

ICE 4000

fast, powerful, mobile, compact, revenue-generating terminal platform

ICE 4000 Features:

- ePic (ePOS-infocommerce™) delivers Internet-based information and commerce via ICE™ (Interactive Consumer Environment) terminals
- 3 1/4" LCD interactive touch-screen display delivers advertising and promotions
- Full function terminal has debit PIN pad and signature capture pad
- Fast 9600 bps modem lowers costs and supports new data-rich applications
- Available with Mobitex, CDPD, GSM900 for wide-area; and 900 MHZ for local area portability
- Powerful lithium ion battery with built-in recharger for continuous portable performance
- Fast thermal printer with auto paper cutter

The Hypercom™ ICE 4000 (SmartICE™) is a lightweight, mobile Internet-enabled POS terminal with a 3 1/4" LCD touch-screen display. The ICE 4000 presents merchants with a powerful, versatile platform for revenue-generating programs, while offering customers the security of a user interface that puts them in control of the transaction.

With its interactive touch-screen display, featuring high-contrast, wide-viewing angle technology, the ICE 4000 provides the ultimate intuitive user interface. The terminal is presented to the customer at the point-of-sale. The customer simply swipes the card and selects to sign or to enter the PIN onto the interactive screen. Upon the customer's approval of the transaction, the ICE 4000 prints the receipt, complete with the merchant logo and promotional message. During idle times the terminal presents targeted advertising and customer promotions on the display screen. Customers like the security of retaining possession of their card and controlling the entire transaction. In addition, the ICE 4000 supports a full range of payment transactions, including debit, credit, check-conversion, gift card, EBT and smart cards.

When used with the Hypercom ePic server software, the ICE 4000 joins the ICE family of terminals in presenting an exciting new platform for a wide array of revenue-generating business functions, such as on-screen advertising, interactive couponing, customer loyalty programs and electronic receipt capture (ERC). With ERC, merchant receipts are captured internally at the point-of-sale, stored and retrieved electronically, creating a completely paperless environment. In its support of frequency and loyalty programs, the ICE 4000 helps keep merchants in touch with the changing needs of their customers. These value-added services, in addition to on-screen advertising and interactive couponing, soon become indispensable components of a merchant's overall marketing strategy.

By combining the Hypercom ePic server software, with its rich variety of fee-based services, and the Hypercom ICE 4000 terminals, merchants, acquirers, processors and independent sales organizations (ISOs) each garner the benefits from a long-term recurring revenue stream.

Profitable New Value-Added Applications with ePic:

Electronic Receipt Capture (ERC)

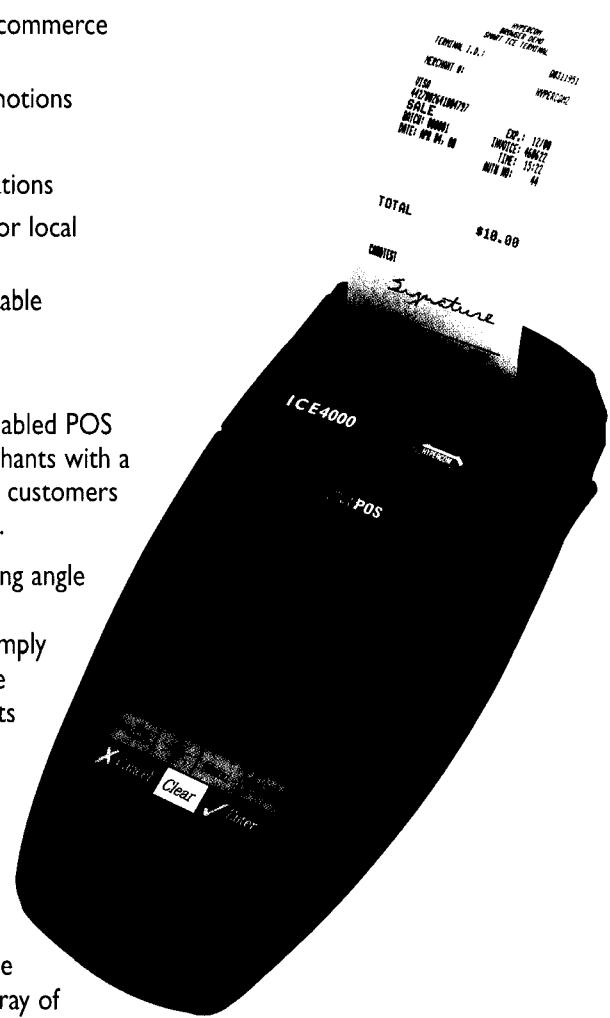
Electronic receipts save thousands of dollars a year in paper costs, help settle disputed transactions and eliminate or significantly reduce charge-backs.

