

```
int atomicCAS(int* address, int compare, int val);  
unsigned int atomicCAS(unsigned int* address,  
                        unsigned int compare,  
                        unsigned int val);  
unsigned long long int atomicCAS(unsigned long long int* address,  
                                  unsigned long long int compare,  
                                  unsigned long long int val);
```

reads the 32-bit or 64-bit word **old** located at the address **address** in global or shared memory, computes **(old == compare ? val : old)**, and stores the result back to memory at the same address. These three operations are performed in one atomic transaction. The function returns **old** (Compare And Swap).