

## [Powerful maker board incorporates BSC programming model OmpSs](#)

# OmpSs

```
void cholesky(float *A[NT][NT]) {  
    int j, k;  
    for(k=0; k<NT; k++) {  
        #pragma omp task inout(A[k][k])  
        sqrtf(A[k][k]);  
        for(i=k+1; i<NT; i++) {  
            #pragma omp task in(A[k][k]) ino  
            cism(A[k][k], A[k][i]);  
            for(j=i+1; j<NT; j++) {  
                #pragma omp task in(A[k][i], A  
                sgemm(A[k][i], A[k][j], A[j][i  
            #pragma omp task in(A[k][i]) ino  
            ssyrk(A[k][i], A[i][i]);  
        }  
    }  
}
```

OmpSs, the parallel programming model developed at Barcelona Supercomputing Center (BSC), is used on the new UDOO X86 board, which [reached its Kickstarter funding target](#) of €100,000 in under seven hours.

UDOO X86 combines a powerful maker board and an Arduino 101-compatible platform, all embedded on the same board. It can be used for a range of applications, such as gaming, video streaming, graphic design editing, Internet of Things applications, or as a toolbox for makers.

The [programming model OmpSs](#), developed at BSC, will be used to operate the UDOO X86 Cluster Kit, providing a simple and efficient way to configure a multi-node application. Using OmpSs on the UDOO X86 is possible thanks to research led by BSC in the projects [Mont-Blanc](#) and [AXIOM](#), funded by the

European Union under the 7<sup>th</sup> Framework Programme and Horizon 2020.

According to BSC Parallel Programming Models Group Manager, Xavier Martorell, ‘this is a great opportunity to raise awareness about our programming model OmpSs, especially among the embedded systems communities’.

OmpSs is currently implemented on Intel/AMD x86, IBM PowerPC and BG/Q and ARM architectures, CUDA and OpenCL devices.

A workshop named ‘Build your own supercomputer with OmpSs, UDOO and Arduino’ will take place in Siena (Italy) during [European Maker Week](#) from 30 May to 5 June, offering participants the opportunity to learn how to build a cluster system on OmpSs and UDOO.

The Kickstarter campaign for the UDOO X86 board ends on 6 June. With 41 days to go, the campaign has already crowdfunded more than €425,000 from 2,337 backers.

[Nota de prensa en castellano \(pdf\)](#)

[Nota de premsa en català \(pdf\)](#)

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