

```
int atomicAdd(int* address, int val);
unsigned int atomicAdd(unsigned int* address,
                       unsigned int val);
unsigned long long int atomicAdd(unsigned long long int* address,
                                unsigned long long int val);
float atomicAdd(float* address, float val);
```

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