

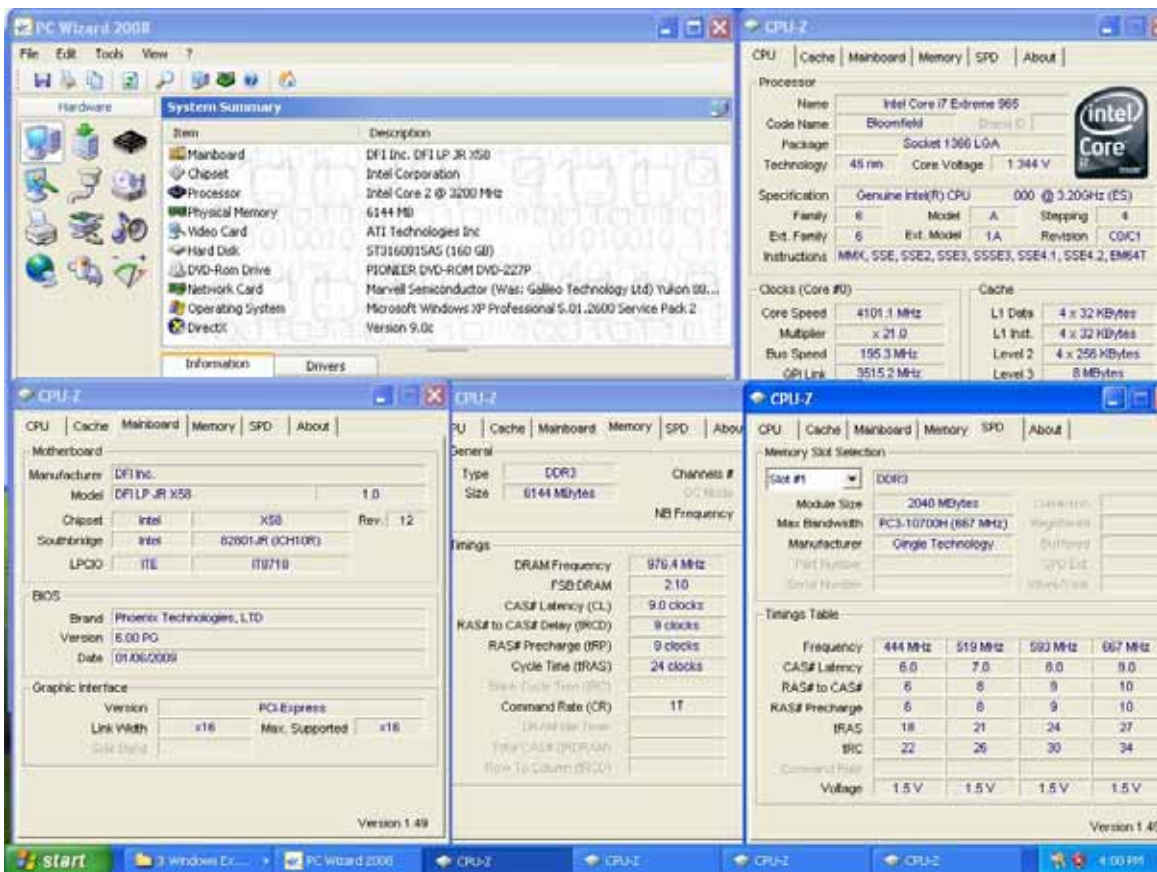
# DFI JR X58-T3H6 OC Guideline (BIOS version: 2009/1/6)

## ➤ Example of over-clock

Device overview



System info:



