Open HMI Solutions

The world market for operator terminals was estimated to have been worth just over $1.5 billion in 2005. The total market is forecast to grow at a compound annual growth rate (CAGR) of 7.4% to $2.3 billion in 2011. Open operator terminals are projected to have the fastest growing revenues and unit shipments over the forecast period 2006 to 2011, with CAGRs of 10.6% and 12.7% respectively. The worldwide touchscreen operator terminal market represented nearly 70% of total worldwide revenues in 2005, with this percentage set to increase slightly over the forecast period.

Uses these diskless and fanless products offer advanced functionality over traditional HMI with improved data handling and standard interfaces and communications. by using the Open HMI standard which uses a scalable operating system to provide PC-based functionality as well as standard file formats and interfaces.

Led by the flourishing PC-based technology market, Open HMI devices not only provide interactive, vivid displays for operators & supervisors, but also Ethernet networking, high performance computing, and open expansion capabilities. Open HMI devices are replacing traditional operator terminals by offering complete, intelligent HMI/SCADA platforms.
Open HMI Solutions

Open HMI, Unlimited Potential
Advantech’s vision is to become the leading HMI platform provider in the PC-based industrial automation market by creating value-added, standard product solutions and by offering customization to meet unique requirements. Advantech offer a wide range of HMI products for automation needs, including hardware platforms such as the Touch Panel Computers (TPC), Industrial Panel PC’s (IPPC), and Industrial Monitors (FPM). We also offer powerful Windows XP/WinCE and Linux-based HMI solutions to easily migrate applications as the scope changes.

Touch Panel Computers (TPC)
Compact & Rugged HMI Platforms for Seamless Interaction between Humans and Machines
The ultra-slim, light, fanless and vibration-resistant design of Advantech’s TPC series provides an ideal HMI platform for most automation applications. TPC products are available in display sizes of 3.5”, 5.7”, 6.4”, 8”, 10.4”, 12.1”, 15” and 17”. TPC’s feature processors that are low in power consumption, and they also have a unique fanless design. With their stable system architecture, TPC is an ideal solution for any industrial environment. In addition, the product housings are made from an aluminum-magnesium alloy which results in a lightweight unit, with corrosion resistance and excellent heat dissipation.

Industrial Monitors (FPM)
Full Range of Industrial-grade Units with Multi-function Capabilities and Brilliant Displays
Advantech’s industrial monitors are designed specifically for harsh environments. These monitors feature industrial-grade flat panel LCDs with brightness that is often more than twice that of commercial monitors, making them much easier to see. FPM products are designed for factory floor environments and can withstand the higher temperatures, vibration, and the dirt and dust that can be commonplace. High NEMA and IP ratings for the bezel design enable these products to be installed in wet and dusty areas. The series of monitors come in sizes ranging from 6”, 12”, 15”, 17” to 19”.

Industrial Panel PC’s (IPPC)
Powerful Computing and Robust Platforms with High Performance for Factory Floors
Advantech’s IPPC series has proven their reliability through years of operation in all parts of the world. They can be built to achieve a high performance to cost ratio that is optimum for any industrial application. Constructed with heavy-duty aluminum or stainless steel front panels, the rugged design of Advantech’s IPPC series can withstand tough industrial environments. Equipped with powerful Intel® Pentium® M & Celeron® M processors, IPPC’s have high computing power, and also provides expansion slots for add-on boards. IPPC’s can be configured with specific CPU, Memory, Drives and operating systems to meet your diverse needs.

Heavy-duty, Expandable & Reliable Solutions to Optimize Site Operations and Visualization
Advantech provides a range of open architecture powerful Industrial Panel PC’s that incorporate widely used PC technology. These PC’s are designed to be integrated with industrial platforms for controlling machinery or processes; displaying the information necessary to repair, maintain, or begin applications, and gather basic production information. The IPPC-7000 series provides industrial motherboards, passive backplanes and accessible front panels with USB ports & multiple membrane function keys.

