

In-house software department for best possible customer service

Where others are still calculating, we are already programming



In the course of digitizing business processes, products and services, it is incredibly important for us as a modern company to have our own software development team.

Our in-house development team consists of experts in a wide variety of fields, ranging from software engineers and hardware specialists to mechanical engineers. With this diversity of professional expertise, we take care of individual solutions such as project management software tools like CERT or software supported test tools that can be semi or fully automated.

In addition, we offer our customers test solutions tailored to their specific needs and applications.

The scope of development projects can range from consulting to turnkey solutions. As a laboratory, we are close to our own services and understand our customers' needs very well.

Due to our many years of experience, we have developed our own software framework for test applications, on which many of our applications are based.

Over the last 10 years, we were able to gain experience in a wide area:

- Project supporting software tools
- Software framework for application testing
- Software-driven automation (such as TOM)
- Automation with robotic systems
- Quality assurance solutions
- Solutions for remote accreditation
- Customized software solutions





OUR LABORATORY USES PROPRIETARY AUTOMATED SOLUTIONS FOR TESTING AND EVALUATION IN THE FOLLOWING AREAS:

- Interoperability test systems
 - various positioning systems for validation of contactless communication via NFC
 - approved by several payment schemes: Visa, Mastercard, EMVCo, Discover, Amex
- Protocol testing solutions
 - platform for validation of ISO 8583 protocols
 - approved by the German Banking Industry
- Automated fingerprint testing
- Smartcard personalization validation
- Creation of test reports

WITH OUR INDIVIDUAL TESTING SOLUTIONS, WE CAN MEET THE SPECIFIC REQUIREMENTS OF OUR CUSTOMERS AND HAVE SUPPORTED E.G. VISA IN THE FOLLOWING AREAS WITH OUR SOFTWARE SOLUTIONS:

- **Visa Terminal Cross Test Testbench**
(Test of a contactless payment device (card or mobile) against a pool of 50 reference terminal devices)
- **Visa Card Cross Test Testbench**
(Test of a payment terminal device against a pool of 1000 reference cards)
- **Visa Cross Test auditing solutions**
(Retest of devices and automated comparison of results)
- **Visa VCAS Interface definition**
(Interface definition to automation of device testing)
- **Visa VCAS Interface validation**
(Application for validation of interface implementation)

- **Visa Middleware reporting and validation (patent pending)** (Communication recording used for continuous testing and reporting)
- **Visa Terminal Emulator auditing device (patent pending)** (Dummy payment terminal for remote laboratory testing)
- **Visa Personalization Validation**
(Automated verification of smart card personalization)
- **Visa Card Deck Consistency Check**
(Automated testing of smart card quality consistency)





DUE TO THE HIGH DEMANDS ON OUR SYSTEM DEVELOPMENT AND OUR CONTINUOUS TRAINING, WE HAVE GAINED EXTENSIVE EXPERIENCE WITH A WIDE VARIETY OF TOPICS IN THE FIELD OF ROBOTICS AND TEST ENVIRONMENTS:

- Sample identification via QR and NFC
- Vacuum and gecko gripper solutions
- Position validation via laser profile scanner
- Position validation via camera
- Safety systems for robot stations
- Long-term testing and automated troubleshooting
- Dynamic power distribution of devices under test (DUT)
- Experience in 3D printing prototyping
- Experience in audio detection
- Device automation without API (via individual scripts)
- Dynamic robot programming without fixed sequence

OUT TECH STACK IS FOCUSED ON .NET DEVELOPMENT:

- C# .NET development
- WPF desktop applications
- Microsoft SQL Server
- Microsoft Entity Framework Core
- Various types of ABB industrial and collaborative robots
- ABB Rapid programming
- Autodesk Fusion CAD design

DUE TO OUR EXPERIENCE AND KNOWLEDGE IN DIFFERENT AREAS, WE CAN OFFER YOU A FLEXIBLE AND RELIABLE COOPERATION:

- Consulting on an hourly basis
- Turnkey solutions
- Agile project development
- Application and feasibility analysis
- Software and interface development
- Process automation
- Robot environment design
- Assembly and commissioning
- Maintenance and support



We will not leave you alone with your questions and will gladly support you with our knowledge for your special requirements.

Please feel free to contact us:
mail@cetecomadvanced.com



Europe

cetecom advanced GmbH

Saarbrücken

Untertuerkheimer Str. 6-10
66117 Saarbrücken - GER
Fon+49 (0) 681 598 0
Fax +49 (0) 681 598 9075
mail@cetecomadvanced.com

Essen

Im Teelbruch 116
45219 Essen - GER
Fon+49 (0) 2054 9519 0
Fax +49 (0) 2054 9519 150
mail@cetecomadvanced.com

USA

CETECOM Inc.
411 Dixon Landing Road
Milpitas, CA 95035 - USA
Fon+1 408 586 6200
Fax +1 408 586 6299
mail@cetecomadvanced.com

Asia

CETECOM Limited
RN. 219, Dusanventedigm, 415
Heungan-daero, Dongan-gu, Anyang-si
Gyeonggi-do, 14059
Korea
Fon+82 31 321 2988
Fax +82 31 321 2989
mail@cetecomadvanced.com

CETECOM K.K.

Shin-Yokohama Business Center Building
2-6, Shin-Yokohama 3-chome, Koho-
ku-ku
Yokohama-shi, Kanagawa, 222-0033
Japan
Fon+81 45 594 9990
Fax +81 45 471 1212
mail@cetecomadvanced.com

CETECOM GmbH
Shanghai Rep. Office
9/F, Silver Tower, 98 South Wanping Rd.,
Xuhui District,
Shanghai, China, 200030
Fon+86 21 8022 0686
mail@cetecomadvanced.com