



# HEIDENHAIN



Product Information

## IPC 6110

## IPC 6120

Industrial PC

Information for the  
Machine Tool Builder

October 2009

# Industrial PC from HEIDENHAIN

## IPC 6110

## IPC 6120

### Range of applications

The IPC 6110 and IPC 6120 industrial PCs from HEIDENHAIN are primarily designed for use on machine tools in conjunction with the iTNC 530.

The IPC 6110 and IPC 6120 with the Windows XP Embedded operating system offer many different possibilities.

- Convenient remote operation through preinstalled software
- Operation of specific additional software from the machine tool builder (such as Windows-based maintenance programs, tool-management software, user-specific applications)
- Servers for TeleService solutions

The two IPCs only differ in the available keyboards and the resulting operational designs.

### Design

The IPCs feature a sturdy housing in proven HEIDENHAIN design:

- Splash-protected front panel for harsh shop-floor environments
- 15-inch TFT color flat-panel display
- Ergonomic short-stroke keys with a defined action point and abrasion-proof inscription
- ASCII keyboard and function keys as on the iTNC 530
- Covered USB port directly on the front panel

### Functions

With its compact design, the **IPC 6110** is particularly well suited as a local console for tool magazines or pallet systems located away from the control. The **IPC 6120** in conjunction with the TE 620 or TE 630 keyboard unit makes a full-fledged additional operating station for the machine possible. Even the override potentiometers of the TE 6xx keyboard unit of the second operating station can be used. The machine tool builder must only connect them to the

PLC over an additional line, and integrate them in the PLC.

The well-coordinated operational design ensures reliability and ease of operation, just like on a "real" control.

### Simple connection as a local console

All the IPC needs is a power supply, an Ethernet connection to the control (distances up to 100 m), and the IP address of the control (or its DHCP name). The IPC can be connected either via a direct Ethernet connection or if an additional network connection is required, via a separate Ethernet switch.

If the IPC is connected to a control, then it reports itself to the control as a local console via the *TNCterminal* software. The dual-processor version of the iTNC 530 requires additional settings.

The IPC may be shut down simultaneously with the control. The IPC does therefore not need to be switched off separately.



IPC 6110 for operation of the tool magazine

### Flexibility through TNCterminal software for PCs

The **TNCterminal** PC software included with the IPC allows flexible communication with the PLC of the iTNC 530. Once an IPC is logged on to the control, functions for different operational designs are available. TNCterminal provides all settings for fast and simple configuration of the IPC—including PLC-controlled activation and deactivation of an operator terminal, a “Monitor mode” (for monitoring the control screen from the operator terminal), and monitoring and locking functions. Simultaneous operation of the control is automatically disabled by TNCterminal.

Predefined PLC functions for the integration of special functions, such as the handling of additional operator terminals from the control (master terminal), or switching the override potentiometers according to the operational design, are available in the PLC basic program of the iTNC.

### Display and operation

The user takes charge of the machine control by simply pressing the Connect key on the IPC. A pop-up window appears on the control, informing the user of the remote operation. At the same time, the control's operating panel is disabled, so that no simultaneous operation is possible.

The IPC screen displays the screen contents of the control. The IPC keyboard can now be used to make entries on the control's user interface. With the IPC 6110, the ASCII keyboard and selected TNC function keys are available for this. The IPC 6120 features all TNC keys and therefore allows full-fledged operation of the machine.

### Integrated USB connection

A USB 1.1 port on the front panel is a standard feature of the IPC. The IPC together with the preinstalled TNCremoNT data transfer software make it easy to load files from USB data carriers to the control.

### Multi-console solutions

Connecting several IPCs to a control is not a problem (multi-console solutions). If any one IPC is in charge of the control, then no other IPCs can take charge of the control. A pop-up window with the name of the controlling IPC is displayed briefly. In order for another IPC to take charge, the Connect key must first be pressed to give control of operations back to the machine control.

