### Selection guide

#### Magelis iPC industrial PCs

<table>
<thead>
<tr>
<th>Applications</th>
<th>&quot;All in One&quot; compact products</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Screen 12” SVGA (800 x 600), Data entry</th>
<th>By keyboard</th>
<th>By keyboard and touch screen</th>
<th>By touch screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen 15” XGA (1024 x 768), Data entry</td>
<td>By keyboard</td>
<td>By keyboard and touch screen</td>
<td>By touch screen</td>
</tr>
</tbody>
</table>

#### Control box

For modular products, to use with 1 front panel screen or in stand-alone (1)

<table>
<thead>
<tr>
<th>Type</th>
<th>Smart iPC</th>
<th>Compact iPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>VIA 667 MHz</td>
<td>Intel Pentium 4 Mobile 1.7 GHz</td>
</tr>
<tr>
<td>Internal hard disk</td>
<td>–</td>
<td>&gt; 20 Gb</td>
</tr>
<tr>
<td>RAM memory</td>
<td>128 Mb extendable to 512 Mb</td>
<td>256 Mb extendable to 512 Mb</td>
</tr>
<tr>
<td>CD-Rom drive</td>
<td>–</td>
<td>Yes</td>
</tr>
<tr>
<td>Floppy disk drive</td>
<td>–</td>
<td>Yes</td>
</tr>
<tr>
<td>Extension slots</td>
<td>2 PCMCIA slots</td>
<td>1 PCI bus slot, 2 PCMCIA slots and 1 Compact Flash slot</td>
</tr>
<tr>
<td>Ethernet TCP/IP network</td>
<td>1 x 10BASE-T/100BASE-TX (RJ45)</td>
<td></td>
</tr>
<tr>
<td>Input/output ports</td>
<td>2 x USB, 1 x COM1, 1 x COM2, 1 x parallel</td>
<td>2 x USB, 1 x COM1, 1 x COM2, 1 x COM3, 1 x parallel</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows XPe integrated operating system</td>
<td>Windows 2000 pre-installed operating system</td>
</tr>
<tr>
<td>Pre-installed software or software package</td>
<td>Transparent Ready Web browser –</td>
<td>Vijeo Look – Vijeo Look</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>~ 24 V</td>
<td>~ 115...230 V</td>
</tr>
<tr>
<td>Type of PC or Control box</td>
<td>MPC ST5 2NDJ 00T</td>
<td>MPC KT5 2NAA 00e</td>
</tr>
</tbody>
</table>

Pages 2/9
Modular products
Control box to use with 1 front panel screen or in stand-alone (1)

MPC NA2 0NNN 00N
MPC NA2 0NNN 00N
MPC NA2 0NNN 00N
MPC NA5 0NNN 00N
MPC NA5 0NNN 00N
MPC NA5 0NNN 00N

2/15

Modular iPC Small
Modular iPC Medium
Modular iPC Large

Intel Celeron 566 MHz
Intel Pentium III 850 MHz
Intel Celeron 566 MHz
Intel Pentium III 850 MHz

20 Gb, removable
Yes, removable
Yes, removable

1 ISA bus slot, 1 PCI bus slot and 1 ISA/PCI bus slot
2 ISA bus slots, 3 PCI bus slots and 1 ISA/PCI bus slot

2 x USB, 1 x COM1, 1 x COM4 and 1 x parallel
1 x external VGA video screen, 1 x PS/2 keyboard (2), 1 x PS/2 pointing device (2)

Windows pre-installed operating system (Windows 2000 or Windows XPe)

Pack A
Pack A, B, C or D
~ 115...230 V
~ 115...230 V
~ 115...230 V

~ 115...230 V
~ 115...230 V
~ 115...230 V

Pack E (~ 115...230 V model)

~ 115...230 V
~ 115...230 V
~ 115...230 V

~ 24 V
~ 24 V
~ 24 V

MPC AN0 2NA 00N
MPC AN0 2ND 00N
MPC BNO 2NA 00N
MPC BNO 5NA 00N
MPC CN0 2NA 00N
MPC CN0 5NA 00N

2/16 and 2/17

(1) To use the Control box without a front panel, you will require the MPC NP0 0NNN 00N mounting panel.
(2) Port not operational when the Control box is used with the front panel screen.
The Magelis Modular iPC range is a full range of rugged industrially hardened PCs offering:
- Panel PCs
- Box PCs
- Bundle packages.

With its modular design, especially adapted for harsh environments, the Modular iPC offers a wide choice of:
- IP 65 front panels: color TFT LCD 12" or 15" screen, with or without touch screen capability, with or without QWERTY keyboard.
- Control boxes, with varying power and expansion capabilities, built around an Intel Celeron or Pentium III processor with 256 MB of RAM expandable to 512 MB and ≥ 20 MB hard disk. As standard, the Control boxes include an Ethernet 10/100 Mbps port, two USB ports, the various standard serial and parallel ports, and up to 6 PCI/ISA bus slots.

Any model of front panel screen can be used with any type of Control box. A Control box can be converted into a Box PC (with no screen) using a mounting panel.

Each Control box (except the model without PCI/ISA bus expansion slots) comprises 3 main sub-assemblies:
- Processor board (2 models)
- Power supply with AC or DC current output (4 models)
- Expansion slots for PCI/ISA bus cards (3 or 6 slots).

