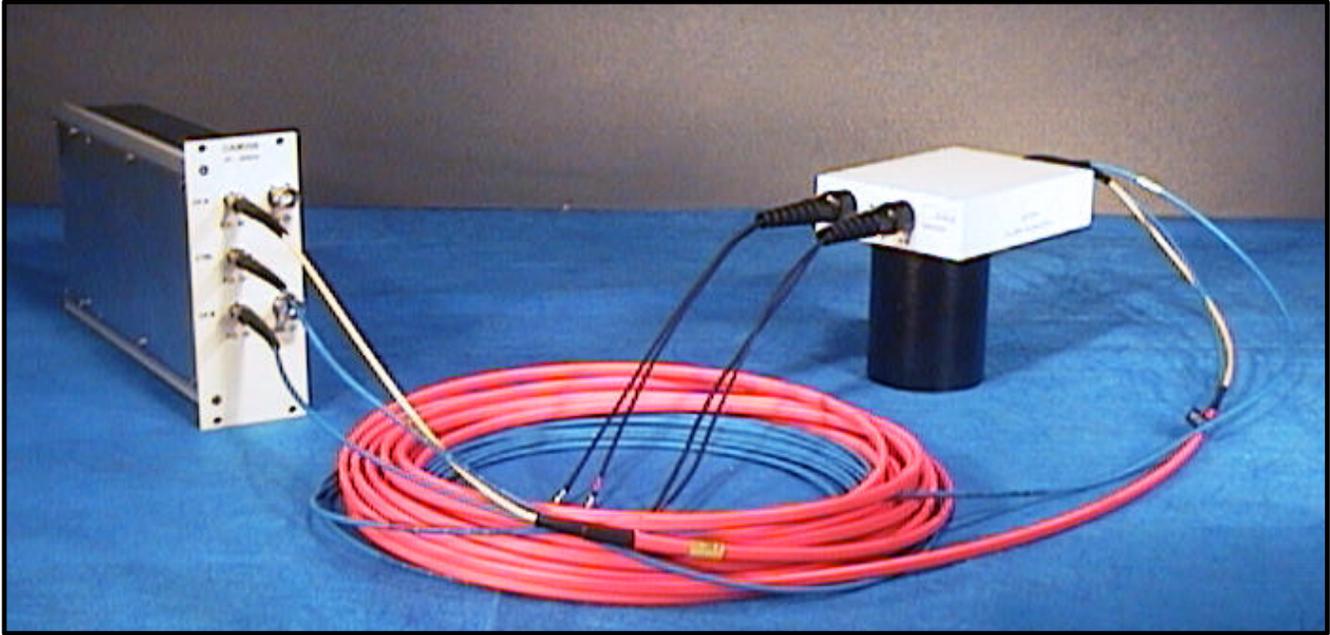


# OAL200 OPTICAL ACQUISITION LINK 200 kHz



## GENERAL DESCRIPTION

The combination of an OAM200 module, an OAS200 satellite and associated fiber cables comprises an OAL200 dual channel analog acquisition link. This OMAS system can acquire two independent analog signals (1 signal = 1 acquisition channel) in the frequency range of DC to 200 kHz. Since each OAM200 module occupies one slot in the OMM, up to six plug-ins can be accommodated for a total of twelve channels per mainframe. If additional channels are required, additional OMMs can be purchased and daisy chained via the RS232 serial bus.

The OAL200 system was designed to acquire low frequency, low voltage signals from a DUT being immersed in a high field or high voltage area. A typical application is automotive immunity testing. Such EMC testing involves component testing as well as whole vehicle testing.

## MAIN FEATURES

### immunity to high field levels

Immunity to a hostile EMC environment is achieved by shielding the satellite, powering the satellite via batteries rather than the AC mains, filtering, acquiring signals differentially, use of fiber optics to transmit the signals from the satellite to the mainframe, and finally the use of resistive cables.

### large bandwidth

A doubling of the bandwidth over the model previously available allows for more accurate monitoring of DUT signals.

