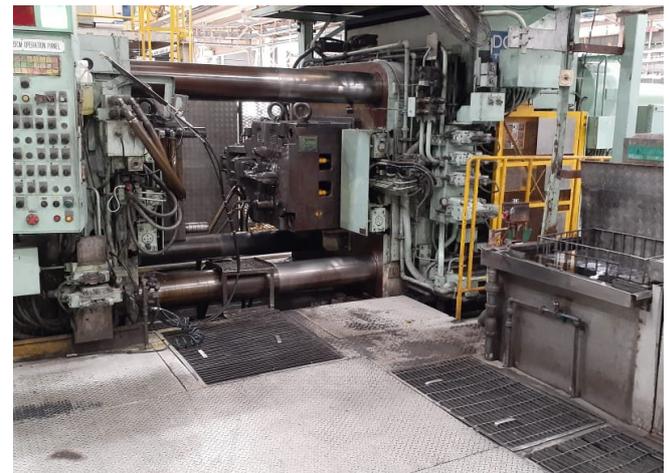


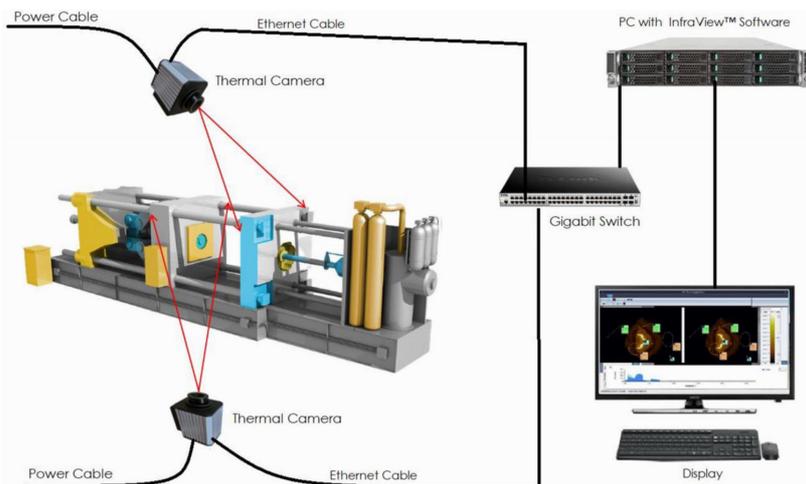
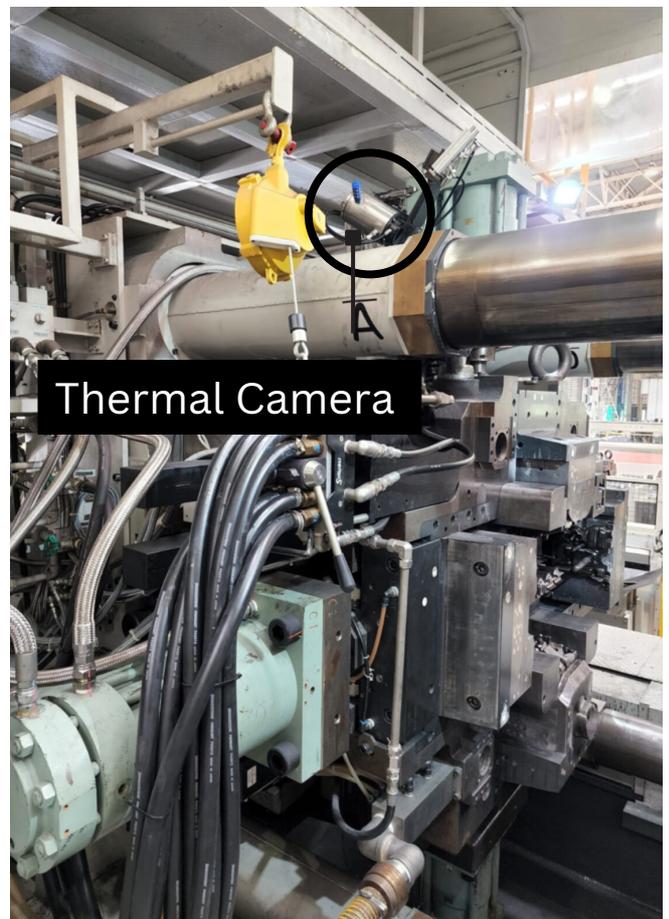
# Die Thermal Profiling in Aluminium Die-Casting Process

During the die-casting process, the molten metal is forced into the mould cavity with high pressure. Surface monitoring during this process is crucial, as to measure the uniformity of the dies after and before casting. As this aluminium casting is an automatic process using a robotic system. If the dies are too hot, the robot will not be able to withdraw the casted part, as aluminium will stick to the dies, and also it will be indicating the cooling process of the dies is not performing well. If the dies are too cold, aluminium will not be cast properly as it will become solid before it reaches the end of the cavity and again, it also indicates some issue with the cooling parameter.

