

# Core i7 Build

Gareth Jones



SWANSEA METROPOLITAN UNIVERSITY

PRIFYSGOL FETROPOLITAN ABERTAWE

# Core i7 Build – Summer 2012

Intel Core i7 3770K – 3.5GHz O/C to 4.8GHz

16GB RAM

3\*2TB 7200RPM hard drives (6TB mass storage)

2\*180GB SSDs in RAID0 (1000MB/s work drives)

1\*60GB SSD – O/S boot drive.



SWANSEA METROPOLITAN UNIVERSITY

PRIFYSGOL FETROPOLITAN ABERTAWE

**ASUS**  
Inspiring Innovation • Persistent Perfection

Motherboard  
**P8Z77-V**  
**PRO**



Wi-Fi GO!



Precision Power Control



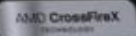
True UASP Support



Network iControl



Easy BIOS Flashback



ASUS P8Z77



**DURATOOL**  
The Best Tools For Every Job

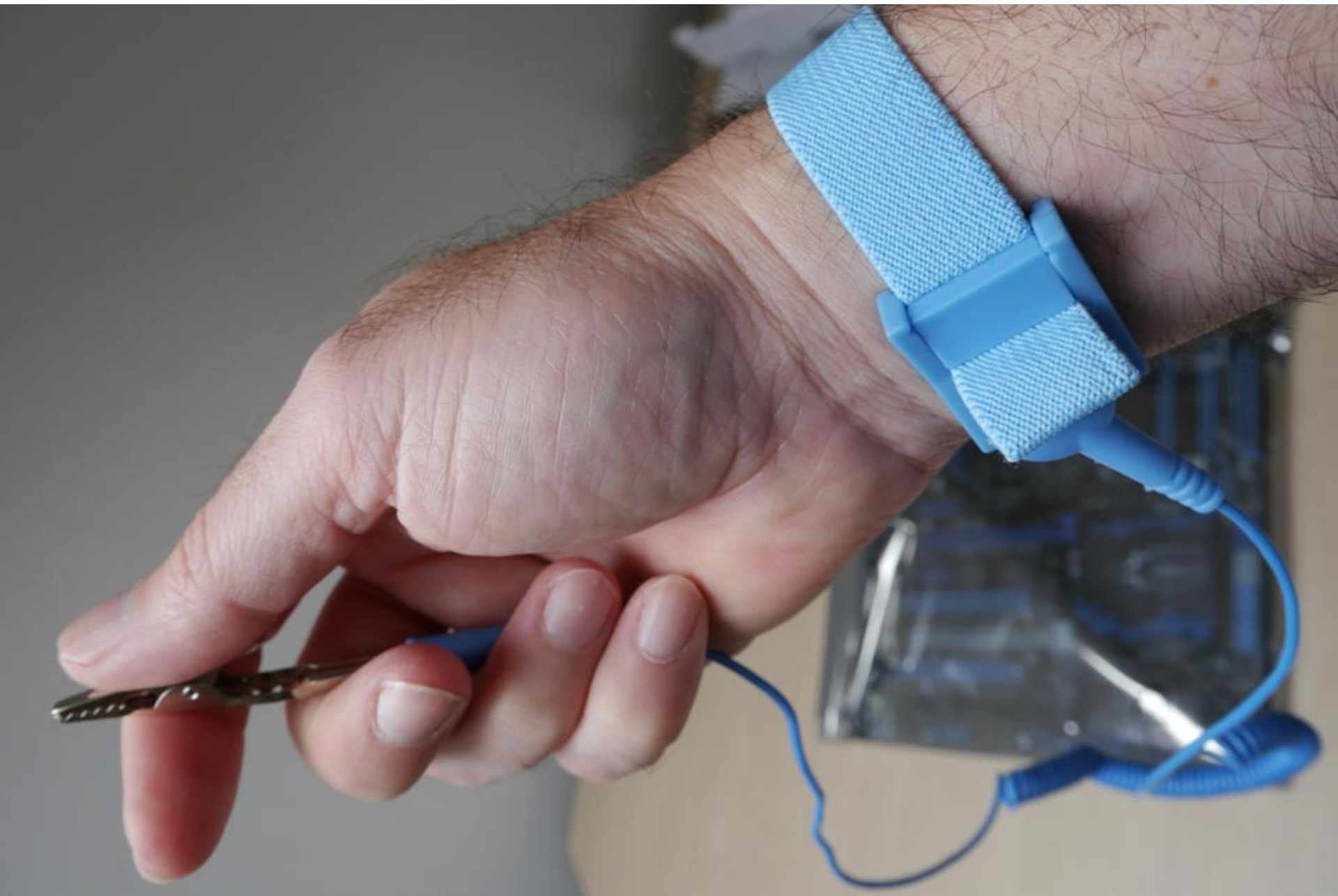
ZD-152

## ANTI-STATIC WRIST STRAP

with built-in

Includ  
one







 **CORSAIR**

ENTHUSIAST SERIES™ V2



HIGH-PERFORMANCE ATX POWER SUPPLY  
ALIMENTATION ATX HAUTE PERFORMANCE  
HOCHLEISTUNGS-NETZTEIL  
ALIMENTATORE ATX AD ALTE PRESTAZIONI  
FUENTE DE ALIMENTACIÓN ATX DE ALTO RENDIMIENTO

650 WATT

# TX650

 CORSAIR



TX650 V2





CORSAIR

**Important Safety Information**  
Consigne de Sécurité Importantes  
Wichtige Sicherheitsinformationen  
Informazioni Importanti sulla Sicurezza  
Instrucciones de Seguridad Importantes  
Безопасность и Важные  
Информация

See the manual for complete user guide or  
visit [www.corsair.com](http://www.corsair.com) for more information.  
Consultez le manuel pour plus de détails ou  
visitez [www.corsair.com](http://www.corsair.com) pour plus d'informations.  
Les informations techniques et les conseils d'utilisation  
sont disponibles sur [www.corsair.com](http://www.corsair.com) ou dans le manuel.  
См. руководство пользователя для получения  
полной информации. [www.corsair.com](http://www.corsair.com)

