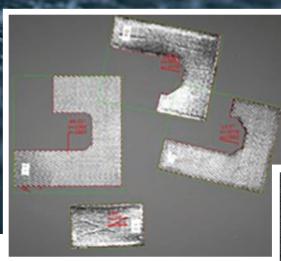


Today's product requirements are more challenging than ever. New processes and approaches are required especially for kitting, stacking and lay-up of preforms and/or composite parts. SMART Control is an automatic control solution to check in real time the conformity of the lay-up to the theoretical plan. There are currently on the market means of assistance to the lay-up (laser projection) but no solution of control of the lay-up in real time. SMART Control allows to make the lay-up more reliable and to correct it, thus reducing the number of scrapped parts.

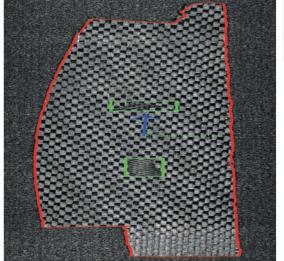
It consists of a camera system with its lighting and plug & play software that allows control functions such as shape identification and recognition, fiber orientation control, ply positioning, gap and/or overlap detection as well as FOD and defect detection on composite materials.







Ply positioning and shape identification



**FOD** detection



## **APPLICATIONS**

- SMART Control can be used in any composites sector in which high rate kitting, stacking and preform lay-up of UD or woven materials is required such as for aeronautic applications (for class 1 parts).
- SMART Control can be used in addition to SMART Pick & Place or as a standalone solution.



## **BENEFITS**

- Ply identification without laser nor barcode
- Quality inspection of plies during lay-up
- Flexible (suitable for Pick & Place solution or manual lay-up)
- Fully modular system (plug & play software + camera system)



## **FEATURES**

- Identification and shape recognition
- Control of fiber orientation with an accuracy of ± 0.3°
- Control of the plies position with an accuracy of 0.25mm
- Detection of gaps and/or overlaps between 2 plies of the same layer
- Detection of FOD > Ø 5mm
- Recognition of defects on composite materials

## **TME AT A GLANCE**

Techni-Modul Engineering is an industrial engineering company that designs, realizes and implements standardized and turn-key solutions in support of composite parts manufacturing. We provide optimized and innovative composite manufacturing solutions worldwide for various processes and for different functions.

