SEMITRON
Distribution + Testhaus

SEMITRON W.RÖCK GmbH
Linecard

FIRMENPROFIL

COMPANY PROFILE

DISTRIBUTOR WELTWEIT FÜHRENDER HALBLEITERHERSTELLER

Die Komplexität von elektronischen Bauelementen wächst unaufhaltsam. Gleichermaßen wächst die Notwendigkeit, dem Anwender kompetente Hilfe und Unterstützung zu bieten. Erst dann verfügt der Anwender über notwendige Voraussetzungen, diese Produkte sowohl technisch als auch kommerziell optimal zu selektieren und individuellen (Anwendungs-) Erfordernissen anzupassen und optimal einzusetzen.

Durch unser Team, von allen von uns vertretenen Herstellern intensiv geschulter und zertifizierter Applikations- und Vertriebs-Ingenieure, garantiert Semitron, dass Sie als Kunde die bestmögliche Unterstützung erhalten, selbstverständlich auch vor Ort.

DISTRIBUTOR OF GLOBAL MANUFACTURERS` SEMICONDUCTORS

The complexity of electronic components is constantly increasing. This is mirrored by the need to offer users competent aid and support. Only this can provide users with the necessary skill to best select such products technically and commercially, and to optimally adapt and use them for individual application requirements.

Thanks to our team, which includes certified application and sales engineers intensively trained by all manufacturers in our portfolio, Semitron guarantees that you, as our customer, will receive the best support possible, both off and on-site.

HOCHQUALIFIZIERTES TEST- UND PROGRAMMIERHAUS

Der Anpassung von Standard-Produkten an individuelle, applikationsspezifische Wünsche und Notwendigkeiten, trägt Semitron durch das Testhaus Rechnung. Kundenspezifische Programmierung, Gurtung und Nachbearbeitung nahezu aller elektronischen Bauelemente werden professionell, schnell und kostengünstig durchgeführt.

Selektionen, applikationsspezifische sowie thermische Tests und BURN IN sind ebenso selbstverständlich wie Tape and Reel Service, individuelle mechanische Modifikationen, Beschriftungen und Markierungen nach Kundenvorgaben.

Selbstverständlich werden alle Testhaus-Dienstleistungen auch für beigestellte Produkte aus beliebigen Bezugsquellen angebten.

HIGHLY QUALIFIED TEST AND PROGRAMMING HOUSE

The Semitron test house is set up to adapt standard products to individual, application-specific wishes and necessities. We carry **out customer-specific programming, taping** and post-processing of most electronic components professionally, rapidly and economically.

Selection, application-specific tests, thermal tests and burn-in are basic services, just like our tape & reel service, individual **mechanical modifications, labeling and marking to customer specifications.**

All test house services are also available for products provided from other supply sources.

UNSERE LINIEN

OUR LINES

ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™

MICROCHIP

Honeywell

ABLIC

SII
Seiko Instruments Inc.

ANALOG DEVICES

AMPLIFIERS

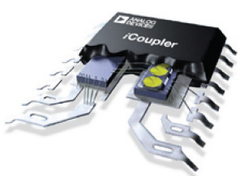
- ADC Drivers
- Differential Amplifiers
- Instrumentation Amplifiers
- Isolation Amplifiers
- Operational Amplifiers
- RF Amplifiers
- RF Power Detectors
- Specialty Amplifiers
- Variable Gain Amplifiers
- Video Amplifier

ANALOG TO DIGITAL CONVERTERS

- A/D Converters
- High Speed ADC > 10MSPS
- Integrated/Special Purpose Converters
- Precision ADC < 10MSPS

AUDIO & VIDEO PRODUCTS

- Analog/HDMI/DVI Interfaces
- Audio A/D Converters
- Audio Amplifiers
- Audio CODECs
- Audio D/A Converters
- Audio Signal Processors
- Camera/Camcorder Analog Front Ends
- Display Driver Electronics
- Lens Driver Components
- Sample Rate Converters
- Video Amplifiers
- Video CODECs
- Video Compression
- Video Decoders
- Video Encoders



BROADBAND

- Broadband Amplifiers
- Cable Modem Baseband/IF Signal Processing
- CATV Amplifiers/Splitters
- Clock and Data Recovery/Retiming
- Digital Crosspoint Switches