### small satellite size

Even though each satellite houses two independent channels, the size has been intentionally kept very small. In particular, the version that houses disposable batteries is especially small. Size is of paramount importance when monitoring on-board automotive components in very confined areas such as under the hood of an automobile.

### remote operation

Satellites can be addressed from the OMM or from a personal computer via the RS232 serial bus.

### long operating time

Satellites can be powered from either four AAA non-rechargeable batteries or via optional rechargeable batteries (user selectable at time of order). In either case long battery life is compatible with anticipated long work shifts. A standby mode is available for the channel not being used for acquisition. When both channels are inoperative the satellite is automatically switched off as an energy saving measure.

### exceptional electrical performances

Each signal channel offers excellent linearity, low residual offset, high signal to noise ratio, low channel to channel crosstalk and outstanding stability. A rapid re-calibration function enhances acquisition accuracy.

## TECNICAL SPECIFICATIONS

### GENERAL

■ Bandwidth (3 dB)	: DC - 200 kHz, input limited
■ Full scale ranges	: $\pm 6V$ or $\pm 30V$ , remotely selectable
■ Residual DC offset (after cal.)	: 0.1 % F.S.
■ DC offset err. stability (24 h)	: 0.5 % F.S.
■ Manual offset adjustment	: $\pm 3$ % F.S.
■ Manual gain adjustment	: -5% to +20 % F.S.
■ Gain accuracy (after cal.)	: 3% F.S.
■ Signal/noise ratio (pp/rms)	: > 60 dB
■ Crosstalk	: > 60 dB

### SATELLITE UNIT

■ Number of channels	: 2, independent
■ Input type	: differential
■ Input impedance	: 1 MOhm differential
■ Overrange protection	: $\pm 60V$ continuous, : $\pm 350V$ transient
■ Number of fibers	: 2 (signal) + 1 (control)
■ Fiber type	: 200 um silica
■ Optical connector type	: SMA
■ Fiber length	: $\leq 100$ m
■ Input connector	: isolated BNC
■ Power supply	: 4 x 1.5V replaceable batteries, AAA style
■ Battery life	: 16 hrs (both channels active) : 24 hrs (one channels active) : > 500 hrs (both channels off)
■ RF shielding	: 300 V/m at 500 kHz to 1GHz, 200 V/m at 1 GHz to 11 GHz, 600 V/m pulsed (5 % duty cycle, 5 $\mu$ s (risetime) at 1 to 2 GHz
■ Size	: 110 x 80 x 26 mm
■ Weight	: 400 g including battery

### BASE UNIT

■ Number of channels	: 2
■ Output type	: unbalanced
■ Output level	: same as input, disregarding selected range
■ Output impedance	: 50 ohm, 10 mA max
■ Output connectors	: BNC
■ Mechanical	: Eurocard rack mounting compatible, 6 slots (12 channels) per mainframe
■ Control	: Local or remote (from a PC via RS232)

## SYSTEM PARTS

- ✓ **OAM200** Optical Acquisition Module
- ✓ **OAS200** Optical Acquisition Satellite
- ✓ **FCmmmSMA** Single fiber optic cable mmm meter long, SMA connectors
- ✓ **FBmmmSMA** Bifiber optic cable mmm meter long, SMA connectors

## OPTIONS

- ✓ **OAS200-RB**: OAS with rechargeable lead battery. Dimensions are: 110 x 120 x 27 mm
- ✓ **CB200**: Fast charger (2 hours recharge time) for OAS200 rechargeable battery, 230VAC, European power cord
- ✓ **CB200/US**: Same as CB200 but powered from 120 VAC 60 Hz, US power cord
- ✓ **FCRmmmSMA**: Rugged single fiber optic cable mmm meter long, SMA connectors
- ✓ **FBRmmmSMA**: Rugged bifiber optic cable mmm meter long, SMA connectors
- ✓ **FOBCSMA**: Bulkhead feedthrough for SMA optical connectors (x3)
- ✓ **RC20BNC**: Resistive cable (x2), 20 cm, BNC connector. Other lengths on request



**OAS200 with battery compartment open**



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