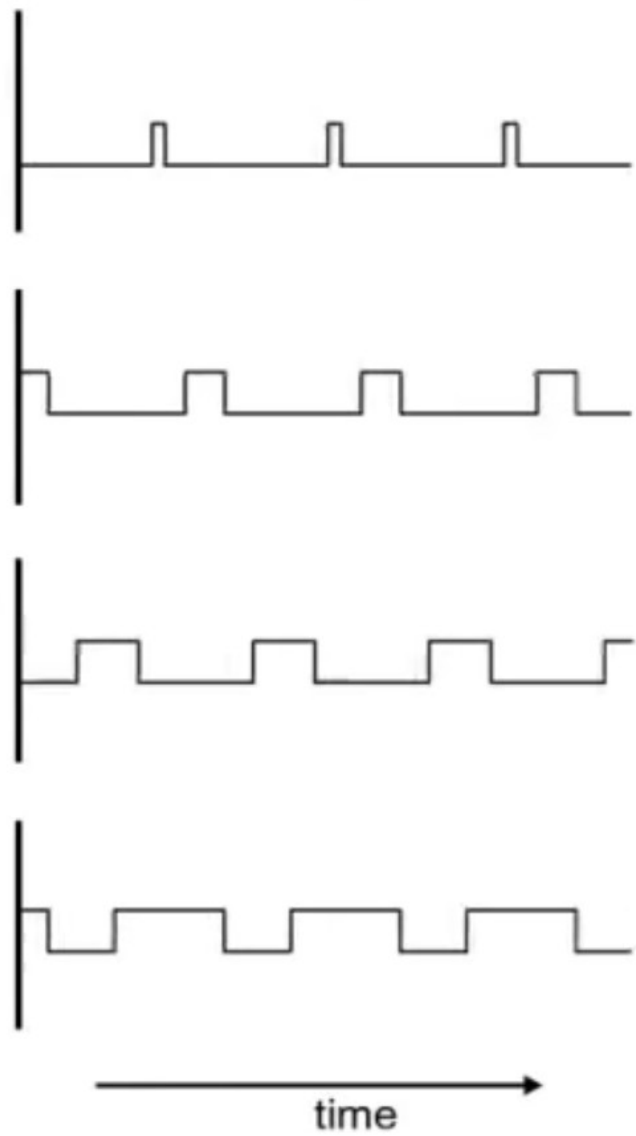
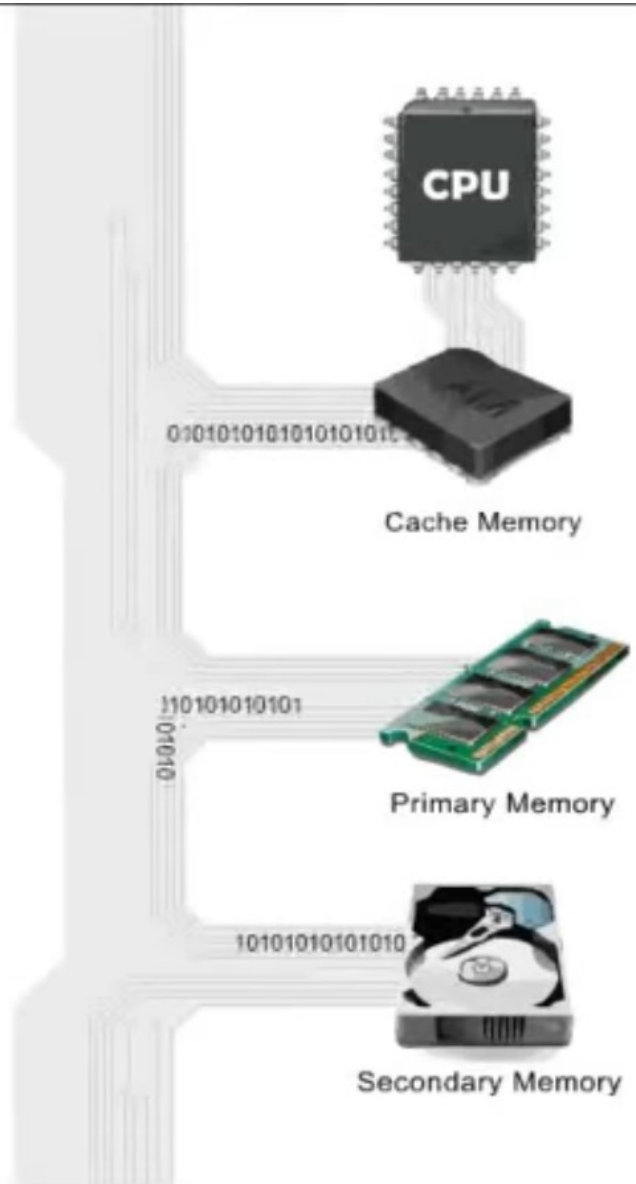
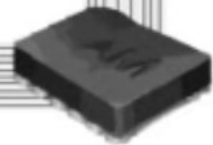
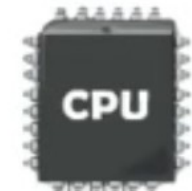
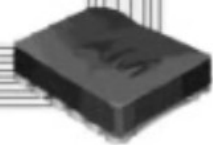
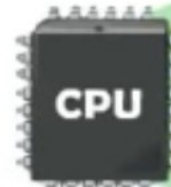


DMA
(Direct Memory Access)

