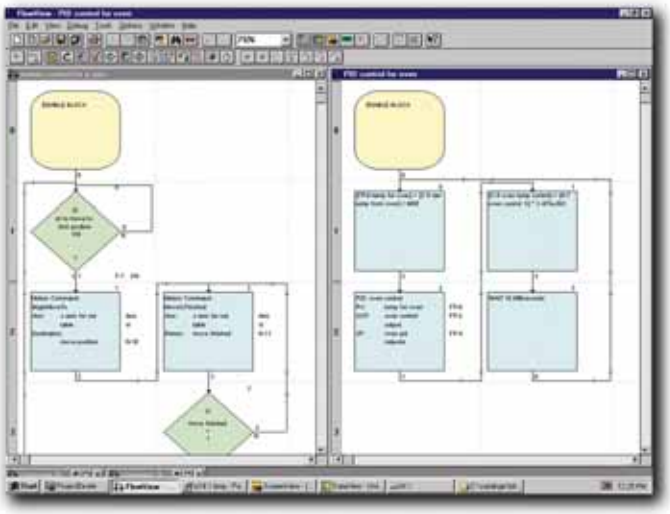
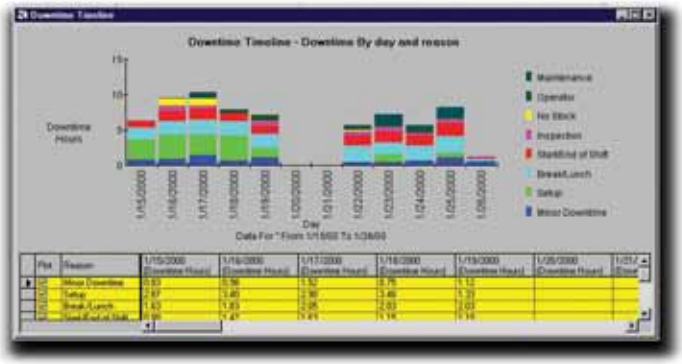
Think & Do Live! Overview

Lots of features for a little price





Think & Do Live! Development & Runtime Licenses

PC-ENT-LIVE <--->
Includes one Live! development and runtime license. Use to develop or modify a Think & Do Live! project on a PC .

PC-ENT-LIVE-E <--->
Live! Development/Runtime License with 1-year ESS (Extended Service Subscription)

ESS-ENT-LIVE <--->
Live! Development/Runtime 1-year ESS (Extended Service Subscription) only

Note: This subscription cannot be purchased online. Call us at (800)633-0405 to order. New keycode will be issued. Valid software serial number required at time of purchase.

UPG-ENT-LIVE <--->
Live! Development/Runtime ugrade to most current version

PC-WPLC-LIVE <--->
Live! programming pack for DL205 WinPLC CPUs. Includes one development license without HMI.

PC-WPLC-LIVE-UPG <--->
Upgrades from PC-WPLC-LIVE to the full PC-ENT-LIVE Development/Runtime package adds HMI capability

Easy connection to I/O and serial devices

- All I/O drivers are included, with virtually no limit on I/O tags including Ethernet, Profibus, DeviceNet and SDS
- Built-in serial communication block within the flowchart environment allows easy communication to barcode readers, drives, and other smart devices
- All motion drivers are included for both serial and PC-card based motion

Integrated motion and PID control with easy-to-use flowchart blocks

- Common flowchart language for motion control independent of the motion card you choose
- All motion parameters accessible to flowcharts and screens
- Several motion drivers supported; check the Phoenix Contact Web site for the latest list
- Easy to synchronize motion and control with your flowchart logic
- 64 full function PID loops
- Advanced PID functions like cascaded loops, bumpless transfer, anti-windup and wildflow variables allow you to perform complex process control applications

Productivity analysis tools

- Downtime analysis — monitor machine downtime by reason codes to identify production bottlenecks
- Cycletime analysis — View machine cycle time by hour, shift or operator to enable you to increase machine and production yield
- Capacity analysis — compare production yield versus maximum capacity to determine maintenance schedules, identify supply problems, or to justify new equipment purchases