➤ **Core i7 965@195MHz\*21 DDR3 1954MHz BIOS Item highlights :**

**Genie BIOS:**

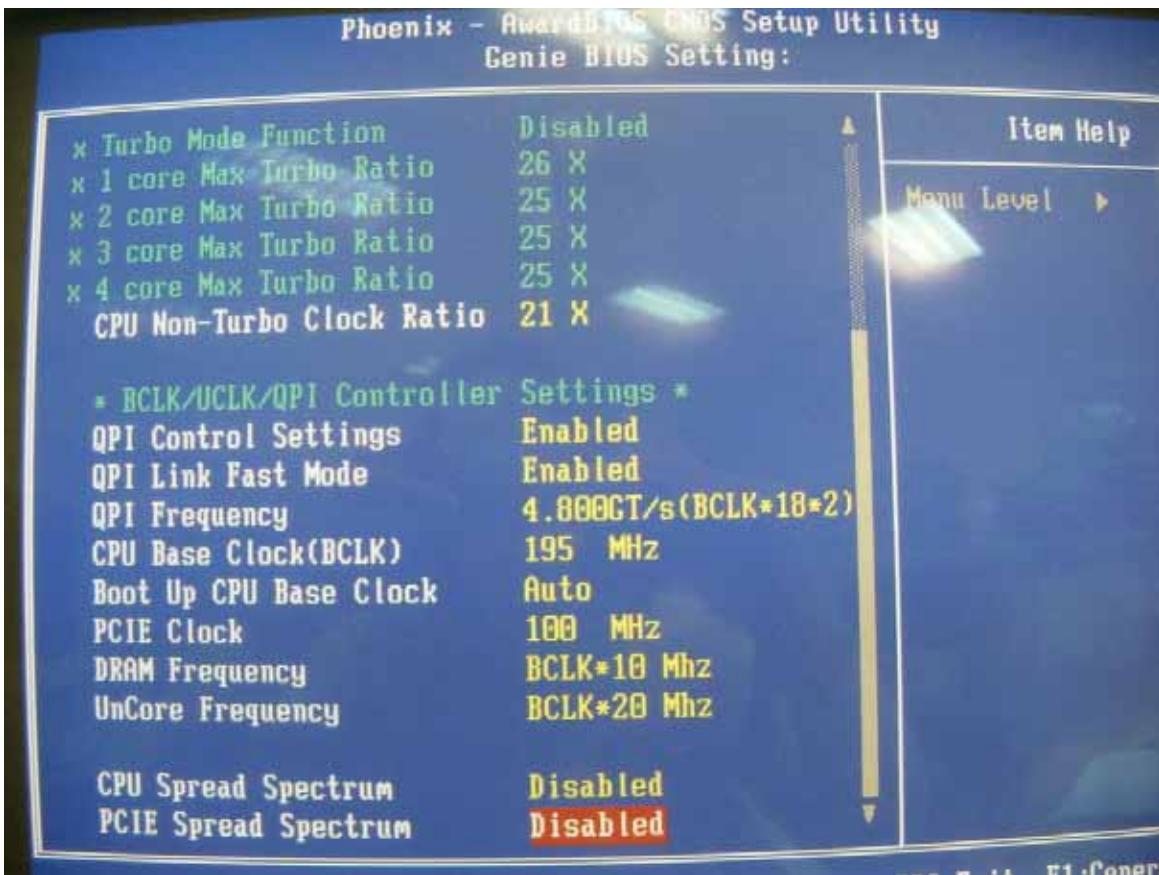
- CPU Non-Turbo Clock Ratio : **21 X**
- QPI Frequency : **4.800 GT /s**
- CPU Base Clock (BCLK) : **195 Mhz**
- DRAM Frequency : **1333 Mhz**
- UnCore Frequency : **2666 Mhz**

**Voltage Settings**

- CPU VID Control : **1.36250v**
- DRAM Bus Voltage : **1.725v**
- CPU VTT Voltage : **1.42v**
- IOH Analog Voltage : **1.10v**