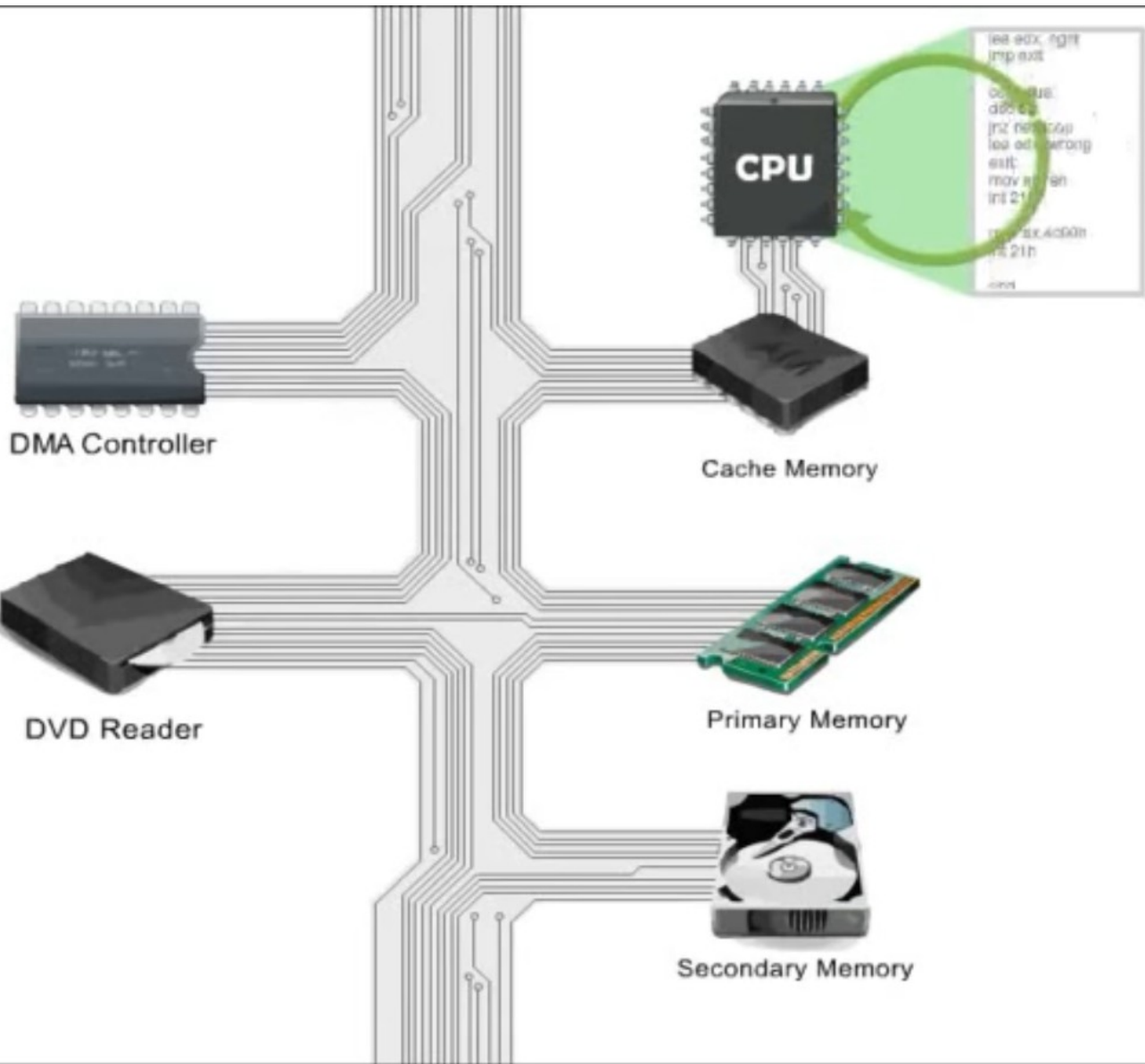




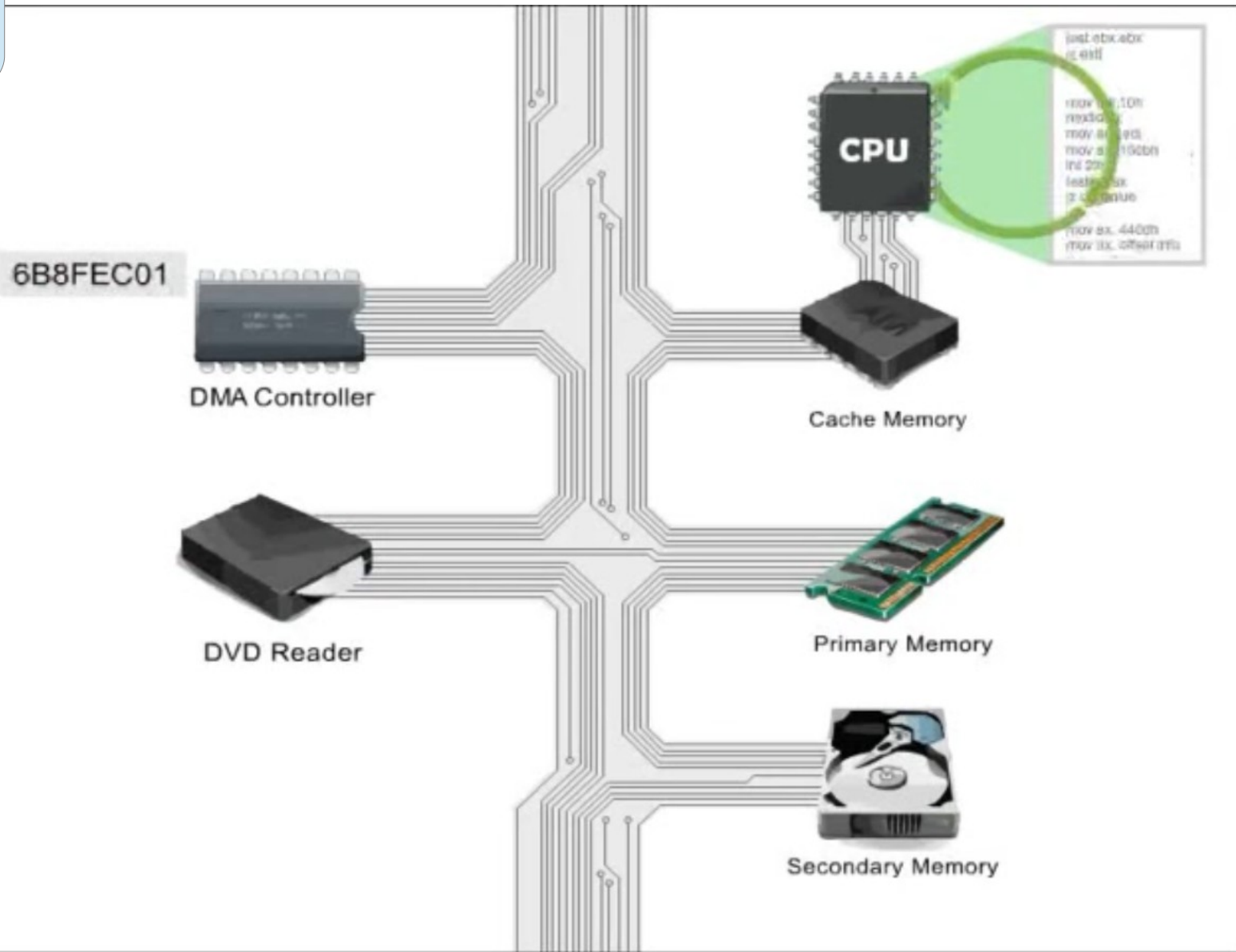


```
end  
    .code  
    .model small  
    .stack  
    .data  
    info db "Info sup (i)"  
    right db "Right CDS"  
    wrong db "Wrong CDS"  
    mov ax, offset  
    .code  
    mov ax, @data
```

