S200 Series

High Performance Smart Camera

◤ High-resolution: 4.2 Megapixels
global shutter CMOS image sensor

◤ Ultra high-speed: 180
frames per second at
full resolution

◤ IP-67 Rated enclosure

◤ Open system
with Linux O.S.

◤ Powerful image processing:
Dual Core Cortex-A9
processor and Xilinx FPGA

◤ Complete interface and communication
capabilities: Gigabit Ethernet, digital I/O,
RS232/485 serial ports, encoder input

▼ **Ultra High-Speed**

With a 4.2 Megapixels resolution and a speed of 180 frame per second, S200 Smart Camera opens new horizons for your applications.

The frame rate of the camera can be further increased thanks to the windowing features: capturing only a portion of the sensor allows higher frame rates for smallest regions of interest.

▼ **FPGA**

The image acquisition and image preprocessing are performed by dedicated FPGA in real time (programmable on demand).

▼ **IP-67**

IP-67 rated housing of S200 Smart Camera allows the installation even in harsh enviroment.

▼ **Architecture**

The fast acquisition and processing of high-resolution images requires a powerful electronic architecture. The S200 Smart Camera features a Dual Core Cortex-A9 800MHz CPU and an Xilinx Artix 85K Logic

Cells FPGA working closely together.

Thanks to Tattile's technology based on FPGA, this smart camera can guarantee the real-time execution of critical functions such as image capture, image preprocessing, I/O and incremental encoder management.

▼ **Open System**

Thanks to the use of Linux O.S., it is possible to develop Vision Application with Tattile software or third parties library / software.

▼ **Direct encoder input**

If the vision system must be interfaced to an incremental encoder, the line-drive RS422 encoder input allows a perfect synchronization without the need of other interface devices.

▼ **Interface and Communication**

The integration of the S200 Smart Camera is made easy by the full-featured set of interfaces available: Gigabit Ethernet, RS422 incremental encoder input, RS232, RS485, 2 inputs, 3 outputs, 3 strobe outputs.

Custom Vision Solutions

tattile

S200 hyp

HyperSpectral Smart Camera

▼ Spectral filter directly applied on CMOS sensor

▼ 3 type of sensor with different spectral range and design

▼ Powerful image processing: Xilinx FPGA and Dual Core Cortex-A9 processor

▼ IP-67 Rated enclosure

▼ Programmable FPGA for image acquisition and preprocessing

Hyperspectral Smart Camera

Tattile has developed the S200 Smart Camera HYP, an intelligent camera with high-performance that allows to apply the hyperspectral technology directly on the production lines.
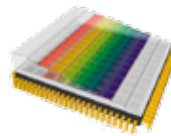
FPGA

The Reflectance calculation and Images / Cube reconstruction are performed by dedicated FPGA in real time. Using graphical tool, it is possible to program the FPGA for image processing.
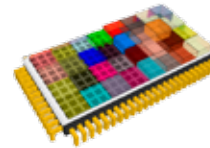
Sensor Design

Three models of hyperspectral sensor are available:
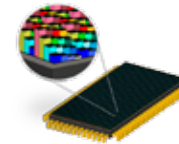- LINESCAN: 100 spectral band
- SNAPSHOT TILED: 32 spectral band
- SNAPSHOT MOSAIC: 16 spectral band

LINESCAN   TILED   MOSAIC

Different spectral wavelength available:

- VIS
- NIR
- VIS + NIR

S200 Series

High Performance Smart Camera

Power supply
digital I/O
RS232/485

Encoder input
strobe output

Gigabit Ethernet

Compact size

C-Mount lens

IP67 rated

Technical Data

Specification	Value
Resolution	2048 x 2048 pixels
Frame rate	180 fps
Sensor type	1" CMOS
Sensor model	CMV4000
CPU	Dual core ARM Cortex-A9 800 MHz
System RAM	1 GB
Flash Memory	Secure Digital 8 GB (up to 32 GB)
FPGA	Xilinx Artix-7 85K LEs
FPGA RAM	1 GB
Digital inputs	2
Digital outputs	3 PNP
Strobe output	3 channels
Encoder input	3 channels RS422 Line Driver
LAN	Gigabit Ethernet
Serial interfaces	RS232-RS485
Internal Protection	IP67
Lens	C-Mount
Operating system	Linux
Power supply	24 VDC

S200 Series - Part Number	
F01576	S200 SMART CAMERA 2048X2048 MONO