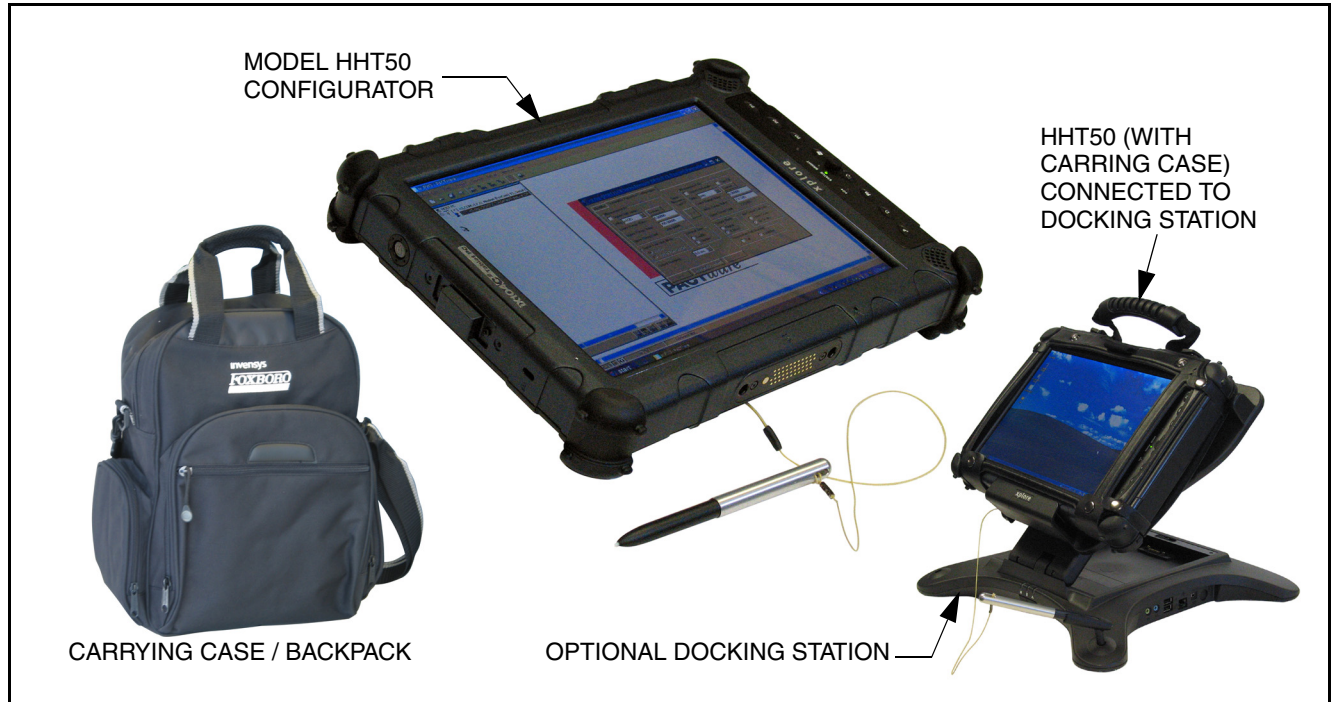


## Model HHT50 Configurator for use with Intelligent Field Devices



The Model HHT50 is a powerful configuration tool for intelligent field devices. It is a rugged unit that utilizes the Windows XP Tablet PC operating system and ships complete with Foxboro Model PC50 configuration software fully loaded. Modems and other accessories may be specified for shipment with the Model HHT50.

### FEATURES

- The HHT50 Configurator supports Foxboro intelligent transmitters and positioners (see Table 1).
- It uses Model PC50 Field Device Tool (FDT) software with Device Type Managers (DTMs) for each field device type. FoxCom™ and HART® DTMs are provided.
- It is an open tool for integration with third party DTMs.
- Intel Pentium M733 Processor provides Centrino technology with 1.1 GHz processing speed.
- Microsoft Windows XP Pro Tablet PC Edition.
- Long life battery pack with warm swap capabilities supports extended field usage away from wired power sources.
- 10.4 inch XGA TFT high brightness LCD color screen with enhanced indoor/outdoor readability.
- Essential I/O includes two USB ports for connection of external modems. An RJ45/RJ11 combo port, and a 15-Pin D-SUB port.
- Backlit Keypad for visibility in dim/dark environments.
- Hot Keys and Joystick Navigation.
- Digital Pen Technology with tethered stylus.
- Carrying case and carrying case/backpack are standard.
- Impact Protected for four-foot drops to a concrete surface.
- Available with optional modems for connection to Foxboro devices.