**DRAM Timing: \*\*\*all are at AUTO, change by Memset under OS**

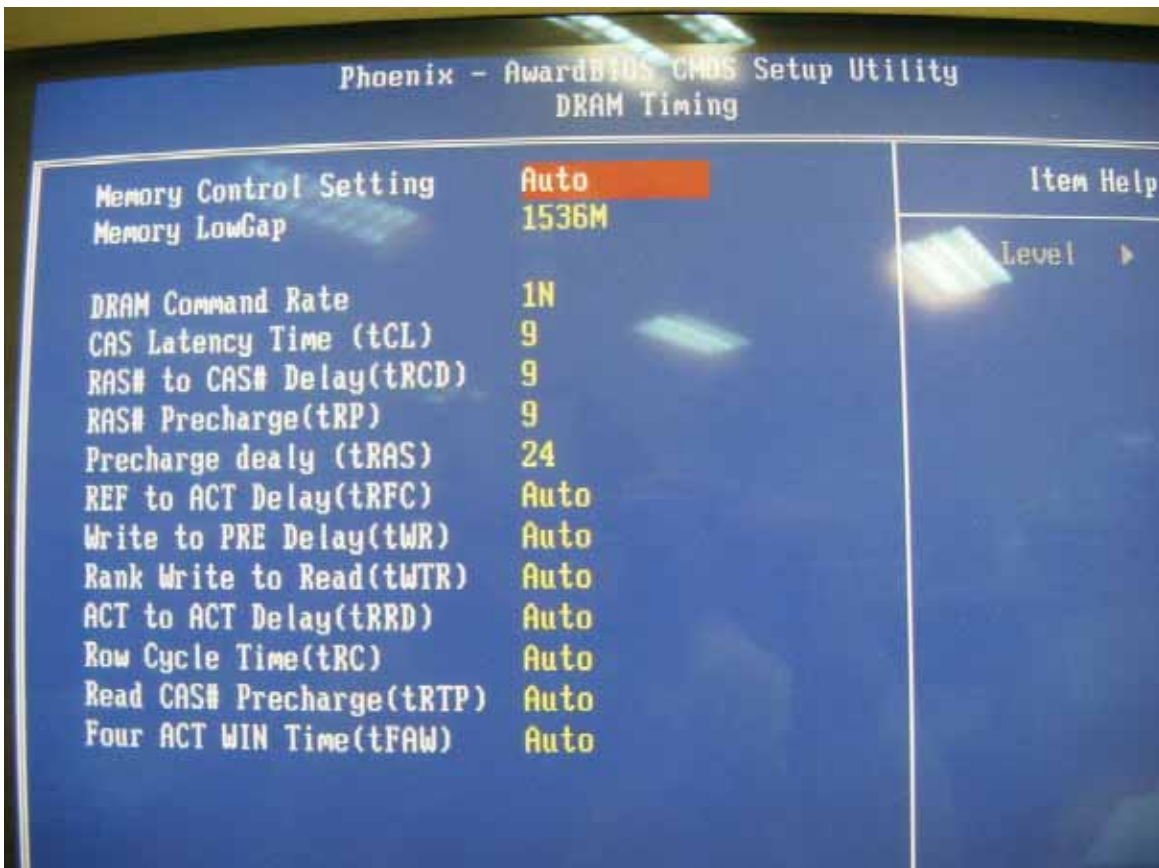
- DRAM Command Rate : **1N**
- CAS Latency Time (tCL) : **9**
- RAS# to CAS# Delay (tRCD) : **9**
- RAS# Precharge (tRP) : **9**
- Precharge Delay (tRAS) : **24**
- REF to ACT Delay (tRFC) : **Auto**



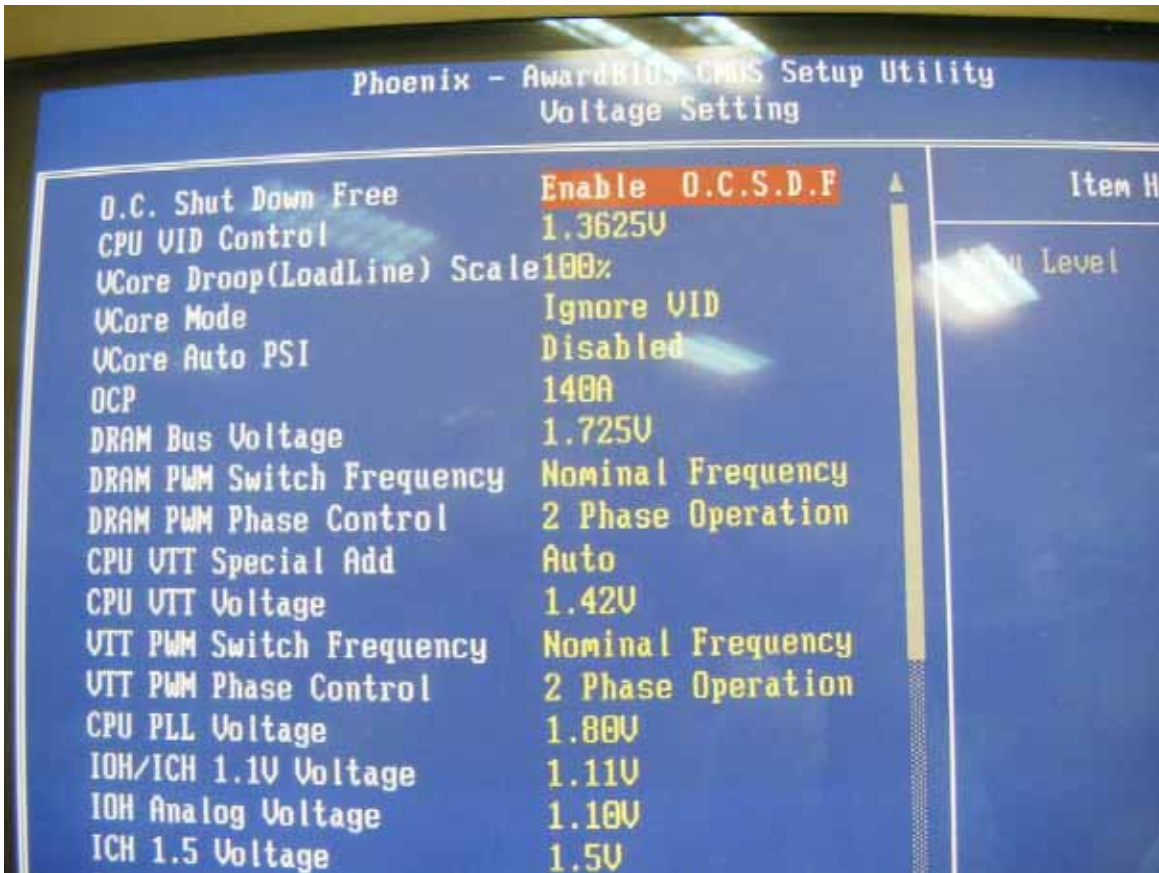
CPU feature settings : Disable all feature except core Multi-Processing



