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CONFIDENTIAL

flex Trieste

Fast facts about the city:

- Trieste is the capital city of the Friuli Venezia Giulia region in northeast Italy.
- It is situated on the crossroads of several commercial and cultural flows
- Population ~210,000

— Trieste, Italy

Trieste, Italy



Flex Trieste Campus Infrastructure



Product Experience

Networking and Communications:Switched DWDM productSubmarine Line terminals

Smart Meters (Energy):

- •Supply chain integration with Wordwide FLEX plant
- •Final assembly & Test
- •Logistic

•Other products







New Product Introduction

Develop and implement new test technologies / automatic functional tests

Analyze design data from development (new designs / product re-spins) and optimize transfer from design environment into supply chain; optimize phase in economics; assure all internal and external manufacturing systems are tied to correct design info

Collaborate with R&D on design for DFM, delivery and product industrialization Perform failure mode analysis and work to eliminate future risk

Ensure proto / pilot deliverables and Supply Chain readiness

Early stage New Product Introduction and Industrialization

Manufacturing Process tools and technique development

Ensure factory process capability, infrastructure, tools and processes are developed on time to support manufacturing

Assembly documentation development for Top Level Items

Test Engineering

Component/board Failure Analysis and supplier engagement to drive resolution

Collaboration with customer's Test Engineering to optimize product for testability (DFT)

Introduction of new product SW/HW releases in the manufacturing flow

Test consoles HW duplication and debug

Test procedures control and preparation

Technical definition of investments and of purchase of testing tools

Final test and System Test Equipment

Product knowledge: troubleshooting on Failing items

Supervision on technical problems at board or at equipment level; test yield analysis

Test knowledge: troubleshooting, maintenance and improvements on test HW;

Test asset management and calibration (2100 active instruments in the calibration plan)

Ensure test instruments s/n tracking vs tested product s/n (TL9000 requirements)

Manage test capital and test capacity

Productivity and industrial cost evaluation with respect to test tools and instruments

Product Engineering

Mechanical Assistance/ Moonshine tooling lab: construction and maintenance for production tools, assistance for mechanical product rework, mechanical and thermal calibration

Participate with R&D in FMA/RCA on product and component failures

ESD management

Support to production SW tools (product tracking, labeling, cad/cam, doc sharing tool)

> ECO processing - pproduct changes management

Establish factory processes capability: assembly, splicing, handling, packaging, component incoming acceptance, optical connector inspection

Provide technical support for day-to-day process-related manufacturing issues

Product specific continuous improvement programs via quality management teams, monitor and optimize factory yield, capacity, capital utilization

Control and distribution of technical data and documentation (including Technology Transfers)

Manufacturing BOM and Routing management

Factory Acceptance Tests and Customized solutions

Customization of tests on the basis of the customer requests (e.g. special environmental conditions, or dedicated measures normally not performed during the manufacturing flow)

Preparation and execution of Factory Acceptance Tests and Type Approval Tests with customers (>15 years of experience, >20 sessions per year)

Integration of the equipment with HW/SW presettings, special labels, complete link test approach where real field working conditions are replicated.

Leveraging high value and cutting edge technology instruments









Trieste Production

29 climatic chambers and 15 heating tents are deployed for the temperature stress tests on the product (standard range is -5°C / +50°C)

Experience needed for various critical steps such as soldering on temperature sensitive devices, special heatsink and thermal pad mounting process, coaxial bullets insertion, handling of fragile mechanical optical devices, handling of 250µm fibers Key competences and factors for assembly staff:

Mechanical and optical assembly of complex circuit packs, with fine pitch soldering, splicing, recoating, fiber routing

Full Traceability (Flex Flow & BAAN software) for parts, component & process flow.

Critical soldering/desoldering with the aid of microscopes, on parts where Design For Assembly is not always applicable

Automated back-end lines and packaging line Smart Meters project

Introduction: Smart Meters realization production flow

- Smart meters production for the italian market
- Smart meters are electronic devices that records consumption of electric energy.
- Product capacity is up to 160.000 pieces per month.





Automated back-end lines and packaging line Smart Meters project

Automated solutions for the back-end process

• Two automated machines for the back-end process of the **Smart Meters production**.







Automated back-end lines and packaging line Smart Meters project

Smart Meters packaging line

• Automated packaging line for **Smart Meters packaging**.







