

HYPERCOM, INC. POS DEVELOPMENT

900 MHz WIRELESS ICE TERMINAL
OPERATION INSTRUCTIONS

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1. GENERAL PRODUCT DISCRIPTION

Hypercom's 900 MHz wireless ICE terminal in its current manifestation will take the standard POS transaction to the customer without the customer losing sight of his/her credit/debit/smart card. It will reduce the transaction time required by the vendor to run a card back and forth between the customer and the central POS terminal. The results of which are increased customer convenience, security and satisfaction, as well as reduced processing cost to the merchant.

Features present on the ICE unit are as follows:

1. **Signature Capture/Graphics Display.** A touch screen display is used to allow a soft key menu and signature capture to be utilized. The Display contains 160 by 80 pixels which allows graphical use.
2. **Keypad.** A twelve key keypad is present on the unit containing the standard numeric numbers zero through nine. The last two keys are "CLEAR" and "ENTER".
3. **Battery Powered.** Ice is capable of running on an internal battery or a 8-12Volt source providing power through the RJ11 port if tethered to a T7 terminal, LP3 loader or other device. The wireless unit is **NOT** designed to be used in a tethered mode. The unit will power up automatically when power is provided through the RJ11. There is a push button power switch located on the ICE for running on internal battery power.
4. **Credit Card Reader.** There is a standard track one and track two card reader located on ICE.
5. **Smart Card Reader.** There is a standard Smart/Memory Card reader located on the side of the unit.
6. **SIMMs.** Three SIMLocks are located on the bottom of the ICE unit for Vendor Mondex use.

The ICE wireless uses an FXI01 900MHz radio transceiver board. This allows the ICE to be portable and the POS transaction can then take place wherever the card users may be. The ICE terminal communicates the transaction data via a 900MHz signal to a host terminal, which in turn communicates to a network. Once the transaction has been approved, the host terminal will inform the customer of the approval via the ICE unit display. Data encryption is provided by the host POS terminal and ICE device.

Hypercom's ICE 900MHz wireless system will consist of the following items:

1. **HOST TERMINAL.** This may be any of Hypercom's POS terminal product with a PIN PAD port, and an external communication port (LAN or telephone), using the appropriate software such as **T7, T7P, T77, T5000.**
2. **TERMINAL TRANSCRIVER INTERFACE.** Hypercom model **FTI 01** or for use with a single terminal transceiver, an adapter cable, Hypercom P/N: 810170-001.
3. **TERMINAL TRANSCIEVER(S).** Hypercom model **FXV 01.**
4. **CUSTOMER PREMISIS WIREING.** (If required.)
5. **ICE TERMINAL.** This must be an ICE wireless terminal with an FXI01 board and wireless software installed.

2. OPERATION

Hypercom's 900 MHz wireless POS terminal interface system is designed to be transparent to the user. The peripheral POS terminal device operation using the wireless POS terminal interface system is identical to its operation when the connection is through a cable between a peripheral POS terminal device and a host POS terminal.

Hypercom's 900 MHz wireless POS terminal interface system utilize radio transmitters and receivers certified in accordance with Federal Communications Commission (FCC) regulations, (CFR 47 Part 2 and Part 15) for use within the industrial, scientific, and medical band of frequencies between 902 MHz and 928 MHz.

**THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.
OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIREED OPERATION.**

Operational distance between a terminal transceiver and a peripheral POS terminal is greatly affected by their environment. Obstructions such as walls and furniture as well as outside interfering signals may reduce the operational range. Software communication protocols have been implemented with in Hypercom's 900 MHz wireless POS terminal interface system that should reduce these effects.

2.1 BASIC CONFIGURATION

The example in figure 1 shows the basic configuration. The system was designed for a communication distance of from the terminal transceiver to the peripheral terminal device of less than 100 feet. Minimizing the coverage area reduces the possibility of creating interference to other communications systems sharing the same radio spectrum, a violation of FCC regulations. The short range design also reduces the chance of interference from outside sources.

