Touch IPC

Technical Manual

This document will explain about the Touch IPC, and is meant to be a technical manual for people that need to install and service the machine.

Although the Touch IPC is a standard PC running standard Windows XP, it is important to follow the guide about how to set up your system correctly, as incorrect settings will influence your performance.

For information about how to customize INKdraw, please see INKdraw manual.

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Hardware Installation

When you receive your Touch IPC, it will come packed in protective plastic wrapping, and with a cardboard to protect the screen.

Unpacking

Carefully cut open the plastic wrap around your Touch IPC and check that the screen is intact. Also check that there is a Windows XP sticker located on the side of the unit.

Mechanical installation

The Touch IPC can be mounted using threads in the sides. Optionally you can order a bracket that will fit the Rose+Krieger system. Please see page 23 (drawings)

To mount in the side, use a 6 mm screw, metric thread.



The maximum length of thread to go inside the Touch IPC is 15mm. It is recommended NOT to use larger screws than 6 x 16.

If you use a longer screw, you will damage electronics inside.

Electrical installation

The touch IPC is a standard PC with all the standard connections. In addition to these standard connections, the Touch IPC has connectors that are used for printer connections and I/O related to that.

Below is a schematic overview of where you should connect cables to the Touch IPC. Pinouts for the I/O connectors are found in the back of this guide.



Capability of the Touch IPC

On the Touch IPC you can connect the following equipment:

HP printers up to 4 pens. This can be as one of the following configurations: **On SUB-D Connectors** 1..4 single pens 2 + 2 pens On SCSI connector 1 x 3 pens 1 x 4 pens XaarJet 128 printers Up to 16 XJ128 print engines. This can be single engine printers that are daisy-chained, or multiple-engine printers that are on different connectors. Each connector will accept up to 4 XJ128 engines.

XaarJet 500 printers

Up to 4 XJ500 printers

Notice that you must specify the model of Touch IPC you wish to use. It is not possible to use the same machine for alle types of printer.

System Installation

First time you start your Touch IPC

The TOUCH IPC is supplied with Windows XP pre-installed. Please check that there is an intact sticker on the side of your machine containing the XP licence.

First time you start your machine, you will be prompted to enter the license key. This will have a format of 25 characters, in groups of 5 (like A4FKG-C839V-...).



HS Automatic supplies an OEM version of Windows XP. This means that Windows has been pre-installed for you, and you do not get a CD or manual from Microsoft.



For performance reasons, the firewall and automatic update has been disabled on the TIPC.

It is not recommended that you have direct internet access on a Touch IPC used in an production environment. The settings below are for PRINTING need in a factory, NOT for Internet access on a public terminal. Likewise, there are NOT set up any restrictions for the default user account.

If you need direct internet access, please consult a guide on how to secure Windows XP and download Windows update.

HS Automatic has configured Windows as follows:

- There is an account "USER" which is loaded by default, and starts INKdraw
- The installation is multi-language-enabled. This means that you freely can choose the language you wish to see in Windows. There is also support for non-western scripts like Japanese, Thai, Hebrew and Arab.
- The hard drive will, for efficiency reasons, be split up in 3 partitions:
 - C: Main Windows partition
 - D: Swap drive for temporary storage
 - O E: Room for applications / Storage
- INKdraw has been setup with default directories search path
 - O INK files: {install}\files

e:\inkdraw\files

O Graphics {install}\logo

e:\inkdraw\logo e:\graphics

O Database {install}\database

e:\inkdraw\database

• There is installed a freeware application "Click-N-Type" that allows you to activate an onscreen keyboard. Although Microsoft does have this function already, the alternative keyboard can be re-designed to your own specifications.

Customizing the TIPC

There are a number of settings you may change according to how your customer will work. The typical settings are described below.

Rotate the screen

The monitor driver allows the screen to be rotated. By default, 0 degrees is "connectors UP" while 180 degrees is "connectors DOWN".



Calibrate the touch interface

Should the touch interface become inaccurate, you can carry out a manual recalibration. Usually a "standard" calibration is enough.



Rotation

🖌 LCD

Þ

🖴 🛹 🤝 🐷 🛄 1:14 PM

In the same menu, there are a number of settings / features related to the touch interface. They will not be described here, but are quite self-explanatory.

International Support

By default, English (US) Windows XP is installed on your Touch IPC.

When you wish to customize the Touch IPC for use in a non-English speaking environment, there are 5 points you should consider changing. These are:

- The user interface of Windows itself (menus, dialog boxes etc) •
- The default display for dates, month names etc
- The input language (what character set you mainly use) •
- The keyboard layout(s). •
- The menus in INKdraw (not covered here, please see INKdraw manual)

Change the Windows user interface language

As part of the Windows XP installation, HS Automatic has installed a number of user interface languages. This allows every user on the PC to see Windows in their own, local language. Notice that the language settings of Windows can be done per user. So you can have users that have French while others have German – etc.