CLOCK AND TIMING

- Clock Generation and Distribution
- Direct Digital Synthesis
- PLLs

DIGITAL TO ANALOG CONVERTERS

- D/A Converters
- Precision DAC ≤ 12MHz
- High Speed DAC >12MSPS

INTERFACE & ISOLATION

- Automotive Interfaces
- HART & 4-20mA Loop Interface Devices
- IOS Subsystems
- Isolation
- Level Translators
- LVDS/MLVDS
- Mobile I/O Expander & Keypad Controller
- RS-232 / RS-422 / RS-485

ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™

Hittite
MICROWAVE PRODUCTS
FROM ANALOG DEVICES

ANALOG DEVICES

LINEAR PRODUCTS

- Analog Multipliers & Dividers
- Comparators
- Current Mirrors
- Linear Isolators
- Precision Modulators/Demodulators
- RMS to DC Converters
- Voltage References

POWER MANAGEMENT

- Battery Management
- Digital Power Management IC
- Display and Lighting IC
- Hot Swap IC
- Isolated Gate Drivers
- Linear Regulators
- MOSFET Drivers
- Power Monitors
- Sequencing
- Supervisory
- Switching Power Converters

MEMS AND SENSORS

- iSensor MEMS Accelerometer Subsystems
- iSensor MEMS Gyroscope Subsystems
- iSensor MEMS Inertial Measurement Units
- Magnetic Field Sensors
- MEMS Accelerometers
- MEMS Gyroscopes
- Temperature Sensor and Control Devices

PROCESSORS AND DSP

- ADSP-21xx Processors
- Analog Microcontrollers
- Blackfin Processors
- CM4xx Mixed-Signal Control Processors – ARM® Cortex®-M4 core
- Digital RX/TX DSP Devices
- SHARC Processors
- SigmaDSP Audio Processors
- SigmaDSP Processors for TV
- TigerSHARC Processors

RF & MICROWAVE

- Communications Analog Front Ends
- Direct Digital Synthesis & Modulators
- Integrated Transceivers, Transmitters & Receivers
- IQ Modulators & Demodulators
- Mixers
- Phase Shifters & Vector Modulators
- PLLs/Synth
- Quadrature Digital Up Converters (QDUC)
- RF Amplifiers
- RF Power Detectors
- RF Switches
- Timing ICs & Clocks
- Tunable Filters
- Variable Gain Amplifiers

SWITCHES & MULTIPLEXERS

- Analog Switches Multiplexers
- Buffered Analog Crosspoints Array
- Buffered Multiplexers
- Digital Crosspoint Switches
- Fault Protected Switches and Multi-plexers
- Latch Up Immune and High ESD
- Level Translators
- RF Switches
- Unbuffered Analog Crosspoint Array

Hittite
MICROWAVE PRODUCTS
FROM ANALOG DEVICES

ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™

MICROCHIP

8-BIT MICROCONTROLLERS (PIC®/AVR®)

- Base-Line
- Mid-Range
- Enhanced Mid-Range "F1"
- PIC18
- AVR 8bit ATMega
- AVR 8bit ATtiny

16-BIT PIC® MICROCONTROLLERS

- PIC24
- dsPIC33

32-BIT MICROCONTROLLERS

- PIC32 (MIPSCore)
- AVR 32-Bit MCUs (ARM M0+, M4, M7 Core)

32-BIT MICRO PROCESSOR UNITS (MPUS)

- Linux support
- ARM5 Core
- ARM9 Core

ANALOG

- Analog Front Ends (AFE)
- Metrology
- Temperature Sensor

MOTOR DRIVERS AMPLIFIERS AND LINEAR

- Operational Amplifiers
- Instrumentation Amplifiers
- Comparators
- PGA & SGA

DATA CONVERTERS

- Analog-to-Digital Converters
- DAC & Digital Potentiometers
- Energy Measurement

INTERFACE

- CAN
- Ethernet
- EtherCAT
- Infrared
- LIN
- USB
- Serial Peripherals
- Core Independent Peripherals (CIP)

POWER MANAGEMENT

- Battery Management
- Charge Pumps
- CPU/System Supervisors
- LDO Regulators
- Power MOSFET Drivers
- Power MOSFET
- Hybrid PWM Controllers
- PWM Controllers
- Switching Regulators
- Voltage Detectors
- Modules

MICROCHIP | SST A Microchip Technology Company | SMSC SUCCESS BY DESIGN | Supertex inc.

