SMT TEKNOLOJİ

LOCAL PRODUCTION • RELIABLE TECHNOLOGY

QUALITY CONTROL IN FOOD PACKAGING

GAS ANALYZERS, LEAK TESTER AND THERMAL CAMERA SOLUTIONS



- HIGH ACCURACY RELIABLE RESULTS
- FAST AND EASY TO USE
- DATA LOGGING AND REPORTING
- LOCAL PRODUCTION LONG SERVICE LIFE

OXITECH
GAS ANALYZERS

OXITECH ONLINE
ONLINE GAS ANALYSIS SYSTEM

OXITECH MEGA
LEAK TESTER

THERMAL CAMERA
QUALITY CONTROL SYSTEMS

www.smttekno.com | RELIABLE MEASUREMENT • FLAWLESS PRODUCTION | ISO 9001 | ISO 22000 | CE | LOCAL PRODUCTION

ABOUT US

SMT Teknoloji is a local technology company that develops measurement, analysis, and imaging systems aimed at improving quality control and process reliability in the food industry. With our R&D and engineering expertise, we provide high-sensitivity, user-friendly solutions that can be integrated into automation systems according to the needs of production facilities.

Within the OXITECH product family, we develop O_2, O_2 & CO_2, and O_2, CO_2 & N_2 gas analyzers, online gas analysis systems for production lines, and OXITECH MEGA leak tester solutions.

In imaging technologies, we develop advanced quality control applications for production lines using thermal camera and SWIR (Short-Wave Infrared) camera systems. Our thermal imaging systems are used to monitor package sealing, filling, cooking, and process-related deviations, while our SWIR camera solutions enable the detection of product differences, foreign materials, moisture and content variations, and process anomalies that are difficult to identify with visible-light cameras.

We approach our solutions not only as standalone devices, but as complete quality control systems that combine measurement, imaging, automated decision-making, data recording, and traceability. By integrating camera, sensor, and analysis technologies into our customers' production processes, we develop customized solutions compatible with existing machinery and automation infrastructure.

At SMT Teknoloji, we work to make food technologies more reliable, measurable, and sustainable through local engineering, strong technical support, and continuous R&D. We bring the technologies we develop in Türkiye to international markets.



OXITECH (O2 ANALYSIS) 001



OXITECH PLUS (O2&CO2 ANALYSIS) 002



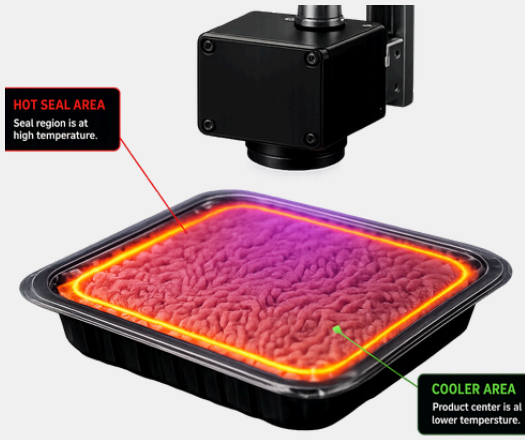
OXITECH PREMIUM (O2&CO2&N2 ANALYSIS) 003



OXITECH ONLINE (O2 &CO2&N2 ANALYSIS) 004



OXITECH MEGA (LEAK TESTER) 005



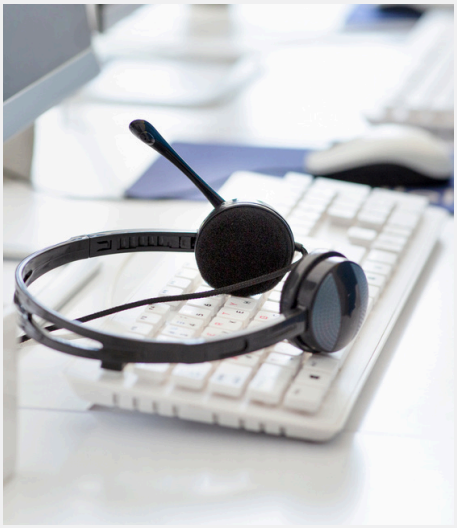
THERMAL CAMERA SYSTEMS 006



SWIR CAMERA SYSTEMS 007



INTEGRATION & SPECIAL PROJECTS 008



TECHNICAL SUPPORT AND COMMUNICATION 009

OXITECH O_2

O_2 GAS ANALYZER

MAP PACKAGE CONTROL

MORE PARAMETERS, HIGHER ACCURACY!