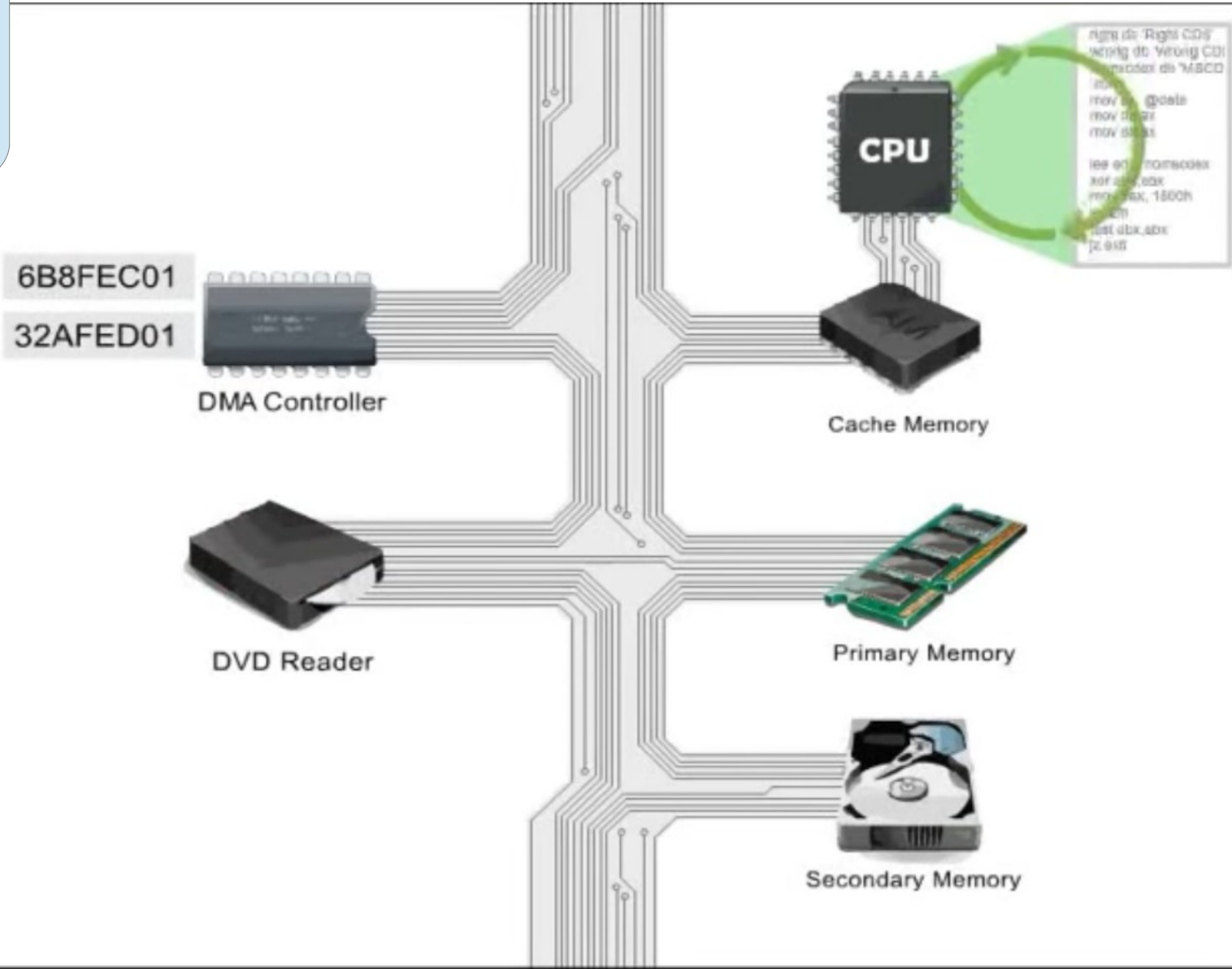




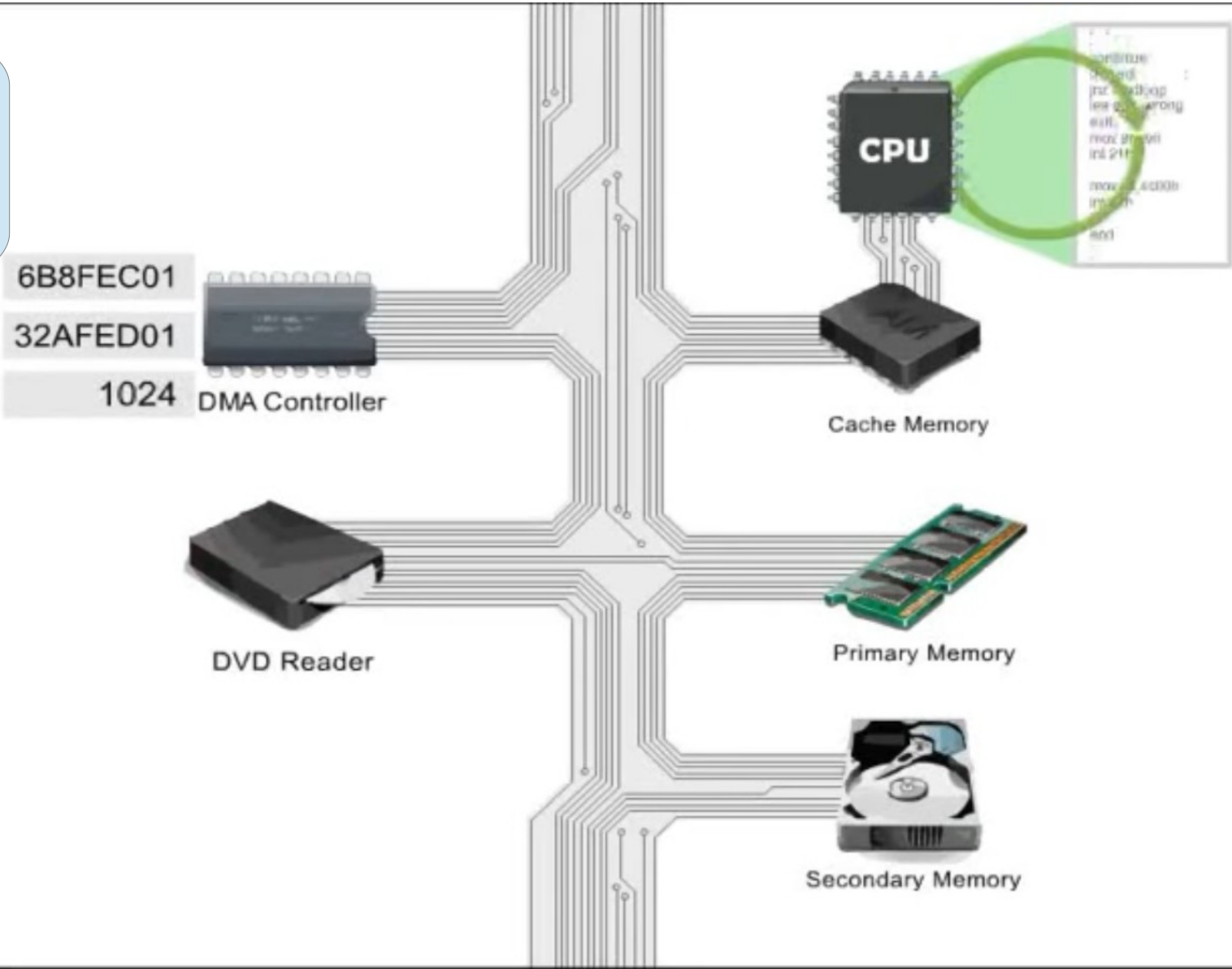
Adr. Périphérique



Adr. Périphérique
Adr. données



Adr. Périphérique