**MODEL PC50 FIELD DEVICE TOOL (FDT) SOFTWARE for use with the MODEL HHT50**

This configuration software is used with the Model HHT50 and is used for intelligent field devices having FoxCom or HART communication protocol. Many features are listed below. Refer to PSS 2A-1Z3 G for further details regarding the Model PC50.

- Supports Foxboro intelligent transmitters and positioners (see Table 1).
- It is also an open tool for integration with third party Device Type Managers (DTMs).
- End users have freedom of choice in their selection of field devices from multiple vendors.
- Other protocols supported by FDT technology.
- Device configuration, device calibration, device diagnostics, and device characteristics.
- Conforms to FDT Specification 1.2. This specification provides a standard mechanism for communication between applications and devices.
- Maintenance of device parameter databases is done through applications specific to each vendor’s DTMs.
- Universal engineering environment to access intelligent device information.
- Expands utility of existing device engineering, and provides greater opportunity to differentiate device application.
- Automatic software installation and easy software upgrades via internet.
- Capability to reconfigure, copy, clone, upload, download, and print out device databases.
- Provides device information necessary for an Asset Performance Management System.

**CARRYING CASE AND BACKPACK**

A carrying case, with straps on the back, allows convenient holding of the configurator on the hand or forearm while accessing the screens and buttons. It also includes a convenient place to hold the stylus.

A separate carrying case, which can also be used as a backpack, is provided to hold the configurator, cables, and modems. See Figure 1 and front page photos.

**FoxCom and HART PROTOCOL DEVICES**

The devices shown in Table 1 are supported by the HHT50 with PC50 configuration software.

Table 1. FoxCom and HART Protocol Devices (DTMs supplied on PC50 Version 2 CDs)

Protocol	Device Type (a)	Device Series
HART (Invensys Devices)	Pressure (b)	130, 140
	Pressure	IAP10, IAP20, IGP10, IGP20, IGP25, IGP50, IDP10, IDP25, IDP50 and Invensys I/A Series
	Multivariable	IMV25 and IMV30/31 (d)
	Temperature	RTT15, RTT20, and TI20 (b)
	Mag Flow	IMT25 and IMT25L
	Mass Flow	CFT30 and CFT50
	Vortex Flow	83F, 83S, and 83W
	Buoyancy (b)	130 and 140
	Positioner (b)	SRD960 and SRD991
HART (c)	Miscellaneous	Non Invensys Devices (c)
FoxCom (Invensys Devices)	Pressure	IAP10, IAP20, IGP10, IGP20, IGP25, IGP50, IDP10, IDP25, and IDP50
	Multivariable	IMV25 and IMV30 (d)
	Temperature	RTT20
	Mag Flow	IMT25, IMT25L, and IMT96
	Vortex Flow	83F, 83S, and 83W
	Electrochem.	870ITEC, 870ITPH, and 870ITCR

- (a) Invensys Foxboro devices unless otherwise noted.
- (b) Invensys Foxboro-Eckardt devices.
- (c) DTMs for non Invensys Foxboro devices to be created by the device manufacturer.
- (d) PCMV Configurator Software required for complete flow and level configuration of Models IMV30 and IMV31. Contact Foxboro for availability.

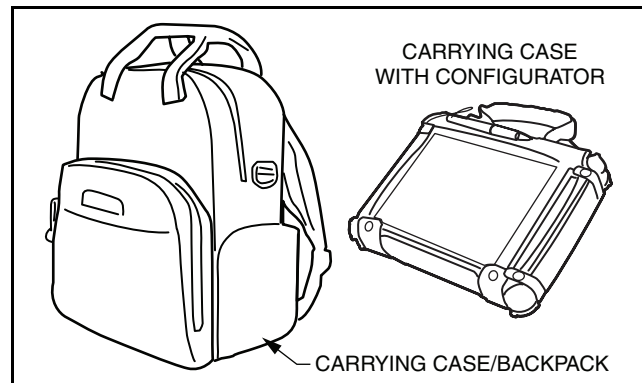


Figure 1. Carrying Case and Carrying Case/Backpack

**ENHANCED LCD TECHNOLOGY**

Whether indoors or outside, the XGA display can easily be seen using screen technology that reduces reflectivity and glare, and increases brightness and contrast, thereby boosting screen viewability in all light conditions.