In OXITECH O_2, MAP (Modified Atmosphere Packaging) applications, it accurately, rapidly and reliably measures the oxygen (O_2) ratio in the package.
It is an indispensable gas analysis device in your production line.



O_2 MEASUREMENT
Measures the oxygen (O_2) ratio in MAP packages.

FAST RESULTS
Provides accurate and reliable measurement within seconds.

HIGH ACCURACY
Analyzes with advanced sensor technology for high accuracy.

PORTABLE DESIGN
Compact, durable and easy to use in any environment.

LONG BATTERY LIFE
Rechargeable battery for extended use.

EASY TO USE
User-friendly interface for practical and fast measurement.

O_2 MEASUREMENT | 0 – 100% MEASUREMENT RANGE | RESULT IN 8 SECONDS | LONG BATTERY LIFE | COMPACT & LIGHTWEIGHT

TECHNICAL SPECIFICATIONS

Measured Parameter	O_2
Measurement Range	0 – 100% O_2
Resolution	%0.1
Accuracy	± %0.1 (Full Scale)
Response Time	8 seconds
Sample Volume	10 ml
Operating Temperature	-20 °C / +60 °C
Battery	3.7V / 3000 mAh Rechargeable Lithium Battery
Battery Life	12 hours (continuous use)
Sensor Life	2 years
Dimensions	230 x 180 x 90 mm
Weight	Approx. 1.2 kg (Accessories included: 1.8 kg)
Case Contents	Device, 100 adhesive pads, 5 needles, sponge, adapter, carrying case

APPLICATION AREAS

- Food production facilities
- MAP packaging applications
- Quality control laboratories
- R&D studies
- Transportation and storage control



WHY OXITECH O_2?

- ✓ Measures oxygen (O_2)
- ✓ High accuracy, reliable results
- ✓ Fast and easy to use
- ✓ Portable and durable design
- ✓ Ensures contamination-free control in production

OXITECH PLUS

O_2 & CO_2 GAS ANALYZER

MAP PACKAGE CONTROL

MORE PARAMETERS, HIGHER ACCURACY!

OXITECH PLUS, MAP (Modified Atmosphere Packaging) applications is a gas analyzer that can instantly and reliably measure O_2, CO_2 ratios in the package quickly, accurately and reliably.
It is an indispensable gas analysis device in your production line.



O_2 & CO_2 MEASUREMENT
Measures O_2 and CO_2 levels inside MAP packages.

FAST RESULTS
Accurate and reliable measurement in seconds.

HIGH ACCURACY
Analyzes with advanced sensor technology for high accuracy.

PORTABLE DESIGN
Compact, durable and easy to use anywhere and anytime.

LONG BATTERY LIFE
Rechargeable battery for extended use.

EASY TO USE
User-friendly interface for practical and fast measurement.

O_2 & CO_2 MEASUREMENT	0 – 100% MEASUREMENT RANGE	RESULT IN 8 SECONDS	LONG BATTERY LIFE	COMPACT & LIGHTWEIGHT

TECHNICAL SPECIFICATIONS

Measured Parameters	O_2, CO_2
Measurement Range	0 – 100% (O_2, CO_2)
Resolution	%0.1
Accuracy	± %0.1 (Full Scale)
Response Time	8 seconds
Sample Volume	10 ml
Operating Temperature	-20 °C / +60 °C
Battery	3.7V / 3000 mAh Rechargeable Lithium Battery
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APPLICATION AREAS

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WHY OXITECH PLUS?

- ✓ Measures O_2 and CO_2
- ✓ High accuracy, reliable results
- ✓ Fast and easy to use
- ✓ Portable and durable design
- ✓ Ensures contamination-free control in production

OXITECH PREMIUM

O_2, CO_2 AND N_2 GAS ANALYZER

MORE PARAMETERS CONTROL

HIGHER ACCURACY, HIGHER RELIABILITY!

OXITECH PREMIUM, MAP (Modified Atmosphere Packaging) applications is a gas analyzer that can instantly and reliably measure the O_2, CO_2 and N_2 ratios in the package. It is a quality control solution that is indispensable in your production line.



O_2, CO_2 AND N_2 MEASUREMENT
Measures O_2, CO_2 and N_2 levels inside MAP packages.

FAST RESULTS
Accurate and reliable measurement in seconds.

