Human-Machine Interface

HMI-084 / HMI-104

Vision the future with HMI

Communication between man and machine is the key for a complete total solution

NEW

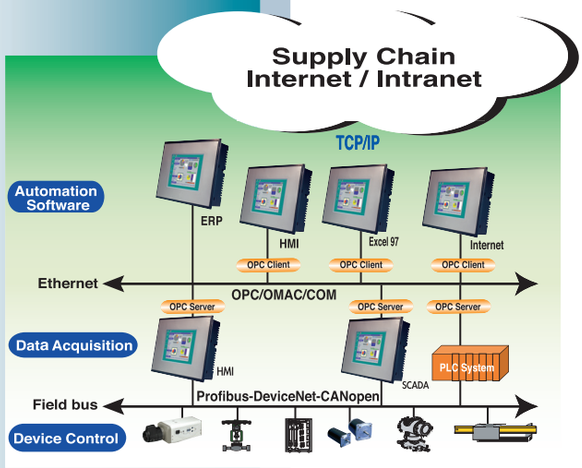
HMI (human-machine interface) is where people and technology meet. The graphic presentation replaces traditional obscure technical terms and makes machine manipulation very direct and reactive. IEI gives you the most flexible and extensible HMI solution, to meet your time-to-market and cost-effective requirements.

HMI-104

Main Features

- Innovative IEI ETX CPU module with flexible and upgradeable options
- "Harddisk-less" environment can avoid a number of possible crashes and vibration damage caused by hard disk.
- Equipped with touch screen to offer easy-to-use manipulation and reliable system integration.
- Selective package with Windows CE .NET platform is ready for integrated application.

Hard disk-less environment of IEI's HMI solution:
For greater reliability, the specific storage devices for operating system and applications are 48 MB DOM (Disk On Module) and Compact Flash, instead of a hard disk. Meanwhile, 128MB SDRAM provides enough memory space for resource-consuming applications to run. DOM and CompactFlash don't require a fan unlike a hard disk, enabling operation in a dusty environment. IDE-interfaced DOM is comparably more stable and secure than hard disk, besides, it is heat and shock resistant to harsh environment.



PC Base Automation

The current factory control is fractionalized: process controls are the brains behind the system, instrumentation is the eyes and ears of the system, and data networks are the voices that are communicating between systems or subsystems. Process controllers which are PC-based, graphic-interfaced, and web-enabled are replacing proprietary and obsolete PLC controllers. In this infrastructure, the communication among devices are via proprietary protocols such as Profibus, DeviceNet, CANopen, and the status information collected by a local controller are sent to automation software for configuration, monitoring and plug-and-play with sophisticated optimization systems. Data acquisitioned from devices are passed via Ethernet to enterprise systems, i.e., ERP, and then directed to Supply Chain via Internet. The windows-based human machine interface (HMI) with touch screen panel allows operators to control and monitor important activities on several machines in the same time. Through the OPC interface provided by hardware manufacturer, software developers are free from the difficulties of supporting versatile hardware in the market, and are able to focus on the software design of control processes. OPC is a new protocol based on Microsoft COM/DCOM technology to ease the software implementation of industry automation and control. As it is known, about 75% of automation systems' costs are associated with systems integration and support, therefore the connectivity between shop floor and the business system will permit synchronization of production lines with supply chain execution, scheduling and other production management systems. This free flow of information will permit the manufacturer to move into the era of Internet-enabled production.

The migration to PC-based platform will allow factory floor to operate a common generic HMI workstation through Ethernet or communication I/O. With the HMI application, graphical objects are linked to I/O points, control variables, monitor alarm status, log data to disk, and trend real-time information. Also, if the control software and HMI application utilize a shared database, this eliminates annoying cross-referencing, and improves accuracy. Reliability of the HMI is an absolute requirement, because the machine operates 24 hours a day, seven days a week.

Human-Machine Interface

Your Best Platform Choice

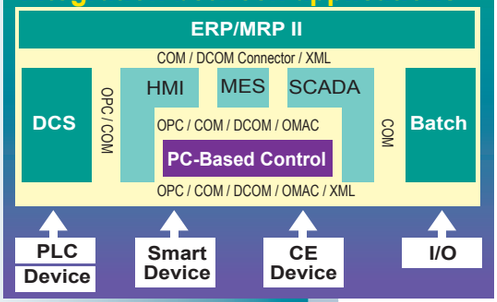
No Second Thought in Industrial Automation and Controls!!