**CORSAIR** **TX650**

MODEL: CMPSU-650TXV2  
5V-3P  
POWER SUPPLY

| AC INPUT                           | 100 - 240V                      | 5A                              | 4.5A                            | 5000V                           | 5000V                           |
|------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| DC OUTPUT                          | +5.0V                           | +5V                             | +12V                            | +12V                            | +500V                           |
| MAX LOAD                           | 25A                             | 25A                             | 25A                             | 0.5A                            | 5A                              |
| MAXIMUM<br>CONVERTED<br>EFFICIENCY | 80%<br>80%<br>80%<br>80%<br>80% | 80%<br>80%<br>80%<br>80%<br>80% | 80%<br>80%<br>80%<br>80%<br>80% | 80%<br>80%<br>80%<br>80%<br>80% | 80%<br>80%<br>80%<br>80%<br>80% |

1200W TOTAL POWER 80%  
CORSAIR

Hi-POT & Grounding OK

S/N 12117011003010730761

PC-026 2

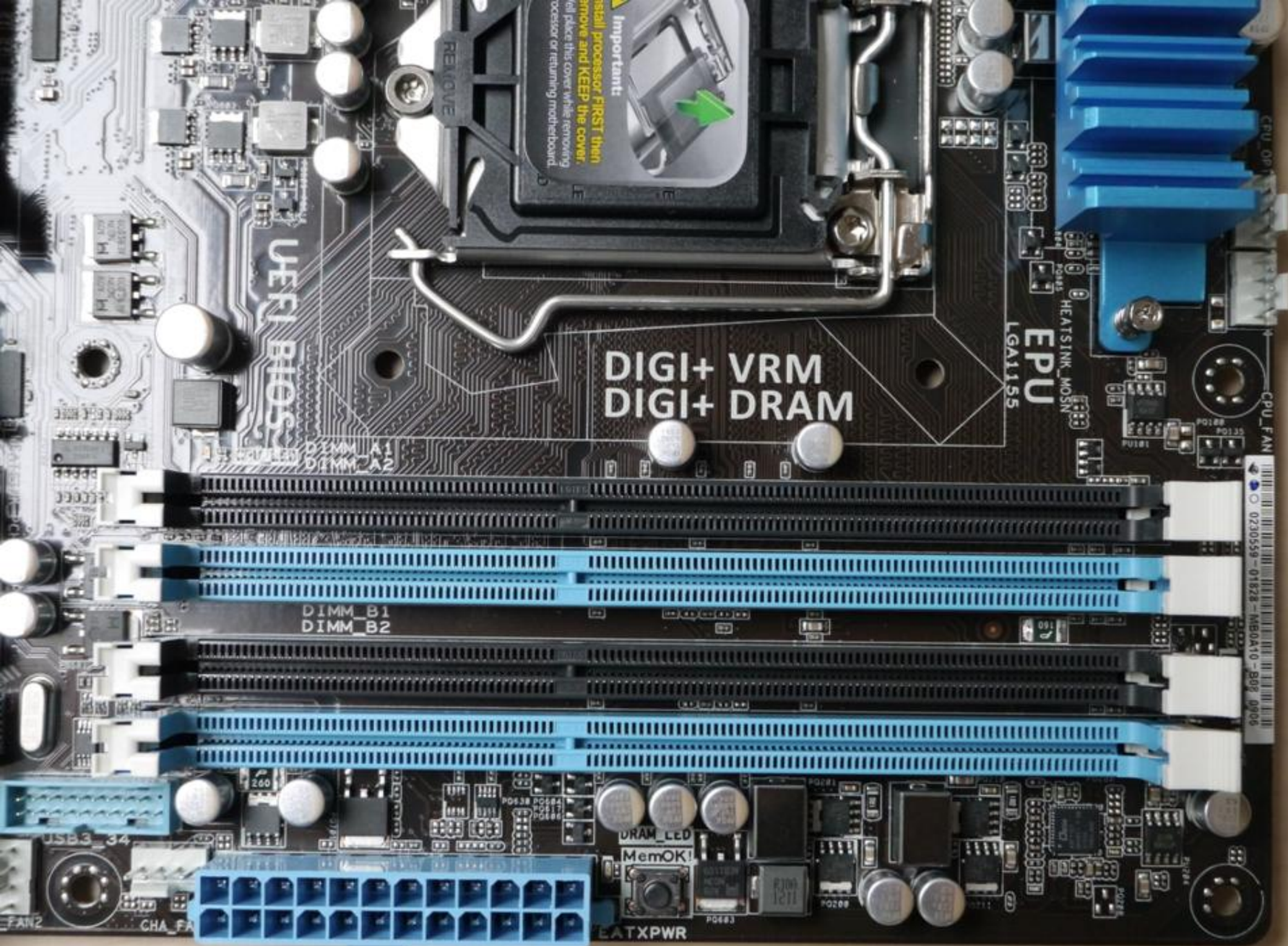
**TX650**

[corsair.com](http://corsair.com)











SATA 6Gb/s

CLRTC 1-2:Normal  
2-3:Clear RTC

BOOT\_DEVICE\_LED



FLBK LED

BIOS FLBK

SATA3G 56

EPU

TPU

TB\_HEADER

PANEL



USB1314



USB1112



USB910



USB78

CHA\_FAN4

+10V\_LED

PWRSW

RESET

SPEAKER

Ethernet  
t Capability  
AN

LAN1\_USB3\_12

HEATSINK\_MOSW

CHA\_FAN3

Wi-Fi GO!