Domain-Focused Platforms
Ultra-Rugged & Open Platforms with Special Industrial Certifications
These compact and heavy-duty with ultra rugged designs and industrial certifications, have been specifically designed to meet the diverse of across diverse industrial applications such as Oil and Gas, Military, and Food and Beverage. Advantech offers not only high-end technology for versatile applications with rugged materials, Panel PCs and monitors with stainless steel to satisfy the stringent standards required in food, beverage, clinical, chemical, pharmaceutical these hazardous applications. Furthermore, Advantech carries industrial automation technology into the oil and gas industry, industrial monitors passed Class 1, Division 2 Groups A,B,C,D certification to extend use to hazardous applications.
**Touch Panel Computer Overview**

The x86 TPC series provides a powerful and durable solution with high computing power and ultra low voltage processors.

- Fanless and compact design
- A PC/104 or PCI-104 expansion slot gives a high degree of versatility
- Rich standard I/O support: providing multiple standard communications to couple with different peripherals
- Dual LAN and Gigabit Ethernet support
- Downward I/O cabling: familiar interfaces for plugging in cables
- Grounding protection
- Variety of OS support, including: Windows XP, WinXPe and WinCE

---

**5.7” x86-based Touch Panel Computers**

**TPC-651H/650H**
5.7” VGA TFT LCD Intel® Atom™ Thin Client Computers/with Wide Operating Temperatures

1. RS-232 COM port
2. RS-422/485 COM port
3. USB 2.0 Host x 2
4. (1)10/100/1000B-T Ethernet x 2 (TPC-651H)
   (2)10/100/1000B-T Ethernet x 1 (TPC-650H)
5. Power Receptor

---

**12.1” x86-based Touch Panel Computers**

**TPC-1251H/1250H**
12.1” SVGA TFT LCD Intel® Atom™ Thin Client Computers/with Wide Operating Temperatures

1. RS-232 COM Port
2. RS-422/485 COM port
3. USB 2.0 Host x 2
4. (1)10/100/1000B-T Ethernet x 2 (TPC-1251H)
   (2)10/100/1000B-T Ethernet x 1 (TPC-1250H)
5. Power Receptor

---

**15” x86-based Touch Panel Computer**

**TPC-1551H/1550H**
15” XGA TFT LCD Intel® Atom™ Thin Client Computers/with Wide Operating Temperatures

1. RS-232 COM port x 1
2. RS-422/485 COM port
3. USB 2.0 Host x 2
4. (1)10/100/1000B-T Ethernet x 2 (TPC-1551H)
   (2)10/100/1000B-T Ethernet x 1 (TPC-1550H)
5. Power Receptor

---

**17” x86-based Touch Panel Computer**

**TPC-1780H/1770H**
17” SXGA TFT LCD Core 2 Duo /Celeron M Touch Panel Computer

1. Power Switch & Fuse
2. Power Receptor
3. F/22
4. RS-232 COM port x 3
5. VGA
6. 10/100/1000B-T Ethernet x 2
7. USB 2.0 Host x 4
8. Audio Line-in/Line-out/MIC
Touch Panel Computer Overview
The RISC kernel consumes less power without sacrificing performance.

- Designed to run on Microsoft WinCE
- Supports horizontal & vertical orientation
- Provides thin client software solutions
- Supports CANopen 2.0b communication protocol

**Embedded OS support**
(Windows XPE/CE 5.0/6.0)

Remote display by Advantech DiagAnywhere

---

**3.5" RISC-based Touch Panel Computers**

TPC-30T/32T
3.5" QVGA TFT LCD XScale PXA270 Touch Panel Computer with CAN-bus/CANopen
1. 10/100B-T Ethernet
2. RS-232/485 COM port (TPC-30T)
3. CAN-bus/RS-232 COM port (TPC-32T)
4. Power Receptor
5. SD Slot
6. USB 1.1 Host