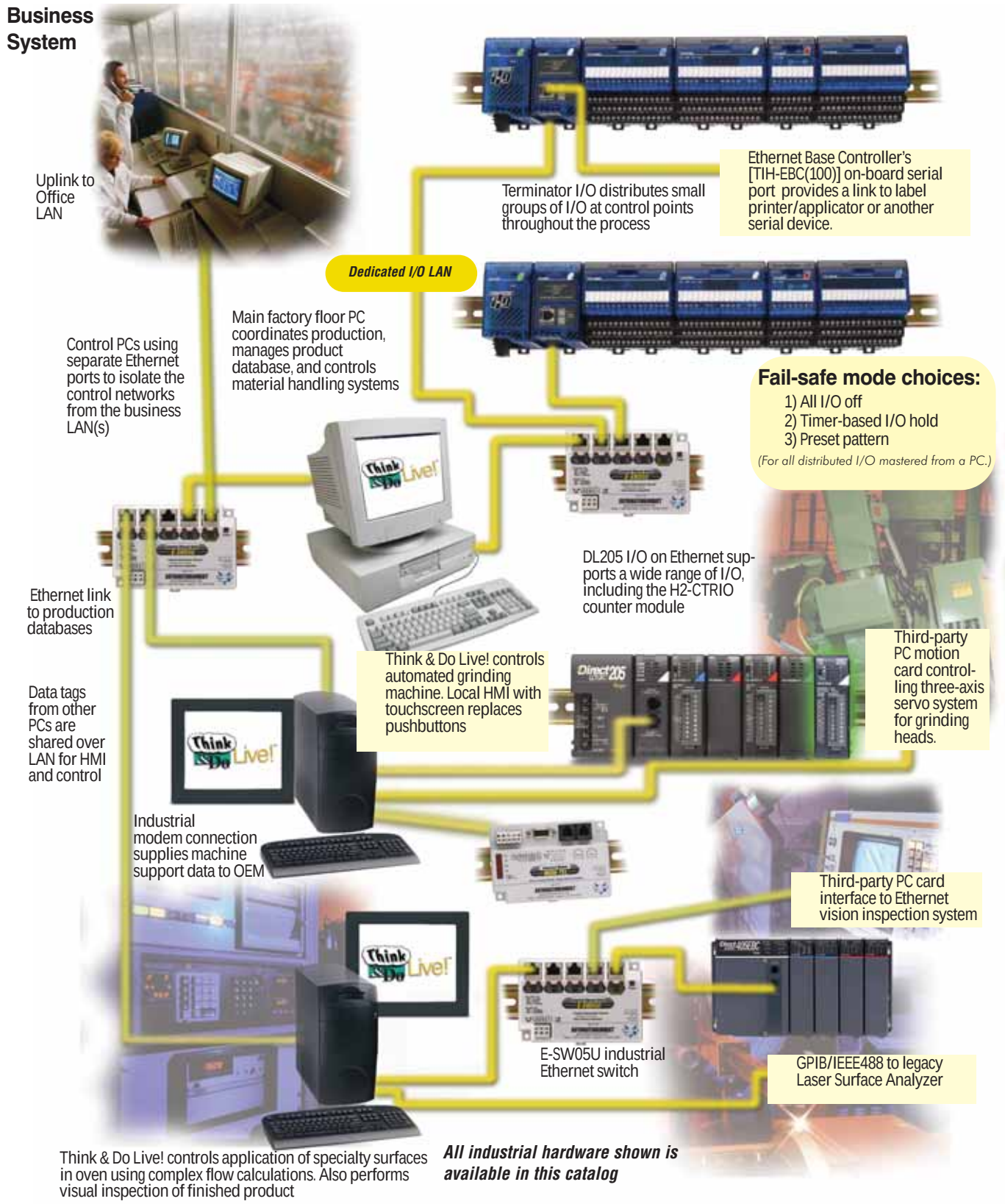
Also includes

Powerful debugging and offline logic testing tools

Check out:
www.phoenixcon.com/software for full details

PC Control with Field I/O

Think & Do, with your choice of I/O, is a powerful, flexible solution for all your automation needs.The example below uses Ethernet, but Think & Do PC Control supports DeviceNet, Profibus, and other popular fieldbus networks as well.



