Multi-Lane

Products Overview

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Trademarks

Table of Contents

Multi-Lane Products Overview

This document describes the products and services Hypercom provides for the multi-lane environment. It contains an overview of the products and services that can help you in the fast-paced multi-lane industry.

Introduction

Hypercom has acquired a considerable amount of experience in the multi-lane POS market, providing successful solutions for many customers. We support you with end-to-end solutions by providing you with the hardware, software, consulting, and deployment support you need to complete your goals.

Hypercom hardware includes the industry's most technically advanced multi-lane terminals. The terminals support core payment functions such as debit, credit, gift card, and electronic benefits transfer (EBT). The Optimum terminals display advertising and promotional messages on the screen.

Hypercom software solutions provide you the ability to utilize the terminals with attractive and attention grabbing information and with protected key management. Hypercom also provides other useful services including: consulting, product deployment, key management, and more.

Hardware

Whether you are looking for a reliable payment terminal, innovative, value-add technology, or a complete electronic transaction management system, Hypercom can deliver.

Hypercom terminals used in the multi-lane environment are:

- Optimum terminals (M4100, L4100 series, L4250, L4200)
- Weather resistant terminals (S1200 and S1300)
- PIN entry devices (S9 and P1300 series)
- Keypads (K1100 and K1200)

Datasheets that provide technical information about device capabilities are available for each terminal.

Optimum Terminals

Hypercom Optimum terminals are sleek, easy-to-use multi-lane payment devices.

Figure 1. Multi-Lane Optimum terminals

M4100

If your business could be more profitable by accepting payment anywhere, the Optimum M4100 is the revolutionary portable you should put to work. The M4100 is a fully functional wireless terminal designed for businesses that need to operate on the go, in temporary locations, or at remote points of service. It features an Intel XScale® 32-bit processor for maximum transaction speed. It reads all types of cards, including magnetic stripe, chip and contactless payment. And its sophisticated battery can handle over 200 transactions on a single charge.

Engineered for flexibility, the M4100 can be customized with a variety of value-added software solutions from gift and prepaid cards to inventory control and mapping services. But its modular design means you only pay for the options you need.

Count on the M4100 to help you open markets, offer more services, increase efficiency and improve profitability. It's the sure, secure solution for businesses that reject boundaries.

Optimum M4100 features include:

- Intel XScale® 32-bit processor for high-speed transactions
- Lightweight construction with ergonomic palm-size design
- Signature capture capabilities
- Modular design allows you to pay only for the functions you need
- Brilliant LED backlit color screen
- Illuminated key pad makes it easy to use in all conditions
- Long-life battery for all day use
- Multiple charging options for flexibility and convenience

L4100 Series

Lane by lane, you can make your customers' buying experience richer and more compelling with the Optimum L4100 high-performance payment device. Its 5.7" color touch screen puts specialized coupon and marketing campaigns (including video) right at checkout, where impulse buying is most effective, without slowing the transaction process.

The big bezel lets you customize every unit with your company colors, logo and brand graphics, turning the device into a true marketing tool. Sleek and easy to use, it also offers signature capture capabilities.

At the same time, you get the best possible payment processing, with Hypercom's advanced technologies delivering fast transactions every time – from the compact Intel XScale® 32-bit processor for fast data transmission to advanced communications options, including RS-232, non-powered and powered USB and Ethernet. The Optimum L4100g with grayscale display and the Optimum L4105 that meets Interac® Association security requirements are also available.

The Optimum L4100 is the one you want in every lane, to maximize customer convenience and retail attraction.

Optimum L4100 features include:

- Robust touch screen for high-performance signature capture
- Auto backlight turnoff for extended unit lifecycle
- RSA public key encryption for maximum customer security
- Easy-to-use interface for reduced human error and fraud
- Intel XScale® 32-bit processor for exceptional reliability and power

L4250

Here's compact streamlining at its best: the Optimum L4250. Easy to use and attractive at the same time, using Hypercom's innovative, dual-sided, bi-directional magnetic stripe reader means your customers won't have to deal with frustrating fumbles. In fact, you get accurate card data reads well beyond the nominal swipe-speed range so you can reduce lanes slowdowns and cashier interactions.