HIGH ACCURACY
Analyzes with advanced sensor technology for high accuracy.

PORTABLE DESIGN
Compact, durable and easy to use anywhere and anytime.

LONG BATTERY LIFE
Rechargeable battery for extended use.

EASY TO USE
User-friendly interface for practical and fast measurement.

O_2, CO_2 AND N_2 MEASUREMENT	0 – 100% MEASUREMENT RANGE	RESULT IN 8 SECONDS	LONG BATTERY LIFE	COMPACT & LIGHTWEIGHT

TECHNICAL SPECIFICATIONS

Measured Gases	O_2, CO_2, N_2
Measurement Range	0 – 100% (O_2, CO_2, N_2)
Resolution	%0.1
Accuracy	± %0.1 (Full Scale)
Response Time	8 seconds
Sample Volume	10 ml
Operating Temperature	-20 °C / +60 °C
Battery	3.7V / 3000 mAh Rechargeable Lithium Battery
Battery Life	12 hours (continuous use)
Sensor Life	2 years
Dimensions	230 x 180 x 90 mm
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APPLICATION AREAS

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- MAP packaging applications
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- Transportation and storage control



WHY OXITECH PREMIUM?

- ✓ Measures O_2, CO_2 and N_2
- ✓ High accuracy, reliable results
- ✓ Fast and easy to use
- ✓ Portable and durable design
- ✓ Ensures contamination-free control in production

OXITECH ONLINE

ONLINE GAS ANALYZER

Accurate Atmosphere **Every Package, Every Time.**

Measure the gas content in your packages instantly with our online gas analyzer, log the data and improve your production quality.



OXITECH ONLINE

0.2 %	32.3 %	67.5 %
O2	CO2	N2

- ✔ O_2 Measurement
- ✔ CO_2 Measurement
- ✔ N_2 Measurement

- **Real-Time Measurement**
- **Consistent Product Quality**
- **High Reliability**
- **Data Logging & Reporting**



Reliable Solution for MAP & Vacuum Packaging Processes

- **O_2, CO_2, N_2 MEASUREMENT**
- **% 0 – 100 MEASUREMENT RANGE**
- **REAL-TIME MEASUREMENT**
- **DATA LOGGING & REPORTING**
- **EASY INTEGRATION**

TECHNICAL SPECIFICATIONS

Measured Gases	O_2, CO_2, N_2
Measurement Range	%0 – 100 (O_2, CO_2, N_2)
Resolution	%0.1
Accuracy	± %0.1 (Full Scale)
Sensors	O_2: KOH (Electrochemical) CO_2: IR (Infrared) | N_2: Calculation
Data Logging	Available
Data Output	Wi-Fi – Bluetooth – Ethernet (Optional)
Display	1.000" Color LCD Display
Program Memory	Up to 1.000 Programs
Operating Temperature	-20 ... +80 °C
Power Supply	24 VDC / 220 VAC
Weight	5 kg

KEY FEATURES

- ✔ Measures O_2, CO_2 and N_2 in every package
- ✔ Detects even low gas levels with high accuracy
- ✔ Strong data output via USB or Ethernet

WHY OXITECH ONLINE?

- ✔ Instant results needed in the laboratory
- ✔ Maximizes production efficiency and reliability
- ✔ Reduces product loss, fire and costs
- ✔ Stores data and transfers to reports
- ✔ Easy integration, user-friendly interface

LEAK TESTER

LEAK TEST DEVICE

LEAK TEST FOR VACUUM AND FLOWPACK PACKAGES

It detects leaks in vacuum or flowpack packages quickly, reliably and with high precision.

Vacuum technology and CO_2 detection sensor enable even the smallest leaks to be detected, ensuring product safety and delivering the highest quality standards.



HOW DOES IT WORK?

CO_2 Detection Technology
0 – 5,000 ppm range with high-sensitivity measurement.

Fast and Sensitive
Short test times with minimal response time.

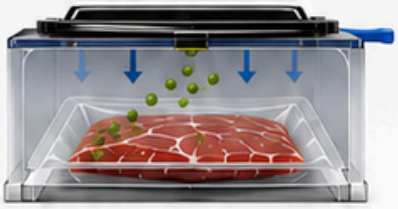
Accurate Results
User-friendly interface for easy result evaluation.

NON-LEAKING PACKAGE



CO_2 increase is none or below the limit value.