POS Advertising and Branding

Customized receipts and personalized advertising build the merchant brand, communicate promotions and encourage repeat business.

Loyalty Management System

Loyalty Management builds a valuable database for reward programs and event marketing that generates increased sales revenue.



ICE 4000 Specifications

Memory	Flash RAM	128K, 1 Mbytes standard, 1.5 Mbytes optional
Battery		Lithium Ion with built-in circuit protection and battery charger
Display	LCD Touch-screen Backlight Touch Pad	160 x 160 Pixel graphics display with touch-screen 3000 hours to half-life Resolution 1200 points per inch
Card Read	Magnetic Stripe	Track 1+2 Standard, Track 2+3 optional Track 1+2+3 optional Reliability: 400,000 reads
	Smart Card IC Card Interface SIMMLOCK (SAM-s)	EMV compliant ISO 7816 - 1,2,3 T0,T1 4 standard
Comms	Modem/Radio PINpad Port Peripheral	FastPOS 9600 bps, GSM900, Mobitex, CDPD, 900 MHz local area 4-Wire RS485 RS232
Printer	Thermal Printer Paper Cutter	384 dots per line 100 single print receipts on one battery charge Auto cutter, partial cut (95%)
Power	AC DC	85 - 250V AC, 50/60 Hz 12V, 1A
Security	Physical	Intrusion detector Secure CPU and memory module Security processor, key storage IC
PIN Encryption	DES Key Management	PIN ANSI 9.8 MAC ANSI 9.9 Master/Session Keys (12) or DUKPT
Environment	Temperature Humidity ESD	0 to 45 degrees C (32 to 115 F) 85% max non-condensing 12,000 volts
Reliability	MTBF	100,000 hours (not including printer)
Warranty*		5 years

*Not available in all countries

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Headquartered in Phoenix, Arizona, Hypercom markets its products in more than 70 countries through a global network of offices and affiliates in Argentina, Australia, Brazil, Chile, China, Hong Kong, Hungary, Japan, Mexico, Russia, Singapore, United Kingdom and Venezuela.

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HYPERCOM

916.5 MHz OOK Radio:

This radio consists of a single chip transceiver from RF Monolithics. The transmitter section consists of a SAW oscillator followed by a SAW filter for spur rejection. It has an output level of less than one (1) mW. The receiver is an amplified-sequenced version where the input signal is first SAW filtered, then amplified, delayed, and then amplified again before detection in a diode type detector. The second amplification occurs in a different time interval than the first amplification so oscillation in the receiver is virtually non-existent. The radio is shut down when no data transfer activity is expected. Also, the radio is shutdown when the printer is functioning.

Antenna:

The Antenna consists of a $\frac{1}{4}$ Wavelength Retractable Helical over Whip Antenna. The SWR is less than 2.0 across the required bandwidth of 916.3 MHz to 916.7 MHz. The Antenna maintains a gain of 2.0 dBi in the extended position. Polarization of the antenna is Vertical and maintains an omni-directional radiation pattern.

Matching Board:

The RF enters the matching board via a OSMT connector and is routed through an RF switch to either a matching network that connects to the retractable antenna or to the external antenna jack. The matching network supports various passive configurations of series and shunt components to tune the antenna. After the matching network, the RF is routed to a copper finger contact that connects to the retractable Antenna.