Adr. Données
Quantité



6B8FEC01
32AFED01
1024

DMA Controller

CPU

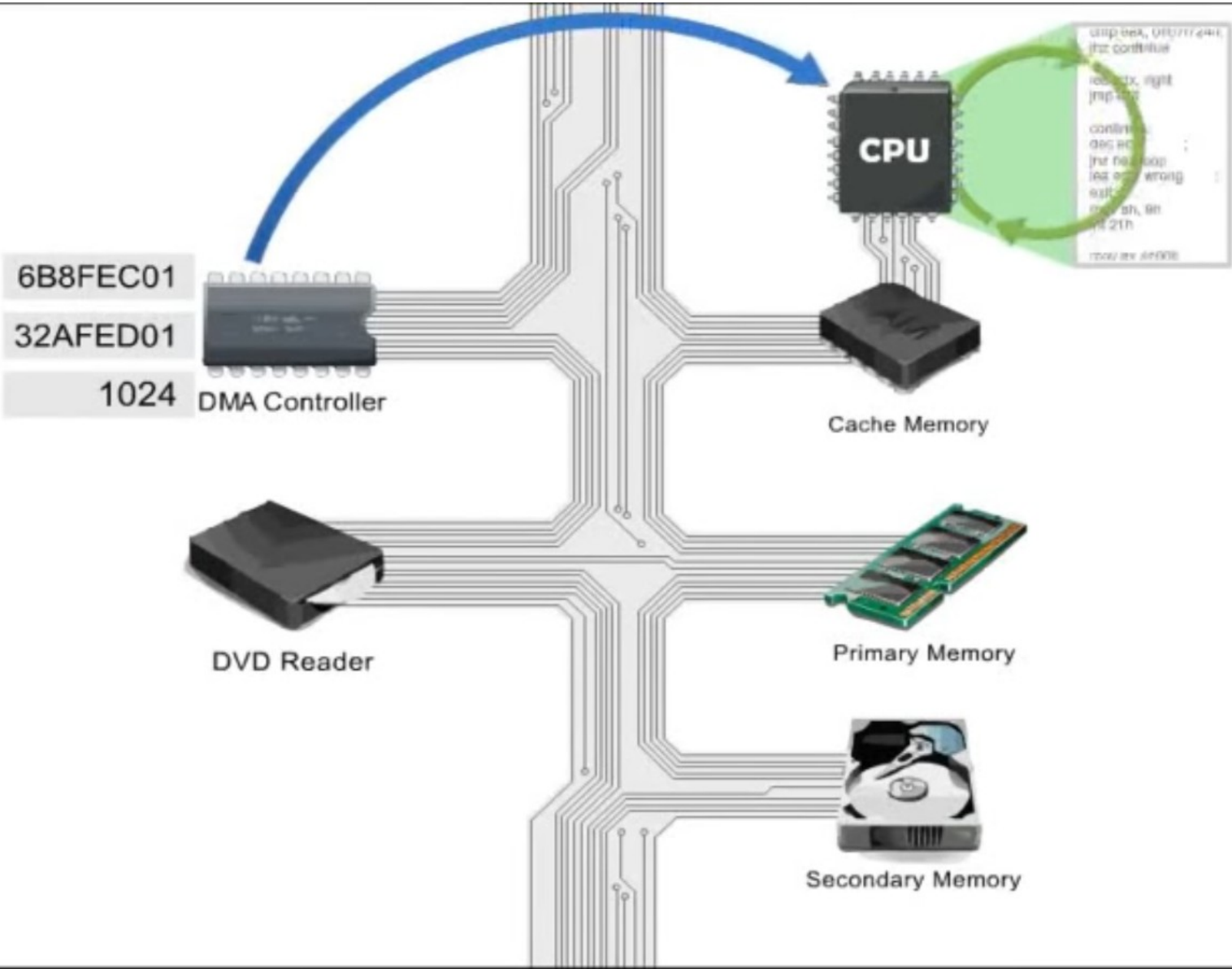
Cache Memory

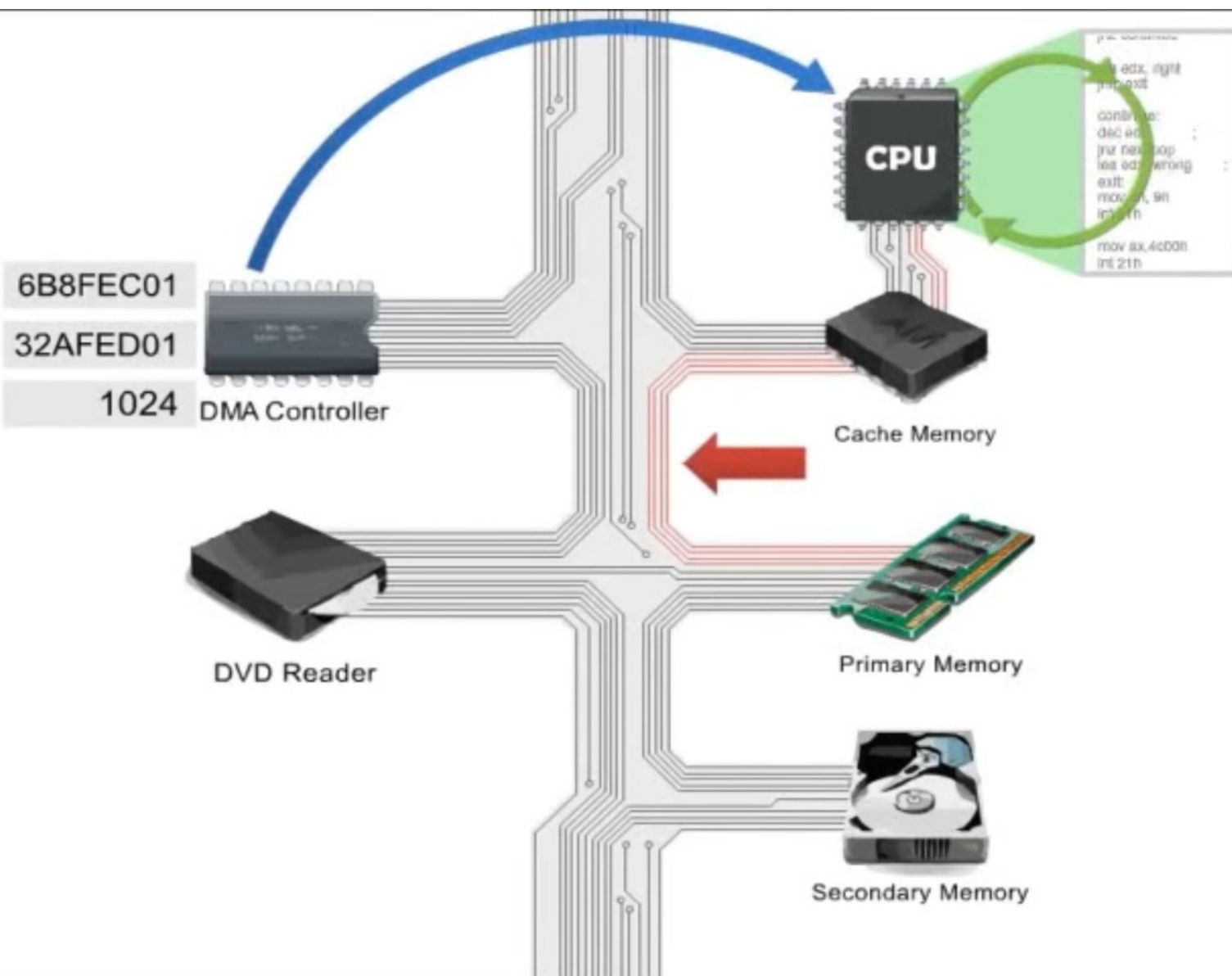