# USB Charger+ Fan Xpert 2

乐

PCIEX 1600 1071  
P8Z77-V PRO

PCIe 3.0

# FC USB BIOS Flashback

## USB 3.0 Boost

UEFI BIOS

REV. 1.02

D33005



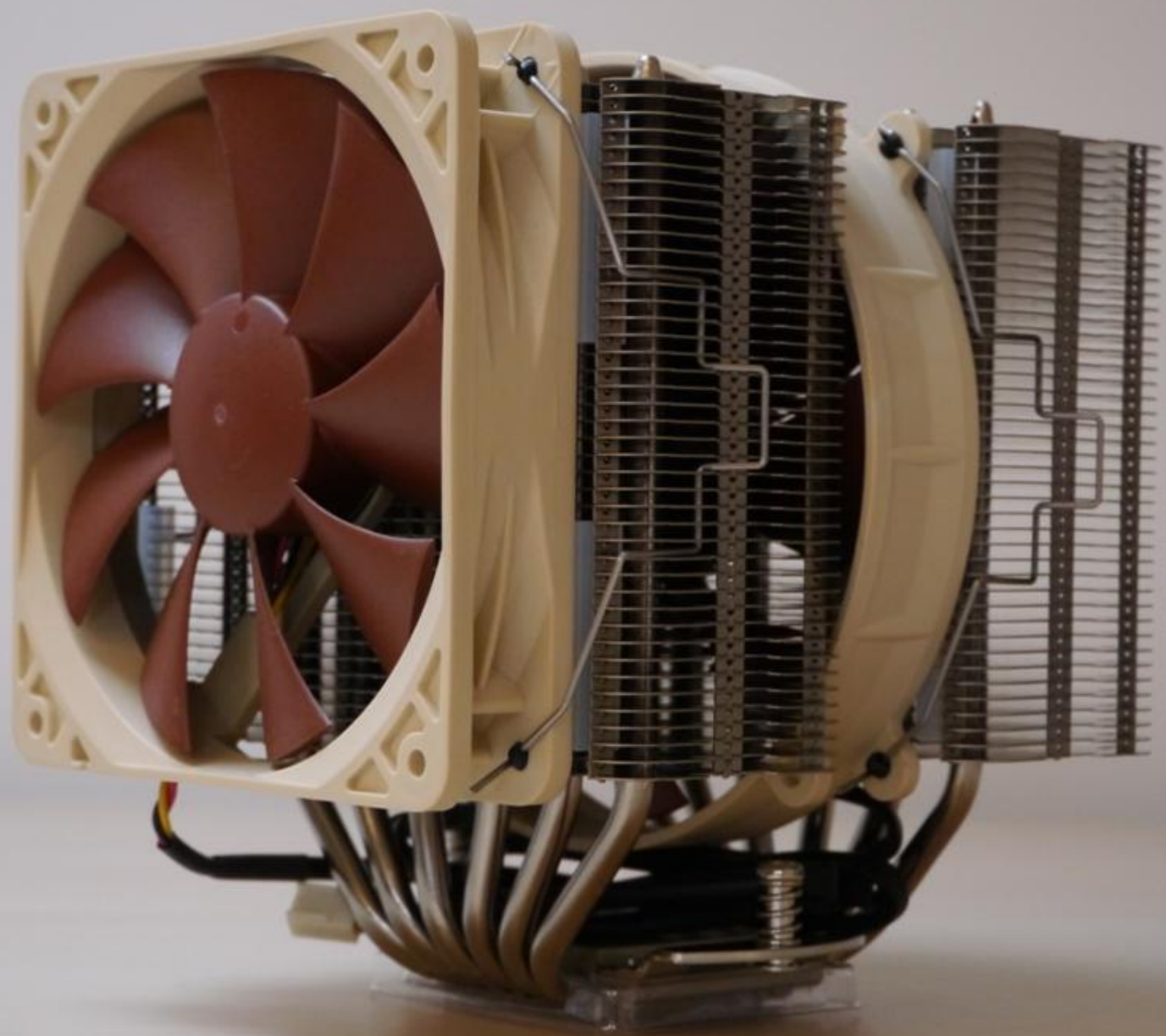
N13219

SAT

BOOT\_DE



Q.C  
2003-11-20  
OK  
(D)