---

**5.7" RISC-based Touch Panel Computer**

TPC-66T
5.7" QVGA TFT LCD XScale PXA270 Touch Panel Computer
1. RS-232 COM port
2. RS-232/485 COM port
3. 10/100B-T Ethernet
4. USB 1.1 Host
5. Power Receptor
6. Power Switch
7. CompactFlash

---

**5.7" RISC-based Touch Panel Computer**

TPC-66SN
5.7" QVGA CSTN LCD XScale PXA270 Touch Panel Computer
1. RS-232 COM port
2. RS-232/485 COM port
3. 10/100B-T Ethernet
4. Power Receptor
5. Power Switch
6. CompactFlash
<table>
<thead>
<tr>
<th>Model</th>
<th>TPC-1780H</th>
<th>TPC-1790H</th>
<th>TPC-1570H</th>
<th>TPC-1270H</th>
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<td>Audio (Mic-in x 1, Line-in x 1, Line-out x 1)</td>
<td>Audio (Mic-in x 1, Line-in x 1, Line-out x 1)</td>
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<td>Serial Port x 3 (RS-232 x 3 and USB x 3)</td>
<td>Serial Port x 3 (RS-232 x 3 and USB x 3)</td>
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<td>VNC x 1, Line-in x 1 (Line-out x 1)</td>
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<td>414 x 347.5 x 93 mm</td>
<td>414 x 347.5 x 93 mm</td>
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<td>0 ~ 50° C (32 ~ 122° F)</td>
<td>0 ~ 50° C (32 ~ 122° F)</td>
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<td>NEMA4/IP65</td>
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<td>BSM, CEC, CE, FCC, UL</td>
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<td>Windows CE 6.0</td>
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<td>Windows CE 5.0</td>
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<tr>
<td></td>
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<tr>
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<td>Windows CE 5.0</td>
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<td>Windows CE 5.0</td>
</tr>
</tbody>
</table>

**Selection Guide and Ordering Information**

- **TPC-1270H**
  - 5.7" STN LCD Intel Xscale CPU with WinCE 5.0
- **TPC-1270H-P2AE**
  - 5.7" SVGA TFT LCD with Intel Pentium M 1.4 GHz CPU, 1 GB DDR2 SDRAM
- **TPC-1270H-C1BE**
  - 5.7" SVGA TFT LCD with Intel Celeron M 1 GHz CPU, 512 MB DDR SDRAM
- **TPC-1570H-C1AE**
  - 15" XGA TFT LCD with Intel Celeron M 1 GHz CPU, 512 MB DDR SDRAM
- **TPC-1570H-P2AE**
  - 15" XGA TFT LCD with Intel Pentium M 1.4 GHz CPU, 1 GB DDR SDRAM
- **TPC-1770H-C2BE**
  - 17" SXGA TFT LCD with Intel Celeron M 1 GHz CPU, 1 GB DDR2 SDRAM

**Accessories**

- **TPC-1270H-MKE**
  - TPC-1270H Desktop Kit
- **TPC-1270H-WMKE**
  - TPC-1270H Wall Mount Kit
- **TPC-1270H-SMKE**
  - TPC-1270H Desktop Stand Kit
- **TPC-1570H-SMKE**
  - TPC-1570H Desktop Stand Kit
- **TPC-1570H-WMKE**
  - TPC-1570H Wall Mount Kit
- **TPC-1570H-SMKE**
  - TPC-1570H Desktop Stand Kit
- **TPC-1270H-EPKE**
  - TPC Series PC/PCI-104 Extension Kit (bracket only)
- **TPC-1270H-PKKE**
  - TPC-1270H Panel Kit (bracket only)
- **TPC-1270H-MKKE**
  - TPC-1270H Main Kit
- **TPC-1270H-SKKE**
  - TPC-1270H Stand Kit (bracket only)
Industrial Monitor Overview

Aiming to be a leader in the display market, Advantech provides a full-range of industrial monitors for versatile applications. The Advantech FPM series ranges in size from 6”, 12”, 15”, 17” to 19”. Their industrial-grade high-brightness LCD and anti-glare design provide a long-lasting and reliable information interface. The FPM series supports panel mounting, VESA and desktop mounting to fit various kinds of applications.