### Operating system

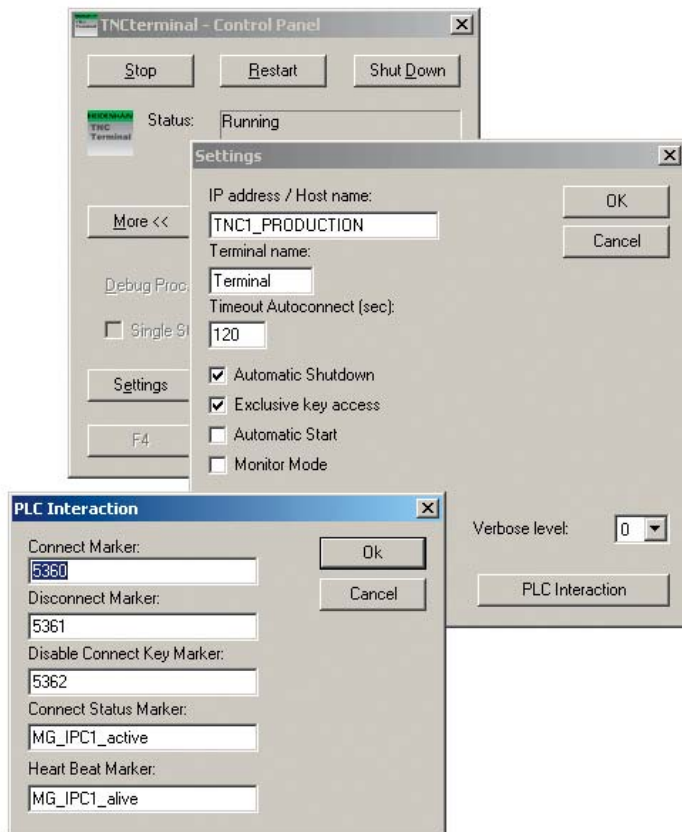
The IPC runs on the Windows XP Embedded operating system (available only in English). Due to its reduced number of functions this operating system is ideal for use with the supplied HEIDENHAIN software.

If the user wants non-HEIDENHAIN PC software to be installed on the IPC, it must be tested by the machine tool builder beforehand.

### CFR CompactFlash memory card

A compact flash memory card with a capacity of 1 GB serves as a mass storage device for the IPC. The following software is installed on it:

- Operating system *Windows XP Embedded*
- Remote operation software *TNCterminal*
- Data transfer software *TNCremoNT* (German and English)