The unit's large, easy-to-read 220 x 80 pixel 16-shade grayscale LCD touch screen not only offers outstanding signature capture, it lets you communicate branding and merchandising messages quickly. Custom screens are easy to update and let you extend loyalty campaigns and promotional specials.

The Optimum L4250 not only looks fast, it is fast – its Intel XScale® 32-bit processor rockets transactions to the ECR/payment device. It also supports advanced communications like USB and Ethernet for even faster transaction speed. *This* is how you turn every lane into the fast lane.

Optimum L4250 features include:

- Proven Forms Processing Engine for assured rapid integration
- Intel XScale® 32-bit processor for fast transaction speed
- Streamlined space-saver with its small footprint

- PCI-PED approved with online PIN code verification
- Permanent privacy screen for maximum customer security
- DES/Triple DES DUKPT for secure key management

L4200

The Optimum L4200 gives every customer built-in privacy with its shielded, recessed 13-key ADA compliant keypad. Its large, monochrome 160 x 80 pixel LCD screen displays more readable information for crisp visual impact plus add-your-logo capability.

And to cut employee training time and speed up customer interaction, it offers you six screen-addressable function keys that you can customize just for your transactions.

This multi-lane payment terminal is economy-minded and still smart as a whip. Deployable right out of the box, it comes complete with a plug-and-play capability that meets PCI PED and Interac® Association security requirements without add-on components. So you can comply with the industry's new security demands and put it to work on every lane immediately.

And with Hypercom's innovative, bi-directional magnetic stripe reader built in, customers won't be asking, "Which way do I swipe my card?" Multi-functional and economical, it's perfectly suited to multi-lane supermarkets, drugstores and similar high-traffic environments where every bit of margin counts.

Optimum L4200 features include:

- Intel XScale® 32-bit processor for fast transaction speed
- PCI-PED approved for online PIN code verification
- Permanent privacy screen for maximum customer security
- California code-compliant beyond ADA standard
- DES/Triple DES DUKPT for secure key management
- Countertop space saver with its small footprint

Weather Resistant Terminals

Hypercom's weather resistant terminals, the S1200 and S1300, are ideal for semi-attended and self-service transactions.

Figure 1. S1200 and S1300 terminals

The S1200 and S1300 payment terminals automate electronic payment transactions, protect the entry of PINs and secure both data input and data transmission according to the standards set by international payment bodies, regulatory authorities, and banking associations. The S1200 and S1300 are hardened PIN pads and card acceptance devices that can be used either indoors or outdoors, are easy to operate, and enable fast, secure identification of both card and cardholder.

Their rugged designs protect the terminals from wear, dust, and vandalism. They easily connect to terminals, cash registers, and peripherals and can be implemented on both wired and wireless technologies for POS connection communications.

PIN Entry Devices

Hypercom PIN entry devices are cost-effective and easy to use.

Figure 2. Multi-Lane PIN entry devices

S9

A strategic combination of form and functionality, the S9 for multi-lane environments creates new opportunities to promote your brand name right at the point of service. With the color-customized bezel, the S9 is an attractive, cost-effective way to accept PIN-based payment transactions.

The S9 meets the latest security standards, is ADA compliant, Triple DES capable, and VISA PED approved. It features a two-line backlit display and easily integrates with existing POS devices.

P1300 Series

These Hypercom PIN entry devices are designed to meet the latest PCI PED security standards for PIN entry, providing merchants with low-cost migration to newly imposed security guidelines. They are compatible with all Hypercom product families and features flexible communications options for rapid integration with electronic cash register (ECR) systems.

Keypads

The K1100 device is a secure keypad for self service systems. The K1200 is a PIN entry device suitable for any semi-attended or self service environment.

Figure 3. Multi-Lane keypads

K1100

The Hypercom K1100 keypad is a modular “plug and play” PIN entry device suitable for any semi-attended and self-service environment. Whether for transportation, ticketing, petrol, or just general kiosk applications, the K1100 secure keypad is the right solution for the job.

Its easy-to-use, color-coded key layout meets the latest security standards. It is appropriate for indoor and outdoor environments. Its vandal-resistant and anti-tampering mechanisms are suited for secure unattended PIN entry. It is easily integrated with existing devices.