DVD Reader

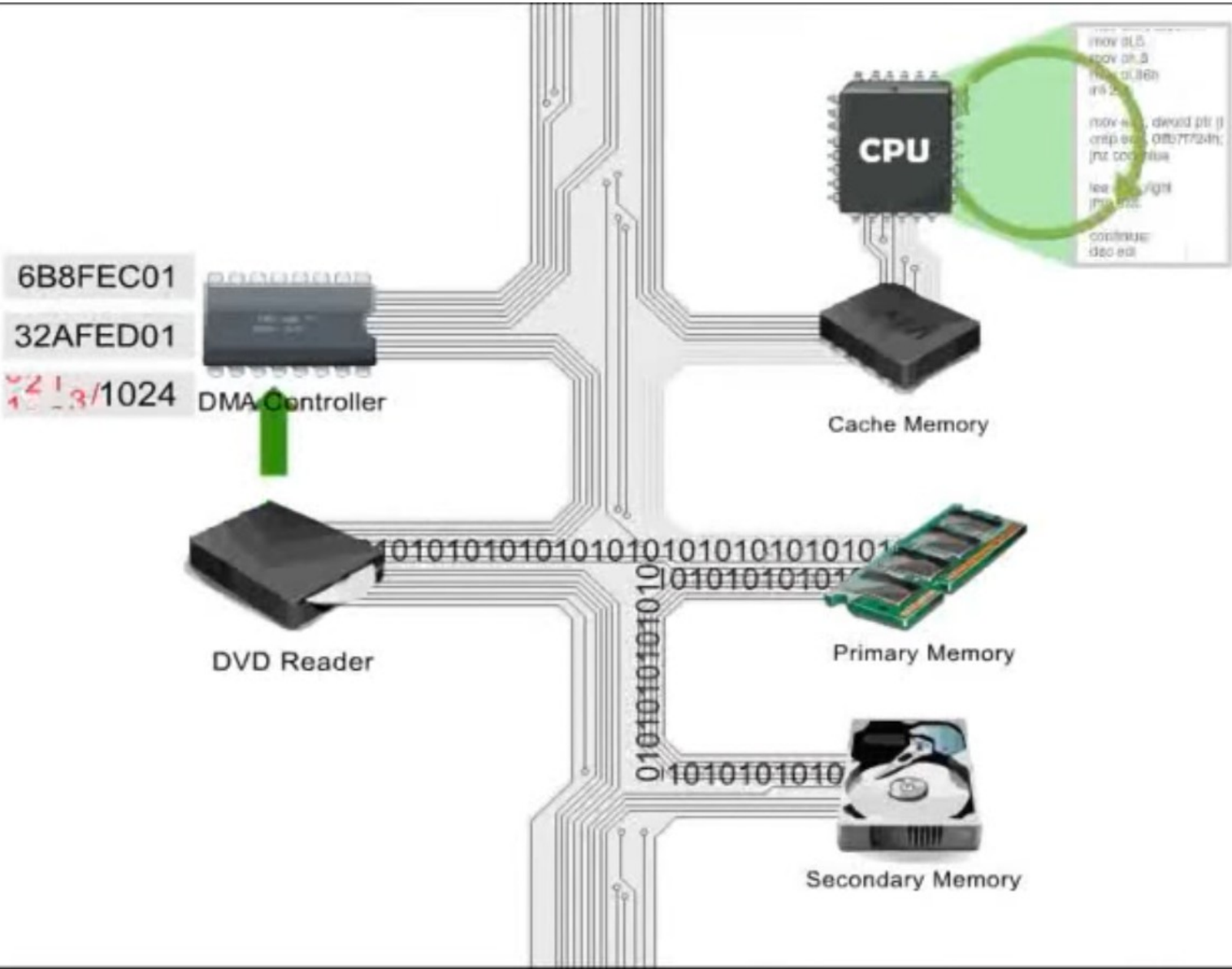
Primary Memory

Secondary Memory

```
pushl %eax
movl $,0x0
movl $,0x0
int $21
movl $,0x0
int $21
and
end
```





