

ATM TERMINAL



eKassir

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ATM Terminal is a software for ATMs and self-service kiosks. ATM Terminal is an integral part of the distributed eKassir solution, which also includes the server components to support basic integration with bank's systems in out-of-the-box delivery.

The solution components, which work jointly ATM Terminal, are the following:

- **ATM Terminal** — a software for kiosks, ATMs and other self-service devices. Works with the devices by XFS layer or direct drivers. Interacts with the server components of the solution.
- **Card Client** — an optional component to support payments with bank cards. Interacts with the host by ISO8583 and NDC protocol types, or custom protocols. eKassir software is PA DSS - and EMVCo- certified. NFC-readers are supported.
- **Host Protocol Adapter** — an optional component for working as hub/concentrator during connection the device network to the card host (by protocol type ISO8583). Located in PCI DSS zone of the bank.
- **Monitoring server** — a server solution for technical monitoring the ATM or other self-service device network. Tracks the status of monitored objects, reports the information about their current state, and supports the remote management of the devices.
- **Payments Hub** with Operation server — proceeds payments scenarios, new product requests and cash-management functions on ATMs. All configuration settings can be centrally specified via the dedicated application with role-based access control.
- **Server DBP** or Digital Banking Platform server — an optional component for delivering personal services and supporting personal areas of bank clients on ATMs and other self-service devices.

The solution delivers a wide range of business functions:

- Common ATM functions (cash withdrawal including recycling and so on.)
- Payments acceptance in favor of unlimited number of service providers on ATMs and self-service devices (by bank cards or in cash.)
- Ability to work in a client's personal area, i.e. access to Internet banking on ATMs and self-service kiosks.
- Advanced monitoring and management of self-service device network.
- Working with NFC-card and services (Android Pay and Apple Pay.)
- Managing advertisements on the devices, reloading the screen content.



Omnichannel solution

Omnichannel scenarios and integration with new channels are provided in out-of-the-box delivery



Microservice architecture

Easily-expanded system functionality by adding microservices



Multivendor software

Universal multivendor solution for ATMs and self-service kiosks



Advertising management

Built-in service for advertising management. Targeted and personal offers



Up-to-day technologies

Workaround for NDC/DDC protocol limitations. Built-in browser. Operating system independence



Personalization capabilities

Personal area, payments, advertising management and other services are provided out-of-the-box



Modern looking interface

High speed performance. Nice visual effects are available

Multivendor support

Multivendor software for self-service devices solves the problem of maintenance the ATMs from different-manufacturers. This is essential when the banks with multi-vendor devices network do not want to depend on their vendors. However upgrading to multivendor software does not mean enabling more business functions such as customer's personal area, payments acceptance and personal offers. These functions should be implemented additionally.

ATM Terminal supports working with wide range of equipment via XFS layer and direct drivers. The solution contains the extended service kit for devices. ATM Terminal helps the bank to complete both tasks: implementing a unified multi-vendor control software and expanding ATM services.

After implementation, the bank gets the multivendor software network with considerably expanded functions while the project costs and duration may be decreased. This is the fundamental difference of eKassir solution from other multivendor software.

Cash withdrawal and recycling

The following features of cash withdrawal - the main ATM function - are supported by ATM Terminal:

- **NFC-reader.** ATM Terminal supports NFC payments on ATMs and self-service kiosks with NFC-reader.
- **Cash withdrawal by QR-code.** The bank's client can get QR-code in their mobile banking app, scan this QR-code on ATM and withdraw cash.
- **Recycling.** Recycling makes easier cash circulation between money deposits and withdraw. We know that our clients who use ATMs with recycling feature have no need to perform ATM cash collection frequently; the longest period of working without cash collection was more than 6 months.

- **Dispense cash in specific denominations.** The service of withdrawal cash in specified banknotes is supported.

Expansion of services

Implementing new functions for ATMs enables the bank to improve business-rates of the network, use omnichannel scenarios, promote banking services and attract new customers. "Smart ATMs" may function in light branches as teller desks, cash e-tellers, cash self-collection devices for currency exchange or money depositing.

When updating the ATM functions, it always required to take in account the security considerations, channels capacity, presence of outdated protocols for connecting with the card-host, and other limitations. This may entail large expenses. That is why we tried to consider all existing and possible future requirements while developing ATM Terminal.

Expanded functions for ATMs are already implemented in ATM Terminal. To launch this functionality the bank will only need to integrate the server solution components with the bank back-office systems. The following set of the services is available out-of-the box:

- **Payments and transfers:**
 - Payments for unlimited number of services via ATMs and self-services kiosks, including payments with complicated scenarios.
 - Geo-targeting for services. The bank can update the set of services available on ATMs depending on region and geo-location. It is possible to configure a certain set of services for each device.
 - Full text search, which is essential when working with numerous service providers.
 - Payments templates. Payments templates shared by for all remote channels are available in ATM interface.
- **Personal area for the bank's client.** The personal area services:
 - Products information. Authorized clients can

view their bank products: accounts, cards, loans, and deposits. Ability to manage the products may also be available via the ATM interface.