HS Automatic installs the following languages by default:

- English Turkish • •
- Danish
- Czech
- Russian
- Greek
- Hungarian
- Polish
- Portugese

- French
- German
- Japanese •
- Arab
- Dutch
- Italian •
- Spanish •

If you need support for other languages / language groups, please contact HS Automatic. It may be possible to install your language also.

To change the language, select "**Regional and Languages**" icon located on the desktop or from the Control Panel.

The language setting for the desktop and Windows in General is in the second tab "Languages", at the bottom "Menus and Dialogs".



Choose any language from the list, this will be the default Windows language **for this user**.

Notice that you must log out and log in again to activate the new language.

	Language used in menus and dialogs	
	English	
	English 🔨	l
	čeština	l
	dansk	l
	русский	l
	ελληνικά	l
	Magyar	l
	polski	l
	português	l
	Türkçe	l
	français	ľ
	Deutsch	l
	日本語	t
	العربية	ĺ
	Nederlands	
ماد	Italiano	
ПK	español	l

Changing your local language defaults

Although Windows has now been configured to your language of choice you must still tell Windows what your *locale* is. A *locale* defines all the standards for your country, such as

- What month names and days names are
- How to display and format numbers
- How a "short" and "long" date is printed

It is important to know that

- 1. A locale is independent of your setting in "menus and dialogs" above
- 2. INKdraw is using the settings from the *locale* to display date and time.

Locale (Standards and formats) is set in the first tab. You can choose a pre-defined region or customize the existing.

The "Location" below in this window is only used in Microsoft services and has no relevance for the TIPC.

Regional and Language Options		
Regional Options	Languages Advanced	
Standards and formats This option affects how some programs format numbers, currencies, dates, and time. Select an item Conatch its preferences, or click Customize to choose your own formats:		
Samples Number:	123,456,789.00	
Time: Short date:	\$123,456,789.00 1:26:02 PM 11/15/2006	
Long date:	, Wednesday, November 15, 2006	
Location		

Changing input language for INKdraw

If you wish to work with INKdraw primarily in your local, non-western, language (such as Japanese, Hebrew, Thai, Arab,...) it is important that you change the *Input Language* to the one you use.

This is needed because INKdraw is not Unicode-Compatible, and is a requirement to edit and use databases in non-western languages.

Do so by – again – going into settings for **regional and language**.

	On the final tab "Advanced" you can
Regional and Language Options 🛛 🛛 🛛 💽	select "Language for non-Unicode
Regional Options Languages Advanced	programs".
Language for non-Unicode programs	
This system setting enables non-Unicode programs to display menus and dialogs in their native language. It does not affect Unicode programs, but it does apply to all users of this computer.	Choose your input format here.
Select a language to match the language version of the non-Unicode programs you want to use:	Windows may ask you if you wish to
Chinese (Taiwan)	use the files already installed, just answer "Yes" to this.
Code page conversion tables	
☑ 10000 (MAC - Roman)	
✓ 10001 (MAC - Japanese) ✓ 10002 (MAC - Traditional Chinese Bio5)	
✓ 10002 (MAC - Korean)	
🗹 10004 (MAC - Arabic)	
V 10005 (MAC - Hebrew)	
Default user account settings	
Apply all settings to the current user account and to the default user profile	
OK Cancel Apply	

Keyboard Layout / Input method

Finally, you can add one or more keyboard layouts (input Method).

A keyboard layout decides which characters are input from your keyboard and how. Adding other than your default language here may allow you to input characters that are not otherwise available from your keyboard.

HS Automatic has, as part of the Touch IPC installation, included support for non-western languages. If you select one of these, you will be able to use the Microsoft on-screen keyboard (Microsoft Input Method), by which you can type f.ex. japanese.

Regional and La	nguage Op	otions ? 🔀
Regional Options	Languages	Advanced
Text services a To view or cha text, click Deta	nd input langu nge the langu ls.	lages lages and methods you can use to enter
- Supplemental la	inguage supp	ort
Most languages select the appro	are installed	by default. To install additional languages, box below.
lnstall files Thai)	for complex s	cript and right-to-left languages (including
In <u>s</u> tall files	for East Asiar	n languages
		OK Cancel Apply

To change the keyboard click "**Details**" in the second tab "Languages".

oungs	Advanced
Defa	ilt input Janguage
Selec	t one of the installed input languages to use when you start your uter.
Eng	ish (United States) - US
Instal	ed services
Selec list. U	t the services that you want for each input language shown in the se the Add and Remove buttons to modify this list.
EN	English (United States)
	🖮 Keyboard
-	• US
FR	French (France)
	French
IT	Italian (Italy)
manual	

Under Installed Services, click "Add..."

