OCA MICRODEMO
LIGHTWEIGHT OCA DEMONSTRATION BOARD

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 STM32F215VET6
- 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

RJ45
Ethernet PHY
KSZ8091

USB
Cortex M3
STM32F207VxTx

I²C
EEPROM

Power In
5-15V
3.3V

User Interface

SWITCHES WITH LEDS

ENCODERS

LEVEL METERS

OCA CONTROL OBJECTS

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