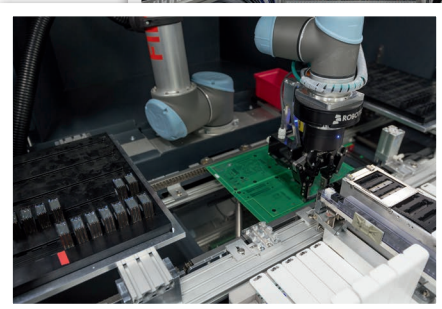
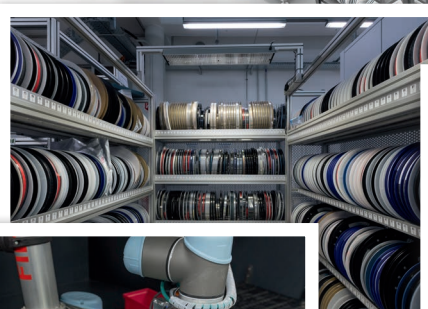


## GERMANY



**“Optimizing only net throughput times is a recipe for disaster in a flexible production environment. Setup and changeover times are much more critical today.”**

– Alessandro Bonara,  
Head of ASM Electronics Factory –



Modern cobots working next to operators.

### ASM Electronics Factory in Munich, Germany

As a manufacturer of machines for SMT producers, ASM must meet the challenges of modern global production in its own operations, which is why the company operates one of the world's most modern and flexible electronics factories in Munich. It is so state-of-the-art that it received the coveted Factory of the Year Award for 2016 explicitly because of the steps it has already taken towards making its operations smart.

#### Key Facts

- > In addition to producing small lots of electronic modules for ASM machines, the factory supports ASM's R&D operations with electronics for prototypes, new options, and custom solutions.
- > High-mix/low-volume production with 2 SMT lines
- Frequent setup changeovers for prototypes and new options

#### Focus

- > Optimization of material flows
- > Automation via deployment of cobots
- > Transparent production
  - KPIs and process data
  - Paperless access to process descriptions and operating instructions
- > Reducing the operator workload

#### Results/KPIs

- > Optimized material logistics
  - Process-oriented material management with UIDs for each package
  - Line-adjacent material tower systems with control of MSD exposure times
  - Integrated and paperless support for offline setup processes
- > Smart operator concept
  - Line Monitor: comprehensive information about line status and pending jobs
  - Machines request fresh material supplies automatically
  - Expert systems for autonomous control and optimization of printing processes
- > Automation
  - Mobile, flexible use of cobots at several workstations
  - Cobot programming performed by in-house staff
- > Transparent production
  - Live display/drill-down of KPIs on factory monitors
  - Digital documents at all workstations, always up-to-date
- > Improvements made within one year with no change in capacity
  - Doubled the product portfolio
  - 10% more throughput
  - Tripled the number of NPIs per year
  - 35% improvement in cost per placed component

Want to see more? Scan the QR code to watch our videos.



 ASM Electronics Factory  
Smart SMT Factory



 ASM Electronics Factory  
Workflow Factory Monitoring