PC Control on a WinPLC

The WinPLC has open PC functionality and maintains what you love about PLCs, including the PLC package and price.

The WinPLC is a product that brings the best of the PC control and the PLC worlds to a common platform. PLCs control more automation than any other form of controller. However, it often isn't enough just to control I/O for today's business-aware applications. From the proprietary operating system and ladder logic programming to the hardware design, PLCs were not designed for handling string or array data, complex math, or network collaboration with other software applications and intelligent devices. For success with these applications, use the WinPLC.

The WinPLC module fits into the CPU slot of the popular DL205 series PLC bases for fast, convenient control of DL205 I/O modules. Programs are downloaded on the WinPLC just like a PLC. However, the WinPLC uses Windows CE, a real time operating system, with the advantages of PC software such as OPC, ActiveX® and other Microsoft communication tools. The WinPLC offers both deterministic control and PC connectivity. Control, data management, communication and integration with business systems are easy with the WinPLCs advanced software development tools.

Develop projects for the WinPLC with Think & Do Studio,Think & Do Live!, or the low cost Live! programming pack for the WinPLC (PC-WPLC-LIVE), which includes flowchart logic, reusable subcharts, PID functions, serial drivers, Modbus TCP and a free OPC/DDE server. You can also upgrade to the full Live package by ordering PC-WPLC-LIVE-UPG.

Or, for qualified OEMs or software developers, the WinPLC comes in a CE-only version *(available from Host Engineering directly)* for VB and C++ programmers to develop their own control code. If you are interested in the CE-only version, visit

www.hosteng.com for details.

WinPLC features

- Fits into DL205 CPU slot
- Backplane communications to DL205 I/O
- 100 MHz CPU models
- 4 MB ROM/2 MB RAM (WPLC1 and WPLC2)
- 8 MB ROM/8 MB RAM (WPLC3)
- Microsoft® Windows® CE operating system
- 10 Mbps Ethernet port and RS232 serial port

Best of the PC world

- Easily handles complex math algorithms and string or array data
- Easy serial communications
- Built-in Ethernet port
- Standard Windows (Win CE)
- Seamless integration with HMI, SCADA and Enterprise systems
- Advanced software development tools

** The WinPLC does not support Think & Do PC Control Software's HMI graphics, SQL communications, productivity analysis, and some motion control features.*

Best of the PLC world

- Direct backplane access to I/O
- Standard micro PLC form factor
- Diskless operation
- Non-volatile program and data memories
- Logic control independent of HMI
- Low cost

It's more than a PLC, it's a WinPLC !

WinPLC CPUs

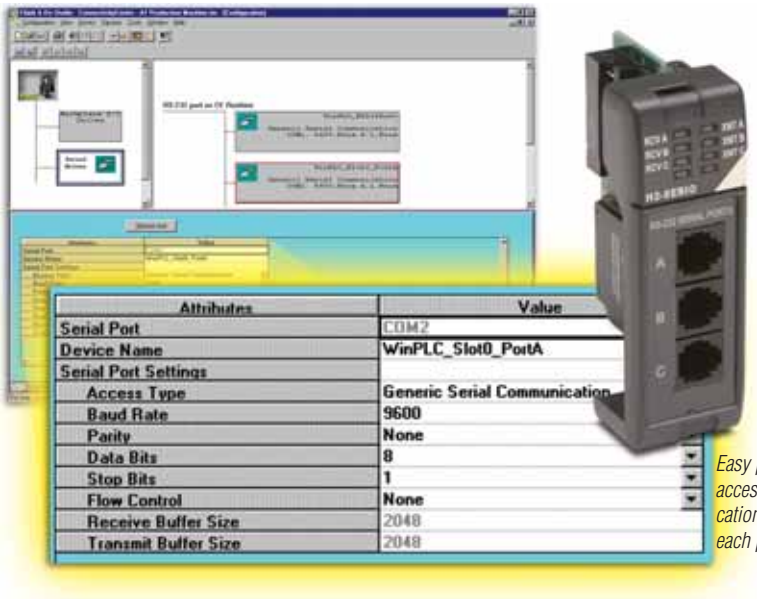
For both Think & Do Studio and Think & Do Live!
4 MB ROM/2 MB RAM