K1200

Hypercom’s K1200 keypad is a compact PIN entry device suitable for any semi-attended and self-service environment. Its easy-to-use, color-coded key layout has multiple keypads available. Because of its compact size, the K1200 is easily integrated with existing devices.

Software

Optimum terminals support several different PIN pad protocols including FPE32, SCAT, IBM® EFT, and posPortal. The protocol and operation modes can be configured via the setup menu.

FPE32

At the heart of the Hypercom solution lies the Hypercom Forms Processing Engine (FPE). FPE32 allows for quick and easy integration with all leading electronic cash register systems (ECRs). A flexible and simple application, it allows transaction flow to be customized to the retailer's expectations and business needs. This customer-specific look and feel includes logos, graphics, and advertising data files that can be downloaded dynamically to ensure customer brands are maintained at all levels.

Based on years of experience in terminal application development, FPE32 does exactly what most retailers want, without having to write a single line of code in the terminal. Using a detailed API document, retailers or integrators can interface Optimum platforms to ECRs or host systems in a matter of days rather than the more typical 4-6 months.

Key features include:

- Customizable GUI with a single application
- Advertising and animation data files can be downloaded dynamically to ensure customer brands are maintained at all levels
- Supports Optimum terminals
- Pass-through peripheral support
- Unified POS (OPOS/JavaPOS) compliant
- Contactless payment support including but not limited to American Express, Express Pay, MasterCard, PayPass, and VISA.

The FPE32 application sits on top of the terminal boot and is functional whenever the terminal is powered on. FPE32 includes Serial and TCP/IP drivers, FPE Interface DLL, OPOS drivers, and JavaPOS drivers.

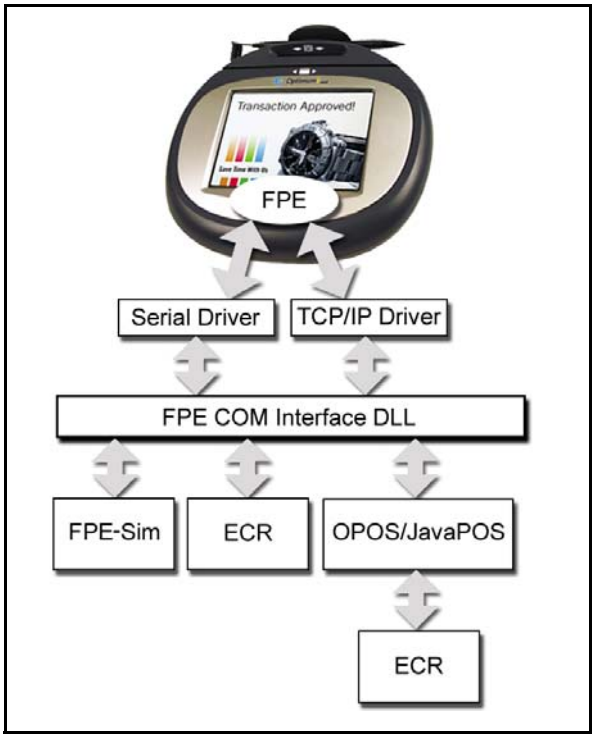

Figure 4. FPE block diagram

The PCI Data Security Standard (DSS) is a security standard that includes requirements for security management, network architecture, and software design to protect customer account data. Because FPE32 does not store any cardholder or transaction data upon completion of a transaction, in most environments the device with FPE32 installed may not be within the scope of a PCI DSS assessment. However, a device with FPE32 installed would be included in a PCI DSS assessment if it communicates with the POS system wirelessly or if there is direct access to the device from a public network like the Internet.

SCAT

SCAT is a PIN Pad protocol used to request PIN, MSR and contactless track data, signature capture, and other information like cash back amount or phone number. It has specific commands for each type of information request, e.g. GetPIN, GetMSR, GetSignature, etc.

IBM EFT

IBM EFT is a PIN Pad protocol used by IBM cash registers. ECR initiates the transaction and the PIN Pad displays run through a number of forms requesting tender type, PIN, and other information as configured in the IBM EFT configuration file on the PIN Pad.

posPortal

posPortal is a Java technology-based application mode that may be used with USB on the Optimum M4100.

