

PC-1040 Touch Screen Panel Computer

A Much Better Idea : Logical : Unique

AmbiLogique
Electronic Controllers



PC-1040 Touch Screen Panel-mount Computer

Features:-

- 10.4" LCD Screen, 800 x 600 resolution
- Low Voltage DC Power Requirement
- Metal Frame Shielded Construction
- Intel Atom 1 Ghz Processor
- 256 MB RAM
- 32 GB Solid State Disk
- Compact Flash socket
- Built-in Intel Video Chipset
- VGA and S-Video outputs
- 3 x USB 2.0 ports (2 on the front panel, one on the connection panel)
- 2 x RS-232 Serial ports
- 10/100 Ethernet port
- PS/2 Keyboard and Mouse connectors
- Audio output
- Optional remote boot connector
- Linux Operating System
- Less than NZ\$ 1100
- Less than AU\$ 1000

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The PC-1040 is a 10.4" touch screen panel-mount computer optimised for HMI applications in machinery and process control.

The sturdy all-metal construction, near-flush panel mounting and low-voltage power supply make it ideal for use in control panels in most interior situations.

Its built-in serial ports connect directly to up to two SKDA-xx PLC systems.

The optional remote boot connection permits the computer to be started automatically, for example where it forms part of an unmanned control system.

The computer can be supplied with the WINE overlay for Linux which permits Windows® applications to be run. For example, we are able to run virtual control panels developed via a Windows version of National Instruments LabVIEW® on these computers.

Using the PC-1040 in conjunction with one or two AmbiLogique SKDA-01 PLCs provides a powerful, flexible and economical control system with an attractive human-machine interface. Remote control via wireless or internet is easily achieved by this means, together with the capacity to log huge amounts of data.

The built-in Ethernet port facilitates the use of this computer in industrial networks, and factory-wide automation systems.

The **connection panel** on the bottom face of the computer provides the following facilities:-

Compact Flash Card Socket

COM1 and COM2 RS-232 serial ports

USB connector

10/100 Ethernet connector

S-Video connector

VGA connector

PS/2 Keyboard and Mouse connector
(a breakout cable is supplied as a standard accessory)

Audio jack

12 to 30 Vdc Power input connector

Optional Remote Boot connector



Connection Panel

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Specifications

1. **Power Input:**
Supply voltage: 12 to 30 Vdc.
Current draw: ≤ 0.75 A at 24 V.
2. **Touch Screen:**
Size: 10.4" (26.4 cm) diagonal.
Resolution: 800 x 600 pixels.
Contrast: 500 : 1.
Brightness: 170 cd/m².
Viewing Angle: 160° - 160° horizontal and vertical.
Touch Screen: 4-wire resistive (single touch only).
3. **CPU:**
Type: Intel Atom.
Clock: 1 GHz.
4. **Memory:** 256 MB DDR.
5. **Storage:**
SSD: 32 GB.
CF: 2 to 8 GB optional.
USB: optional.
6. **Video:**
Card: Intel built in.
Outputs: VGA, S-Video.
7. **Audio:**
Output: 3.5 mm stereo jack.
8. **Ethernet:** RJ45, 10/100 card built in.
9. **Keyboard/mouse:** PS/2 connector with splitter cable.
10. **Dimensions:** See Installation Drawing for panel cutout.
Width: 280 mm.
Height: 210 mm.
Depth: 66 mm.
Projection from front of panel: 3.5 mm (5 mm over boot button).
Depth behind panel: 63 mm.
11. **Ambient temperature:**
Working: 0 to +45 °C.
Storage: -20 to +60°C non condensing.
Cooling: Convective natural airflow (fanless).
12. **Humidity:**
Working: 10 to 85%.
Storage: 10 to 90%.
13. **Operating System:** Linux (Ubuntu 10.10 at time of writing).

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Options

Here is a selection of options which can be factory installed on the PC-1040. Please **contact us** for **requirements additional** to these.

1. Remote Boot:

This facility allows the computer to be booted by closing an external contact.

This is especially useful when systems which are normally unmanned are remotely started by applying power. Where the computer is used in partnership with a PLC such as AmbiLogique's SKDA-01, the PLC can be set up to boot the computer via this connection.