H2-WPLC2-EN (100MHz)....<--->

CPU with extra memory
8 MB ROM/ 8 MB RAM

H2-WPLC3-EN (100 MHz)....<--->

Serial Communications in an EBC or WinPLC



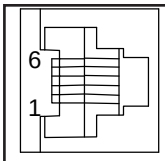
Easy point and click access to set communication parameters for each port individually

H2-SERIO <--->

In addition to the built-in serial port on the WinPLC or EBC, you can also add as many as nine additional serial ports for Think & Do applications. Install up to three H2-SERIO modules into a WinPLC base or an H2-EBC base, and you have "PC-like" serial ports to communicate to multiple serial devices, such as barcode scanners. All Think & Do products include advanced string and array functions that make manipulating serial data a snap.

Both Think & Do Studio and Think & Do Live! support easy point-&-click access to set baud rate, parity, data bits, and stop bits for each port. Think & Do allows each port to be designated as a Modbus slave or a generic serial device. Each port on the H2–SERIO module is capable of full hardware handshaking.

H2-SERIO Specifications	
Module Type	Intelligent module for use with H2–EBC and all WinPLCs
Number of Modules Supported per WinPLC	3
Connector	RJ12 jack
Power Consumption	210mA @ 5VDC
Operating Environment	0 to 60°C (32°F to 140°F), 5% to 95% RH (non-condensing)
Baud Rates	300 baud - 57.6 Kbaud



RJ12 (6P6C) female modular connector

H2-SERIO port pin assignments

1 0V Power (-) connection (GND)
2 CTS Clear to Send
3 RXD Receive Data (RS232C)
4 TXD Transmit Data (RS232C)
5 RTS Request to Send
6 0V Signal Ground (GND)

Note: While the H2-SERIO will support virtually any serial device, processing large amounts of serial data will increase system response time. This is important to consider when using multiple H2-SERIO modules, especially in a WinPLC local base that also includes an H2-ERM, H2-CTRIO or other specialty modules.

Due to the large amount of data inherent with serial devices, the H2-SERIO module is not supported across an H2-ERM - H2-EBC link. The H2-SERIO module is supported in a WinPLC local base and in H2-EBC bases connected to a PC system master.

Ethernet I/O from a WinPLC Base

H2-ERM <---
H2-ERM-F <---

H2-ERM(-F)

The Ethernet Remote Master H2-ERM (-F) allows a WinPLC solution to expand beyond a single I/O base, over a high speed Ethernet link. Add an H2-ERM to a WinPLC local base and connect it with one EBC (Ethernet Base Controller) to control larger amounts of I/O or to distribute your I/O for more convenient wiring. Both Think & Do Studio and Think & Do Live! support the H2-ERM module.

The H2-ERM connects to your control network using a Category 5 UTP cable for cable runs up to 100 meters. Use repeaters to extend distances.