Application-oriented Design

- DC adapter with plug bracket makes the machine more reliable in critical environments
- Industrial 24VDC, power input is compatible with factory installation
- A combination of touchscreen interfaces with lockable connectors is provided, allowing secure attachments for a variety of uses
- Front-accessible USB port provides a convenient & practical solution
- Rear adjustable-OSD design provides a flat & easy-maintain screen

Complete Product Line

- Complete selection of sizes from 6” to 19”
- For diverse application demands

Industrial-Proven Design

- Has a tempered glass screen, which is nearly 4X stronger than annealed glass. When struck by an outside force, a tempered glass screen won’t shatter into pieces, making it very easy to clean in the event of breakage
- Robust design with stainless steel chassis and aluminum front panel

NEMA4/IP65 Compliant

- The IP65 rating means that the monitor is protected from dust and jets of water from all directions.

Versatile Mounting Methods for Different Application Environments

- Panel Mount
- Mounting Kit for Desktop
- Swing Arm
- Rack Mount
- Wallmount
<table>
<thead>
<tr>
<th>Model</th>
<th>Resolution</th>
<th>Color</th>
<th>Viewing Angle (H/V°)</th>
<th>Luminance (cd/m²)</th>
<th>Contrast Ratio</th>
<th>Luminance (cd/m²)</th>
<th>View Angle (H/V°)</th>
<th>Colors</th>
<th>Power Input (voltage)</th>
<th>Front Panel Ingress Protection</th>
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<td>1024 x 768</td>
<td>250</td>
<td>170 x 170</td>
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**Ordering Information**

- **FPM-3151G-RBME** 19" Industrial Rack Mounting Kit for FPM-3151G
- **FPM-2150G-RBME** 19" Industrial Rack Mounting Kit for FPM-2150G
- **FPM-3060G** 19" VGA Monitor, VESA Mount Kit for FPM-3060G
- **FPM-5151G-RBME** 19" Industrial Rack Mounting Kit for FPM-5151G
- **FPM-5171G-RBME** 19" Industrial Rack Mounting Kit for FPM-5171G
- **PWR-246E** Industrial DC to DC Converter with 24 ~ 48VDC Power Input
- **IPPC-6172A-RMKE** 19" Industrial Rack Mounting Kit for IPPC-6172A or FPM-5171G
- **IPPC-6152A-RMKE** 19" Industrial Rack Mounting Kit for IPPC-6152A or FPM-5151G
- **FPM-2150G-SMKE** Stand Kit for FPM-2150G
- **FPM-3151G-SMKE** Stand Kit for FPM-3151G
- **FPM-3171G-RMKE** 19" Industrial Rack Mounting Kit for FPM-3171G
- **FPM-3191G-RMKE** 19" Industrial Rack Mounting Kit for FPM-3191G
- **FPM-3060G-VMKE** VESA Mount Kit for FPM-3060G
- **IPPC-6152A-RMKE** 19" Industrial Rack Mounting Kit for IPPC-6152A or FPM-5151G
- **PWR-246E** Industrial DC to DC Converter with 24 ~ 48VDC Power Input
- **PWR-246E** Industrial DC to DC Converter with 24 ~ 48VDC Power Input
- **IPPC-6120A-RMKE** 19" Industrial Rack Mounting Kit for IPPC-6120A or FPM-5120A

**Accessories**

- **FPM-3060G-RAE** 6.5" VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port (RS-232) 3000
- **FPM-3120G-RAE** 12" VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port (RS-232) 3000
- **FPM-2150G-RAE** 19" Rack Mounting Kit for FPM-2150G
- **FPM-3151G-RAE** 19" Rack Mounting Kit for FPM-3151G
- **FPM-3171G-RAE** 19" Rack Mounting Kit for FPM-3171G
- **FPM-3191G-RAE** 19" Rack Mounting Kit for FPM-3191G
- **FPM-5151G-RAE** 19" Rack Mounting Kit for FPM-5151G
The industrial design and compact size of the IPPC series make it a good fit for almost any industrial application. Constructed with heavy-duty aluminum or stainless steel front panel and tempered glass, the rugged design of IPPCs stand up to the toughest industrial operating environments. Equipped with powerful Intel Pentium M / Celeron M processors, IPPC’s provide high performance with excellent expansion capabilities.