Serial and TCP/IP Drivers

Serial and TCP/IP drivers support multi-lane terminals.

FPE Interface DLL

This DLL is used to interface with standard OPOS and JavaPOS drivers or your own ECR application to make integration faster and easier. The DLL operates in a Windows environment.

FormBuilder

FormBuilder is a Windows-based tool that creates and manages the forms used on Optimum terminals. It uses a simple “drag-and-drop” approach to creating forms. Pre-built objects for standard functions like signature or PIN can be quickly dropped onto the virtual screen and previewed before being loaded into live terminals. posPortal events, actions, and variables are supported.

FPE-Sim and Java FPE-Sim

Hypercom’s FPE-Sim and Java FPE-Sim are form simulator applications. Without having to leave your desk, you can communicate and test the terminal application prior to deployment into a multi-lane environment. These applications download new or changed forms onto terminals that are not live on the system. This allows you to demo the forms, verifying the look and operation of forms before downloading them onto live terminals. These powerful application allow you to download a packinglist, test form functionality, and trace terminal communications.

OPOS Drivers

Hypercom OPOS drivers are plug-and-play drivers that provide support for MSR, PIN Pad, Signature Capture, POS Keyboard, and Line Display. OPOS was the first widely-adopted POS device standard to help integrate POS hardware into Windows-based applications. OPOS uses COM technology and is therefore language independent.

OPOS consists of:

- An architecture for Win32-based POS device access
- A set of POS device interfaces sufficient to support a wide range of POS solutions.

