



## APPLICATIONS

SMART STRUCTURE

THERMAL & MECHANICAL  
MEASUREMENT

SECURITY &  
PROTECTION

GEOTECHNOLOGY

CIVIL SELF HEALTH  
MONITORING

PIPELINE

BIOSENSORS

CULTURAL & HERITAGE  
MONITORING

ACUOSTIC &  
VIBRATION

## CONTACTS

E-MAIL: [INFO@OPTOSMART.COM](mailto:INFO@OPTOSMART.COM)

PHONE: +39 0817758803

LEGAL ADDRESS:  
VIA PONTANO, 61  
NAPLES 80121 ITALY

PRODUCTION ADDRESS 1:  
CNR - IPCB -  
EDIFICIO ENEA  
P.LE E. FERMI 1, LOC.  
GRANATELLO  
80055 PORTICI (NA) - ITALY  
PH. +39 0817758803  
MON. - FRI. HR. 9.00 - 18.00

PRODUCTION ADDRESS 2:  
ENGINEERING DEPARTMENT -  
UNIVERSITY OF SANNIO  
P.ZA ROMA 21  
82100 BENEVENTO (BN) - ITALY  
PH. +39.0824.305824  
(MON. - FRI. HR. 9.00 - 18.00)

OPTOSMART S.R.L.,  
P.I. 05019441210 - CCIAA DI NAPOLI REA N. 727839

ADVANCED TECHNOLOGY COMPANY



OPTOELECTRONIC AND SMART SYSTEMS

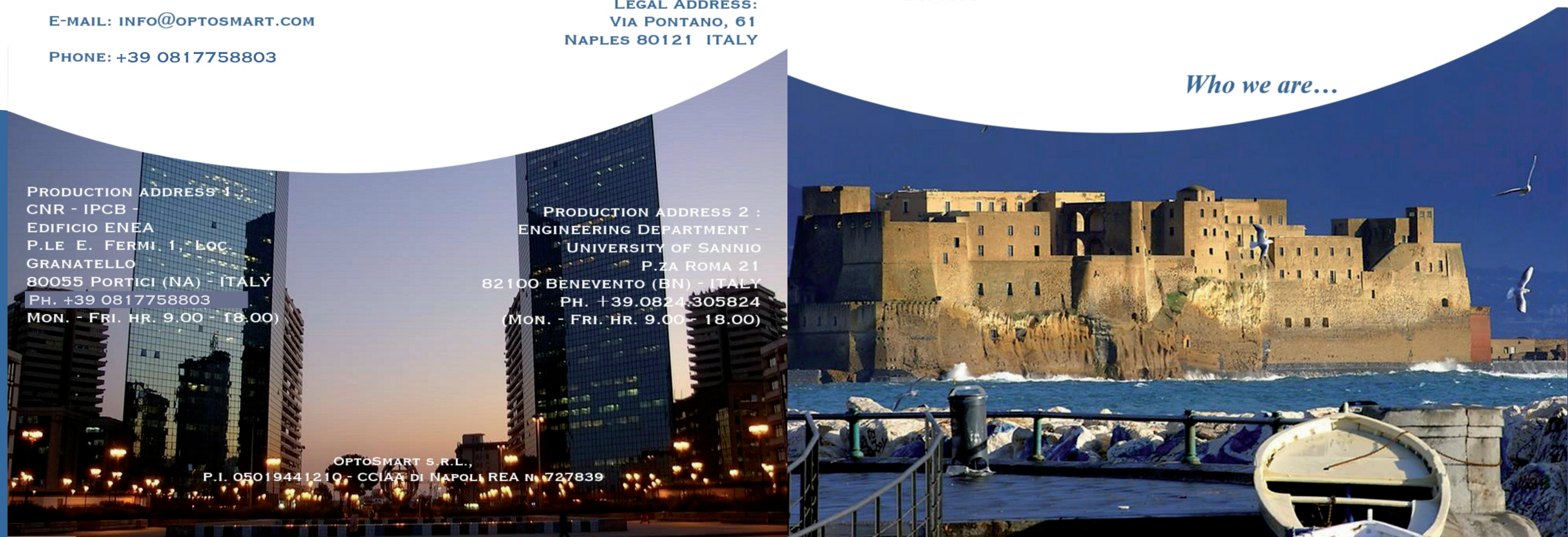
*Product&Process Innovation*

*Optoelectronic R&D Lab.*

*MicronOptics Inc. Distributor*

*Service*

*Who we are...*





# Who we are

OptoSmart was born in 2005 as a spin-off company from the joint-venture of some of the most important Italian research centers which are working since many years on innovative technologies.