**IPPC-6000 Series**
High Performance & Compact Design

- 15" XGA, 17" SXGA TFT LCD with touchscreen
- Intel Core 2 Quad Processor up to 3.0 GHz/ Core 2 Duo Processor up to 3.3 GHz (A model)
- On board Intel Celeron M ULV 1 GHz with 512KB L2 (F model)
- System memory supports dual channel DDR3 SDRAM up to 4 GB (A model)
- Configured system memory supports dual channel DDR2 SDRAM (F model)
- Offers two expansion slots for PCI slots on card
- System memory supports dual channel DDR3 SDRAM up to 4 GB (F model)
- Supports two Gigabit Lan (A model)
- Support i/o card/IO1010 (IA model)
- Front USB access and system reset function
- Front panel is NEMA4/IP65 compliant

**IPPC-4000 Series**
Rich Expansion & 4U Rack Mount Design

- 4U rack chassis and keyboard/mouse pad drawer
- Rich expansion slots and Industrial ATX motherboard / passive backplane
- Offers 2 ISA and 5 PCI slots / 2 PCIe and 5 PCI slots (IPPC-7158B)
- Detachable side open front panel makes maintenance fast & easy
- Programmable membrane function keys for varied application access
- Heavy-duty design with anti-rust chassis and NEMA4/IP65 aluminum front panel
- One front-accessible USB 2.0 port

**IPPC-7000 Series**
Membrane Keypad Control & Rack Mount Design

- Membrane function/number keypads and mouse with front USB access
- Detachable side open front panel

**IPPC-6152A/F, IPPC-6172A/F**
- 15", 17" LCD Core 2 Quad/Core 2 Duo Industrial Panel PC with 2 x PCI Slots (A model)
- 15", 17" LCD Celeron M Fanless Industrial Panel PC with 2 x PCI Slots (F model)

**IPPC-4000D, IPPC-4001D, IPPC-4008D**
- 5.7" LCD 4U Industrial Panel PC with 7 x ISA/PCI Slots and Membrane Keypad (IPPC-4000D)
- 5.7" LCD 4U Industrial Panel PC with 14 x ISA/PCI Slots and Membrane Keypad (IPPC-4001D)
- 5.7" LCD 4U Half-sized Industrial Panel PC with 8 x PCI Slots and Keyboard Drawer (IPPC-4008D)

**IPPC-40000D, IPPC-4001D, IPPC-4008D**
- 5.7" LCD 4U Industrial Panel PC with 7 x ISA/PCI Slots (IPPC-40000D)
- 5.7" LCD 4U Industrial Panel PC with 14 x ISA/PCI Slots and Keyboard Drawer (IPPC-4001D)
- 5.7" LCD 4U Half-sized Industrial Panel PC with 8 x PCI Slots and Keyboard Drawer (IPPC-4008D)
Selection Guide and Ordering Information

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Ordering Information

KPC-4800G (18") PPC4 120A Pentium 4 (3.0 GHz) and XP Industrial Panel PC with Intel Compute Mode (IMU-710/710/710) and with Resistive touchscreen
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KPC-6152F (15") PPC4 120A Pentium 4 (2.4 GHz) and XP Industrial Panel PC with Intel Compute Mode (IMU-710/710/710) and with Resistive touchscreen
Domain-Focused Platform Overview

These products are compact and heavy-duty with ultra rugged designs and industrial certifications, making them specially designed to meet needs across diverse industrial applications such as in the Marine, Military, and Food and Beverage markets.

