors.

10 Secondhand downloads
Tracy King analyses the implications of a French court’s rule that consumers have a right to resell Steam games.

22 Mini X570 boards
The first miniature motherboards for AMD’s Z570 chipset turn up, and we look at three of them, including two mini-ITX boards and Asus’ new mini- DTX Impact board.

32 Thermaltake WaterRAM
Thermaltake’s latest DDR4 memory kit not only includes RGB lighting, but also has a waterblock attached to it.

46 Mini-ITX cases
Complementing our mini-ITX build guide and motherboard reviews, we take a look at five of the latest mini-ITX cases.

55 Lightweight gaming mice
The latest trend in gaming mice is lightweight models you can swing round without any resistance. Edward Chester puts several ultra-light mice to the test.

72 Control
Remedy Entertainment’s latest imaginative action thriller arrives, and Rick Lane loves it.

78 Build a super-powered mini monster
Mini PCs no longer have to involve compromising on performance, but you do need to make sure you get the right gear. Antony Leather shows you what you need to build a powerful 12-core gaming rig, and how to put it all together.

86 How SSDs work
We delve into the inner workings of SSDs, and explore if the latest super-fast drives are worth the extra money or not.

95 Hobby tech
Gareth Halfacree talks to Quarter Arcades about their miniaturised arcade machine clones, and also tests the Seeed Studio Grove AI HAT and Pimoroni Inky wHAT.

98 Water cooling Navi
Antony Leather puts a waterblock on one of AMD’s latest GPUs to see how it affects temperatures and boosting performance.

100 How to guides
We show you how to fit a waterblock to an AMD Navi card, and take you through the process of leak-testing a water-cooling loop with a pressure tester.

105 The Sound Blaster story
We talk to founder and CEO of Creative Technology, Sim Wong Hoo, about the history of the company’s iconic Sound Blaster cards.