TNCterminal, the communication interface of the IPC

# IPC 6110

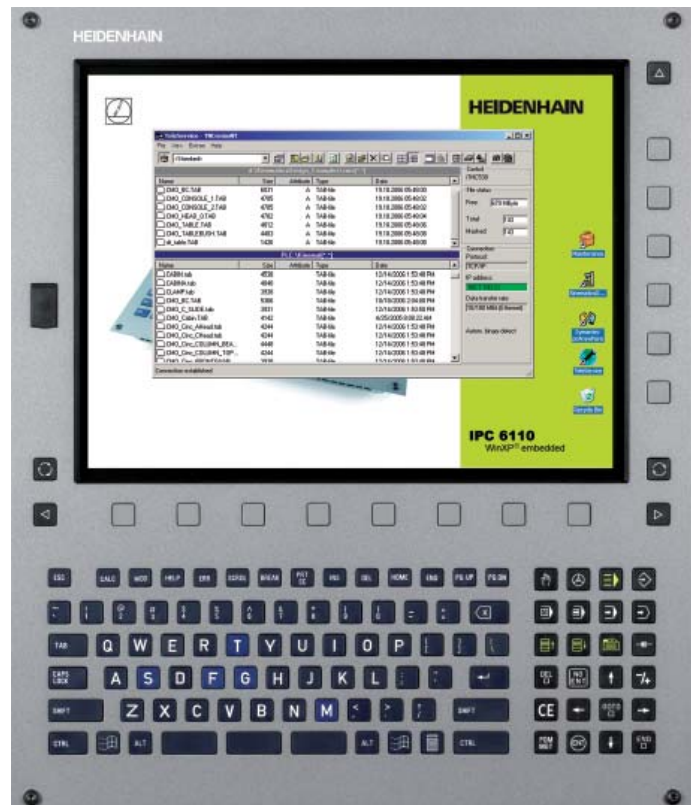
## Compact Industrial PC

The IPC 6110 in conjunction with the iTNC 530 is well suited as a local console. Its compact design makes installation easy, even if only limited space is available.

The IPC 6110 features both a 15-inch color screen and a keyboard consisting of an ASCII keyboard and selected TNC function keys, such as:

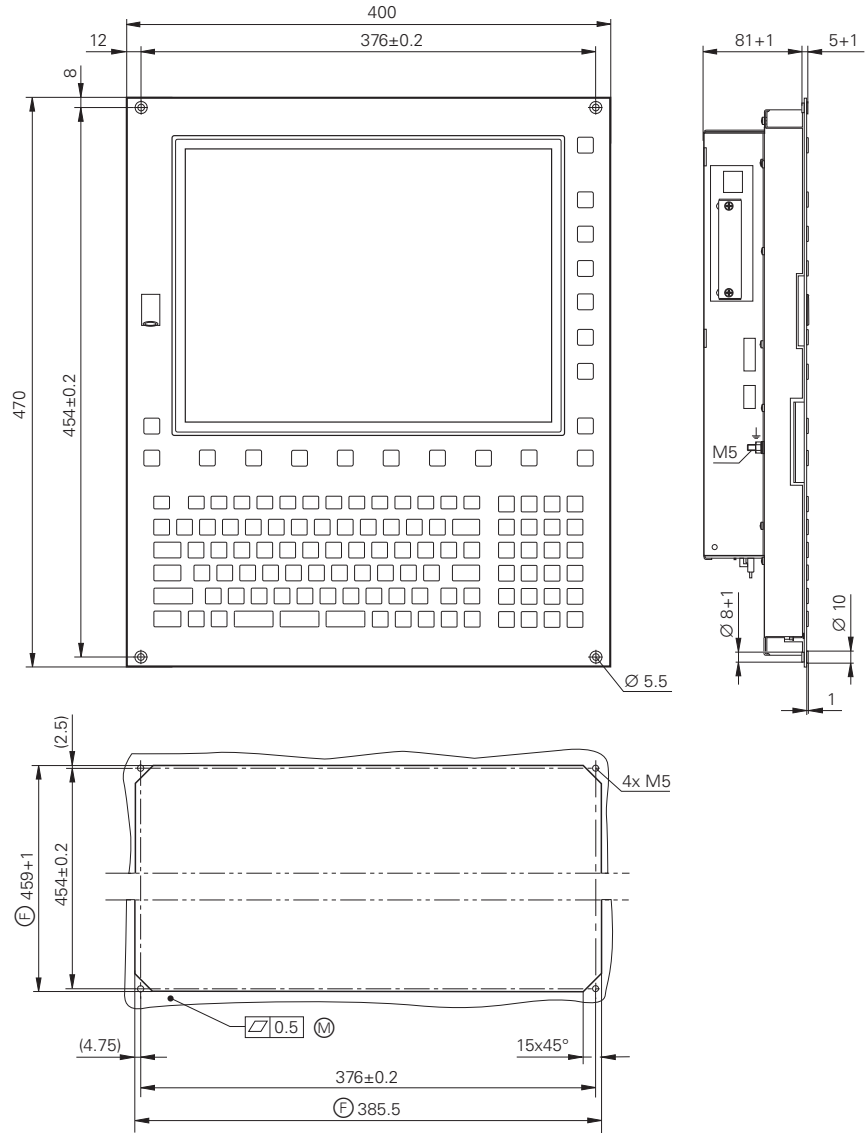
- Keys for switching between operating modes (Manual, MDI, Program Run – Full Sequence, Program Run – Single Block, Handwheel, and smarT.NC)
- Programming and Editing
- Test Run
- Program Management key (PGM MGT)
- Help keys (HELP and ERR)
- Arrow navigation keys and navigation keys for smarT.NC
- CALC, MOD, DEL, ENT, NOENT, GOTO, END, CE, +/- special keys

The horizontal soft-key row and all PLC soft keys are available for entries via the PLC.