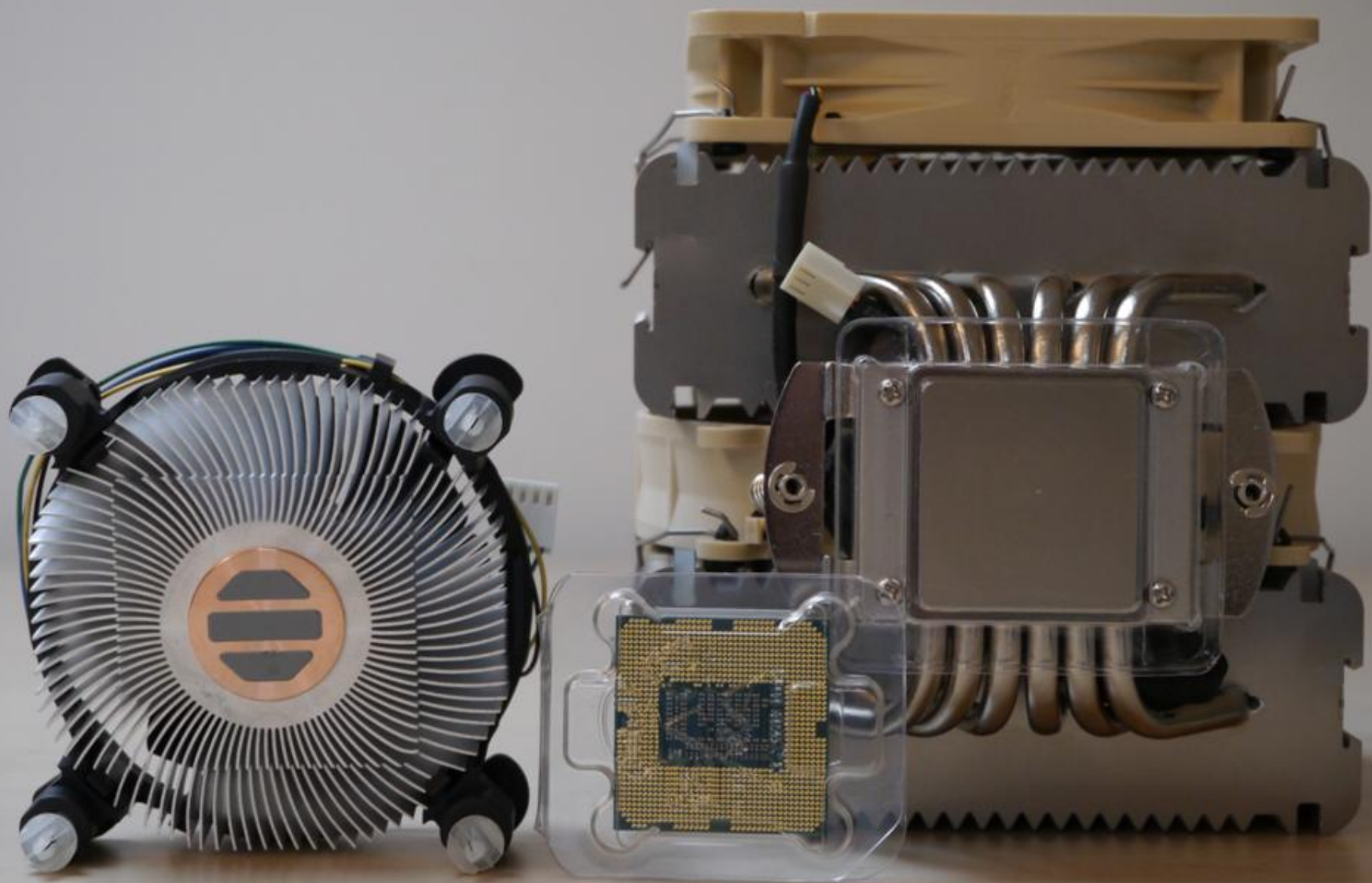
intel<sup>®</sup> inside™

CORE™ i7

INTEL® CORE™ i7 PROCESSOR  
Unlocked & Unleashed

i7-3770K  
LGA1155





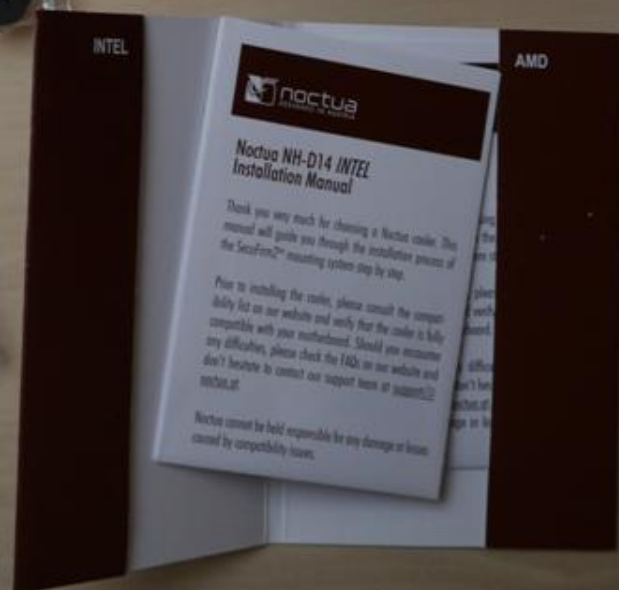




A hand is holding a clear plastic blister pack containing an Intel Core i7-3770K processor. The processor is a square, gold-colored chip with a green circuit board around its edges. The top edge of the chip has a row of gold pins. The chip is mounted on a gold-colored base. The blister pack has a wavy, interlocking design. The background is a plain, light-colored surface.

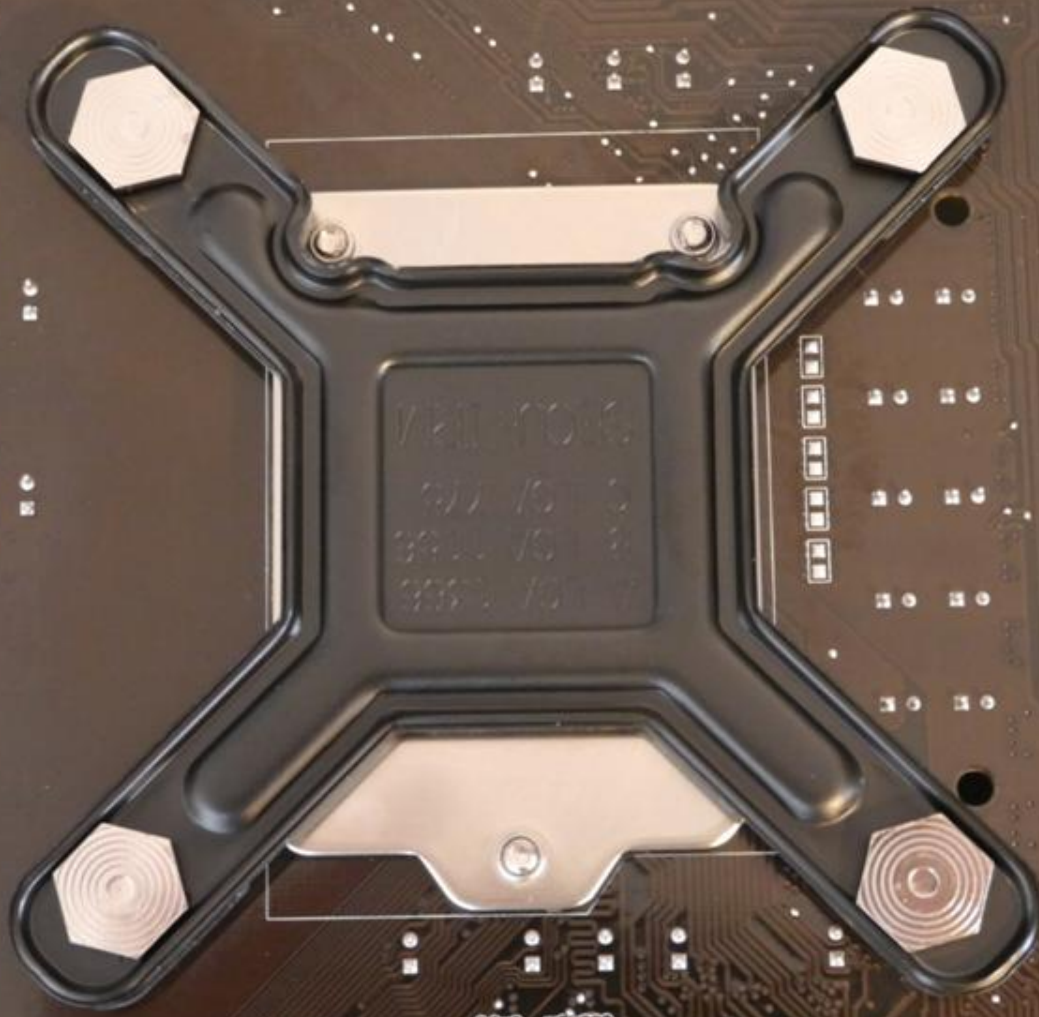
iM C10  
INTEL® CORE™ i7-3770K  
SR0PL 3.50GHZ  
MALAY  
L221B014 e4

