

Cypherbridge® Systems AK200

Low Power Wireless POS Terminal Application Kit



Overview

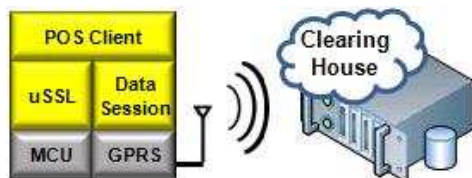
The AK200 Point-of-Sale Application Kit provides a project-ready solution for the rapidly growing market for secure payment transaction card-present applications.

Vending systems, laundry facilities, coffee kiosks and parking systems are but a few examples of non-traditional POS terminals. These cashless systems can now scan credit cards, ATM cards, and pre-loaded ISO-7816 smart cards to transact conveniently and securely, eliminating the need for coin or currency based sales. These POS terminals can be centrally managed to vary time-of-day or event rates, track usage patterns, increase operator revenue, plus deliver improved self-diagnostic alerts and field service.

The AK200 standards based approach and direct connect model eliminates proprietary intermediate proxy servers, hosting and expense, resulting in lower system capital and maintenance costs.

Solution Block Diagram

The AK200 software and hardware building blocks are shown in the following diagram:



POS Client Application

The client uses the uSSL library to securely connect over wired or wireless WAN with payment clearing house servers, and includes sample credit card authorization and transactions. Using an encrypted card reader, or uSSL library to encrypt track information, the transaction is securely processed with the clearing house servers.

uSSL Security Library

The industry proven uSSL embedded SDK provides the low-footprint MCU based security foundation, implementing SSL/TLS encryption and hash algorithms to connect with cloud-based transaction servers.

Low Power Microcontroller

The AK200 is hosted on industry leading low-power microcontrollers (MCUs). This system-on-chip processes the POS client application, low-memory footprint uSSL SDK, and wireless data session, and is well-suited to a power-managed product design.

Wireless Connectivity

Low cost WLAN and M2M cellular modems provide the connectivity between the terminal and internet. Using TCP offload into the wireless device, this reduces the memory footprint and cost for the system MCU.

AK200 includes a nationwide cellular data plan in partnership with Wyless Group, an M2M managed service provider. This project ready relationship eliminates the need to negotiate data service, and the resilient Wyless network ensures service quality and coverage.

Payment Clearing House

In partnership with a leading payment clearing house, the POS client application is pre-tested with transaction servers. The uSSL security layer and client application, work in tandem to securely process authorizations and transactions. A range of transaction models can be used including standard swipe, P2PE encryption, or hosted payments depending on business model.

Bringing it all Together

The AK200 POS Terminal application integrates the essential building blocks to deploy innovative transaction systems, accelerate time-to-market, and quick-start the path to revenue.

Features

- ✓ *Embedded security solution, standards based, interoperates with PKI networks and clearing houses.*
- ✓ *Process credit card swipes from card reader.*
- ✓ *Based on uSSL ANSI-C SDK security library and sample applications.*
- ✓ *RTOS independent.*
- ✓ *Project supported on IAR tool chain includes Quick Start Guide*
- ✓ *Integrates reference client POS terminal software and building blocks.*
- ✓ *Supported on low power microcontrollers suitable for battery operated terminals.*
- ✓ *GPRS telemetry modem or 802.11 WLAN with TCP offload.*
- ✓ *Includes wireless carrier data plan.*
- ✓ *Includes payment clearing house plan and test account.*
- ✓ *Optional modem emulation application simulates modem for testing over wired internet.*

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About Cypherbridge Systems:

Established in 2005, our portfolio includes software, server, security, device and system level products to enable a broad range of connected device applications integrating embedded device, communications networks, and back office servers in a secure system solution.

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PRELIMINARY INFORMATION
Product features and specifications subject to change without notice.

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