MICROCHIP

SAFETY AND SECURITY

- Horn Drivers
- Smoke & Co
- Crypto Authentication
- Crypto RF
- Crypto Memory
- Trusted Platform Modules

THERMAL MANAGEMENT

- Temperature Sensors
- Brushless DC Fan Controllers

MEMORY

- Serial EEPROM
- Serial SRAM
- Serial Flash
- Parallel Flash
- EERAM

TOUCH AND INPUT SENSING

- Proximity, Keys and Sliders
- Touch Screens
- Touch Pads
- 3D Tracking
- Gesture Sensing
- Haptics

IOT / WIRELESS

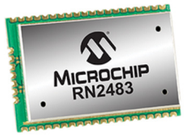
- Infrared
- Power Amplifiers
- Radio Frequency
- Embedded Wi-Fi®
- Bluetooth
- LoRa
- Sigfox
- Energy Harvesting

TIMING / COMMUNICATION

- MEMS Oscillators
- Real Time Clock (RTC)

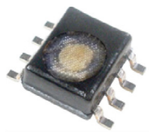
SMART ENERGY

- Metering
- Power Line Communications
- Wireless Communications



ISSC | MICREL Innovation Through Technology | Atmel | MICROCHIP

HONEYWELL SENSING & INTERNET OF THINGS



SENSORS

- Speed Sensors
- Current Sensors
- Temperature Sensors
- Magnetic Sensor ICs
- Motion and Position Sensors
- Optical Sensors
- Oxygen Sensors
- Pressure Sensors & Transducers
- Airflow Sensors
- Humidity Sensors
- Force Sensors

SWITCHES

- Limit Switches
- Basic Switches
- Toggle Switches
- Rocker Switches
- Pressure Switches
- Vacuum Switches
- Sealed Switches
- Safety Switches
- Pushbutton Switches

CONTROLS AND MONITORS

- Operator Controls
- Power Relays

TEST & MEASUREMENT PRODUCTS

CUSTOMIZED SENSOR PRODUCTS

Honeywell

ABLIC

POWER MANAGEMENT ICS

- Voltage Regulators (LDO Regulators)
- Voltage Detectors (Reset ICs)
- Watchdog Timer
- Switching Regulators (DC-DC Converters)
- Power Sequencer
- Boost Charge Pump ICs
- Composite ICs
- Lithium-ion Battery Protection ICs

MEMORY

- Serial EEPROM (SPI, I2C, Microwire)
- EEPROM for DIMM (SPD)

SENSORS

- Temperature Sensor ICs
- Magnetic Sensor ICs (Hall Effect ICs)
- Faint Signal Detection ICs
- UV Sensor

TIMER ICS / ASSPS

- Real-Time Clock ICs
- Wake-up Timer IC
- Interval Timer IC
- Counter IC
- Power Sequencer
- Wireless Power IC

AUTOMOTIVE ICS

- Voltage Regulators (LDO Regulators)
- Voltage Detectors (Reset ICs)
- Watchdog Timer
- Switching Regulators (DC-DC Converters)
- Antenna Diagnosis ICs
- Composite Ics
- Li-ion Battery Protection ICs / EDLC Protection ICs
- Serial EEPROMs (SPI, I2C, Microwire)
- Magnetic Sensor ICs (Hall Effect ICs)
- Real-Time Clock ICs
- Convenience Timer
- Operational Amplifiers

AMPLIFIERS

- Operational Amplifiers
- Comparators

HEALTHCARE

- Ultrasound Digital Transmit Pulsers
- Ultrasound Linear Transmit Pulsers
- High-Voltage Analog Switches

ABLIC

SEIKO INSTRUMENTS INC.

