

**Overview**

Femtos are small individual sensors for motion detection, light level and environment parameter monitoring. Femtos are peripherals that add additional sensor data input to Pico sensor nodes. For example, by using fifteen FemtoB 6DOF sensors real time finger tracking becomes possible.

**Features:**

- 3,6,9 DOF motion sensors
- RGB light sensors
- I2C communication
- Very small size
- Compatible with Nano and Pico sensor nodes
- Software application library included with Pico

The PI communicates with Paella using either a serial USART or high speed SPI connection. The ATxmega16E5 can be instructed by the user to execute complicated real time data acquisition/monitoring functions without PI intervention.

Pico software drivers are available to integrate Femto sensors.

**Software Drivers**

Each Femto sensors comes with the appropriate driver software to allow quick integration with a Pico or Nano sensor node.

**FemtoA**



- 10DOF
- 3-Axis Accel
- 3-Axis Gyro
- 3-Axis Mag
- I2C Interface
- 2 Sensors per chain

**FemtoB**



- 6DOF
- 3-Axis Accel
- 3-Axis Mag
- I2C Interface
- 4 Sensors/chain

**FemtoC**



- 3DOF
- 3-Axis Accel
- I2C Interface
- 2 Sensors/chain

**FemtoD**



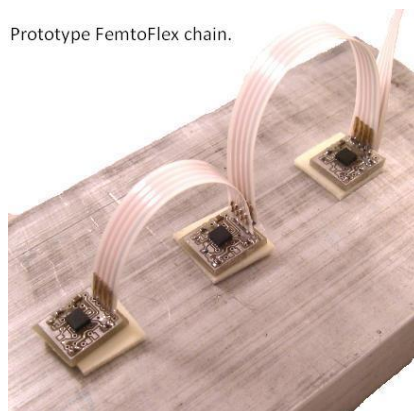
- 3DOF
- 3-Axis Gyro
- I2C Interface
- 2 Sensors/chain

**FemtoE**



- RGC Color
- Light level
- I2C Interface

Femto sensors can be combined on a Femto flex circuit chain.



Prototype FemtoFlex chain.

FemtoB 6DOF Sensor



FemtoB uses the Freescale FXOS8700 6DOF sensor -  
3-axis accelerometer  
3-axis magnetometer