IPPC-8151S for the Food and Beverage Industry
IP66 Certification to meet FDA Hygienic Requirements

FPM Displays for Marine-based Applications
DNV Certification Ensures Reliability on the Seas

Selection Guide and Ordering Information
HMI Application Story Overview

Advantech’s open HMI solutions are designed to fulfill the needs of mission-critical automation applications. Their rugged features and powerful computing technology deliver reliability and flexibility.

Point of Service Terminals in Gas Stations
IPPC-6152A – 15” XGA TFT LCD Intel Pentium 4/Celeron M Industrial Panel PC with 2 x PCI Slots
Our clients’ existing Point of Sales terminals were breaking down frequently and they were looking to upgrade their machines so that they would perform more reliably in the demanding environment, and be able to operate around-the-clock, 24 hours a day, 7 days a week. The high temperatures, dust and chemical density of their environment was very demanding, but nevertheless they were looking to increase their minimum total Operating Life Cycle to at least 5 years. Furthermore, the Point of Sales terminals needed to be equipped with a variety of communication, Ethernet and USB ports to fulfill multiple equipment connectivity.

The IPPC-6152A was the best choice for this application. Not only can it easily link with the Transaction Server, its wide operating temperature range and fanless design allow it to operate all day long while maintaining system stability. Furthermore, each IPPC-6152A is equipped with ingress protection on the front panel, allowing it to withstand harsh environmental conditions.

IPPC-6152A – 15” XGA TFT LCD Pentium 4 Industrial Panel PC with 2 x PCI Slots

Intelligent Transportation Solution for Traffic Light Displays
TPC-1261H – 12.1” SVGA TFT LCD Geode LX800 Touch Panel Computer
Creating traffic flow installations that ensure safe, efficient and environmentally friendly traffic and mobility is the day to day concern of many countries. An integrated approach is necessary to provide complete solutions and keep traffic moving: to combat traffic jams, keep cities liveable and to streamline the flow between cities and motorways. Having detailed information about communications and traffic systems for urban road networks and road systems, plus the capability to connect together different systems, guarantees a successful integrated approach at all levels. In this solution, the TPC-1261H provides an intelligent control panel allowing users to easily monitor and maintain the traffic information system without complications. The robust and fanless TPC-1261H is an excellent solution for this application. The Windows OS ensures our customers can easily integrate intelligent and value-added services, while the unique transflective solution makes operating in direct sunlight easier than ever before.

TPC-1261H – 12.1” SVGA TFT LCD Geode LX800 Touch Panel Computer

Automatic Bakery Systems for the Food Industry
TPC-66SN - 5.7” QVGA CSTN LCD XScale PXA270 Touch Panel Computer
Because of the high temperatures inside bakeries, high operating temperatures are required for all of the automated hardware systems hardware. An intuitive and easy-to-learn user interface also needs to be implemented within the controlling software. Furthermore, to connect the machine to other devices within the branch a corresponding hardware and software interface is necessary. In this way, new or updated recipes can be remotely added to the system. Finally, a touch panel computer is implemented as the control device to provide information on each phase of the baking process.

The TPC-66SN was highly recommended for this application. Not only does it provide reliable use in the hot environment, it’s easy to use interface made the entire process easier for the end user. The operator starts the process by choosing the program from the TPC-66SN, which lasts nearly twenty hours, starting at -20°C and ending at +30°C. During the process the TPC-66SN shows each phase as graphical information.

TPC-66SN - 5.7” QVGA CSTN LCD XScale PXA270 Touch Panel Computer

Automatic Fluid Filling System for Road Construction Vehicles
TPC-1570H - 15” XGA TFT LCD Intel Pentium M/Celeron M Touch Panel Computer
When designing this system, the customer wanted to have the capability for automatic and manual fueling. Additionally, they wanted to have warning displays and alarm messages, in the event of a leaky oil container or faulty hydraulic fluid filter. Each vehicle’s fuel list needed to be adjusted through a password protected menu, and for each fluid, a pulse generator flow controller should be connected to the counter input of an Ethernet based I/O controller, which was connected to a Touch Panel Computer, which required a fanless and IP65 compliant design to withstand the harsh outdoor conditions.