6B8FEC01

32AFED01

10 24/1024



DMA Controller

CPU

Cache Memory



DVD Reader



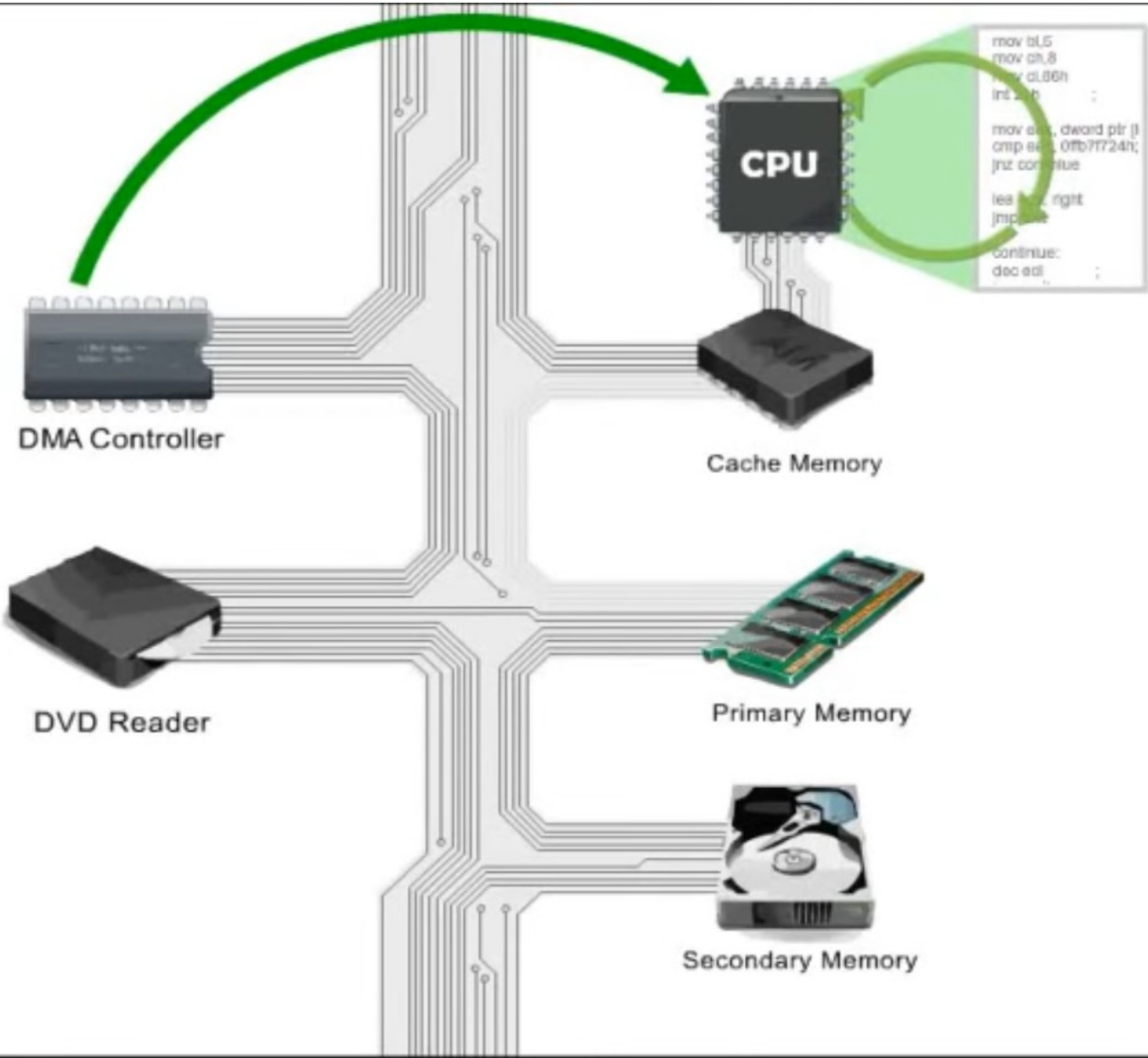
Primary Memory

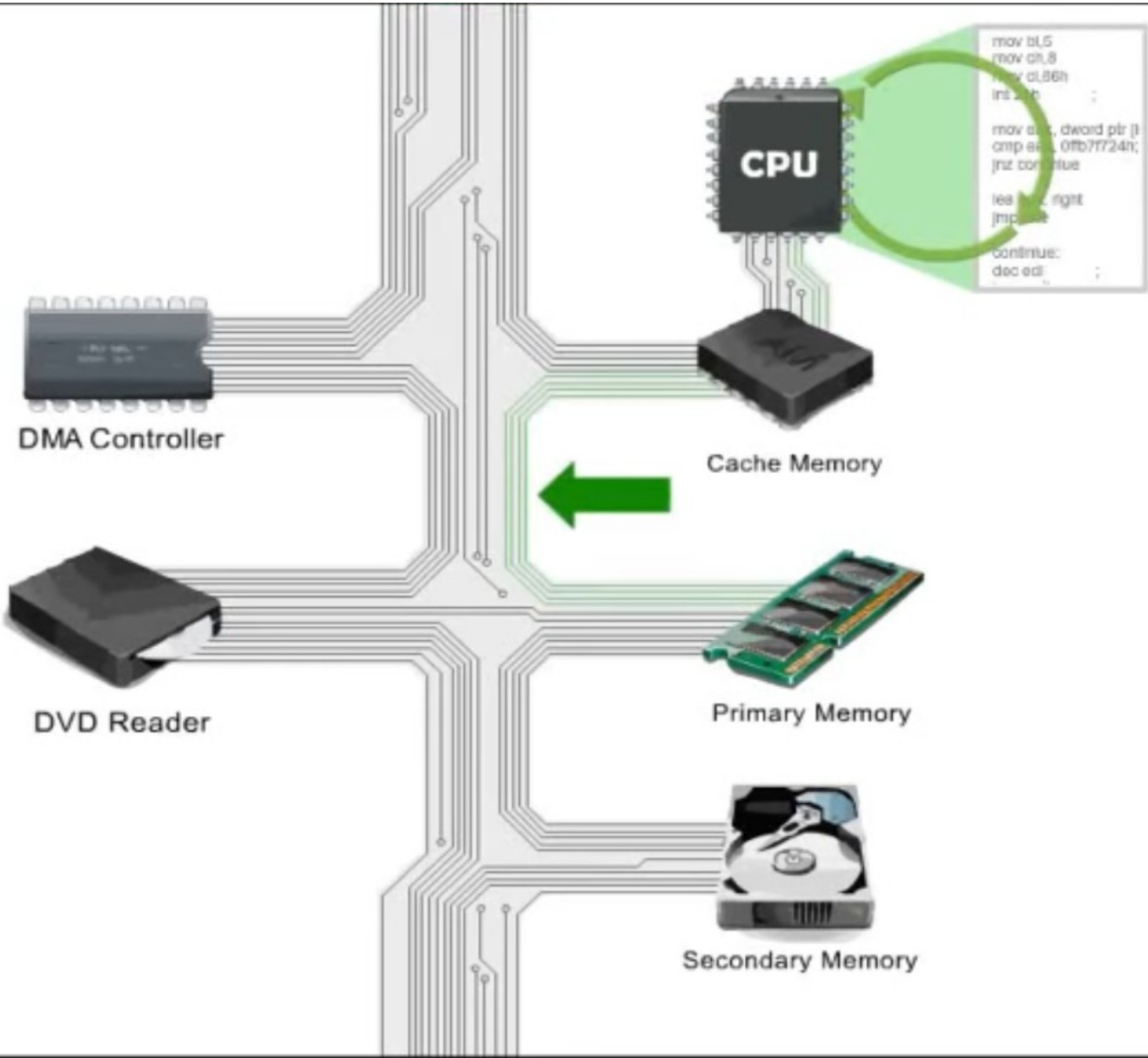


Secondary Memory

```
...  
mov db 30 dup (0y  
mov db 'Right CD'  
wrong db 'Wrong CD'  
mov ebx, eax  
mov eax, 0  
mov ebx, 1  
mov ecx, 1  
mov ebx, 1000000  
mov ebx, 0  
mov ebx, 1000  
...
```

