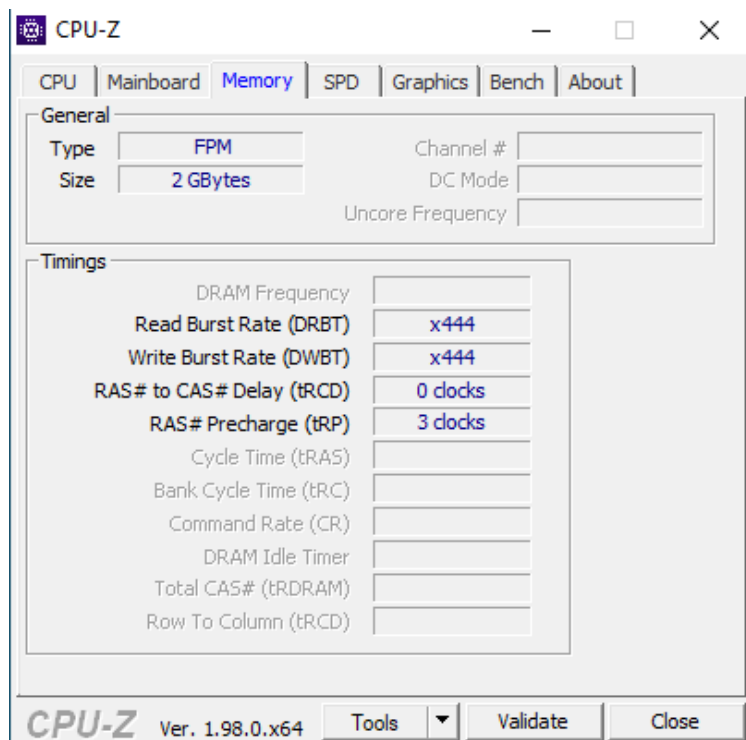
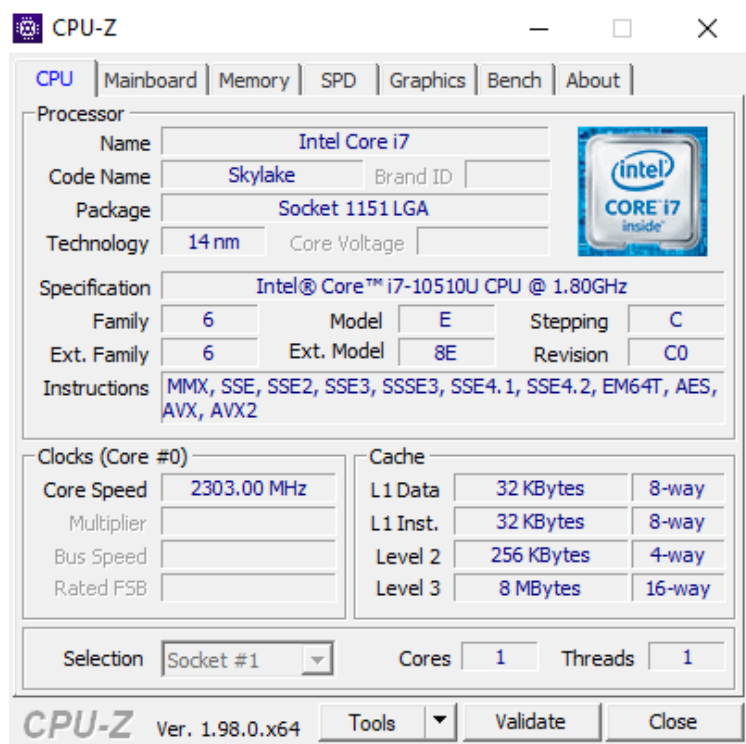


## MONITOR DE HARDWARE y BIOS

1.- Instala estos programas en tu ordenador (o en una máquina virtual) y mira la información que te proporcionan. Identifica la información relativa al microprocesador y a la memoria RAM y localiza en ella los parámetros estudiados en los temas correspondientes.