INTEL 8343



K1235

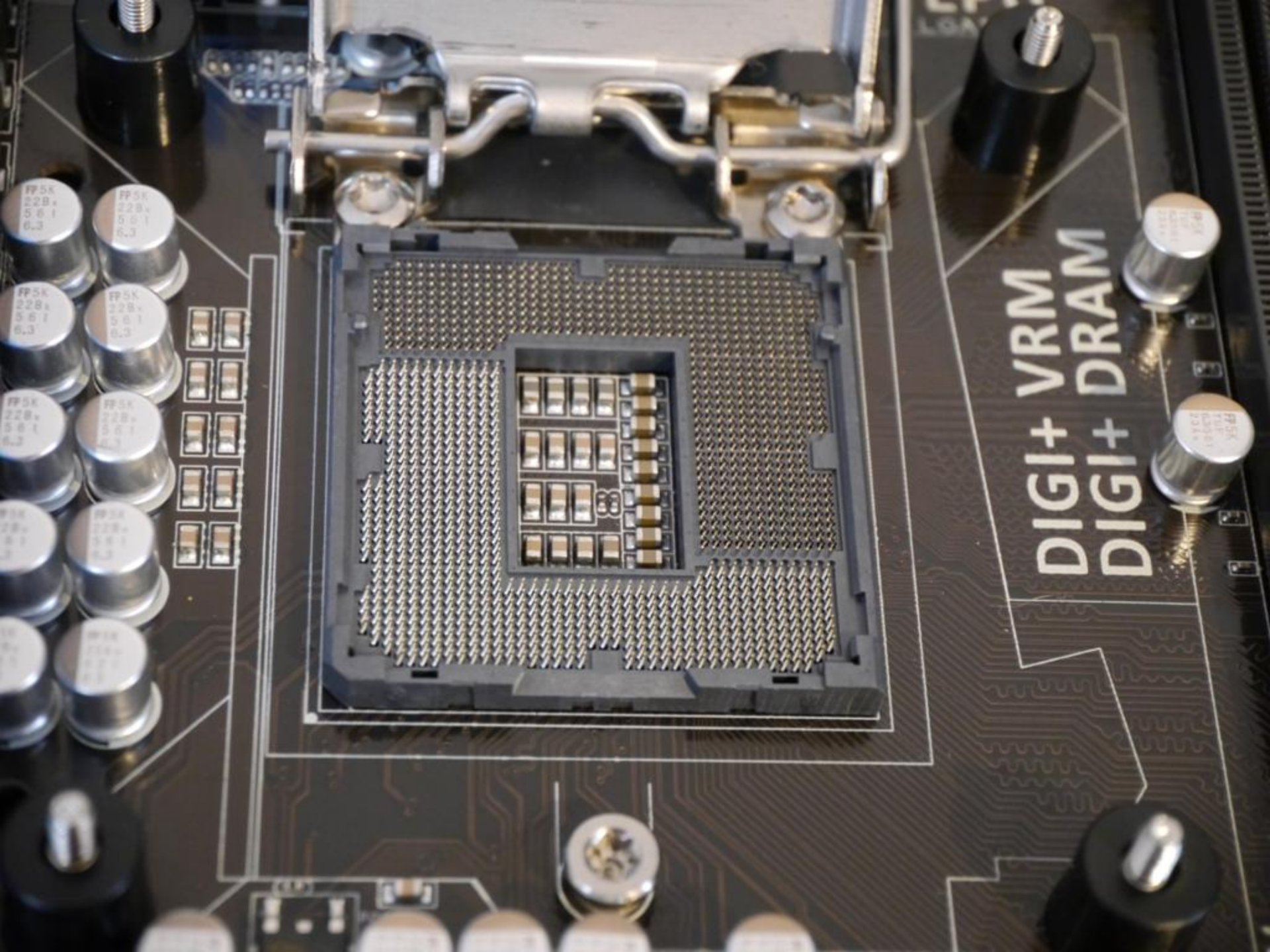
K1235



K1235



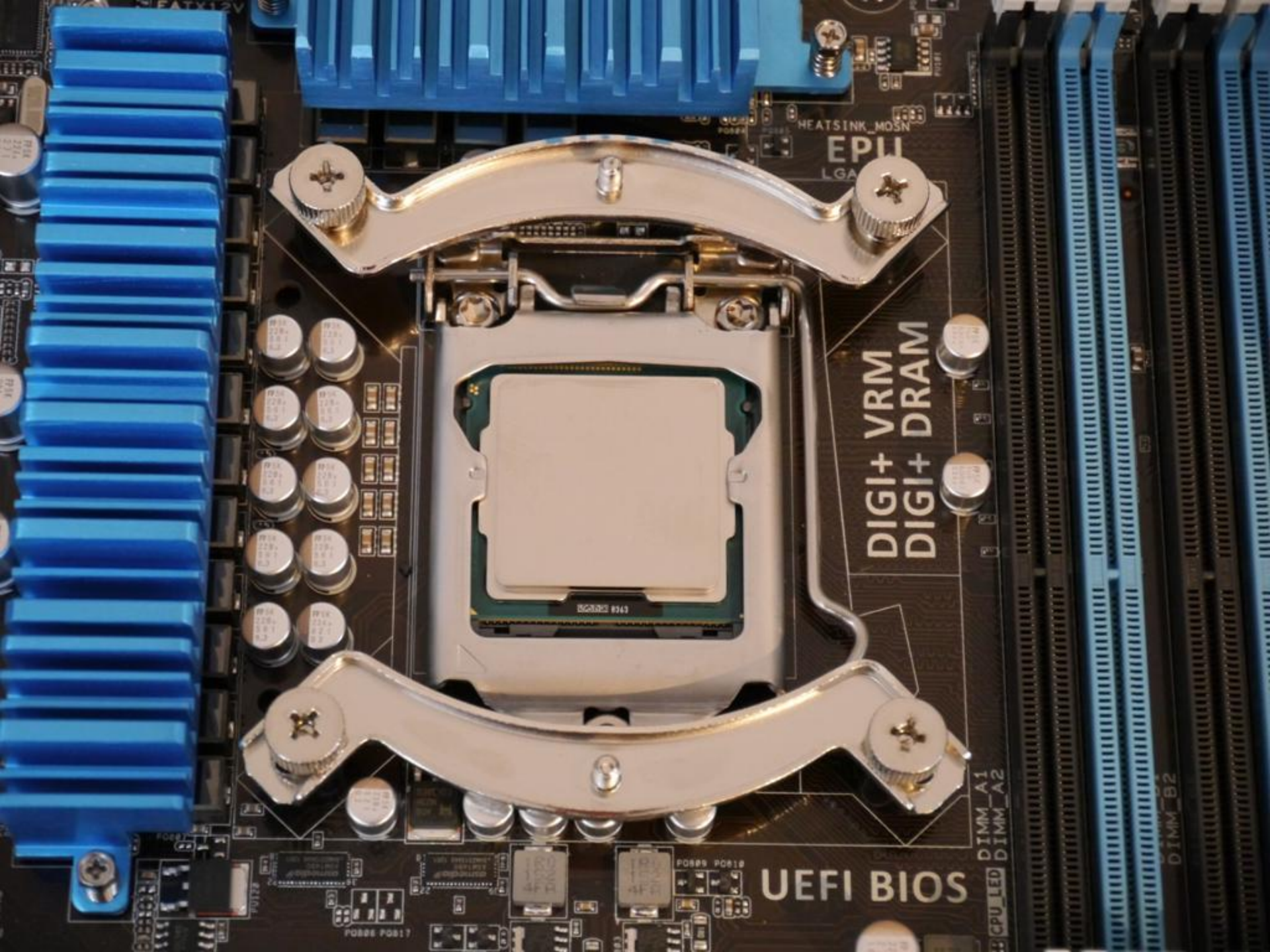




VRM  
DIGI+  
DIGI+  
DRAM









DDR3

16GB