SEMICONDUCTORS
POWER MANAGEMENT ICS

- Voltage Regulators (LDO Regulators)
- Voltage Detectors (Reset ICs)
- Switching Regulators (DC/DC Converters)
- Charge Pump ICs
- Composite ICs
- Lithium-Ion Battery Protection ICs

MEMORY

- Serial EEPROM (SPI, I2C, Microwire)

SENSORS

- Temperature Sensor ICs
- Magnetism Sensor ICs
- Hall ICs/Hall Switch
- Photo Detect ICs

TIMER ICS / ASSPS

- Real-Time Clock ICs
- Programmable Port Controller
- Mini Logic (Gate Logic IC)
- Automotive Convenience Timer

ANALOG ICS

- Operational Amplifiers
- Comparators

THERMAL PRINTERS

- Printer Mechanisms
- Receipt Printers
- Mobile Printers
- Portable and Boxed Printers
- Sub Assemblies
- Smart Label Printer

QUARTZ CRYSTALS

MICRO BATTERIES

LITHIUM ION BATTERIES

SII
Seiko Instruments Inc.

Data IO
TF 20
Data IO
TF 20
Data IO
PS 588
PS 588
FlashCORE III
Data IO
Data IO
388

LEISTUNGEN TESTHAUS
TEST HOUSE SERVICES

Durch unsere langjährige, intensive Zusammenarbeit mit Herstellern, Anwendern sowie dem „Know How" beim Bearbeiten von elektronischen Komponenten mit unterschiedlichen Prüfverfahren, ist Semitron Ihr Partner in der Qualitätssicherung.

LEISTUNGEN TESTHAUS SEMITRON

- Optische / visuelle Prüfung
- Echtheitsprüfung
- Bauteilprüfung
- Selektionen
- Temperaturbehandlung
- Bauteilanalysen
- Bauteilprogrammierung
- Mechanische Bearbeitung
- Tape & Reel Service
- Scannen und straighten von Bauteilanschlusspins
- Dry Packing

Our long-term, intensive cooperation with manufacturers and users, as well as our electronic components processing know-how using diverse test procedures, means that Semitron is your quality control partner.

SEMITRON TEST HOUSE SERVICES

- Optical / visual inspections
- Authentication
- Component testing
- Selections
- Heat treatment
- Component analysis
- Component programming
- Mechanical processing
- Tape & reel service
- Scanning and straightening of component connection pins
- Dry packing

WARENEINGANG
INCOMING GOODS INSPECTION

Im Wareneingang werden die Bauelemente visuell geprüft (Beschriftung, Gehäusebeschädigung, Anschlüsse). Die Abgleichung von Typ und Stückzahl wird auf dem Lieferschein bestätigt.Ob die Ware aus dem Semitron Distributionslager oder direkt vom Kunden, kommt macht hier keinen Unterschied.

Die Lenkung und Dokumentation aller Qualitätsaufzeichnungen ist gewährleistet und auf Jahre gesichert.

Der Warenbestand im Distributionslager rotiert nach dem Prinzip "first in – first out".

ANFORDERUNGEN AN DIE LOGISTIK

- Konsignationslager
- Ship to stock
- Just in Time
- Kanban

Components are visually checked at incoming goods inspection (labeling, housing damage, connections). Comparison and confirmation of type and quantity with delivery note data. No difference is made between goods delivered directly from the Semitron distribution warehouse or from the customer.

Steering and documentation of all quality records is guaranteed and long-term archived.

The distribution warehouse inventory is rotated according to the „first in – first out" principle.

LOGISTIC REQUIREMENTS

- Consignment warehouse
- Ship to stock
- Just in Time
- Kanban

PROGRAMMIERSERVICE

PROGRAMMING SERVICE

Das Testhaus Semitron ist Ihnen ein kompetenter Partner und bietet auch einen umfassenden Programmierservice. Unser Programmierequipment ist für kurzfristiges Handling umfangreicher Stückzahlen ausgelegt. Zur Programmierung stehen Systeme der Firma Microchip,BP-Microsystems, Data I/O, Elnec usw. zur Verfügung.

Mit modernen Handlingsystemen erreichen wir nicht nur im Bereich der Programmierung, sondern auch bei der Lasermarkierung und Gurtung eine Ihren Ansprüchen gerechte Kostenoptimierung.

Kennzeichnung mittels:

- Laser
- Label
- Farbkennzeichnung

The Semitron test house is your competent partner and also provides you with a comprehensive programming service. Our programming equipment is set up for short-term handling of large quantities. We use Microchip, BP-Microsystems, Data I/O, Elnec, etc. for our programming services.