In the illustration here, there is already support for

- US English (default)
- French / France
- Italian / Italy

Add Input Language	? 🛛
Input language:	
German (Germany)	×
Keyboard layout/IME:	
German	~
	OK Cancel



In the Add Input Language dialog box, click the input language and keyboard layout or Input Method Editor (IME) you want to add.

Here, a German language with German keyboard is added.

You should now see a language indicator in the System Tray (located at bottom right hand corner of the desktop by default)

NOTE: You can switch between different input methods by pressing the left Alt + Shift keys or the right Alt + Shift keys. You can also have the language indicator appear as a small bar on your screen.

Service

Take-apart guide and what's inside

Typically it is not necessary to open your Touch IPC, as there are very few user-serviceable parts inside.

If you need to, please consult HS Automatic before you open your unit.

The Touch IPC should be opened by removing the screws on bottom plate, which wraps around the connector side. Carefully open the unit with the monitor upwards and connectors towards yourself. The unit opens as if there was a hinge. Take great care not to remove the monitor from the main unit, as there are cables going from the main board to the monitor.



Serviceable parts (fuses etc)

There are 2 fuses located on the CB board itself. They are type TR5 (round with 2 pins facing down). You need 1A and 4A fuses, placed as illustrated below.



Reference Section

Default (working) BIOS settings

BIOS settings are the basic settings for the PC. The settings below are the default settings for a Touch IPC, as supplied from HS Automatic. Normally you should not have to change these

Before you begin you have to connect a PS/2 keyboard and a VGA monitor, you cannot perform this operation without! (as LCD screen will be inactive without bios settings)

Enter the BIOS editor:	Turn on your IPC by pressing the red button on the front. Immediately press the <u>delete</u> key on your keyboard, maybe multiple times.
	Wait until the BIOS editor is loaded.
Reset the BIOS:	Select the option: LOAD DEFAULTS And press Y and enter to approve.
	From the factory, the BIOS has been configured to HSA values.
	If you need to change boot order, you can do that now.
Close the BIOS editor	Move the cursor to SAVE AND EXIT SETUP and press enter Press Y and enter to save the new settings.

Start sensor connections

As a start sensor, you can use a simple switch, or a photo cell.

PIN	DESCRIPTION
1	V I/O
2	5 V
3	IN 2
4	START
5	GND
6	IN 1
7	12 V
8	OUT 1
9	OUT 2
	PIN







Encoder connections

For the encoder, you can use either a single or double channel. If you have both channels connected, you need to activate "Quadrature" in the software, and divide distance / pulses by 4.





Output Connections

On the Touch IPC there are 2 different outputs that can be used for detection of when a message has been printed, and to give an alarm for low ink.

Notice that lout max = 400mA

OUTPUT1:

This is always print message signal. The LED or relay will be active every time the start sensor is activated, until the message has been printed.



Connecting an LED

 $Led = \frac{5V - LEDvoltage}{LEDcurrent}$

Connecting a RELAY

Schematic (for 5V relay), for Signal lamp/sound device:



OUTPUT2 :

This is used to get the low ink warning. On Xaar printers, you will see a signal on the printer as well, on HP printers you can see on the monitor which cartridge is empty.



For 5V relays: For 12V relays:

Between pin 2 and pin 9. Between pin 7 and pin 9.



Exact Machine Reference

Motherboard

Model: Supplier: North Bridge VIA ENDAT 3405M Unicorn Computers, Taiwan VT8603

Processor

VIA Niehemiah 1 Ghz

<u>Memory</u>

512 MB DDR 400

Graphics

S3 graphics	Twister, On-Board
Chip:	S3-VIA Twister(TM) 380-381
Chipset	PN133 / VT8603 ProSavage PN133
Chip ID	8D01
Supported	AGP 2.0, 4X speed, 66 MHz PCI

Hard Drive

Model	HITACHI Deskstar 7K160
Reference	HDS721680PLA380
Capacity:	80 GB
Interface:	SATA
Speed	7200 RPM, up to 3 Gb/Sec transfer rate

Drawings

Touch IPC outside drawings, for mounting purposes. All sizes are in mm.



Bracket measurements.

The bracket is optional and can be specified when ordering.

The holes in the bracket are meant to fit Rose+Krieger bracket systems.

