OpenApps Introduction

1. Why need OpenApps
   * + More and more SMT manufacturers use MES , to track and document the transformation of raw material to finished good. Reflow & Wave as part of the SMT industry, customers need to collect oven data in PCB process.
     + Industry 4.0, what has been called a“smart factory”. It is the current trend of [automation](https://en.wikipedia.org/wiki/Automation) and data exchange in manufacturing technologies.

OpenApps opens up the possibility for easy two way communication to and from Centurion oven. The primary driver for this is that many customers would like our ovens to talk to their own in-house MES systems.

MES: A Manufacturing Execution System (MES) is a control system for managing and monitoring work-in-process on a factory floor.

1. What is OpenApps

OpenApps is a software framework, OpenApps server can provide almost all oven data, such as event, alarm, recipe, production information, machine configuration etc.

OpenApps is based on Json RPC, it is a light weight remote procedure call protocol, and it is simple for customer developer to get oven data.

Member data:

* **Configuration**
  + 🡪Software version
  + 🡪Machine configuration
  + 🡪Object parameters
* **Alarm**
  + 🡪New alarm information.
  + 🡨Remote reset / clear all current alarms.
* **Board**
  + 🡪PCB process start.
  + 🡪PCB process complete.
  + 🡪New barcode read.
  + 🡪Collect oven data (zone temperature, conveyor speed, O2 sample etc.) when PCB process completed.
* **Status**
  + 🡪Machine status changed
  + 🡪Machine blocked
  + 🡪Measured value changed
  + 🡪Lane / conveyor busy
  + 🡪Machine busy
  + 🡨Remote power on machine
  + 🡨Remote power off machine.
* **Recipe**
  + 🡪New recipe started
  + 🡪Recipe setting changed
  + 🡨Get current recipe name
  + 🡨Create new recipe
  + 🡨Start new recipe

🡪：Events，send to customer application

🡨：Function, customer application can call this function remotely.

1. What can OpenApps do

With OpenApps, customer can get oven data & status, and remote control oven machine. Also customer can develop their special request with this data and function.

We can provide customers with OpenApps application program interface so that customer can extract whatever machine information they want into MES system.