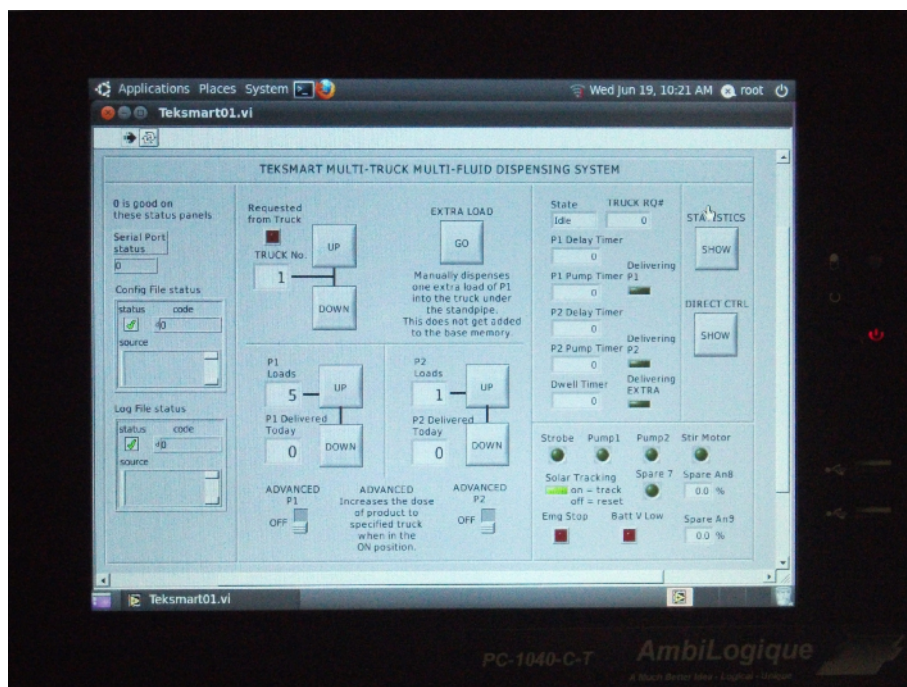
2. WINE: Application Overlay permitting Windows® software to be run:

This facility provides an API interface which permits software written for Microsoft Windows® environments to be run on the PC-1040.

As an example, the Ambi_PLC support software installs and runs in this environment, as do virtual control panels developed under the Windows version of NI LabVIEW® (see next item). Note that this is not a Windows® emulator: applications run at full speed.

3. LabVIEW® Control Panels:

We can design and install virtual control panels developed using National Instruments LabVIEW® on the PC-1040.



LabVIEW panel on PC-1040

The illustration above shows such a panel.

These control panels can provide layered control with one or two AmbiLogique PLC's providing the interfaces with the target process.

For those of you who wish to develop your own LabVIEW panels, we can supply a LabVIEW driver for the SKDA series of PLC's.

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A wide range of controls and indicators can be incorporated; together with facilities such as:-

- pop-up sub-panels,
- conditional display of controls or indicators,
- password protection of groups of controls,
- data logging,
- remote control via internet,
- configuration files,
- etc.

4. **3G Internet Access:**

For remote and/or unmanned sites, the PC-1040 connects to 3G cellular networks using inexpensive USB stick modems. We have proven success using NZ Telecom's (ZTE) MF180.

5. **TeamViewer Remote Control:**

This application permits secure remote access to the PC-1040, enabling it to be controlled from a remote desktop computer via an internet connection.

6. **Panel Mounting Kit:**

This kit provides crossbars, panel reinforcers and tensioning screws to facilitate mounting the PC-1040 to control panels with no fixings showing.

WARNING SAFETY-CRITICAL SYSTEMS

A Safety-Critical system is a system whose failure or malfunction could cause death, significant injury or loss of property.