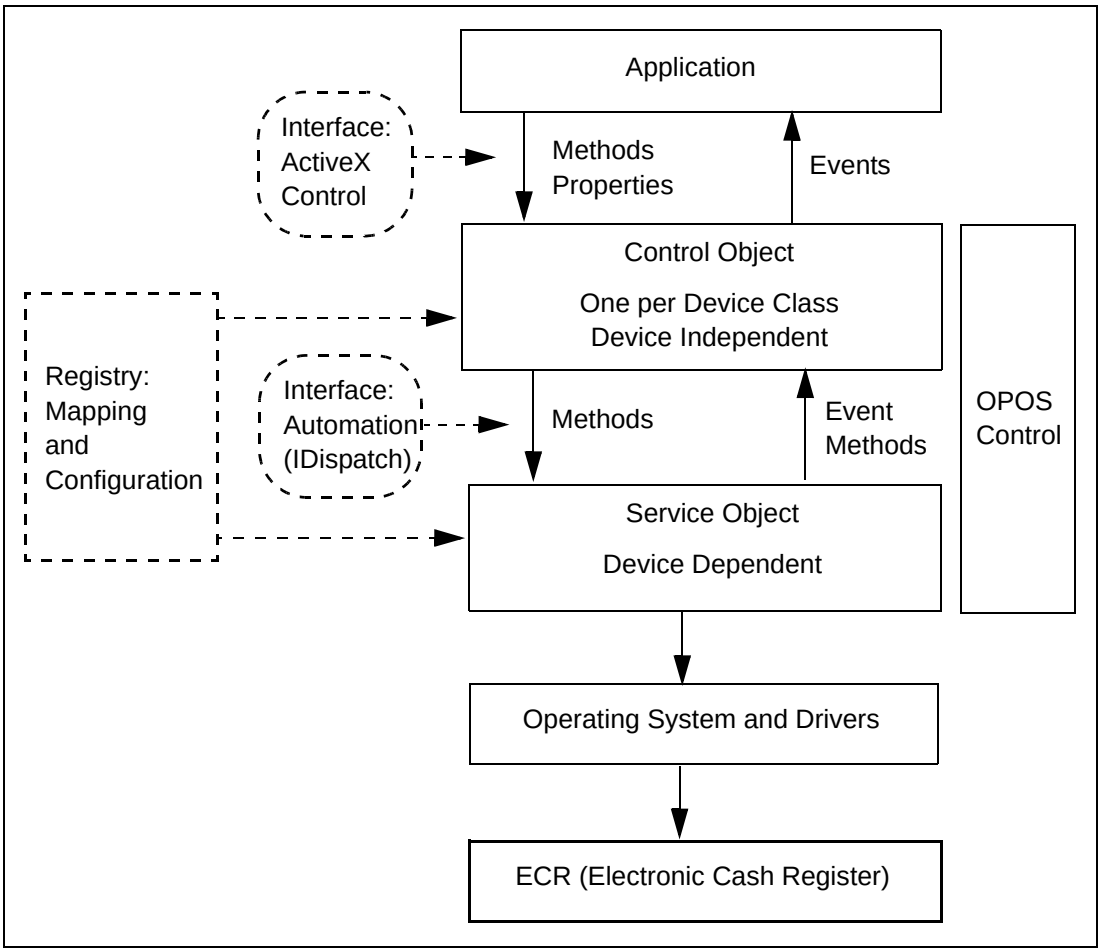

Figure 5. OPOS Architecture

In the general OPOS model, OPOS controls adhere to the ActiveX control specifications. They expose properties, methods, and events to a containing application. The controls are invisible at run time, and rely exclusively on the application for requests through methods and sometimes properties. Responses are given to the application through method return values and parameters, properties, and events. For more information on OPOS, please visit www.monroecs.com.

JavaPOS Drivers

JavaPOS maps to the Java platform in much the same way that OPOS maps the architecture to Windows. Hypercom JavaPOS drivers provide support for MSR, PIN Pad, Signature Capture, POS Keyboard, and Line Display. JavaPOS defines a multi-layered architecture in which a POS Application interacts with the Physical (or Logical) Device through the JavaPOS Device.