NOTA: Todos los tests han sido realizados en una máquina virtual.

### a) CPU-Z



## b) Hwinfo

The screenshot shows the Hwinfo application running on a Windows 10 virtual machine. The left sidebar lists various system components, with 'Central Processor(s)' selected. The main window displays detailed information about the Intel Core i7-10510U processor.

| Feature                                | Description                                   |
|--|---|
| <b>General Information</b>             |   |
| Processor Name:                        | Intel Core i7-10510U                          |
| Original Processor Frequency:          | 2300.0 MHz                                    |
| CPU ID:                                | 000806EC                                      |
| CPU Brand Name:                        | Intel(R) Core(TM) i7-10510U CPU @ 1.80GHz     |
| CPU Vendor:                            | GenuineIntel                                  |
| CPU Stepping:                          | V0  |
| CPU Technology:                        | 14 nm   |
| CPU Power Limits (Max):                | Power = Unlimited, Time = Unlimited           |
| CPU Max Junction Temperature (Tj,max): | 100 °C  |
| CPU Type:                              | Production Unit                               |
| Microcode Update Revision:             | Not Updated                                   |
| Number of CPU Cores:                   | 1   |
| Number of Logical CPUs:                | 1   |
| <b>Operating Points</b>                |   |
| CPU LPM (Minimum):                     | 2300.0 MHz = 23 x 100.0 MHz                   |
| CPU HPM (Base):                        | 2300.0 MHz = 23 x 100.0 MHz                   |
| CPU Turbo Max:                         | 4200.0 MHz = 42 x 100.0 MHz [Locked]          |
| Turbo Ratio Limits:                    | 42x (1-4c)                                    |
| CPU Current:                           | 2304.4 MHz = 42 x 54.9 MHz @ 1.7474 V         |
| LLC/Ring Maximum:                      | 4100.0 MHz = 41.00 x 100.0 MHz                |
| LLC/Ring Current:                      | 2249.6 MHz = 41.00 x 54.9 MHz                 |
| CPU Bus Type:                          | QPI   |
| Number of Overclocking Bins:           | Unlimited                                     |
| <b>Cache and TLB</b>                   |   |
| L1 Cache:                              | Instruction: 32 Kbytes, Data: 32 Kbytes       |
| L2 Cache:                              | Integrated: 256 Kbytes                        |
| L3 Cache:                              | 8 Mbytes                                      |
| Instruction TLB:                       | 2MB/4MB Pages, Fully associative, 6 entries   |
| Data TLB:                              | 4 KB Pages, 4-way set associative, 64 entries |
| <b>Standard Feature Flags</b>          |   |
| FPU on Chip:                           | Present                                       |
| Enhanced Virtual-86 Mode:              | Present                                       |
| I/O Breakpoints:                       | Present                                       |
| Page Size Extensions:                  | Present                                       |
| Time Stamp Counter:                    | Present                                       |

The screenshot shows the Hwinfo application running on a Windows 10 virtual machine. The left sidebar lists various system components, with 'Memory' selected. The main window displays detailed information about the system's memory configuration.

| Feature                              | Description            |
|--------------------------------------|------------------------|
| <b>General Information</b>           |                        |
| Total Memory Size:                   | 2 Gbytes               |
| <b>Current Performance Settings</b>  |                        |
| Current Memory Clock:                | 54.9 MHz (1 : 1 ratio) |
| Current Timing (tCAS-tRCD-tRP-tRAS): | 7-7-7-7                |
| Memory Channels Active:              | 1                      |

*El apartado de slots no funcionaba correctamente en la MV*

## c) Aida64

No he podido descargar este programa y probarlo por mi cuenta, los servidores de descarga no funcionaban correctamente (06/11 17:30).

He buscado información acerca de este programa, está más orientado al benchmark que al monitoreo.