Our modern handling systems allow us to optimise our costs to meet your programming needs and for your laser marking and taping requirements.

Marking using:

- Lasers
- Labels
- Colour-coding

TESTANLAGEN

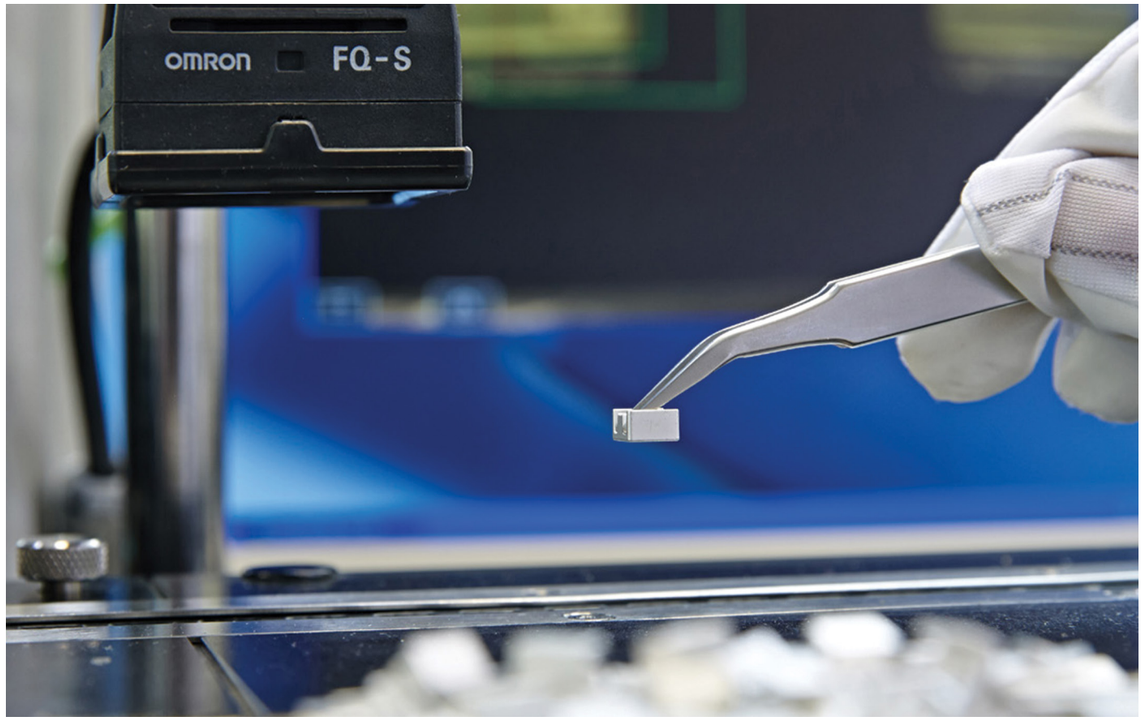
TEST SYSTEMS

Die meisten unserer Testanlagen sind in mehrfacher Version im Einsatz. Alle Testund Prüfprogramme, auch für kundenspezifische ICs (ASIC), werden von den Semitron Ingenieuren entwickelt.

- Datenblattprüfung
- Selektion
- Temperaturprüfung
- Vollautomatisches Handling

Most of our test systems are available in various versions. All test and inspection programmers are developed by Semitron engineers, including those for application-specific integrated circuit (ASIC).

- Data sheet checks
- Selection
- Thermal tests
- Fully automated handling



GURTUNGS SERVICE
TAPE AND REEL SERVICE

Grundsätzlich können alle Gehäuseformen gegurtet werden. Die enge Zusammenarbeit mit unseren Gurtlieferanten gibt uns die Möglichkeit, kurzfristig kundenspezifische Gurte kostengünstig anzufertigen. Während des Gurtungsprozesses überwacht eine integrierte 2-D Kamera Positionierung, Beschriftung und Pin-Ausrichtung. Durch eine ständige Kontrolle der eingesetzten Materialien sowie der Prüfung der Abdeckfolienabzugskräfte, ist ein hoher Qualitätsstandard gewährleistet.

