

# OpenIPMC: a free and open source Intelligent Platform Management Controller

*Monday 25 May 2020 18:40 (5 minutes)*

We present a free and open source firmware designed to operate as an Intelligent Platform Management Controller (IPMC). An IPMC is a fundamental component for electronic boards conformant to the Advanced Telecommunications Computing Architecture (ATCA) standard, being adopted by a number of high energy physics experiments, and is responsible for monitoring the health parameters of the board, managing its power states, and providing board control, debug and recovery functionalities to remote clients. OpenIPMC is based on the FreeRTOS real-time operating system and is designed to be architecture-independent, allowing it to be run on a variety of different microcontrollers. Having a fully free and open source code is an innovative aspect for this kind of firmware, allowing full customization by the user. This work aims to describe its development, features and usage.

## Funding information

With support from FAPESP via processes 2018/18955-0 and 2013/01907-0

**Primary authors:** CALLIGARIS, Luigi (UNESP - Universidade Estadual Paulista (BR)); MULLER CASCADAN, Andre (UNESP - Universidade Estadual Paulista (BR)); CASU PEREIRA DE SOUSA, Bruno Augusto (UNESP - Universidade Estadual Paulista (BR)); FRANCA QUEIROZ DA COSTA, Alison (UNESP - Universidade Estadual Paulista (BR)); SHINODA, Ailton Akira (UNESP - Universidade Estadual Paulista (BR)); ARRUDA RAMALHO, Lucas (UNESP - Universidade Estadual Paulista (BR)); ARDILA, Luis (KIT-IPE); SANDER, Oliver (KIT - Karlsruhe Institute of Technology (DE))

**Presenter:** CALLIGARIS, Luigi (UNESP - Universidade Estadual Paulista (BR))

**Session Classification:** Poster

**Track Classification:** Readout: Trigger and DAQ