**EUROPEAN UNION DIRECTIVES**

Conforms to applicable EU directives ("CE" logo marked on product).

**OPTIONAL DOCKING STATION**

Supplied instead of external CD-ROM drive, when specified. Docking station includes battery charger and CD-ROM drive. See photo on front page.

**OPTIONAL MODEM AND POWER SUPPLY**

A modem is required for communication between the intelligent field device and the FDT software installed in the Model HHT50. An optional FoxCom or HART modem kit is offered for a user who may not already have one. Also, an optional power supply is offered for users who need to power the device. Because the modem uses the field-proven Frequency Shift Keying (FSK) technique, the transmitter output signal or positioner set point is not disturbed during communication between Model PC50 and field device. See Table 2 for FoxCom and HART Modem specifications.

Table 2. FoxCom and HART Modem Specifications (a)

Parameter	FoxCom Modem	HART Modem
Power Supply	Modem is powered directly by the USB port of the computer.	
Product Safety	This product is CE approved according to EMC Directive 89/336/EEC guidelines.	
Agency Certification	Modem has been designed for use in nonhazardous (general purpose) locations.	
Isolation	RS-232 interface galvanically isolated from the measurement/control loop. 1500 V dc between the device and the computer.	
Operating Temp. Limits	-40 and +50°C (-40 and +122°F)	0 and 50°C (32 and 122°F)
Storage Temp. Limits	-40 and +70°C (-40 and +158°F)	-40 and +85°C (-40 and +185°F)
Relative Humidity Limits	5 and 99% noncondensing	0 and 95% noncondensing
Computer Connection	0.3 or 1.5 m (1 or 5 ft) cable with a DB-9 connector	1.5 m (5 ft) cable with an Integral DB-9 connector
Dimensions	81 x 61 x 25 mm (3.2 x 2.4 x 1 in)	51 x 33 x 15 mm (2.0 x 1.3 x 0.6 in)

(a) A modem with a USB Adapter is required with Model HHT50. Refer to Model Code for modems available.

### FUNCTIONAL SPECIFICATIONS

**CPU**

Intel Pentium M733

**Chipset**

Intel 855GME, 400 MHz

**Processor Speed**

1.1 GHz

**Main RAM**

512 MB

**Hard Drive**

40 GB, shock mounted

**Display Size and Type**

10.4 inch XGA TFT Color

**Display Readability**

Indoor or Outdoor, with ambient light sensing and 16 levels of brightness

**Interfaces**

Two USB 2.0 Interfaces

**CD-ROM Drive**

Shipped with external CD-ROM Drive (options available)

### ENVIRONMENTAL SPECIFICATIONS

**Housing**

Durable multilayered magnesium housing with bumper system to survive four-foot drops to a concrete surface.

**Harsh Environments**

Meets MIL-STD 810F for use in harsh environments.

**Operating Temperature Limits**

-4° and +140°F (-20° and +60°C)

**Storage Temperature limits**

-40° and +167°F (-40° and +75°C)

**Low Temperature Limit for Cold Boot**

32°F (0°C) on battery at 70% charge

**Humidity**

0 to 95%, noncondensing

### PHYSICAL SPECIFICATIONS

**Nominal Dimensions (WxHxD)**

11.2 x 8.25 x 1.6 in (284 x 210 x 41 mm)

**Approximate Weight**

4.7 lbs (2.13 kg) with standard battery.

**Battery**

41 Whr provides up to 3.5 hour usage with 2.5 hour recharge time (90%).

**AC Adapter**

Auto sensing 100 to 240 V ac, 50 to 60 Hz, supplying 19 V dc, 3.42 A current; with North American power cord (options available).

**Carrying Case and Carrying Case/Backpack**

A carrying case and carrying case/backpack are provided as standard. See Figure 1.