1010101010101010
101010101010
1010101010101010
101010101010







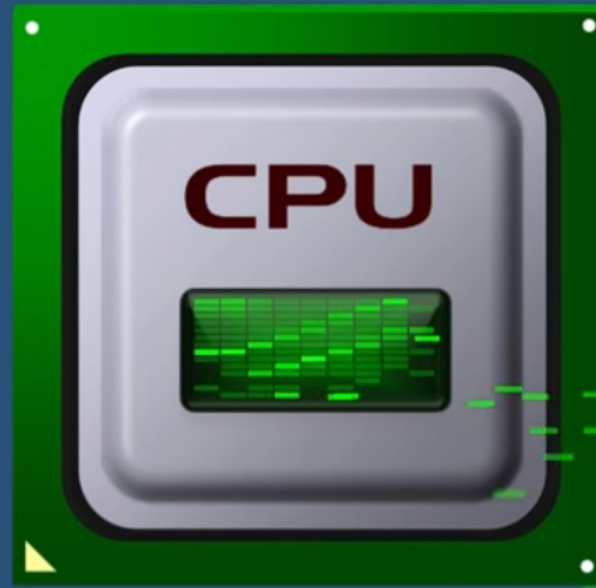
1. DMA controller requests data bus control from CPU
2. CPU grants the data bus control to the DMA controller
3. DMA controller acknowledge data bus grant to CPU
4. DMA controller reads device and writes to memory
5. DMA controller generates an interrupt request

Hyper Threading



HYPER-THREADING

Technology developed by Intel



Increases the performance of the CPU cores.

PowerCert





HYPER-THREADING

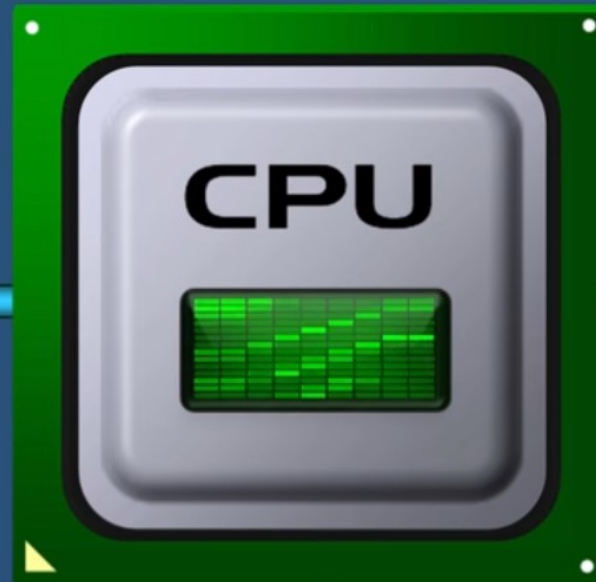
Technology developed by Intel

INPUT

OUTPUT

THREAD 1

THREAD 1



16 CPU cores.





HYPER-THREADING

Technology developed by Intel

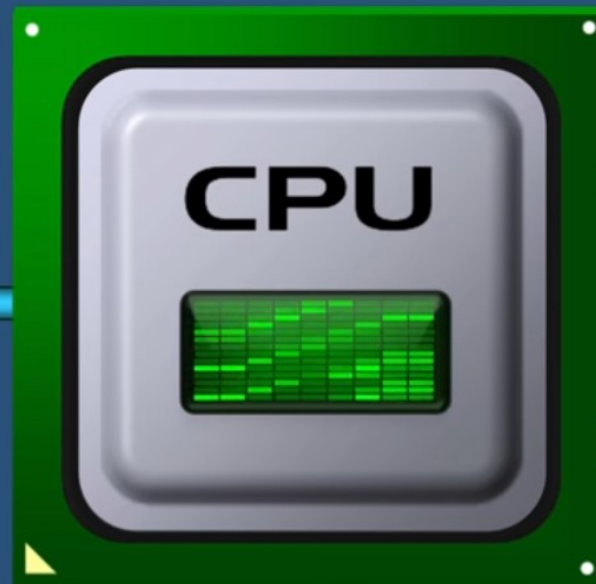
INPUT

OUTPUT

THREAD 1

THREAD 1

THREAD 2

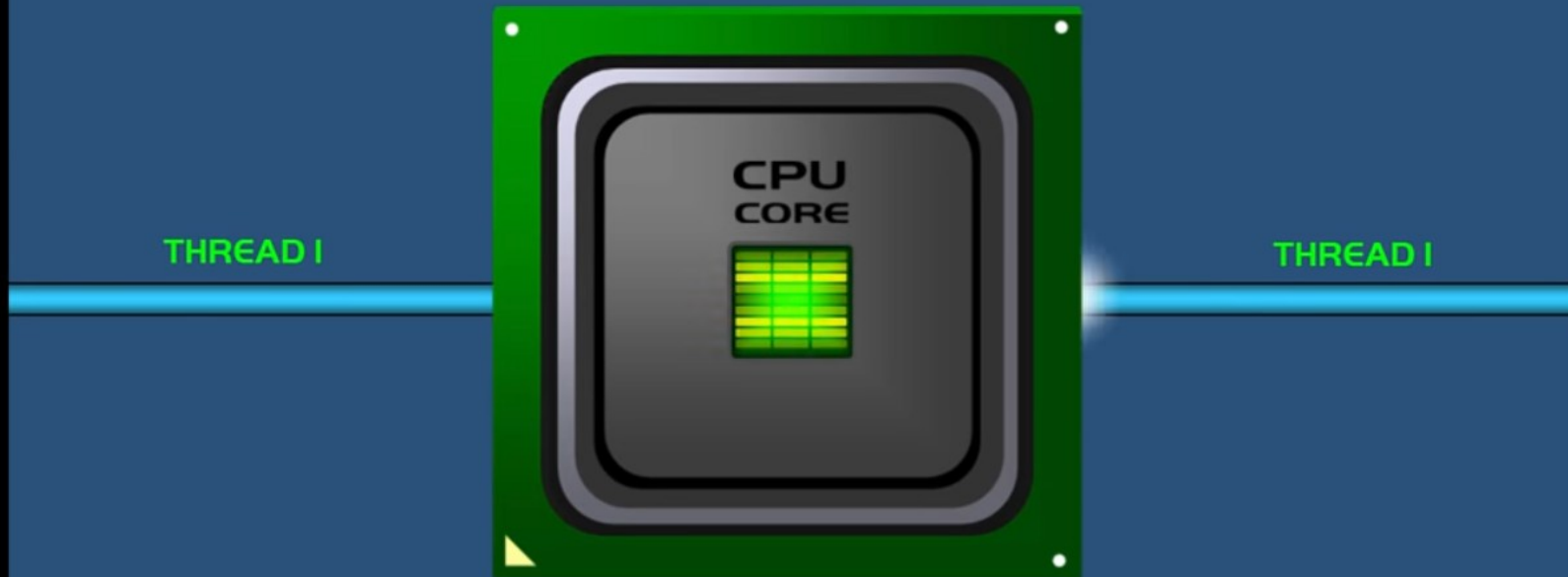


Enables multiple threads to be run by each core to make the CPU run more efficiently.