Today a hi-speed growing request of hi-performances with low costs is bringing OptoSmart to invest many resources to provide a wide range of products and services for structures, processes and environment monitoring. OptoSmart activity satisfies the current needs in many engineering sectors, such as aerospace, civil, industrial and environmental, to reduce costs and to increase automation and safety. These results are achieved thanks to an efficient

coordination among R&D, design and engineering sectors of OptoSmart. Optoelectronic, materials engineering and mechanical skills are integrated.

OptoSmart aim is an integrated sensing-actuating platform to realize "smart systems", which are able to work by adjusting its self to the environmental conditions. Today many solutions are available but the real improvement is to create a system which could be "embedded" into anything without modifying its own features.

OptoSmart develops, manufactures and distributes integrated measurement systems based on fiber optic sensors and optoelectronic devices for the structural, environmental and process monitoring.

OptoSmart supports its customers in design, installation and use of the cited systems, as well as in data acquisition, processing and analysis.

OptoSmart offers the design, manufacturing, distribution and installation of high quality custom systems for environmental and structural monitoring and industrial process control and special apparatus for research centers, based on fiber optic technology.

## LARGE AREA & MULTISENSING

**FBG Interrogator:** MicronOptics sm225-800 16ch

**Sensors:** Temperature- OS 4400;

Displacement gages: OS 5000;

**Applications:** Mapping; Static Analysis

**960 different sensors on wide area with a single interrogator**

## DYNAMIC SOLUTION & MULTISENSING

**FBG Interrogator:** MicronOptics sm130-4 ch 2kHz

**Sensors:** Strain -OS3610; Accelerometers-OS 7100

**Applications:** Dynamic analysis, vibrations, accelerations.

## ADVANTAGES FIBER OPTICS TECHNOLOGY

MANY SENSORS, SO LOW COST

PASSIVE NATURE AND IMMUNITY TO ELECTROMAGNETIC INTERFERENCE

SMALL SIZE & HIGH SENSITIVITY

LARGE AREA SOLUTION (KM) ON SINGLE FIBER

MULTIPLEXING OF DIFFERENT SENSORS ON SINGLE FIBER

DIRECT MEASURE PHYSICAL PARAMETERS SUCH AS TEMPERATURE AND STRAIN

We are official distributor of Micron Optics inc.



Worldwide leader for FBG interrogator

## INSTRUMENTS

OptoSmart can manufacture custom devices to satisfy specific needs of its customers at competitive costs, for example static or dynamic interrogation systems for FBG and/or refractometric sensors, which we can customize in terms of: number of channels, number of sensors, sample rate, bandwidth. This solution is very useful and cheap when few sensors (or measurement points) and/or high sample rates are requested.

### MICRON OPTICS MODELS & KEY FEATURES

SM 125	SM 130
STATIC	DYNAMIC
CAPACITY OF 100S OF SENSORS	WIDE WAVELENGTH RANGE
PROVEN RELIABILITY AND LONGEVITY	TENS OF SENSORS PER CHANNEL
AUTOMATIC CALIBRATION	SPECTRAL DIAGNOSTIC VIEW & SYNCHRONIZE MEASUREMENTS



In your Lab



Some our custom solutions



## SENSORS

MANY DIFFERENT SENSORS ON SINGLE FIBER

Furthermore, we can assemble custom array of FBG sensors, where number, type (strain, deformation, etc.), wavelength distribution and spatial distribution of the sensors are completely customizable.

OptoSmart is able to develop fiber optic sensors with special coatings (ceramic, metallic, polymeric) for special applications, for example high temperatures, high pressures or underwater.

### In-concrete strain



### Surface strain



### Temperature



### Displacement gage



### Accelerometer



### Our custom Termo-hygrometer



### FBG sensor



# WHERE WE ARE ...

SOME CLIENTS, PARTNERS, RESEARCH INSTITUTES AND UNIVERSITIES WHICH HAVE CHOSEN OPTOSMART

AERONAUTICAL

SPACE

HIGH ENERGY PHYSICS

RAIL

R&D

