

## Computer Vision applied to natural stone companies

IDSTONE CAPTURE: PHOTO CAPTURE SYSTEM FOR NATURAL STONE SLABS, REAL TIME, AT THE END OF THE PRODUCTION PROCESS. SUITABLE FOR PRODUCTION LINES OF MARBLE, GRANITE AND OTHER NATURAL STONES

*IDStone SGA incorporates an advanced system for image capturing in real time, transcending the limitations of conventional photography: IDStone Capture. IDStone's exclusive image capture technology allows, at the end of the productive process, to take pictures slab by slab and to integrate each image, unequivocally, with their corresponding registry of stock, facilitating, at the same time, information queries, real time, from any other module of IDStone (IDStone Office, B2B). Based on the last computer vision technology, the procedures of IDStone Capture have been adapted to meet the needs of the industry producing marble slabs tables or granite slabs mainly, although its use can be extended to other kind of products.*



## Main Features

- Image capture of slabs or tiles.
- Configuration profiles by material or set of materials.
- Automatic capture of pieces' IDs (barcode labels, RFID labels) .
- Association of the image to the corresponding register of stock (slab by slab, bundle or block).
- Association of attributes (quality, measurements, etc).
- Manual measurement directly on the captured images.
- Watermarks (id, company, etc.)
- Different algorithms for the automatic processing of the images captured .
- User interface developed specifically for touchscreen terminals .
- Communication with IDStone Server.

## Related modules

- **IDStone B2B:** It is the online sales portal and customer relationship management of IDStone SGA. Connected with IDStone Server, it publishes on the Internet the stock and the real picture of each slab, the defining characteristics of the product (material, size, quality, finish , etc.).
- **IDStone Reader:** Provides the automatic identification of the image (in association with a stock register), by decoding the bar code built on the natural stone slab from the main image or secondary image cameras that can be achieved complementary.
- **IDStone Quality:** From the pictures of the slabs captured by IDStone Capture, this module allows the manual sorting of tables by a qualified operator from the office. It also allows the measurement of the useful area (trade measure), being this method faster, accurate and effective than the traditional classification or measure processes in the plant.
- **IDStone Server:** It is the engine, the "core" of IDStone SGA. It's the environment for storing, orderly, large amounts of information and manages the communications with the other system modules..
- **IDStone Office:** It is the easy to use user interface to access and to manage the information that the system stores. Its advanced data presentation technology allows the users to group, filter by any column or customize your views..

# Technical features

## Vision system

<b>Sensor</b>	Color 3 CCD for optimal image quality, providing true color RGB
<b>Resolution</b>	2048 pixels for each line that makes up the image
<b>Pixel size</b>	14 µm x 14 µm
<b>Maximum line speed</b>	9.2 kHz
<b>Data format</b>	8 ó 12 bits selectable
<b>Protection</b>	Camera housing IP30. Closet IP65. Ventilation IP54
<b>Operating temperature</b>	Max 50°C
<b>Input/Output</b>	3 input / 2 digital output
<b>Lighting system</b>	LED technology

## Control terminal, checkpoint

<b>CPU type</b>	CPU industrial fanless and no internal cabling (cableless).
<b>Processor</b>	Intel Atom Dual-Core D510 / 4 x 1.67GHz processes
<b>Memory</b>	2 GB DDR2 SDRAM built-in
<b>Storage</b>	2.5" SATA HDD
<b>Ports</b>	6 USB, 8 COM, 2 Mini PCIe, 2 Ethernet 10/100/1000 Base-T RJ-45
<b>Protection</b>	IP40
<b>Working temperature</b>	IEC 60068-2-2 with 100% load CPU: -10 ~ 70° C (14 ~ 158° F)
<b>Operating system</b>	Windows XP , Windows Vista Windows 7. WXP Embedded WES 7
<b>Monitor</b>	Industrial 17" SXGA color TFT LCD, resistive touch screen front NEMA4/IP65
<b>Barcode reader</b>	Linear-imaging technology, wireless, industrial IP54, battery 16 hours
<b>Control cabinet</b>	(Optional) Industrial control cabinet IP54 with drawer. Dimensions 650 x 600 x 270 mm

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IDStone<sup>SGA</sup>

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