**FUNCTIONAL BLOCK DIAGRAMS (Figures 2 and 3)**

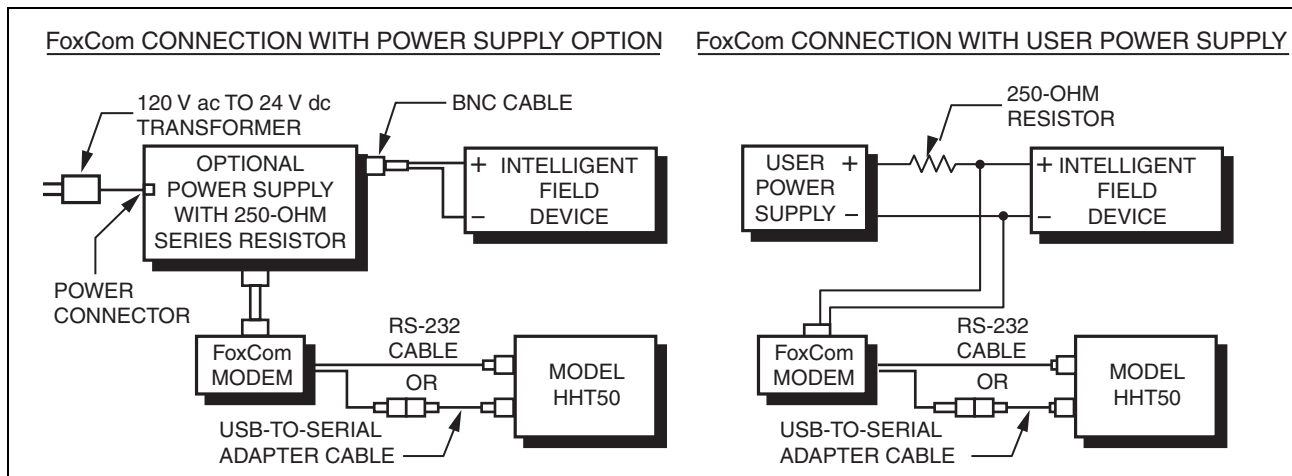


Figure 2. Functional Block Diagram with FoxCom Modem, with Optional and User Power Supply

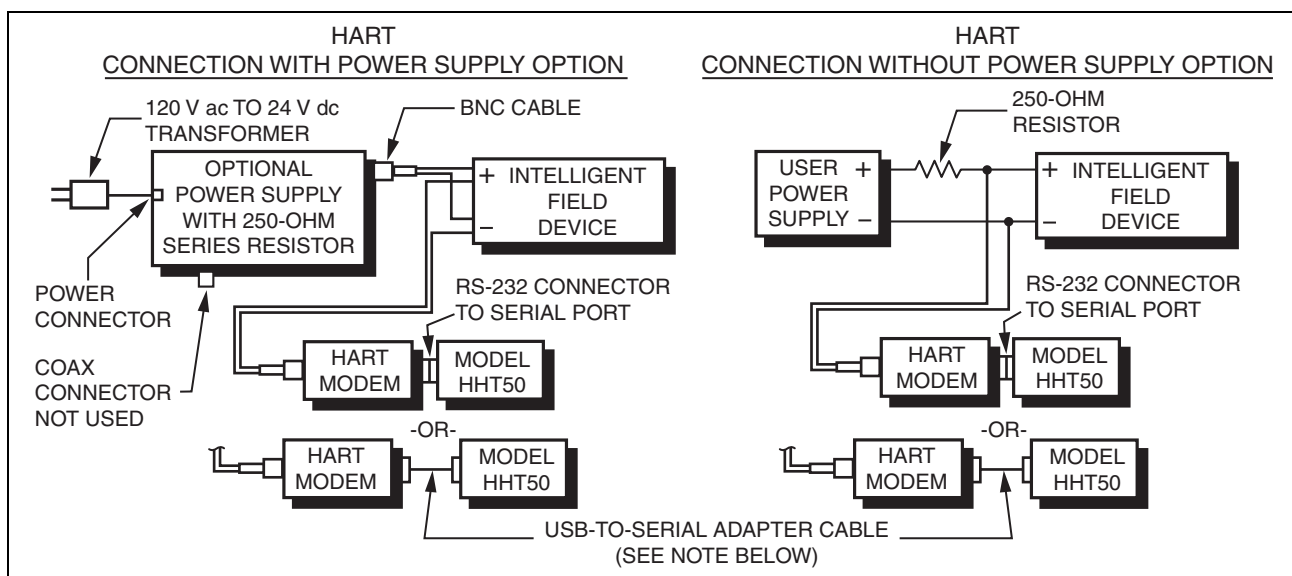


Figure 3. Functional Block Diagram with HART Modem, with Optional and User Power Supply