ThermCAM series thermal imaging cameras provide real-time video/image with temperature monitoring. Its high-performance IR sensor captures and visualizes the thermal map of the die surface. A threshold temperature can be set on individual ROI's, over which if the temperature of the die rises an alarm will be generated. The thermal camera can also be integrated with PLC, SCADA, relay, hooter, or any other triggering instrument by using an I/O module which can provide analogue and digital output (4-20mA).



**ThermCAM-384**  
 Pixel Resolution: 384 x 288 Pixels  
 Temperature Range: -20°C to 120°C / 100°C to 1000°C



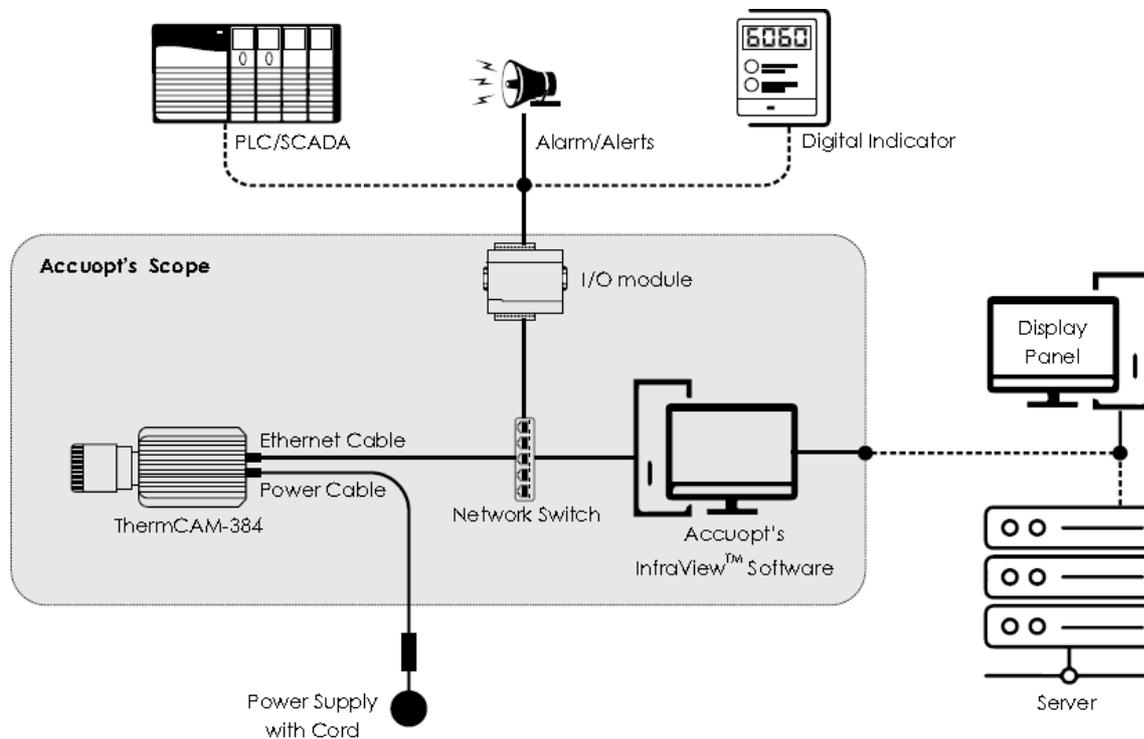
# System Configuration

## Advantages

- Realtime temperature adjustment of moulds.
- Improves the quality of finished products.
- Reduce the cycle time.
- Reduce the number of discarded goods and reduce the cost of rejection.
- Generate alarms on detection of hot spots, which helps in indicating predictive maintenance which reduces high maintenance costs.

## Key Features

- Provide continuous thermal video in InfraView™ Software.
- Different types of ROI (Region Of Interest) can be drawn for localized temperature monitoring.
- Histogram and trend chart of ROI can be generated for data analysis.
- Includes 9 different color palates which can be selectable as per the user demand



## Thermal Camera Connections

- ThermCAM-384 provides Ethernet output. The camera has two connectors at the back side one is power connector and another one is RJ45 Ethernet connector.
- The camera get connected to PC installed with InfraView™ software which allows to stream thermal videos/images.
- This camera output can also be taken over PLC/SCADA, digital indicators or hooters/ alarms etc. through I/O module via a network switch.
- This Accuopt's I/O module provide 2 relay outputs and 4 analog output of 4-20mA.