

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.

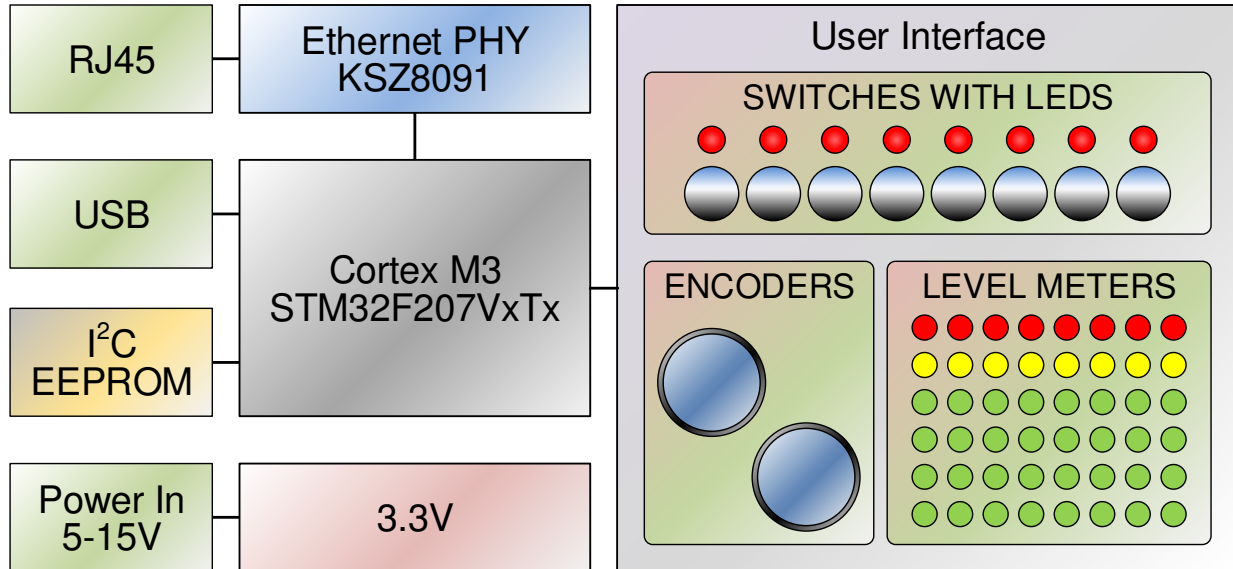
HARDWARE

Processor and memory:	ST Microelectronics STM32F215VET6 <ul style="list-style-type: none">- 120 MHz Cortex M3- 512 kB Flash memory128 kB SRAM
Onboard peripherals:	10/100 baseT Ethernet <ul style="list-style-type: none">(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