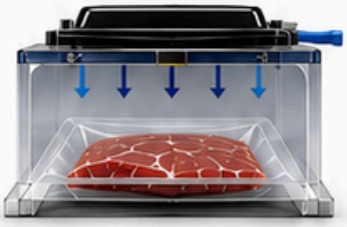
LEAKING PACKAGE



CO_2 increase is above the limit value.

OPERATING PRINCIPLE

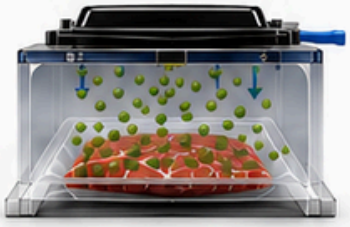
1. The product is placed in the chamber and vacuum is created.



2. If a leak exists, outside air enters and CO_2 level increases.



3. CO_2 sensor detects the increase and the leak is evaluated.

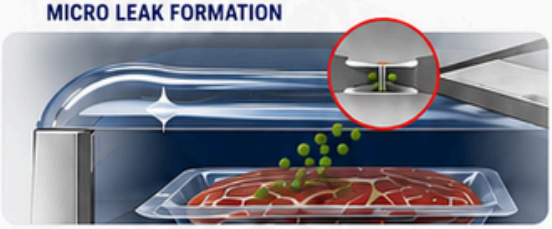


LEAK TEST APPLICATION AREAS

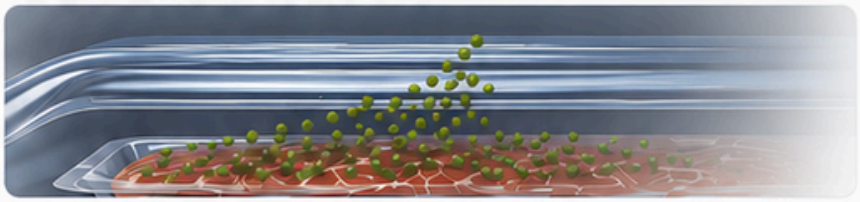


HOW DOES A LEAK OCCUR?

MICRO LEAK FORMATION



INCREASES CO_2 LEVEL INSIDE THE PACKAGE



TECHNICAL SPECIFICATIONS

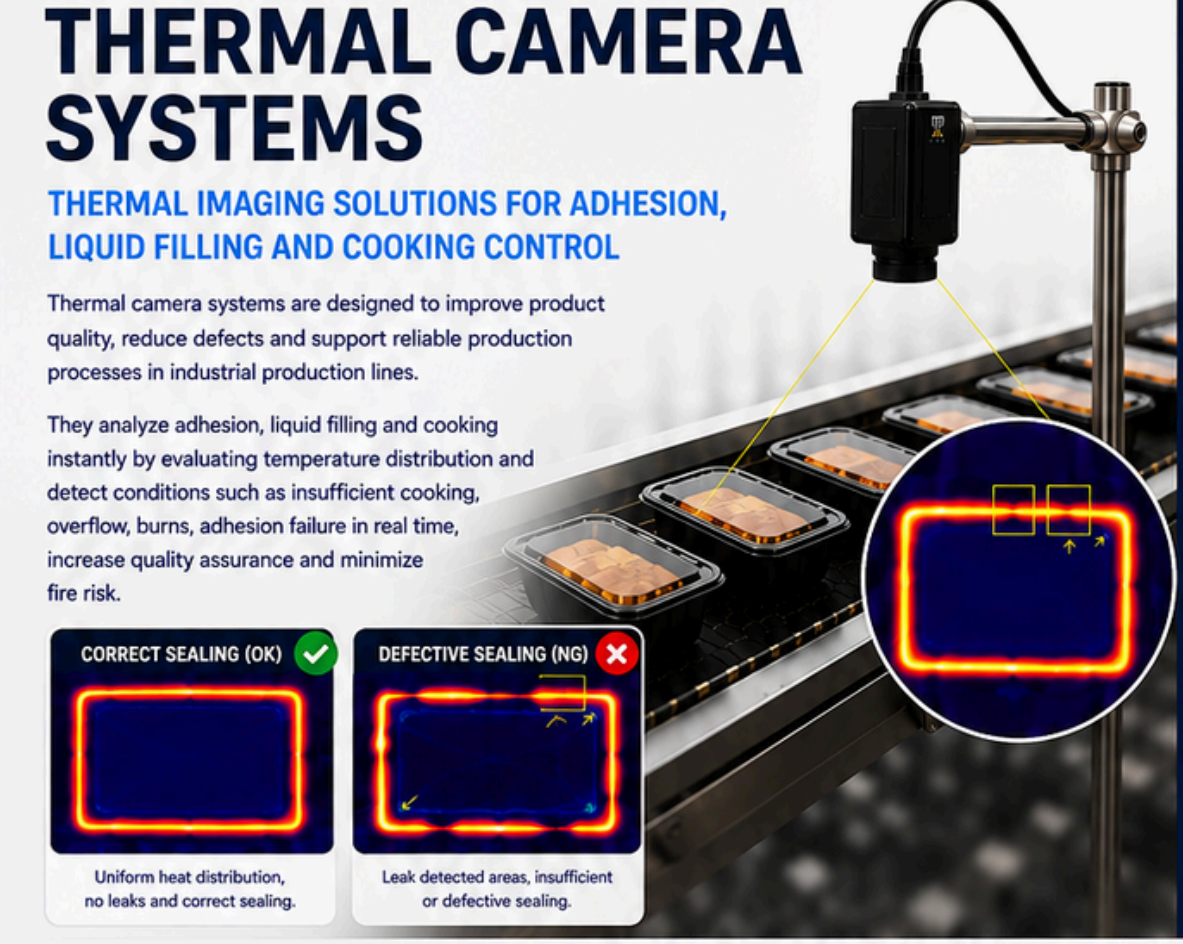
Measurement System	Infrared sensor for CO_2
Measurement Range	0 – 5,000 ppm
Resolution	1 ppm
Detectable Leak Size	> 10 µm (depending on product and test conditions)
Sensor Response Time	Approximately 1 second
Test Cycle Time	Vacuum, CO_2 measurement and evaluation are included
Vacuum	Max. 200 mbar abs. (approx. +800 mbar – atmospheric pressure), adjustable
Vacuum Pump Capacity	12 m³/hour vacuum pump
Status Indicator	None
Interface	Wi-Fi