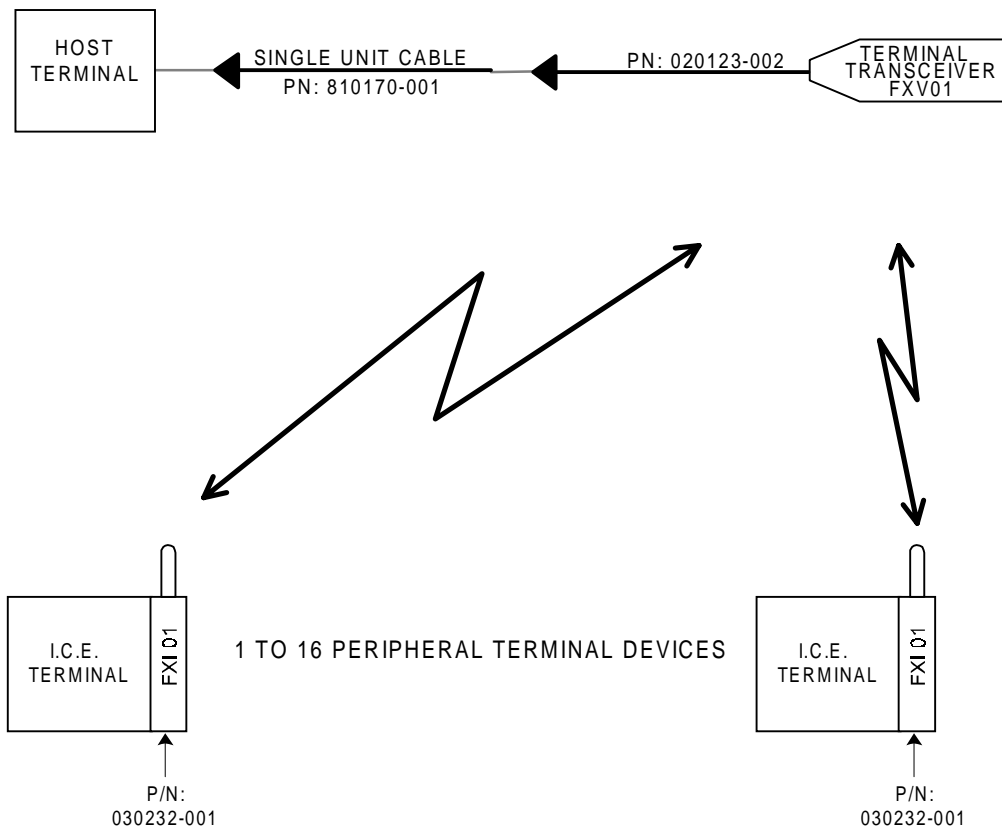


Figure 1 BASIC CONFIGURATION EXAMPLE

NOTE: DO NOT INSERT THE CABLE CONNECTORS FROM THE ICE RJ11 PORT INTO ANY RECEPTICAL DISIGNATED FOR USE WITH THE PREMISIS TELEPHONE SYSTEM AS THE ICE UNIT MAY BE DAMAGED!

3. INSTALLATION EXAMPLE

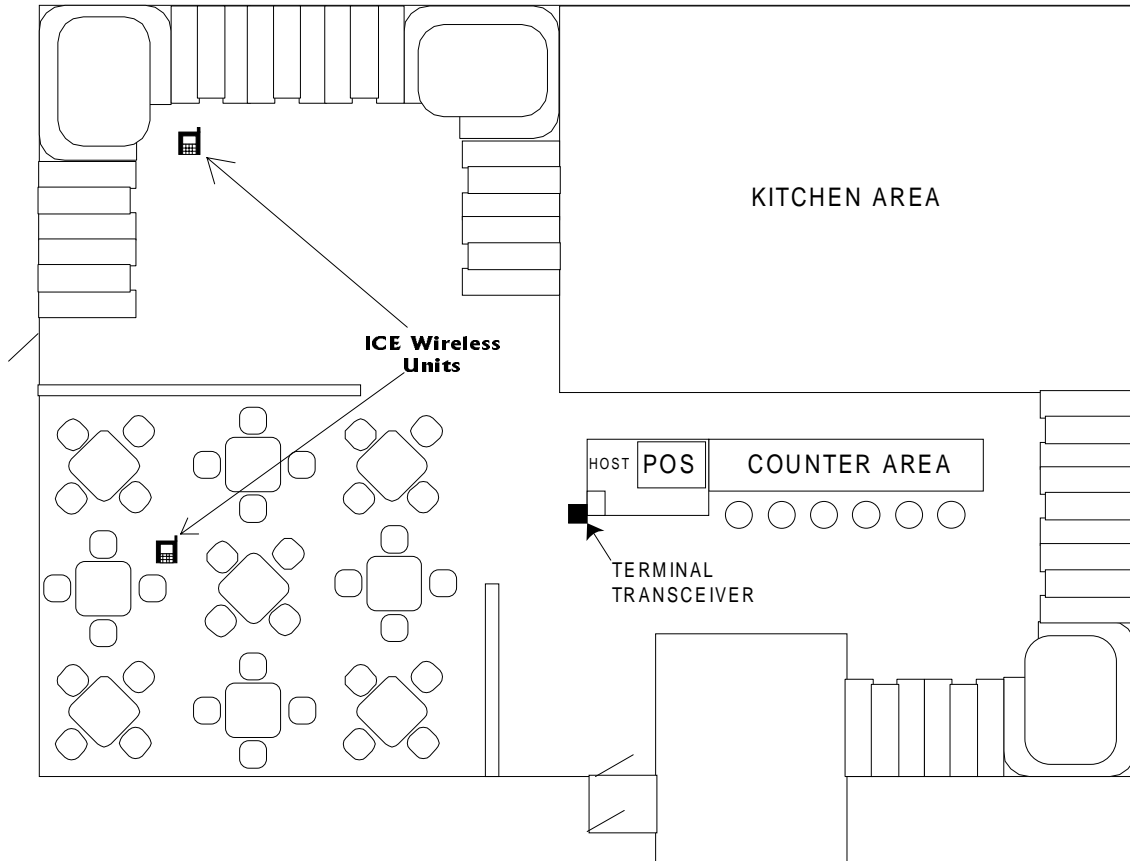


Figure 2 BASIC SYSTEM EXAMPLE