# XMS3



Dual Channel  
PROCESSOR



2 x 8GB



CORSAIR™

XMS3

10576130 122909337

CMX16GX3M2A1600C11

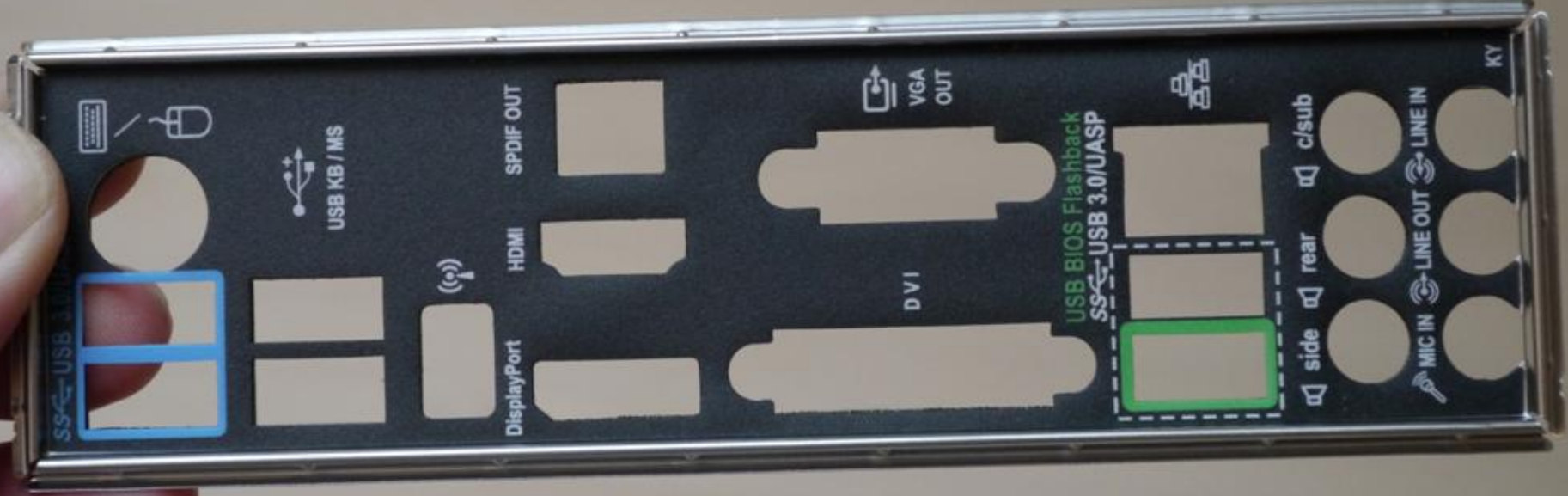
1600MHz 16GB(2X8GB) 11-11-11-30 1.50V ver2.20