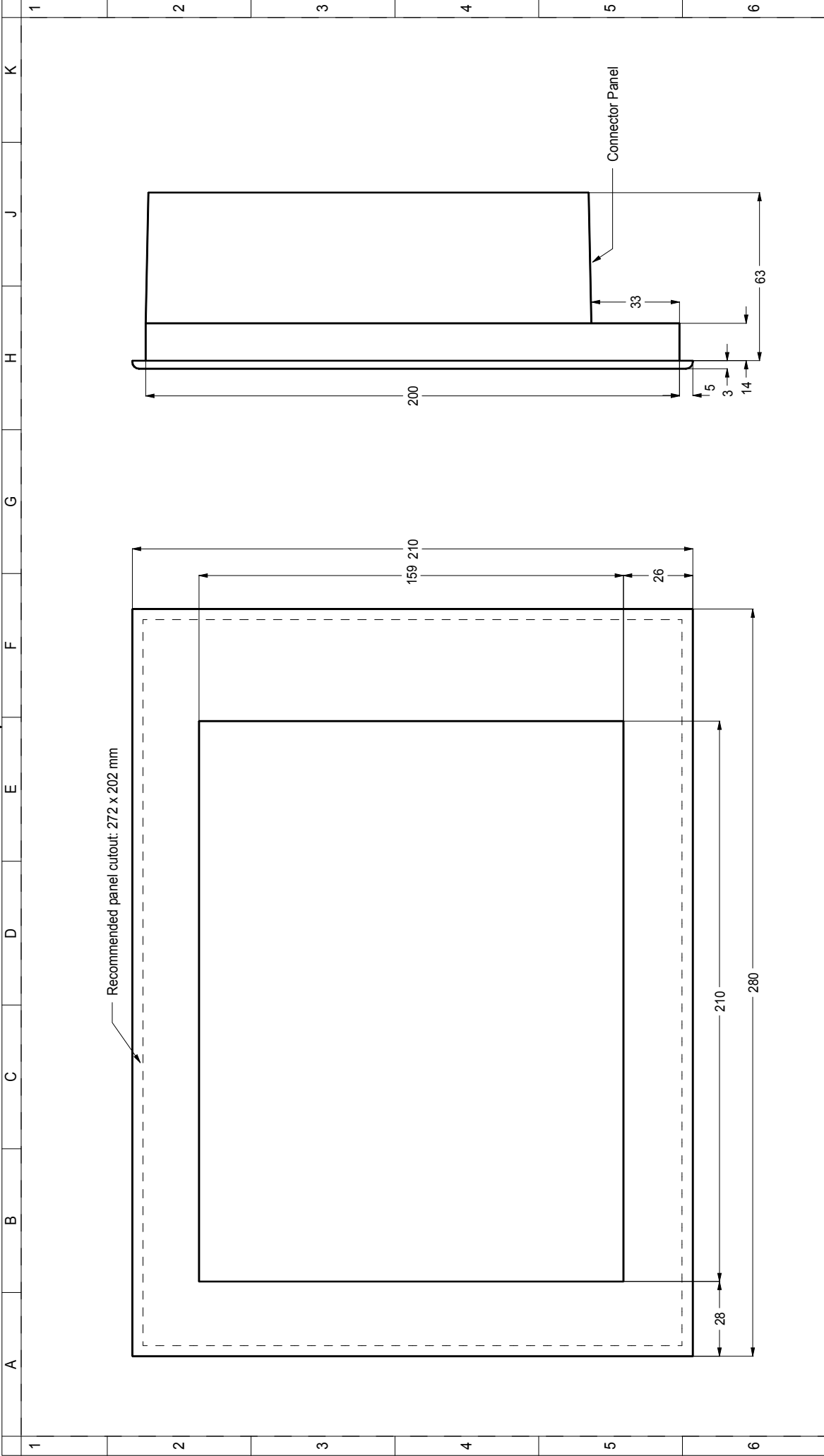
AmbiLogique products incorporate electronic hardware and software, both of which carry a remote but real possibility of failure. AMBILOGIQUE DOES NOT WARRANT, CLAIM OR REPRESENT THAT ITS PRODUCTS ARE INFALLIBLE.

It is therefore THE RESPONSIBILITY OF THE DESIGNER of any safety-critical system which incorporates AmbiLogique products to ensure that:-

1. The system is designed so that any failure of an AmbiLogique component will not cause death, injury or loss of property.
2. The system incorporates independent monitoring means which detect the failure of any of the electronic control elements.
3. The system has alternative and independent means of control which enable it to be controlled and shut down in an orderly manner.
4. Any and all other industry-specific safety requirements are fully implemented.

Revision History:

R 0.0 2013-05-30 Initial issue.



REV	CHANGE	AmbiLogique Ltd				TITLE PC-1040	
						OUTLINE	
						DRG. No. PC1040-M01	
0.0	Initial		RJW		2013-05-30	Stratford + Hawera, New Zealand	
						sheet 1 of 1	