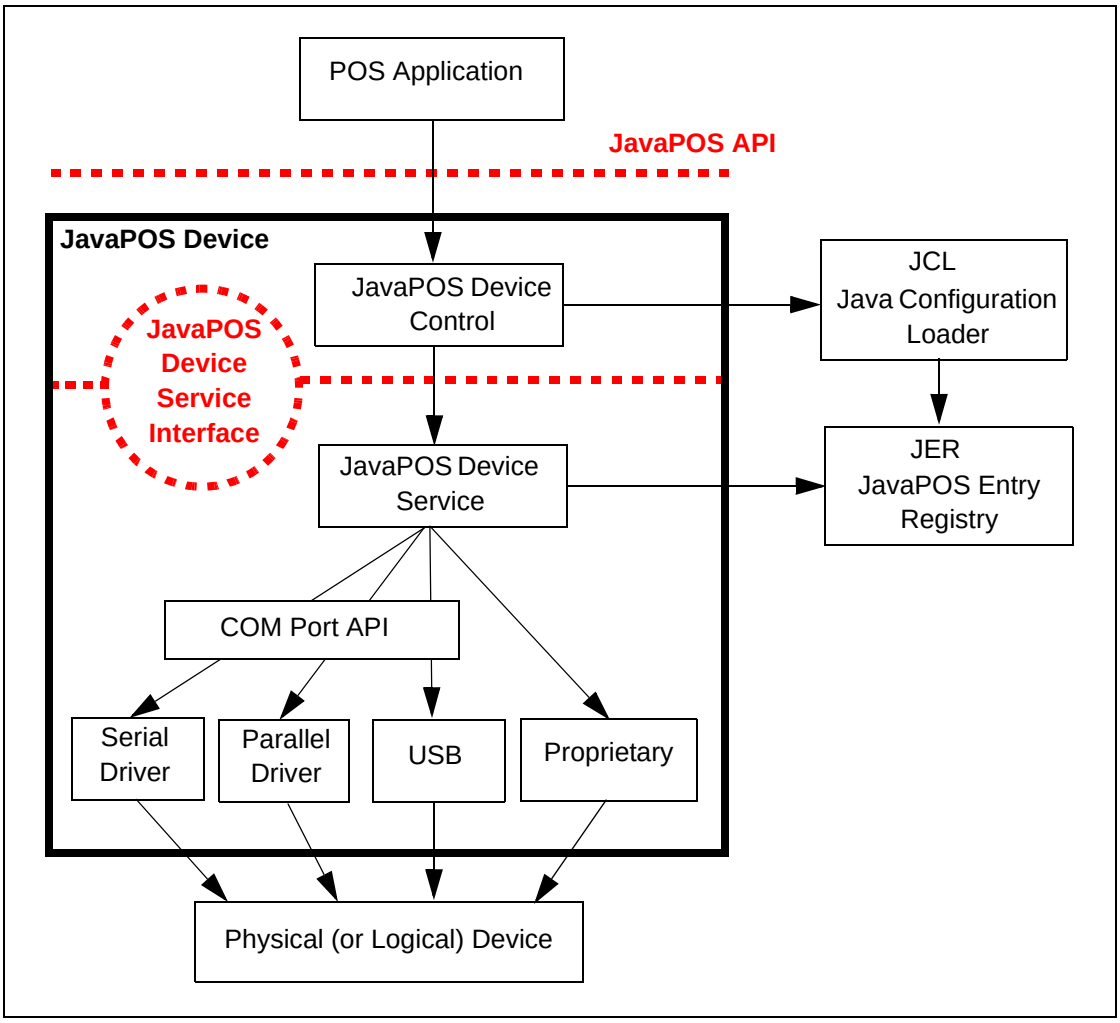

Figure 6. JavaPOS Architecture

For more information on JavaPOS, please visit www.monroecs.com.

HTMS

HTMS software is a management system for POS terminals connected through TCP/IP Ethernet. HTMS is located on a host PC or server. Terminals then connect to HTMS via a direct IP connection or the Hypercom Serial Server. Once a terminal makes a connection with HTMS, the terminal is displayed listed by its serial number.

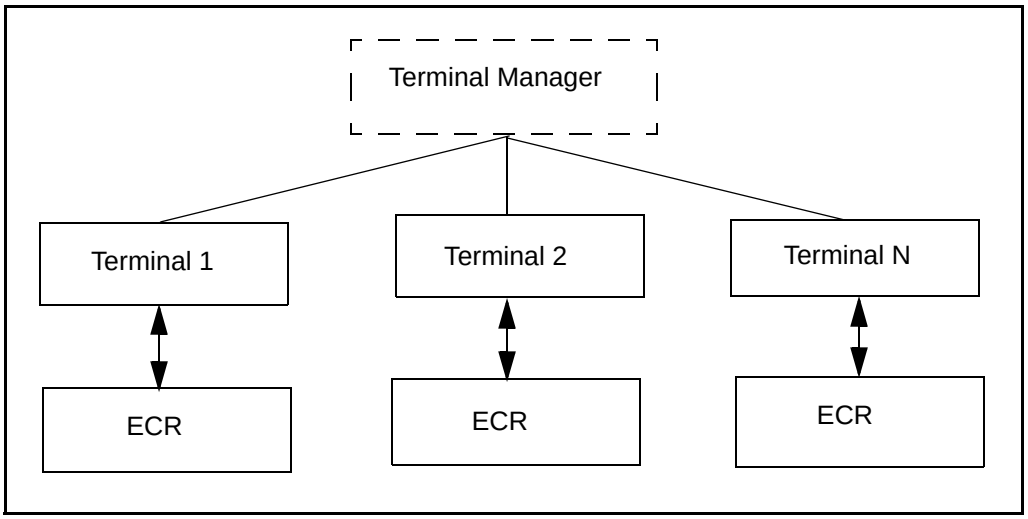

Figure 6. HTMS Model

The HTMS solution provides support for the following operations:

- Grouping/sub-grouping of the terminals based on customer, location and business, etc.
- Download of the data onto the terminal (scheduled or immediate), including:
  - The terminal application (`main.app`)
  - A packinglist (screen files)
  - An image file (.img, .gif) for promotional graphics
- Manage terminal files of multiple terminals
  - View files and generate report
  - Upload files
  - Delete files and generate reports
- Upload of statistics
- Report generation of the collected statistics
- Report generation of completed jobs
- Configurable alerts (SMS and email) when terminals go offline, come back online, and when a scheduled job is completed
- Get and set terminal(s) password

The system provides immediate activation of maintenance operations, as well as support for scheduling of the tasks (over a defined period of time, e.g. once every day or week, etc.) All of the features are possible for a single terminal and for a group of terminals. HTMS maintenance operations (uploads, downloads, cleanups, etc.) are logged. Additionally, HTMS provides the ability to store the statistics, as an XML file, in the database.

