

ProMik Programming Services

Overview

ProMik provides programming services for integrated circuits and related devices. Servicing the electronics industry for more than fifteen year, ProMik combines technical expertise, high quality standards and proven processes to create flexible solutions for its customer base.

The systems and procedures in place ensure consistent product quality and on-time delivery. By maintaining strong relationship to semi conductor manufacturers and its key-customers ProMik stays on top of industry changes and new requirements.

ProMik is unique because it combines two complementary business units within one company: The *Programming-Services* business with its top quality and logistic services and the *ISP-Systems* business unit, which designs and manufactures a range of in-system programming solutions. Our customers benefit from the synergy effects between the two business units and receive unparalleled fast response times for new device inquiries, verification samples or any special request combined with deep technical expertise

Our proprietary programming system PA2012 represents a new class of automated programming and handling technology. The unique programming and handling technology combined with the integrated system control software ensures top quality, no human influence or intervention, and 100% traceability.

ProMik's trusted solutions are used by industry-leading electronics manufacturing companies who rely on ProMik's programming technology, to flash and test reliably in their production environment.

Business Processes

Our business processes focus on maximizing the benefit to our customers. Whether in our device programming centre or logistic system a high degree of automation and process-based quality assure customer satisfaction.

Examples of ProMik's commitment to industry standards are demonstrated in the company's ISO9001, ISO/TS16949 and ISO14001 certification. Such adherence to standards provides ProMik customers with confidence in the utilization of ProMik's services.

Logistic Services, Inventory Management

ProMik offers logistics solutions which utilize an optimized flow of goods, supported by state-of-the-art technology, to guarantee our customers production supply whenever needed.

ProMik's inventory management models include for example consignment warehouse models or vendor managed inventory. As part of inventory management, monitoring is an important point at ProMik to provide complete transparency for our customers. We provide in this context stock status or planned/actual quantities in comparison with project use - any customer requirement can be met.

ProMik guarantees seamless traceability at every stage in the process. A large amount of data is recorded and thereby ensures that all the necessary information can be accessed and evaluated very quickly.

Examples

- **Manufacturer data:**
Date and lot code, article name, order number, valid mask set, quantity etc.
- **Transport data:**
Delivery note number, export/customs data
- **Warehouse data:**
Storage location and storage period
- **Production data:**
Customer blank device ID, customer programmed device ID with SW version, order data, lot and job data, system ID, SW algorithm, adapter ID
- **Picking and shipping data:**
Carrier, tracking number, container number, invoice

Our logistic concepts are completed with customer-specific labelling and packing. ESD packaging, tape & reel service, drying of electronic components and sub-assemblies complement our services.

Programming Services

ProMik offers comprehensive programming services for integrated circuits (ICs). Our standard processes, continuously trained personal and full ESD JESD 625 facility protects our customers at every step during the programming process. And, ProMik procedures ensure that ongoing process improvements are the highest quality standards are consistently maintained.

Our proprietary PA2012 automated programming system combines programming, lead inspection, tape & reel as well as integrated system control software in one system - no human influence or intervention during the programming process.

The PA2012 system with the proprietary *SmartHandling* concept monitors the device handling process throughout the entire system; every device is traced at each process step. The integrated 2D and 3D collinearity and coplanarity systems compliment the *SmartHandling* concept. Every device is vision checked prior to placement in the programming socket. The coplanarity check is performed after programming as an additional safety check. A third vision system monitors device placement at the taping station to ensure after programming a uses automated lead scanning systems to verify that tolerances adhere to manufacturer or customer specifications.



We support virtually all package and product types including programmable microcontrollers (Flash and OTP), Flash Memories, etc. From prototype to production volumes, our proprietary automated programming and handling systems reduces processing time and protects device leads from damage.

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Programming Services Details

- Fully integrated production process: programming, lead inspection, tape & reel
- Integrated 2D Collinearity and 3D Coplanarity inspection ensure lead integrity, check devices prior and after programming
- 100% traceability over your product life cycle, of any device or lot with unique traceability feature
- Optimized communication for high-speed and margin verify algorithms for quality programming

- Customer / application specific serialization algorithm
- Short response time for new device inquiries and verification samples
- Electronic file transfer promotes quick turnaround
- Automated systems retrieve customer program files from a central database, track revisions and trace every individual part
- Dedicated engineering staff handles technical support issues
- Optional test functions, e.g.
 - Memory test
 - Application parameters
 - Oscillator trimming

Lead Inspection

Damaged leads are a primary reason for failures in electronic manufacturing process. Lead inspection lowers parts per million (PPM) levels and increases product yields.

A 3D Coplanarity check is performed in our automated handling system. The combination with an additional vision system at the tape and reel station monitors the device placement in the tape to ensure highest quality levels – the 0 PPM programming service.

ProMik can supply specialized reports that display lead scan results for each device processed. Reports for individual devices are also available for engineering control purposes.

Tape and Reel

ProMik offers a wide variety inventory of carrier and cover tapes to handle the devices used by its customers. Our automated equipment eliminates the possibility of bent caused by excessive handling and ensures accurate orientation in carrier tape. Stabilization bake and humidity barrier packing protects moisture-sensitive devices.

- Vision-controlled device placement in tape, check for pin orientation, empty socket, pocket size check
- In accordance to EIA481 standards
- Peel back force testing
- Vacuum dry packaging

Programming Services Summary

- IC Programming
- IC Marking
- Lead Scanning
- Dry Bake / Dry Pack
- Taping and Reeling
- Materials Management

Certifications

- ISO 9001
- ISO/TS 16949
- ISO 14001
- ESD JESD 625 compliant