THERMAL CAMERA SYSTEMS

THERMAL IMAGING SOLUTIONS FOR ADHESION, LIQUID FILLING AND COOKING CONTROL

Thermal camera systems are designed to improve product quality, reduce defects and support reliable production processes in industrial production lines.

They analyze adhesion, liquid filling and cooking instantly by evaluating temperature distribution and detect conditions such as insufficient cooking, overflow, burns, adhesion failure in real time, increase quality assurance and minimize fire risk.



HOW DOES IT WORK?

Thermal Imaging
Continuously scans the surfaces of the product or package and captures thermal images.

Thermal Analysis
Analyzes the captured images using advanced algorithms and controls quality criteria.

Defect Detection
Detects issues such as insufficient filling, overflow or overcooking immediately and records them.

Quality Assurance
Ensures consistent quality for every product, increases shelf life and protects customer satisfaction.

Easy Integration
Easily integrates with existing machinery and automation systems.

APPLICATION EXAMPLES

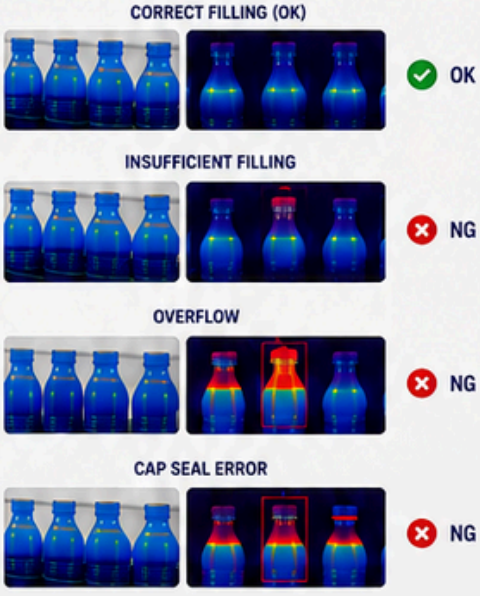
ADHESION CONTROL

Analyzes the seal adhesion quality of MAP packages.



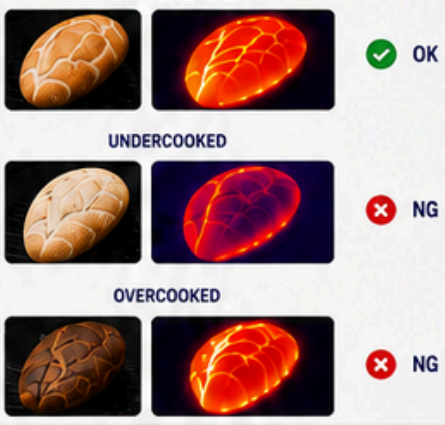
LIQUID FILLING CONTROL

Detects liquid level and filling errors.