Major features of HTMS are summarized in Figure 7.

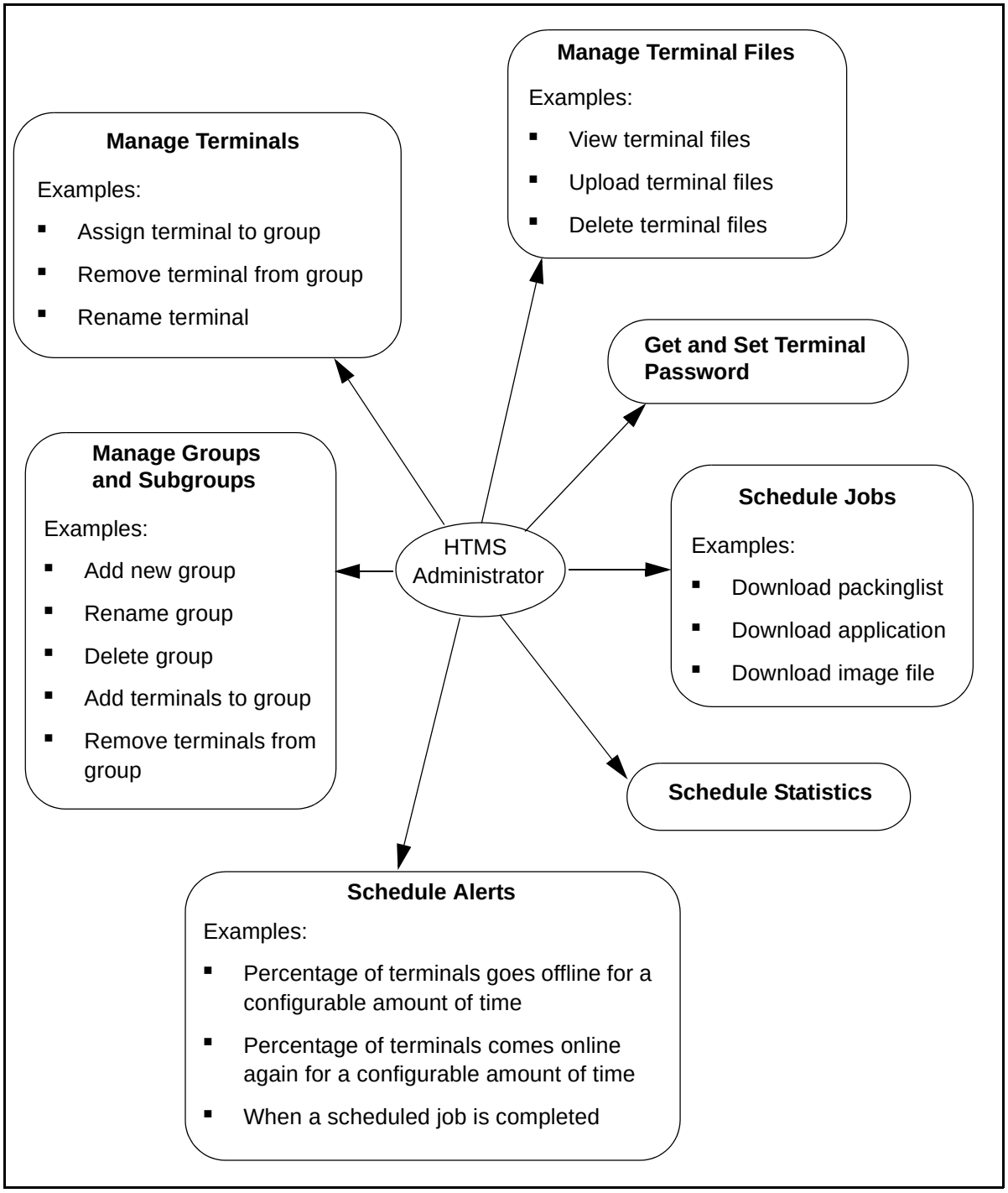

Figure 7. Major features of HTMS

Services

Hypercom can provide a true end-to-end solution for your goals. Our consulting services can help you define your needs and develop the best solution for you.

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