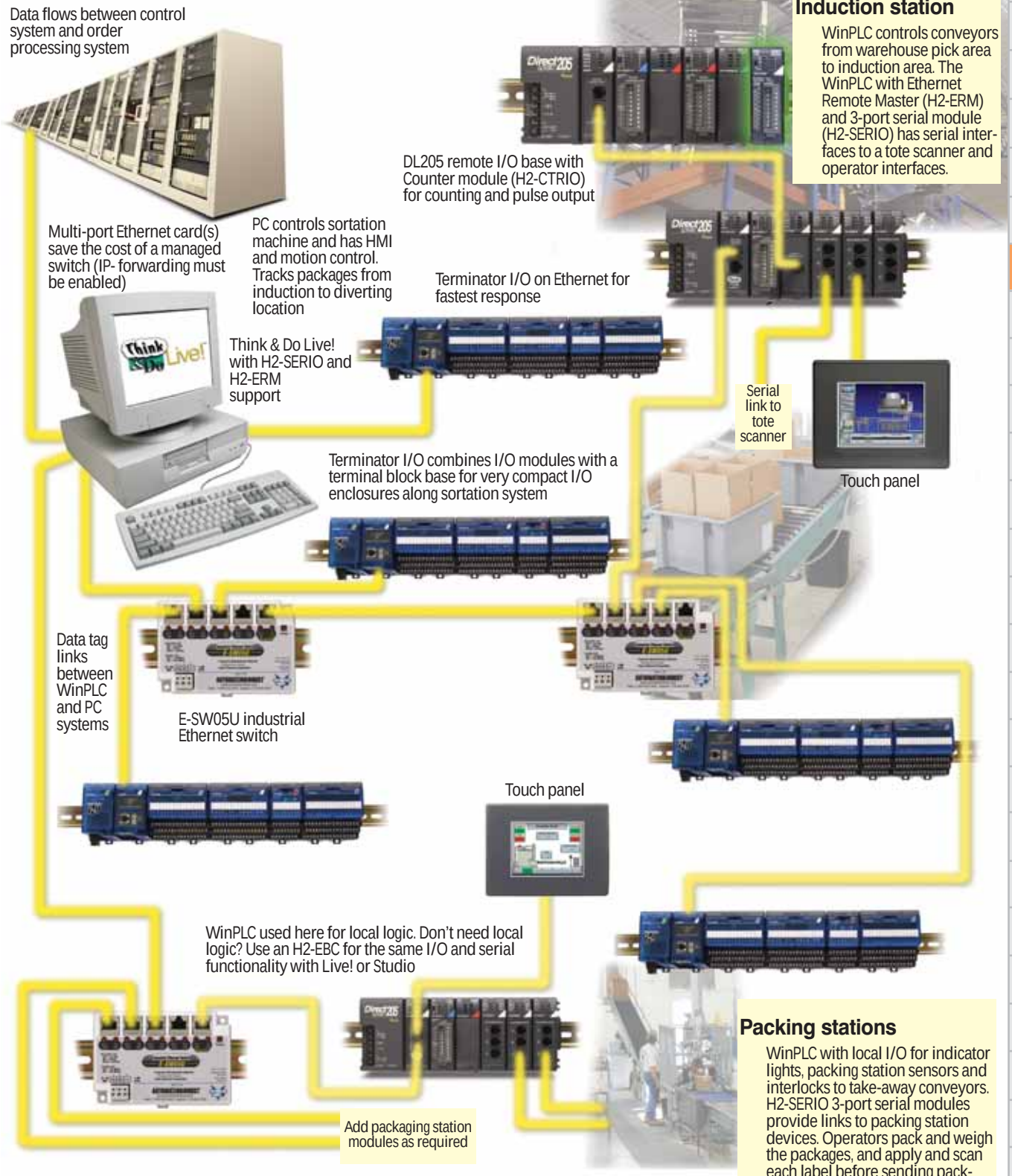
Our fiber optic version uses industry standard 62.5/125 ST-style fiber optic cables and can be run up to 2,000 meters.

Specifications	H2-ERM	H2-ERM-F
Communications	10BaseT Ethernet	10BaseFL Ethernet
Data Transfer Rate	10Mbps	
Link Distance	100 meters (328 ft.)	2K meters (6560 ft.)
Ethernet Port	RJ45	ST-style fiber optic
Ethernet Protocols	TCP/IP, IPX	
Power Consumption	530mA @5VDC	670mA @5VDC
Usage	One ERM per WinPLC system	

The WinPLC with the H2–ERM can be configured in complex systems with any of several specialty modules. Therefore, to ensure reliable performance on any system, default support for the H2–ERM product is one H2–ERM with one H2–EBC.

A PC with WinPLC System

A great material handling solution



Induction station

WinPLC controls conveyors from warehouse pick area to induction area. The WinPLC with Ethernet Remote Master (H2-ERM) and 3-port serial module (H2-SERIO) has serial interfaces to a tote scanner and operator interfaces.

Packing stations

WinPLC with local I/O for indicator lights, packing station sensors and interlocks to take-away conveyors. H2-SERIO 3-port serial modules provide links to packing station devices. Operators pack and weigh the packages, and apply and scan each label before sending packages to the shipping area.

Up to 10 serial ports per WinPLC base

Note: Large volumes of serial data will impact WinPLC I/O scan time.