The OCA MicroDemo is a demonstration product developed by OCA Alliance members Focusrite, Attero Tech, and Bosch. Its primary purpose is to prove that OCA can run well in lightweight hardware environments.

OCA is standardized by the Audio Engineering Society as **AES70**. The MicroDemo meets minimum requirements for AES70 compliance, and provides a small set of OCA-controlled application functions as well.

The finished schematic diagrams, board layouts, and custom software for the MicroDemo will be downloadable from the OCA Alliance website at no charge, and on commercially appropriate licensing terms.

HARDWARE

Processor and memory: ST Microelectronics **STM32F207VET6**- 120 MHz Cortex M3  
- 512 kB Flash memory  
 128 kB SRAM

Onboard peripherals: 10/100 baseT Ethernet  
(1) USB 2.0  
(8) switches  
(8) switch status LEDs  
(2) shaft encoders  
(8) 6-segment LED bargraph indicators  
(2) state LEDs  
(2) rotary shaft encoders  
(2) isolated relay outputs, suitable for mains voltages

Parts cost: About **US$30** in small quantities, PC board excluded

SOFTWARE

Operating system: **FreeRTOS** (open-source, modified GPL)

IP stack **lwIP** (BSD license)

DNS-SD **tinysvcmdns** from https://bitbucket.org/geekman/tinysvcmdns   
(open source, BSD license)

OCA implementation Collaboratively-developed OCA implementation from Bosch, Attero Tech, & Focusrite. (open source, commercial-friendly license)

Block Diagram



OCA CONTROL OBJECTS

|  |  |  |
| --- | --- | --- |
| **Hardware** | **OCA Object** | **Function** |
| LEDs | Bitstring Actuator | Writes LED bargraphs |
| Relays | Boolean Actuator | Writes relay on/off |
| Switch/LED Combos | Bitstring Actuator | Writes LED state |
| Bitstring Sensor | Reads switch state |
| Encoders | Int8 Sensor | Reads 8-bit encoder value |