

# – Mold Temperature Control – Die-cast Mold Temperature Control System by Using IR Thermography

## Challenge

Temperature of mold needs to be managed and controlled, for improving productivity and maintaining quality

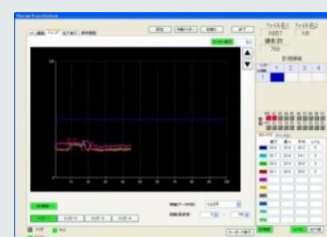
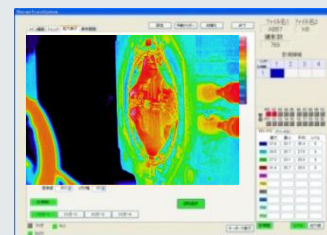
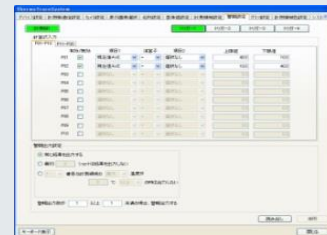
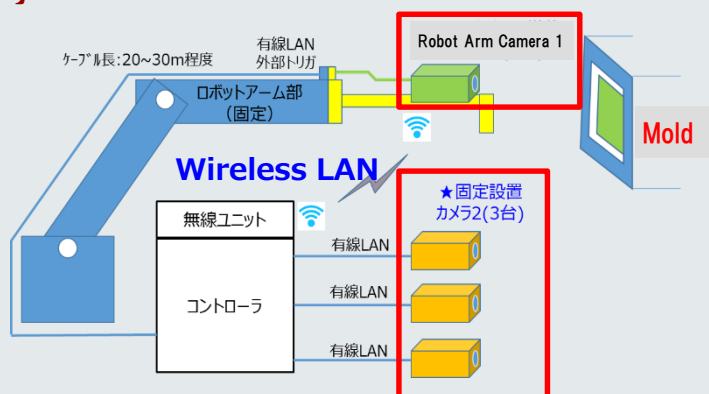
## ■ Avio Solution!!

Data acquisition, Good/NG judgement, evidence management, control feed back are available by thermal image data from same angle and timing for each shot by system construction with PLC.

- ★ Proposal of housing which is excellent in environmental resistance, robot mounted thermography with the release agent, and wireless support
- ★ Monitoring of cooling status by cooling water and release agent by thermal pattern of mold.
- ★ All mold data can be stored automatically (Evidence management).

### ■ System Example

#### • System Outline



#### ■ Subtraction Function

Subtracted image can be displayed between current and the master/previous image. It enables efficient analysis and early detection of quality abnormality.

#### ■ Setting of Monitoring Area

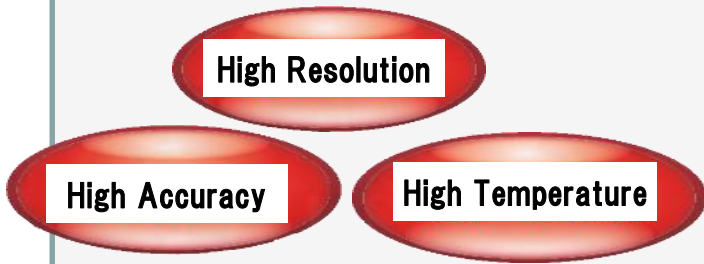
Max. 20 areas can be arbitral set. Within the area, calculation of Maximum, minimum, average value, trend graph display, and alarm forecast output are available.

◆ **2 models to fit size of die-cast machine!**  
**TS600 for large machines / S25 for small machines**

High Function Network Compatible Fix-mounted model

**InfReC TS600series**

High resolution 311,000 pixels model  
 It contributes to quality management by sold performance  
 IR thermography camera which contributes to various control  
 requirement by general purpose protocol.



Network Thermography Camera

**Network thermo S25 System**

High dust proof/drip proof, equivalent to IP67!

It is widely used from stand alone monitor to large scale monitoring system by alarm output function and network capability.



**Small, Light & Robust**

- Flexible and easier installation / easily installed in confined spaces / restricted room availability
- IP67 rated protective casing makes it possible to be used in harsh environment

**Network-Configured and -Controlled**

- Ethernet Interface incorporated for remote operation and flexible system building

**Alarm Output**

- When adequately programmed, the camera can operate for monitoring to output alarm signal on its own (disconnected from network), too.

**Thermal Image and Measurement**

- 160 x 120 pixel image sensor allows high-resolution thermal image measurement
- Measuring Temperature Range is to be chosen from either -20°C to +350°C (S25W) or 0°C to +600°C (S25H)

**Software and Tools**

- Remote Control Software is a standard accessory to configure, program and operate over the network
- Thermal image viewer, analysis and report generator software (for captured images) is included (NS9500LT)
- Software Development Kit (SDK) available free for purchasers\*

\* Software Development Kit (SDK) is provided to users, on request, via our website  
 \* Thermal / Visible images are for illustrative purposes

Avio offers most suitable model for all of your measurement needs.

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**WARNINGS & CAUTIONS**

- Before using this product, please carefully read the provided Operation Manual "WARNINGS" & "CAUTIONS" section to ensure proper operation.
- Please do not place the product in high temperature, high humidity or high inert gas environments.

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