GURTMÖGLICHKEITEN

- Axiale Komponenten (DIN IEC-286-1)
  Dioden, Widerstände, Kondensatoren
- Radiale Komponenten (DIN IEC-286-2)
  ELKO´s, LED´s, Transistoren etc.
- SMD Gurtung (STANDARD EIA-481-1)
  SOIC, PLCC, TSOP, SSOP, QFP Gehäuse etc.

In general, all housing forms can be taped. Close cooperation with our tape suppliers allows us to produce tapes economically, rapidly and customer-specific. An integrated 2D camera monitors positioning, labeling and pin alignment during the entire processing. A high-quality standard is guaranteed through constant control of the materials used and monitoring of cover tape peel forces.

TAPING OPTIONS

- Axial components (DIN IEC-286-1),
  diodes, resistors, capacitors
- Radial components (DIN IEC-286-2),
  ELKOs, LEDs, transistors, etc.
- SMD taping (EIA-481-1A),
  SOIC, PLCC, TSOP, SSOP, QFP, etc.

WEITERE DIENSTLEISTUNGEN
ADDITIONAL SERVICES

PRÜFEN DER ÄUSSEREN MERKMALE

- Maßhaltigkeit
- Beschriftung
- Lötbarkeit
- Dichtigkeit (Fine and Gross-Leak)
- 3-D Leadscan

KLIMATISCHE TESTS

- Statischer BURN IN
- Dynamischer BURN IN
- Temperaturschock
- Temperaturzyklen
- Feuchte Wärme
- HAST-Test

LEBENSDAUERPRÜFUNGEN

- 1000 Stunden BURN IN
  (dynamisch oder statisch)
- Langzeithochtemperaturlagerungen
- Pressure Cooker

BAUTEILKONSERVIERUNG

- Trocknen der Teile nach JEDEC Norm
- Dry Packing mittels Trockenmittelmethode
- alternativ Stickstoffmethode
  (für lange Lagerungszeiten)

BAUTEILKONFEKTION

Für die Bauteilkonfektion werden Werkzeuge zur mechanischen Bearbeitung von Bauteilanschlusspins gefertigt.

- Ablängen und Abbiegen von Anschlusspins
- Richten (scannen + straighten) von Pins bei allen gängigen Gehäuseformen
- Reinigen von Anschlusspins
- Nachverzinnen (DIN IEC 68/2-20Tb)

EXTERNAL CHARACTERISTICS CHECKING

- Dimensional accuracy
- Labeling
- Solderability
- Tightness (Fine and Gross Leak)
- 3-D Leadscan

CLIMATIC TESTS

- Static BURN-IN
- Dynamic BURN-IN
- Temperature shock
- Temperature cycles
- Damp heat
- HAST test

ENDURANCE TESTS

- 1000 hours BURN-IN
  (dynamic or static)
- Long-term high temperature storage
- Pressure cooker

COMPONENT PRESERVATION

- Drying parts as per JEDEC standard
- Dry packing using desiccant methods
- Alternative nitrogen methods
  (for longer term storage)

COMPONENT MANUFACTURING

Tools produced for mechanical processing of component connection pins used in component manufacturing.

- Cutting and bending of connection pins
- Alignment (scanning + straightening) of pins for all current housing forms
- Cleaning connection pins
- Retinning (DIN IEC 68/2-20Tb)

SEMITRON
Distribution + Testhaus

Zentrale
SEMITRON W. Röck GmbH
Talweg 1
79790 Küssaberg
T +49 7742 8001-0
F +49 7742 6901

Büro Böblingen
SEMITRON W. Röck GmbH
Calwer Straße 27/29
71034 Böblingen
T +49 7031 41808-0
F +49 7031 41808-59

Büro Quickborn
SEMITRON W. Röck GmbH
Kieler Str. 38
25451 Quickborn
T +49 4106 620608
F +49 4106 621778

SEMITRON SWISS AG
SEMITRON SWISS AG
Promenadenstrasse 6
5330 Bad Zurzach, Schweiz
T +41 56 2696040
F +41 56 2493569

in www.linkedin.com/company/semitron-gmbh/

Qualitätsmanagement nach ISO 9001

sales@semitron.de
testhaus@semitron.de

www.semitron.de