DRAM timing : Leave to default values



Voltage setting : Please be attention on CPU, DRAM, CPU PLL and VTT voltages.



Temperature of system : If CPU temperature around 45~55 will be better for over clocking.



➤ OC Result: Intel Core i7 965 OC from 133MHz to 195MHz

JR X58-T3H6\_Core i7 965\_195MHz\*21\_PI 1M, DRAM timing @ 9-9-24= 10.078S

The screenshot displays a Windows XP desktop with several open applications. On the left, a CPU-Z window shows the processor details for an Intel Core i7 Extreme 965. In the center, another CPU-Z window shows the memory slot selection for DDR3. On the right, a SuperPI window shows the results of a 1M calculation, with a PI value of 10.078s. A small dialog box in the foreground says "I calculation is done!".

**CPU-Z Processor Information:**

Name	Intel Core i7 Extreme 965
Code Name	Bloomfield
Package	Socket 1366 LGA
Technology	45 nm
Core Voltage	1.344 V
Specification	Genuine Intel(R) CPU 000 @ 3.20GHz (ES)
Family	6
Model	A
Stepping	4
Ext. Family	6
Ext. Model	1A
Revision	C0C1
Instructions	MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, EM64T

**CPU-Z Clocks (Core #0):**

Core Speed	4093.2 MHz
Multiplier	x 21.0
Bus Speed	194.9 MHz
QPI Link	3500.0 MHz

**CPU-Z Cache:**

L1 Data	4 x 32 KBytes
L1 Inst.	4 x 32 KBytes
Level 2	4 x 256 KBytes
Level 3	8 MBytes

**SuperPI 1M Calculation Results:**

```

1M Calculation Start. 19
Total memory = 214741
Available real memory = 214741
Allocated memory = 8381
0h 00m 00.156s The initial
0h 00m 00.594s Loop 1 fini
0h 00m 01.094s Loop 2 fini
0h 00m 01.610s Loop 3 fini
0h 00m 02.110s Loop 4 fini
0h 00m 02.625s Loop 5 fini
0h 00m 03.125s Loop 6 fini
0h 00m 03.641s Loop 7 fini
0h 00m 04.156s Loop 8 fini
0h 00m 04.656s Loop 9 fini
0h 00m 05.172s Loop 10 fini
0h 00m 05.672s Loop 11 fini
0h 00m 06.188s Loop 12 fini
0h 00m 06.688s Loop 13 fini
0h 00m 07.203s Loop 14 fini
0h 00m 07.703s Loop 15 fini
0h 00m 08.203s Loop 16 fini
0h 00m 08.703s Loop 17 fini
0h 00m 09.188s Loop 18 fini
0h 00m 09.625s Loop 19 fini
0h 00m 10.078s PI value out
Checksum: DA6E4156
The checksum can be validated at:
http://www.xtremesystems.org.
    
```

➤ Modifying FSB in OS: CPUID's Set FSB ver 2\_1\_89

The screenshot shows a Windows XP desktop with the SetFSB application open in the foreground. The SetFSB window displays the current FSB/DDR/PCI-E/PCI frequency as 195.3/390.6/100.0/33.6 MHz and the selected frequency as 195.3/390.6/100.0/33.6 MHz. The current CPU frequency is shown as 4101.6 MHz. In the background, a CPU-Z window shows the processor and cache information, identical to the previous screenshot.

**SetFSB 2.1.89.0 Control Panel:**

Clock Generator: **ICS9LPRS916JKL**  Ultra

Current FSB/DDR/PCI-E/PCI Frequency: 195.3/390.6/100.0/33.6 MHz

Select FSB/DDR/PCI-E/PCI Frequency: 195.3/390.6/100.0/33.6 MHz

Current CPU Frequency: Internal **MMT** 4101.6 MHz

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End