MADE IN TAIWAN

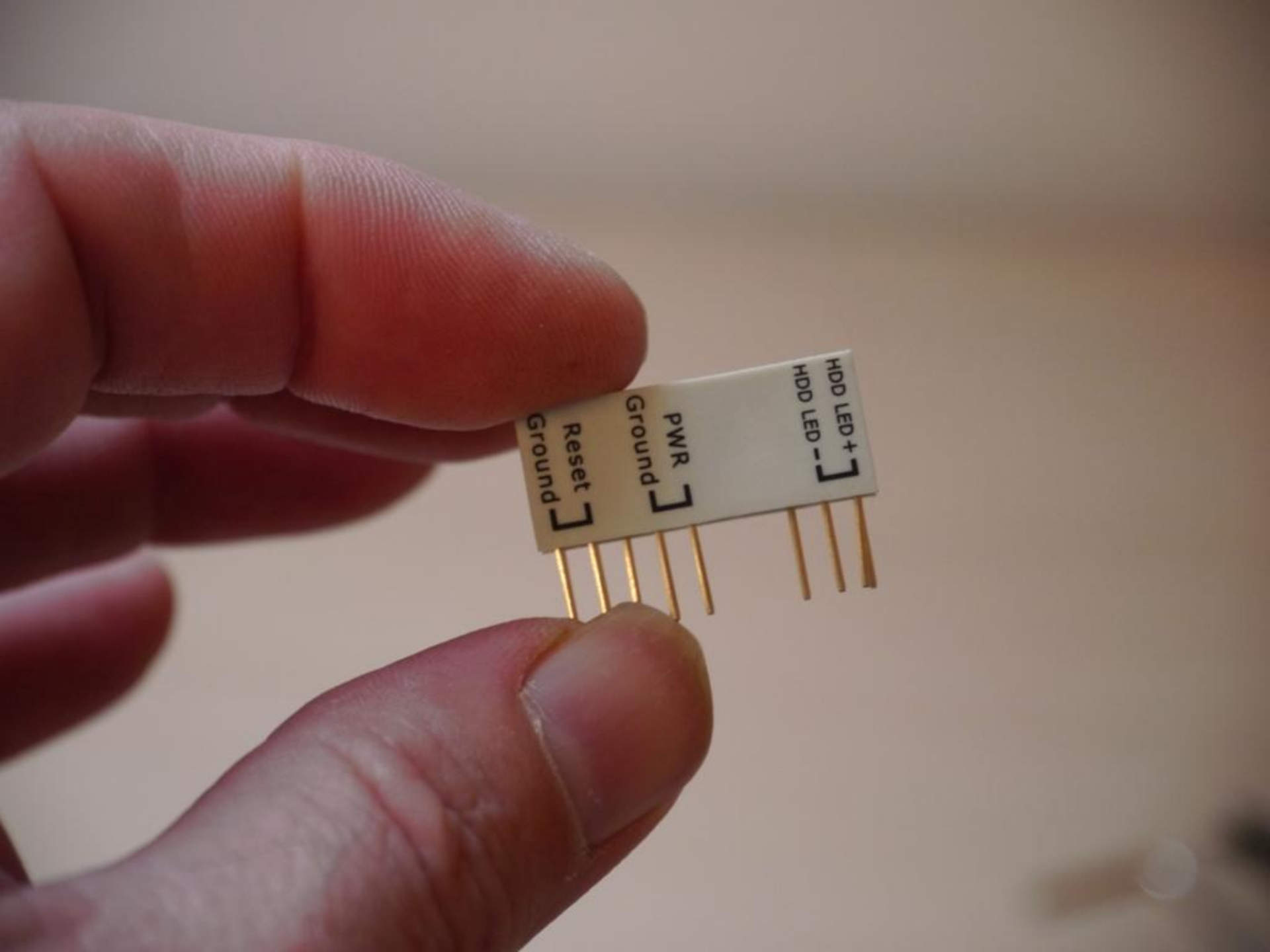
CORSAIR™

XMS3

DDR3







HDD LED +  
HDD LED -

PWR  
Ground

Reset  
Ground





WARRANTY VOID IF REMOVED

FC

CE

RoHS

WEEE

GS

GS

SATA  
3

UP TO 90K IOPS RANDOM WRITE SPEED

READ 555 MB/s  
WRITE 525 MB/s

180GB

SATA 3 2.5" SOLID-STATE DRIVE

CORSAIR™

**CORSAIR™**

Get fast random write speeds with Corsair® Force GS SSD. Take advantage of leading-edge SATA 3 speed and fast Toggle NAND for dramatically better system performance, quicker boot times and faster game level loads. Includes 3.5" adapter for desktop PCs.

Meilleures vitesses d'écriture en aléatoire avec les SSD Corsair Force GS. Une vitesse optimale du SATA 3 et des NAND Toggle rapides pour une meilleure performance, des temps de démarrage et des chargements de jeu plus rapides. Inclut un adaptateur 3.5" pour les PC de bureau.

Obtenez de meilleures vitesses d'écriture en aléatoire avec les SSD Corsair Force GS. Tirez avantage de la vitesse optimale du SATA 3 et des NAND Toggle rapides pour une performance de système bien meilleure, des temps de démarrage et des chargements de niveaux de jeux plus courts. Inclut un adaptateur 3.5" pour les PC de bureau.

Obtenez de meilleures vitesses d'écriture et un meilleur avantage de la vitesse optimale du SATA 3 et bénéficiez d'une performance de système bien meilleure, des temps de démarrage de niveau de jeux plus courts. Inclut un adaptateur 3.5" pour les PC de bureau.

Die Force GS SSD bietet hohe Transferraten bei zufälligen Schreibvorgängen. Profitieren Sie von der führenden SATA 3-Geschwindigkeit und schnellem Toggle NAND für eine höhere System-Performance, schnelleren Boot-Vorgängen und Laden von Spielständen. Inklusive 3.5"-Adapter für Desktop-PC's.

La Force GS SSD assicura la massima velocità di scrittura casuale al vertice con gli SSD Corsair Force GS. Tutti i vantaggi della tecnologia SATA 3 e del Toggle NAND per performance di sistema, tempi di avvio rapidissimi e caricamento dei giochi. Adattato per PC desktop.

Velocità di scrittura casuale al vertice con gli SSD Corsair Force GS. Tutti i vantaggi dell'interfaccia SATA 3 e delle veloci memorie Toggle NAND per performance di sistema radicalmente migliori, tempi di avvio fulminei e rapido caricamento dei giochi. Adattatori da 3.5" per PC desktop.

...ричтура с el SSD Corsair Force GS. Воспользуйтесь  
...ND para un mejor rendimiento de los PCs de escritorio.  
...a juego. Incluye un adaptador para PCs de escritorio.  
...ой записи с накопителями SSD Corsair Force GS. Воспользуйтесь  
...ого стандарта SATA 3 и быстрой памяти Toggle NAND, для того  
...шить производительность системы, ускорить время ее запуска, а также  
...Адаптер 3.5" поставляется в комплекте.



P/N : A8003-E46A-A9P0T

Barracuda® Green  
http://www.samsung.com  
S/N : S2H7J90C505503  
Model : ST2000DL004  
HDD P/N : HD204UI  
LBA 2,907,029,168 2000.00B

SAMSUNG

STX-BarracudaLP16

RATED: +12V / +5V  
SAMSUNG Technology LLC  
6.5A, 5.1MA

Product of CHINA  
DDM: 05.2012  
Site: DGT

1MB = 1,000,000bytes / 1GB = 1,000,000,000 bytes  
Actual accessible capacity may vary from advertised  
due to formatting, partitioning of the hard drive  
to your computer's operating system.