COOKING CONTROL

Monitors surface temperature during the cooking process.



USAGE AREAS

- Dairy Products
- Meat & Poultry Products
- Ready Meals
- Fruits & Vegetables
- Seafood Products
- Bakery Products
- Beverage Industry
- Snack Food Products

KEY FEATURES

HIGH SENSITIVITY
Accurate and reliable measurements with high sensitivity thermal sensors.

CONTACTLESS CONTROL
Fast and hygienic temperature analysis without contacting the product.

REAL-TIME ANALYSIS
Instant image processing and automatic defect detection.

EASY INTEGRATION
Fully compatible with all packaging and production lines.

DATA RECORDING & REPORTING
All data is recorded, reports are generated and traceability is ensured.

TECHNICAL SPECIFICATIONS

Sensor Type	Thermal Camera
Resolution	160x120 pixels or 380x290 pixels
Frame Rate	5 – 80 Hz
Wavelength Range	900 – 1700 nm
Focus	Manual
Interface	Ethernet
Operating Temperature	0 – 50 °C
Power Supply	220 VAC
Temperature Measurement Range	-20 °C ... +550 °C (optional +1500 °C)
Accuracy	±2 °C or ±2% (of reading)
NETD (Thermal Sensitivity)	≤ 50 mK

WHY THERMAL CAMERA SYSTEMS?

- ✔ Improves product quality and reduces fire and costs
- ✔ Automated process control minimizes human errors
- ✔ Supports food safety and regulatory compliance
- ✔ Provides real-time monitoring for maximum process efficiency
- ✔ Ensures hygienic and reliable control without contact measurement

SWIR CAMERA SYSTEMS

ADVANCED IMAGING AND INSPECTION SOLUTIONS

SWIR camera systems operate in the 900 – 1700 nm wavelength range and detect the chemical and physical differences within the product's structure.

They detect bruising, sprouting and foreign matter in fruits, vegetables and meat products, as well as moisture change and quality differences. They bring more reliable and efficient quality control processes, saving time.



EARLY DETECTION WITH SWIR

VISIBLE IMAGE

SWIR IMAGE

Bruises and internal damage that are not visible on the surface are detected clearly with SWIR imaging.

HOW DOES IT WORK?

SWIR Imaging Technology
Generates images in the 900 – 1700 nm wavelength range.

Spectral Analysis
Analyzes the reflection spectrum of the product and determines its chemical and physical properties.

Defect Detection
Detects bruising, sprouting, foreign matter, moisture and quality issues in real time.

Quality Assurance
Automatically increases product quality while reducing fire, waste and costs.

Easy Integration
Easily integrates with existing error and automation systems for seamless operation.

APPLICATION EXAMPLES

EARLY BRUISING DETECTION (FRUITS)
Bruised areas inside the fruit that are invisible on the surface are detected at an early stage with SWIR.

VISIBLE IMAGE



SWIR IMAGE



BRUISING AND ODOR DAMAGE DETECTION (MEAT)
Detects bruising and odor damage that occur inside the meat and helps deliver high quality products with SWIR.

VISIBLE IMAGE



SWIR IMAGE

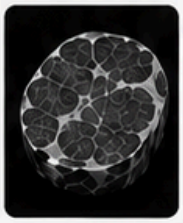


FAT QUALITY AND FRESHNESS ANALYSIS (MEAT)
Analyzes the fat distribution, moisture and freshness of meat products with SWIR and evaluates quality.

VISIBLE IMAGE



SWIR IMAGE



MOISTURE DISTRIBUTION ANALYSIS
Analyzes moisture differences inside the product with SWIR and improves quality control processes.

VISIBLE IMAGE



SWIR IMAGE



KEY BENEFITS

HIGH PENETRATION
Provides clear imaging up to 900 – 1700 nm wavelength range.

REAL-TIME ANALYSIS
High-speed imaging and advanced algorithms deliver instant results.

SUPERIOR IMAGE QUALITY
High contrast and low noise deliver detailed images even in low light.

EASY INTEGRATION
Seamlessly integrates with all packaging and production lines.