- Payments or cash withdrawal are not limited by the inserted bank card. These functions can be performed from any client's product. This actually transforms an ATM into a bank's mini-branch.
- Timeline service. All client's payments and transactions, which have been made in various self-service channels are available on ATM screen in chronological order.
- The Fast cash service keeps in memory the amount of withdrawn cash.
- **Personal offers and targeted advertising.** Advertising and personal offers are displayed during the client service session. The built-in advertising service enables the banks to:
 - Integrate displaying of the advertisements and personal offers into the client service scenarios.
 - Collect statistics on the clients' feedback: number of displays, reactions, sales funnel.
 - Follow up the clients' feedback about positive and negative scenarios on-line. For example, if a client has selected "don't show me this offer again", the advertising display would be stopped.
 - Save "heavy" advertising content on ATMs. When running a client service scenario, the system only requests the parameters of the particular offer in compliance with the advertisement template. The screen layout will be automatically generated based on the template and downloaded content.
- **Transactional services**
 - P2P transaction via ATMs
 - Cash withdrawal by QR-code scanning
 - Supporting NFC-cards and Apple Pay/Android Pay

Modern looking interface

A client expectedly evaluates an ATM interface. For some clients the interface design is not important, their only goal is to get money from ATM. On the other hand, young people and demanding clients are accustomed to iPhone styled-interfaces and graphics. For them, the ATM screen with legacy MS DOS graphics looks obsolete and outdated. Assuming that such clients visit live bank branches rarely, we can resume that they will extend their bad ATM experience to entire bank.

In ATM Terminal, we use modern technologies to design attractive user interface. User interface is developed as a separate module; it interacts with the software core by standardized API. Therefore, the software screens are actually the single-page web-applications running in built-in browser Chromium. Such approach enables high-speed of graphics display and nice visual effects.

The development tools like HTML5, JS make the development processes faster and more cost-effective. For the clients it means the ability to use modern interface controls such as swipe. UI SDK for designing the software screens on the customer side is provided. Custom user interface can be developed and debugged without deploying to physical device.

Built-in monitoring

- The built-in functions of NDC/DDC protocols normally are used to monitor an ATM network. Such technology only covers the basic requirements to monitoring, however it is sufficient to run the network. To optimize the network monitoring and expand managing capabilities, the bank needs a separate technical monitoring server. You can find a number of such server applications on the market.
- ATM Terminal solution does not use the standard monitoring features of NDC/DDC protocols, but includes eKassir Monitoring - a monitoring serv-

er - instead. The server is essential part of the solution and does not require any additional integration activity. Data exchange between devices is optimized by traffic and works perfectly even with poor connection channels.

- Features of the monitoring server are the same as the leading market vendors are proposing. The server can execute such tasks as tracking the device network, handling failures, remote software upgrading and more.
- In case when a bank already has a monitoring server and does not plan to replace it, eKassir monitoring solution may be integrated with the existing bank's server. In this situation, the data are just transferred between eKassir's and bank's servers and no additional integration with the software on the devices is required.

Managing advertising campaigns

Standard ATM software cannot deal with flexible advertising campaign and content. Deploying the advertising over the ATM network is a time-taking process. Besides, the advertisement interface may be unattractive due to technical reasons and specificities of various devices.

In ATM Terminal, we use modern Internet-oriented approaches to apply the innovative advertising management. The areas intended for displaying the advertisements are pre-designed in the software screens on the self-service devices. The advertisement content is managed by an advertising agent, a separate program component. The ATM Terminal software is not involved in this process. Therefore, no software updates are required for reloading the advertising content.

Content management on self-service devices is performed by dedicated cloud web-service CloudAdNet. The advantages of managing the content by Cloud AdNet are the following:

- **Easy to deploy.** Marketing specialist can manage the content on devices themselves, without assistance of the technical staff. As a result, deploying the advertisement becomes easier and faster.
- **Automatic scheduling.** An advertising campaign can be scheduled to run automatically.
- **Feedback handling.** The client activities are stored for further analysis. The collected data can be used for building the sales funnel.
- **Various content type.** Any content type is available for deploying: from simple banners to complex targeted advertisements.
- **Adaptable user interface.** The user interface layout and content can be modified in compliance with the customer's profile data.

Omnichannel scenarios

Omnichannel concept is a main trend in modern banking. A client should be able to start a transaction in one channel, continue it in a second one and finish the transaction in a third channel. ATM channel is the case; however, the outdated and inflexible technologies along with high security requirements impose many restrictions to omnichannel scenarios for ATMs.

ATM Terminal as a component of Digital Banking Platform does support cross-channels service scenarios. For example, a bank client can prepare a transaction in mobile banking and complete the operation on ATM (payment or cash withdrawal.) Another case: a front-line manager starts a transaction in front-application and a client then completes this transaction on ATM.