**NOTE**

An Adapter Cable is used with serial HART Modem (Optional Selection -M2), but is not supplied or required with USB HART Modem (Optional Selection -M4).

MODEL CODE

<u>Description</u>	<u>Model</u>
Configurator	HHT50
<b>Language</b> English	-E
<b>Electrical Classification</b> None (a)	Z
<b>Additional Features</b> None - Reserved for Future Product Feature Expansion	N
<b>Optional Selections (see Descriptions below)</b>	
<b>Additional Software Installed (b)</b>	
PCMV Configurator (for Models IMV25, IMV30, IMV31, with FoxCom or HART) (h)	-S1
PCMM Configurator (for Model IMV25-M - Modbus)	-S2
<b>Modems</b>	
FoxCom Modems; complete with USB-to-DB9 Adapter	-M1
HART Modem; complete with USB-to-DB9 Adapter	-M2
USB-to-RS485 Converter; for use with Option -S2 only (PCMM and IMV25-M)	-M3
HART USB Modem and Cable Kit	-M4
<b>CD-ROM Drive and Docking Station</b>	
Omit External CD-ROM Drive	-D1
Omit External CD-ROM Drive, and Add Docking Station with internal CD-ROM Drive	-D2
<b>Power Cords (North American Power Cord is standard)</b>	
European Power Cord (c)	-P1
United Kingdom (UK) Power Cord (d)	-P2
<b>Miscellaneous Options</b>	
Spare Battery	-B
Screen Protectors - Two (e)	-G
Power Supply for Transmitter (f)	-C
USB-to-DB9 Adapter (g)	-U
Example: HHT50-EZN-M2D2B	

- (a) Certification of PC with Modem is pending completion of Division 2 Modem Development Program.
- (b) Model PC50 software, complete with both FoxCom and HART DTMs, is standard.
- (c) European power cord for Germany, Finland, France, Austria, Belgium, Denmark, Greece, Iceland, Italy, Netherlands, Norway, Poland, Portugal, and Sweden.
- (d) UK power cord for Ireland and certain Middle Eastern, Asian, and African countries.
- (e) Screen Protectors option includes cleaning solution, cloth, applicator, and instructions.
- (f) Power Supply with a 250-ohm resistor for transmitter is a tool that requires 120 V ac, 60 Hz, and supplies 24 V dc for use during configuration.
- (g) The USB-to-DB9 Adapter is included with Options -M1 and -M2. Option -U is offered for use with existing Foxboro Modems that do not have a USB Adapter. This Adapter is also available as a separate part by ordering Part Number D0186XC.
- (h) Contact Foxboro for availability.



**ORDERING INSTRUCTIONS**

1. Model Number
2. Tag and Application

**OTHER M&I PRODUCTS**

Invensys Foxboro provides a broad range of measurement and instrument products, including solutions for pressure, flow, analytical, positioners, temperature, controlling and recording. For a listing of these offerings, visit the Invensys Foxboro web site at:

[www.foxboro.com/instrumentation](http://www.foxboro.com/instrumentation)

33 Commercial Street  
Foxboro, MA 02035-2099  
United States of America  
[www.foxboro.com](http://www.foxboro.com)  
Inside U.S.: 1-866-746-6477  
Outside U.S.: 1-508-549-2424  
or contact your local Foxboro  
representative.  
Facsimile: 1-508-549-4999

Invensys, Foxboro, and FoxCom are trademarks of Invensys plc, its subsidiaries, and affiliates.  
All other brand names may be trademarks of their respective owners.

Copyright 2006 Invensys Systems, Inc.  
All rights reserved

MB 010

Printed in U.S.A.

0806