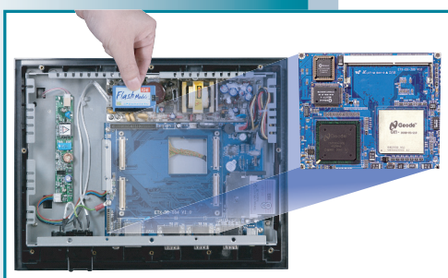
Advantages of Windows CE .NET

Win CE .NET provides an integrated end-to-end tool set which helps manufacturing software applications integrated easily and seamlessly together, and reduce both operating system and applications developing time, achieving faster time-to-market purposes:

- Offer tiny and reliable core system services that enable the most demanding real-time embedded design across a breadth of devices
- Windows CE .NET framework provides the portability of developed applications across all Microsoft windows systems, such as Windows 98, NT, 2000, XP, etc.
- Low cost by each run-time license
- Modular design for flexibility and extensibility
- Run on many different processors, some with very low power consumption
- Instant power shutdown

Windows DNA in Manufacturing Integration between applications





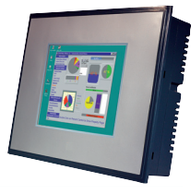
The Adoption of ETX Module

IEI Inc. is introducing a HMI product line, a practical hardware platform for HMI/SCADA software applications, which is made very easy to connect to PLC and Internet by offering LAN and communication ports. Besides it is very cost-effective to upgrade in the future based on its ETX architecture. HMI application vendors are able to save lots of cost by just upgrading the CPU module to get the performance scalability.

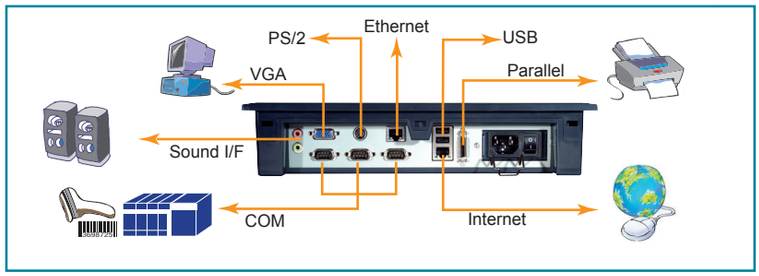
Specifications

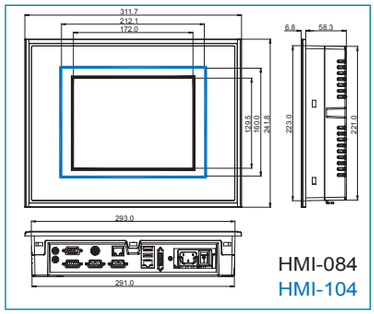
Model	TFT LCD					
	Size	Resolution	Brightness	Color	LCD MTBF	Backlight MTBF
HMI-084	8.4"	640 x 480	250 cd/m²	262 K	50000 hrs	25000 hrs
HMI-104	10.4"	800 x 600				

- Plastic front panel, meets NEMA4 / IP65 standard
- Embedded ETX-EDEN-400 / ETX-GX-300 CPU module
- Equipped with 128M SDRAM and 48 MB IDE flash disk for embedded OS used.
- I/O: 2 x RS-232 serial port ,1 x RS-232/422/485
  1 x VGA port, 1 x parallel port, CF II
  2 x USB 1.1 port, PS/2 port, 2 x LAN port
  2 x Audio port (1 x Mic-in, 1 x Line-out)
- Stardard equipped with resistive touch screen
- Standard equipped with ACE-855A power supply (5V@10A, 12V@4A), and one 6 cm removable cooling fan
- Optional: ACE-855C, + 24V DC input power supply
  ACE-845V, +12V DC input power supply
- Operating Temperature: 0 ~ 50°C
- Vibration: 5-17Hz, 0.1" double amplitude displacement
  17-640Hz, 1.5G acceleration peak to peak
- Shock: 10G acceleration peak to peak (11ms)
- Color: Dark Blue (Pantone 433C)
- Net / GW: 3.0 / 5.0 (kg)



HMI-084





HMI-084
HMI-104

User friendly design to easy use Compact Flash

Ordering Information

- **HMI- Size / CPU Module / Power Supply / CE**

Size	CPU Module	Power Supply	CE
084: 8.4" LCD 104: 10.4" LCD	ETX-GX-300 ETX CPU module with NS GX1-300MHz CPU ETX-EDEN-400 ETX CPU Module with VIA Eden-400MHz CPU	ACE-855A ACE-855C ACE-845V	None: No. CE: with Windows CE .NET