Specifications	IPC 6110
Processor	Intel Celeron 400 MHz
Main memory	512 MB RAM
Mass storage device	CFR CompactFlash memory card (approx. 580 MB available)
Screen	15-inch XGA, resolution: 1024 x 768
Keyboard	<ul style="list-style-type: none"> <li>• English ASCII keyboard</li> <li>• Block of keys for TNC functions (snap-on keys)</li> </ul>
Interfaces	<ul style="list-style-type: none"> <li>• 1 slot for compact flash card</li> <li>• 3 x USB 1.1 (1x on the front next to screen); load capacity: Up to 500 mA each</li> <li>• 1 x Ethernet</li> <li>• 1 x RS-232-C/V.24</li> </ul>
Power supply	85 V~ to 264 V~; 47 Hz to 440 Hz
Power consumption	60 W
Cooling	Integrated fan
Protection EN 60529	Front: IP 54, rear: IP 20
Weight	Approx. 7.7 kg

IPC 6110



Dimensions in mm



Tolerancing ISO 8015  
 ISO 2768 - m H  
 < 6 mm:  $\pm 0.2$  mm

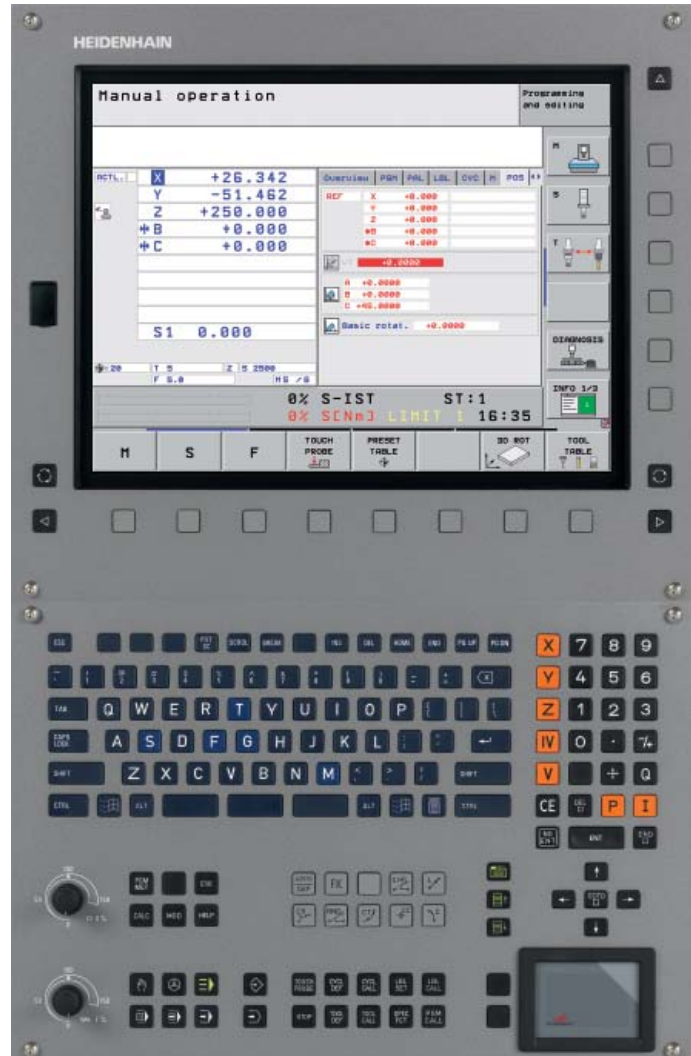
# IPC 6120

## Industrial PC with Complete iTNC Keyboard

The IPC 6120 makes it easy to install a second operator terminal for the iTNC 530. The screen and keyboard are the same as those of the control and therefore allow full-fledged operation of the control from the IPC 6120.