DATA RECORDING & REPORTING
All data is recorded, reports are generated and traceability is ensured.

TECHNICAL SPECIFICATIONS

Resolution	640x512 pixels
Frame Rate	100 Hz
Wavelength Range	900 – 1700 nm
Focus	Manual
Interface	Ethernet
Operating Temperature	0 – 50 °C
Power Supply	220 VAC
Weight (including conveyor)	50 kg

WHY SWIR CAMERA SYSTEMS SHOULD BE PREFERRED?

- ✓ Increases product quality and reduces fire and costs
- ✓ Enables early detection and saves time and resources
- ✓ Delivers high performance in demanding production conditions
- ✓ Supports food safety and regulatory compliance
- ✓ Provides hygienic and reliable control without contact measurement

INTEGRATION AND CUSTOM PROJECTS

CUSTOM, RELIABLE SOLUTIONS FOR YOUR NEEDS

We develop fully compatible solutions with different production lines and packaging machines.

In addition to our standard products, we also provide engineering and software solutions tailored to your custom project needs.

INTEGRATION

We ensure fast and seamless integration with your existing systems.

FLEXIBLE STRUCTURE

We use appropriate hardware donation and I/O options according to your needs.

CUSTOM PROJECTS

We develop custom hardware and software solutions tailored to your needs.

CUSTOM PROJECT SOLUTIONS

In addition to our standard solutions, we provide engineering and software support for your custom project needs.

CUSTOM HARDWARE DESIGN

We design custom electronic boards and hardware according to your application and develop suitable solutions for your needs.

SOFTWARE DEVELOPMENT

We develop custom software solutions for your needs such as control, monitoring and reporting.

CUSTOM MECHANICAL SOLUTIONS

We design custom fixtures, enclosures and test setups to make your processes more efficient.

DATA LOGGING AND REPORTING

We develop solutions that record all test and measurement results, generate reports and provide analysis capability.

SCREEN AND INTERFACE CUSTOMIZATION

We customize user experience by designing screen and interface solutions tailored to your needs.

FIELD SUPPORT AND COMMISSIONING

We provide installation, testing and training support to ensure your projects operate smoothly.

WHAT DO YOU GAIN?

- Higher reliability
- More accurate measurements
- More efficient production processes
- Lower cost
- Shorter delivery time
- Long-term technical support

TECHNICAL SUPPORT AND CONTACT

WE ARE ALWAYS BY YOUR SIDE

SMT Teknoloji is with you with expert support before sales and after sales processes as well as providing only products and solutions.

EXPERT SUPPORT TEAM
Our experienced technical team provides fast and accurate solutions to your needs.

FAST RESPONSE
We prioritize your requests with quick turnaround time and minimize downtime.

TRAINING SUPPORT
We are by your side with device usage, maintenance and application training.

RELIABLE SOLUTION
We provide service with accurate analysis, effective solutions and sustainable support.

CONTINUOUS SUPPORT

TECHNICAL CONSULTANCY
Free consultancy for the most suitable solution for your application.

REMOTE SUPPORT
Quick fault detection and direction via remote connection.

SPARE PARTS SUPPORT
Uninterrupted operation support with original spare part supply.

DOCUMENTATION
User manuals, technical documents and application notes.

FOLLOW-UP AND FEEDBACK
We value your satisfaction by following up your process at every stage and receiving feedback.

OUR CONTACT CHANNELS

PHONE
+90 542 744 86 96

E-MAIL
info@smttekno.com

You can write us at any time.

WEBSITE
www.smttekno.com

You can get detailed information about our products, solutions and references on our website.

ADDRESS
Bahçelievler Mah. Prof. Dr. Necmettin Erbakan Bulvarı
Elit İş Merkezi No:3
İç Kapı No:115
Serdivan / SAKARYA / TÜRKİYE

WE REACH YOU FROM EVERYWHERE

We provide solution partnership services in Turkey and more than 17 countries.

- Global Service Network
- 7/24 Support
- Reliable Service
- 100% Customer Satisfaction

LET'S GET IN TOUCH, LET'S PRODUCE SOLUTIONS

If you would like to talk about your needs, get information about our products or contact us for support, you can reach us. Let's find the most suitable solution together.

DO YOU HAVE A QUESTION?
Let's get in touch.

RIGHT SOLUTION
We offer custom solutions for your needs.

WE ARE BY YOUR SIDE
Today, tomorrow and always.