HYPER-THREADING

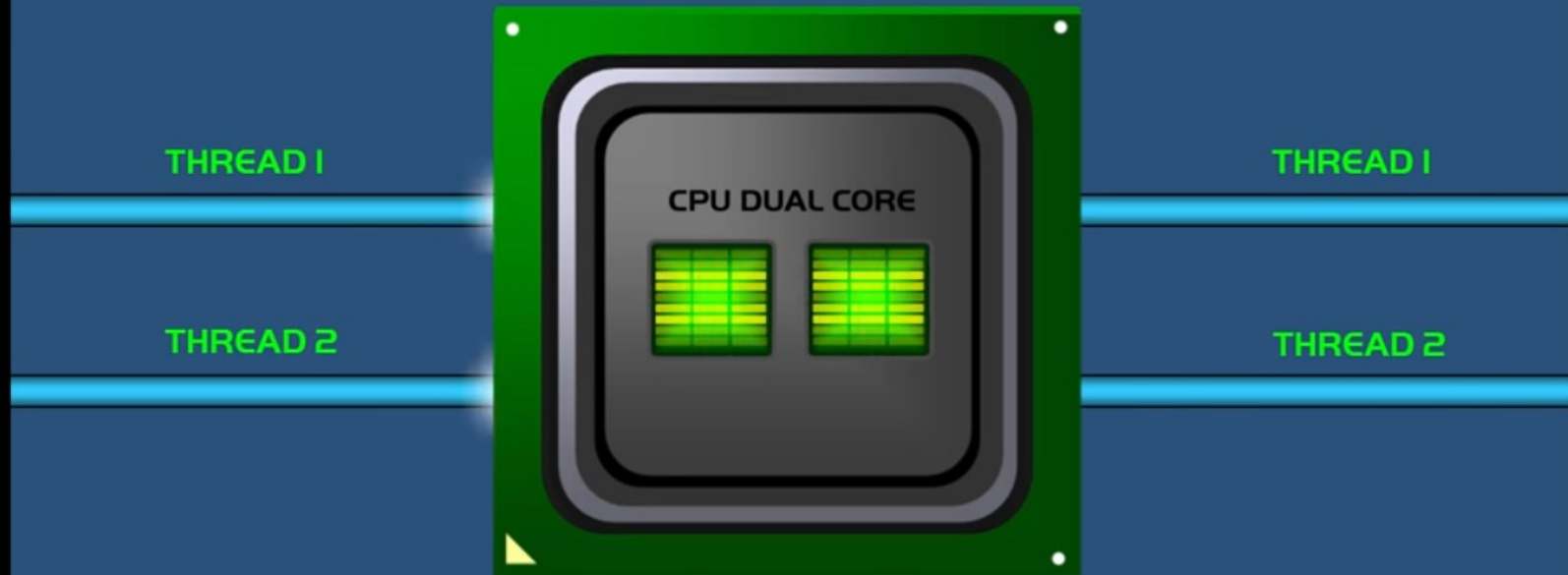


A core is a unit that reads and executes instructions.





HYPER-THREADING





HYPER-THREADING



Virtually doubles the amount of cores that's on the CPU.





HYPER-THREADING



Example: Video editing & encoding.

To take advantage of hyper-threading, you have to run applications that take advantage of multi-threading technology.





Gestionnaire des tâches



Fichier Options Affichage

Processus Performance Historique des applications Démarrage Utilisateurs Détails Services

Processeur
2% 0,90 GHz

Mémoire
2,6/3,9 Go (67%)

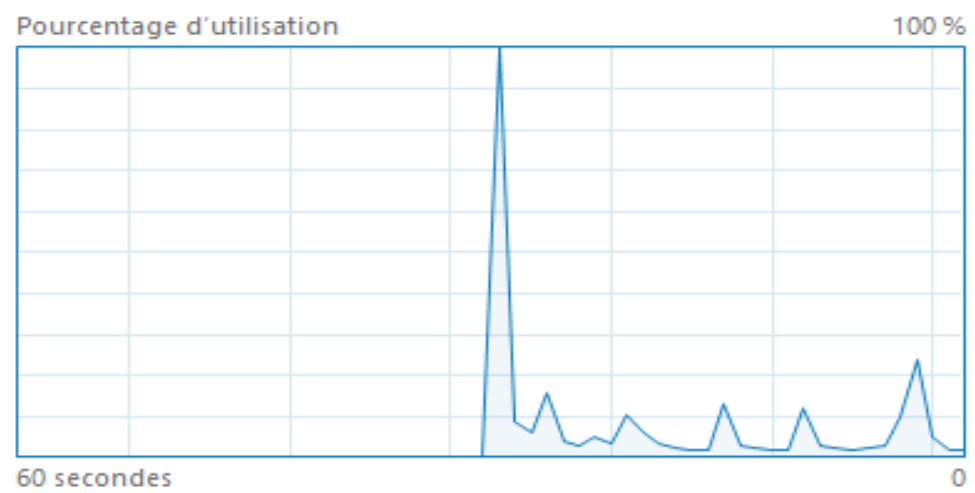
Disque 0 (C: D:)
4%

Ethernet
Non connecté

Wi-Fi
E : 0 R : 0 Kbits/s

Ethernet
Non connecté

Processeur Intel(R) Core(TM) i5-5200U CPU...



Utilisation	Vitesse	Vitesse maximale :	2,...	
2%	0,90 GHz	Sockets :	1	
Processus	Threads	Handles	Cœurs :	2
120	1420	54408	Processeurs logiques :	4
Durée de fonctionnement		Virtualisation :	D...	
1:12:22:42		Prise en charge d'Hyper-V :	Oui	
		Cache de niveau 1 :	1...	
		Cache de niveau 2 :	5...	
		Cache de niveau 3 :	3,...	

Moins de détails | Ouvrir le Moniteur de ressources