The IPC 6120 features a 15-inch color screen with USB port, soft keys and keys for shifting the soft-key row. It is available either with the TE 630 keyboard (with touchpad) or the TE 620 keyboard (without touchpad)—both are well-proven iTNC 530 keyboards. Even the override potentiometers on the operating panel can be connected to the analog inputs of the iTNC 530 over a separate cable (accessory) and can be evaluated by the PLC. The IPC 6120 therefore allows complete remote operation of the iTNC 530, while ensuring the usual ease of operation.

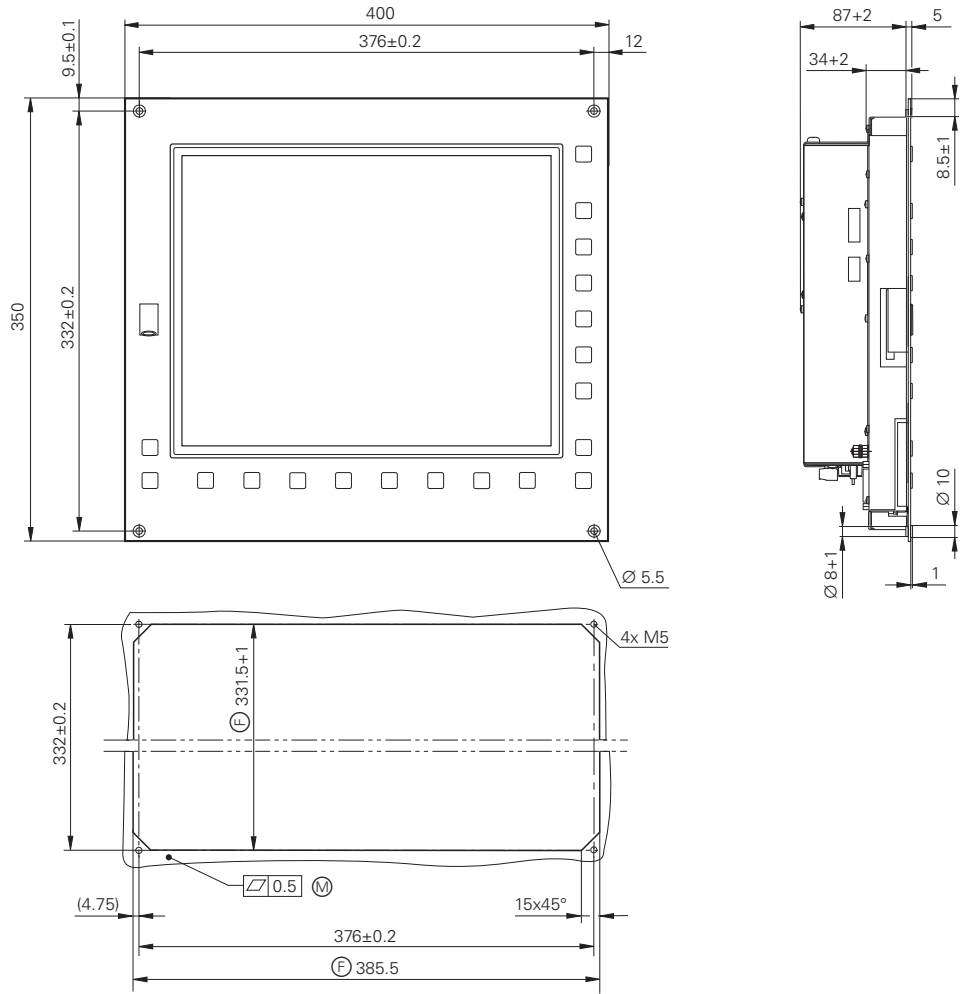
The horizontal soft-key row and all PLC soft keys are available for entries via the PLC.



