

Intelligent Online Vending

PUT YOUR VENDING BUSINESS INTO A HIGHER GEAR

Wireless Package Switch Network Application

Electronic payment & sales information over the Mobitex wireless network

Below you see a schematic of the application developed by DMS Tech for Pepsi-Cola Turkey. It enables the vending machines to accept online credit card sales (VISA/MasterCard) over the Mobitex wireless network.



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Application details

As you can see in the schematic there are two main products involved in this application. The first product is a VM-POS/C, which is a combination of the VMComEM and the VM-POS described in the **Product Brochure**. The second product is the Gateway 2000-RM also described in the **Product Brochure**. These two products communicate with each other over the Mobitex wireless network. When a person swipes a credit card through the magnetic card reader the VM-POS/C will check the validity of the credit card and it checks the state of the vending machine. If these are correct the VM-POS/C will generate a sales packet. This packet will be encrypted and is then send to the Mobitex modem to be transmitted to the Gateway 2000 in the service center. When this packet arrives in the Gateway 2000 it will decrypt the packet and check the data in the packet. It transforms this packet to a bank compatible format and at the same time the Gateway outputs a log entry to the serial port and transmits the transformed data packet to the bank. If the bank replies in time it will create a return packet for the VM-POS/C in the vending machine and outputs another log entry to the serial port. The Gateway encrypts the packet and transmits this packet to the VM-POS/C in the vending machine. Based on the encrypted sales reply packet the VM-POS/C will give the person credit or it will display a message on the LCD display that the authorization failed. If a certain number of sales are reached in the VM-POS/C it will close the sales with the bank. The VM-POS/C will try to synchronize the sales information from its buffer with the data in the bank. If the synchronization succeeded the VM-POS/C will clear the sales in the buffer and it is ready to accept the next credit card. If the synchronization failed it will upload all the sales from its buffer to the bank host and will retry the synchronization after the upload. When this procedure is finished the VM-POS/C is ready to receive the next credit card.

VM-POS/C features

- A special front panel, designed to exactly fit the front hole in the Dixie-Narco machine (models V468 and V340). The front panel includes:
 - A 4x16 character LCD display with backlight. It displays the time and date of the Mobitex network, the current price for the beverage and it is the user interface during processing of a card swipe or synchronization with the bank.
 - A TTL magnetic swipe reader in a strong aluminum case.
- The main aluminum case, which exactly slots into the front panel without the need of any screws or bolts (see picture at the right), includes the following items:
 - The VMComEM electronic card with the VM-POS firmware, which has following features:
 - A TTL magnetic swipe reader controller.
 - Communicating with the Mobitex modem over a serial port.
 - LCD display controller.
 - Checking the Dixie-Narco machine state (empty, coin credit available etc.).
 - Counting the total credit card sales and the coin acceptor/changer sales.
 - Giving credit to the Dixie-Narco machine if an authorized credit card is swiped.
 - Storing the sales information until it closes the sales with the bank.
 - Encrypting and decrypting all the communication packets, which travel over the Mobitex network.



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- Two main Dixie-Narco cables. The female cable is for the connection to the coin acceptor or changer. In this way it is still possible to use the coin mechanism. The male connector is connected to the machine, from which the VMComEM uses the power and controls to the machine.
- One power switch, which enables the service person to switch the VM-POS/C on or off.
- One power supply, which creates the necessary power supplies for the VMComEM and the Mobitex modem.
- An aluminum holder for the Mobitex modem.
- A flat cable to be connected to the LCD display on the front panel.
- A female socket to connect the TTL magnetic swipe reader.

Gateway 2000-RM features

- A 2x40 character LCD display with backlight. The LCD displays the Mobitex network time and date and the number of bytes received/transmitted over the Mobitex network.
- An internal Mobitex modem with an antenna connector on the back of the aluminum case.
- An internal dial-up modem to communicate with the bank. It has an output connector for a telephone line on the back of the aluminum case.
- A 220V/50Hz power connector including switch and fuse on the back of the aluminum case.
- A serial communication port, which is used as control and log port to the center PC.