**AIDA64 CPUID**

|                 |   |       |   |                 |               |
|-----------------|---|-------|---|-----------------|---------------|
| Processor       | QuadCore AMD A10-7850K  |       |   |                 |               |
| Code Name       | Kaveri  |       |   |                 |               |
| Platform        | Socket FM2+   |       |   |                 |               |
| Stepping        | KV-A1   |       |   |                 |               |
| CPUID Vendor    | AuthenticAMD  | 28 nm |   |                 |               |
| CPUID Name      | AMD A10-7850K APU with Radeon(TM) R7 Graphics   |       |   |                 |               |
| CPUID Rev.      | 06F   | 30    | 1 | Core Voltage    | 0.984 V       |
| CPU Clock       | 3720.0 MHz  |       |   | L1I / L1D Cache | 96 KB / 16 KB |
| Multiplier      | 37x   |       |   | L2 Cache        | 2 MB          |
| Bus Clock       | 100.5 MHz   |       |   | L3 Cache        |               |
| Bus Speed       |   |       |   | L4 Cache        |               |
| Instruction Set | x86, x86-64, MMX, MMX+, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, SSE4A, XOP, AVX, FMA, FMA4, AES |       |   |                 |               |
| Motherboard     | Gigabyte GA-F2A88XM-D3H   |       |   |                 |               |
| BIOS Version    | F5a   |       |   |                 |               |
| Chipset         | AMD A88X, AMD K15.3   |       |   |                 |               |
| Integr. Video   | Active (AMD Kaveri)   |       |   |                 |               |
| Memory Type     | Dual Channel DDR3-2145 SDRAM (9-11-10-31 CR2)   |       |   |                 |               |
| Memory Clock    | 1072.4 MHz  |       |   | DRAM:FSB Ratio  | 32:3          |

CPU #1 / Core #1      AIDA64      Save      Close

**AIDA64 Cache & Memory Benchmark**

|          | Read        | Write       | Copy        | Latency |
|----------|-------------|-------------|-------------|---------|
| Memory   | 53109 MB/s  | 52779 MB/s  | 50959 MB/s  | 61.1 ns |
| L1 Cache | 730.98 GB/s | 365.55 GB/s | 730.96 GB/s | 1.1 ns  |
| L2 Cache | 370.79 GB/s | 232.86 GB/s | 332.10 GB/s | 5.2 ns  |
| L3 Cache | 236.26 GB/s | 158.08 GB/s | 198.80 GB/s | 11.5 ns |
| L4 Cache |             |             |             |         |

|                |  |                    |            |
|----------------|--|--------------------|------------|
| CPU Type       | HexaCore Intel Core i7-4930K (Ivy Bridge-E, LGA2011) |                    |            |
| CPU Stepping   | S1   |                    |            |
| CPU Clock      | 3400.1 MHz (original: 3400 MHz)                      |                    |            |
| CPU FSB        | 100.0 MHz (original: 100 MHz)                        |                    |            |
| CPU Multiplier | 34x  | North Bridge Clock | 3400.1 MHz |
| Memory Bus     | 933.4 MHz  | DRAM:FSB Ratio     | 28:3       |
| Memory Type    | Quad Channel DDR3-1866 SDRAM (9-10-9-27 CR2)         |                    |            |
| Chipset        | Intel Patsburg X79, Intel Ivy Bridge-E               |                    |            |
| Motherboard    | Gigabyte GA-X79-UD3                                  |                    |            |

AIDA64 / BenchDLL 4.1.611-x64 (c) 1995-2014 FinalWire Ltd.

Save      Start Benchmark      Close

**2.- ¿Qué puede ocurrir en nuestro equipo si poco después de arrancar escuchamos un pitido largo y dos cortos? ¿Y si escuchamos un pitido largo?**

Un pitido largo y dos cortos → Problema relacionado con la tarjeta gráfica, bien sea la propia tarjeta o el conector.

Un pitido largo → Problema relacionado con la RAM, puede ser porque algún módulo o slot está averiado o porque están mal conectados.