As the main interface for this solution, the TPC-1570H was the perfect solution. Not only does it provide a rugged, reliable and fanless solution, it’s easy to use interface made the complicated process much easier for the operator, who is responsible for the correct filling of oil, hydraulic fluid and water. The filling process starts after pressing the “start filling” key from the touchscreen menu and each individual fluid filling process can be viewed on the touchscreen monitor.

TPC-1570H - 15” XGA TFT LCD Intel Pentium M/Celeron M Touch Panel Computer

HMI in Modern Oil Drilling for the Petroleum Industry
IPPC-9151G – 15” XGA TFT LCD Pentium 4 Industrial Panel PC with 2 x PCI Slots
A mudlogger in the modern oil field gathers data and collects samples during the drilling process. This can be challenging, especially during drilling activity. Much of the equipment will require precise calibration or alignment by the mudlogger to provide accurate readings. Over 30 data parameters are needed to be recorded and controlled while withstanding the harsh conditions of a modern oil field. Furthermore, distributed control on the mudlogging device should be implemented by advanced control technologies, so as to improve the control precision of all technological parameters during the operation.

This is an extremely taxing application that requires a highly rugged, reliable and user-friendly HMI. The IPPC-9151G is able to withstand the intense electromagnetic interference, noise, vibration, and unstable currents present, and still provide dependable operation.

IPPC-9151G – 15” XGA TFT LCD Intel Pentium 4/Celeron M Industrial Panel PC with 2 x PCI Slots

Wireless Fleet Management System with In-Vehicle Display
UNO-2053E - AMD G62 UNO with 2 x LAN, 2 x COM and Audio
FPM-3060G - 6.4” VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port
In order to provide an efficient management system for transportation applications, our customer was looking to implement advanced operating software that was easy to use whilst being powerful and functional. They required the ability to interact with maps onscreen, and view multiple vehicles onscreen at once. Furthermore, they wanted to have detailed reports for monthly distance tracking, average/top speeds, suburbs visited, driving times, waiting times and more. All of these functions needed to be established in their new eCarCenter.

The fleet management system consists of an FPM-3060G Industrial Monitor attached to an UNO-2053E, installed within the truck, and communicating with the eCarCenter in the central office. A satellite tracks the vehicle via GPS, sending this information to both the eCarCenter and the UNO-2053E, which displays all of the information on the industrial display within the truck itself. This way, the management team will always know the location of the truck, while the driver has access to updated road, safety and weather information displayed through the FPM-3060G.

UNO-2053E - AMD GX2 UNO with 2 x LAN, 2 x COM and Audio
FPM-3060G - 6.4” VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port

Automatic Fluid Filling System for Road Construction Vehicles
TPC-1570H - 15” XGA TFT LCD Intel Pentium M/Celeron M Touch Panel Computer
When designing this system, the customer wanted to have the capability for automatic and manual fueling. Additionally, they wanted to have warning displays and alarm messages, in the event of a leaky oil container or faulty hydraulic fluid filter. Each vehicle’s fuel list needed to be adjusted through a password protected menu, and for each fluid, a pulse generator flow controller should be connected to the counter input of an Ethernet based I/O controller, which was connected to a Touch Panel Computer, which required a fanless and IP65 compliant design to withstand the harsh outdoor conditions.

As the main interface for this solution, the TPC-1570H was the perfect solution. Not only does it provide a rugged, reliable and fanless solution, it’s easy to use interface made the complicated process much easier for the operator, who is responsible for the correct filling of oil, hydraulic fluid and water. The filling process starts after pressing the “start filling” key from the touchscreen menu and each individual fluid filling process can be viewed on the touchscreen monitor.

TPC-1570H - 15” XGA TFT LCD Intel Pentium M/Celeron M Touch Panel Computer