DO NOT CO



CORSAIR

SATA 3  
SOLID-STATE DRIVE

180GB

FORCE  
3

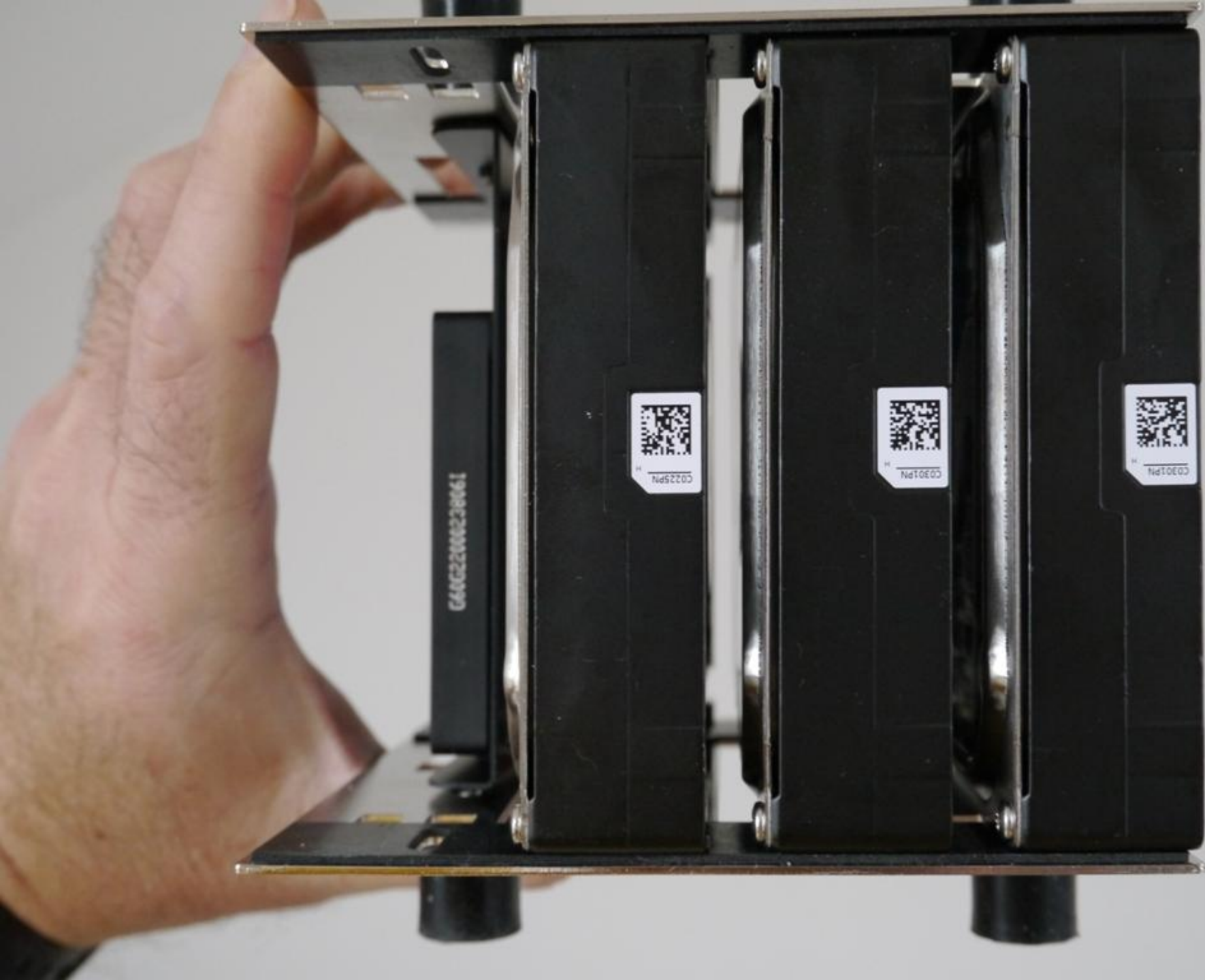
WARRANTY VOID IF REMOVED

PART NUMBER CS550-F180GBQS-BK  
12301700652018820032

MADE IN TAIWAN







CO25PM



NaT00EO



CO301P

1908270002720090

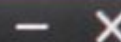




STORAGE SOLUTIONS  
**FORCE SERIES**  
**F60**  
600GB 2.5" Solid-State Drive  
PART NUMBER: CX600M60  
Model of 3D NAND flash memory  
100% NAND  
100% NAND  
100% NAND



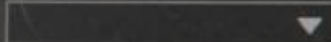
# TurboV EVO Powered by TPU



Manual Mode

Auto Tuning  
GPU Boost

Profile



Save Profile

|                |       |       |       |  |
|----------------|-------|-------|-------|--|
| BCLK Frequency | 100.5 | 100.5 | (MHz) |  |
| CPU Voltage    | 1.160 | 1.160 | (V)   |  |
| DDR Voltage    | 1.500 | 1.500 | (V)   |  |

Advanced Mode

GPU Boost

CPU Ratio

|                 |         |         |     |  |
|-----------------|---------|---------|-----|--|
| VCCSA Voltage   | 0.92500 | 0.92500 | (V) |  |
| CPU PLL Voltage | 1.80000 | 1.80000 | (V) |  |
| PCH Voltage     | 1.05    | 1.05    | (V) |  |
| CHADATA         | 0.500   | 0.500   | X   |  |
| CHA CTRL        | 0.500   | 0.500   | X   |  |
| CHB DATA        | 0.500   | 0.500   | X   |  |

OS Default Settings

Undo

Apply

CPU

CPU Frequency

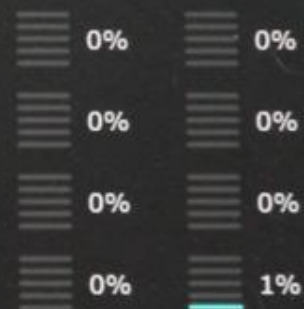
1604.7 MHz

100.3 x 16.0

GPU Frequency

0350.0 MHz

CPU Usage



Auto  
Tuning



Tool

Monitor

Update

System  
Information

Settings



Recycle Bin



Browser Choice



Google Chrome

Prime95

Test Edit Advanced Options Window Help

Main thread

[Sep 18 13:59] Mersenne number primality test program version 25.3  
[Sep 18 14:00] Starting worker threads.

Worker thread #1 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #2 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #3 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #4 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #5 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #6 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #7 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

Worker thread #8 - Self-Test

[Sep 18 14:08] Test 6, 4000 Lucas-Lehmer iterations of M18874367 using FFT length 1024K.  
[Sep 18 14:10] Test 7, 4000 Lucas-Lehmer iterations of M18474367 using FFT length 1024K.

For Help, press F1

Windows Task Manager

File Options View Help

Applications Processes Services Performance Networking Users

CPU Usage

100 %

Memory

1.70 GB

CPU Usage History

Physical Memory Usage History

Physical Memory (MB)

|           |       |
|-----------|-------|
| Total     | 16271 |
| Cached    | 1675  |
| Available | 14523 |
| Free      | 13044 |

Kernel Memory (MB)

|          |     |
|----------|-----|
| Paged    | 116 |
| Nonpaged | 77  |

System

|             |            |
|-------------|------------|
| Handles     | 15183      |
| Threads     | 695        |
| Processes   | 60         |
| Up Time     | 0:00:16:57 |
| Commit (GB) | 1 / 15     |

Resource Monitor...

Processes: 60 CPU Usage: 100% Physical Memory: 10%

Sensor

|             |          |
|-------------|----------|
| Vcore       | 1.144 V  |
| +12V        | 12.096 V |
| +5V         | 5.080 V  |
| +3.3V       | 3.376 V  |
| CPU         | 34.0 °C  |
| MotherBoard | 25.0 °C  |
| CPU fan     | 1251 rpm |
| CPU fan OPT | 1274 rpm |

Monitor