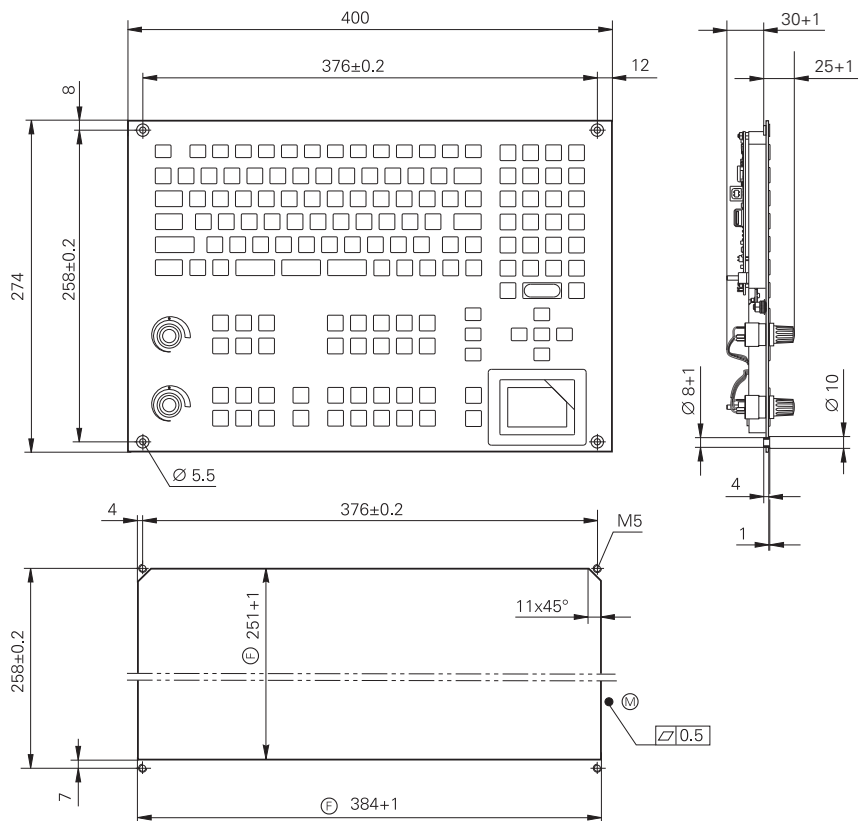
Specifications	IPC 6120
Processor	Intel Celeron 400 MHz
Main memory	512 MB RAM
Mass storage device	CFR CompactFlash memory card (approx. 580 MB available)
Screen	15-inch XGA, resolution: 1024 x 768
Keyboard*	Separate TE 630 (with touchpad) or TE 620 (without touchpad)
Interfaces	<ul style="list-style-type: none"> <li>• 1 slot for compact flash card</li> <li>• 3 x USB 1.1 (1x on front), load capacity: Up to 500 mA each</li> <li>• 1 x Ethernet</li> <li>• 1 x RS-232-C/V.24</li> </ul>
Power supply	24 V–
Power consumption	60 W
Cooling	Integrated fan
Protection EN 60529	Front: IP 54, rear: IP 20
Weight	Approx. 9 kg


\* Please select when ordering

**IPC 6120**



**TE 630 with touchpad**  
**TE 620 without touchpad**



Dimensions in mm  
  
 Tolerancing ISO 8015  
 ISO 2768 - m H  
 < 6 mm: ±0.2 mm

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# HEIDENHAIN

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**[www.heidenhain.de](http://www.heidenhain.de)**

For catalogs, brochures and product information sheets, visit

**[www.heidenhain.de/docu](http://www.heidenhain.de/docu)**

#### **For more information**

- Catalog: *iTNC 530*

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