The modularity and flexibility of the Magelis Modular iPC range allows you to choose the ideal solution for your needs, with easy upgrades and fast maintenance.

Magelis Modular iPC, pre-installed with a Windows operating system, can run Telemecanique software tools such as:
- PLC programming tools: PL7, Concept, Unity Pro, ProWORX, etc.
- SCADA (Supervision Control And Data Acquisition), Vijeo Look, Monitor Pro or OFS data server (OPC Factory Server), etc.

These include:
- Bundled hardware and software packages
- Accessories

Bundled packages, including:
- Control box with Telemecanique software:
  Vijeo Look and/or PL7 Pro (depending on the model)
- Control box with Atrium PCX coprocessor and Telemecanique software:
  Vijeo Look and/or PL7 Pro (depending on the model)

This type of offer provides the security of acquiring, at a preferential cost, a pre-installed and tested industrial-grade system which is correctly dimensioned to the software application requirements and is supported across the entire Schneider Electric sales network.

Modular iPC and Atrium PCX coprocessor card bundles offer an all-in-one package including a PC micro-processor with integrated programmable PLC and SCADA (Supervision Control And Data Acquisition) and PL7 Pro programming software.

This type of configuration is particularly suitable for installations requiring a high level of interaction between Premium PLC automation functions and control, processing or management applications.

Accessories, with:
- RAM expansion kits (up to 512 MB)
- 12" and 15" external flat screens which can be mounted on a swivel arm
- External QWERTY keyboard
- etc.
Magelis iPC industrial PCs
Modular iPC range

Architectures

Connection to Transparent Ready Ethernet architectures

Modular iPC industrial PCs include two RS 232-compliant serial links (point-to-point link) as standard. The use of Uni-Telway or Modbus protocols ensures the straight-forward implementation of communication with Telemecanique PLCs.

Connection to mixed network architectures (Fipway, Modbus Plus) and Ethernet TCP/IP network

The inclusion of network cards on the ISA or PCI bus in Modular iPC industrial PLCs enables them to be integrated into mono or multi-network architectures such as Fipway and/or Modbus Plus. The built-in Ethernet 10/100 Mbps port allows PLC stations to be connected to levels 2 and 3 of communication architectures.

(1) Fipway network with ISA bus card TSX FPC 10M.
(2) Modbus Plus network with PCI bus card 416 NHM 300 30 or ISA bus card AM-SA85 030.

Connection to Transparent Ready Ethernet architectures

The built-in Ethernet 10/100 Mbps port in Modular iPCs allows them to be integrated into "full Ethernet" architectures, such as Transparent Ready, and thus provides links between levels 1, 2 and 3 of TCP/IP architectures. This dual link is achieved by the inclusion of the TCC ETH 01 Ethernet card (on PCI bus).

Open to COM/DCOM, OPC (OLE for Process Control) and Web standards, Modular iPCs facilitate the implementation of client/server solutions of the following types:

- Monitor Pro
- OPC Factory Server
- Web Client, in conjunction with FactoryCast Web servers embedded in the PLCs

This type of "full Ethernet" architecture allows the transparent circulation of data generated at level 0 (by a sensor, for example) to MES (Manufacturing Execution System) applications at level 3. The Modicon TSX Micro, Premium and Quantum PLCs are connected to the Ethernet network via:

- Ethernet Transparent Ready modules or
- FactoryCast Web server modules

In this case, the Modular iPC terminal, comprising a Control box with no expansion slots, represents the Web client station.

Connection to mixed bus/network architectures (Magelis Modular iPC and Atrium PCX bundled package)

Packs combining a Modular iPC Control box and Atrium PCX PLC coprocessor allow easy integration into mixed architectures such as Bus X (Premium PLC) and Fipio/Modbus Plus fieldbuses. These packs offer enhanced capacity for the integration of PLC functions in the PC.

This type of offer allows:

- The remote location of PLC I/O racks up to 100 m away (Premium Bus X)
- The management of distributed I/O on Fipio or Modbus Plus fieldbuses (3)

The built-in Ethernet 10/100 Mbps port allows this equipment to be connected to levels 2 and 3 of communication architectures.

(3) Connection to the Modbus Plus bus requires the addition of a 416 NHM 300 30 card (on a PCI bus) or an AM-SA85 030 card (on an ISA bus).
Magelis iPC industrial PCs
Modular iPC range

Description

MPC NA•NB• 0NNN 00N front panel screens with keyboard

MPC NA•NB• 0NNN 00N front panel screens with keyboard comprise:
1. A color TFT active-matrix LCD screen (with or without high-definition analog touch panel):
   - either 12" SVGA for a maximum display definition of 800 x 600
   - or 15" XGA for a maximum display definition of 1024 x 768.
2. An aluminum alloy front panel with IP 65 membrane (mounted on a nickel steel frame).
3. Two rows of 10 user-configurable keys, PF1 to PF10 and PF11 to PF20 (that also give access to special characters such as ~, @, *, (, ), {, }, etc.).
4. Fifteen numeric keypad keys.
5. Fourteen cursor and function keys (Del, Esc, Ins, PgDn, PgUp, PrtSc, etc.).
6. Forty-one QWERTY alphabetic and function keys (Alt, Ctrl, Enter, Space, etc.).
7. An access plug fitted to the mini-DIN PS/2 connector for a keyboard or external pointing device.
8. An infrared IrDA-compatible port for downloading software and data.
10. Three LEDs with, from left to right:
    - ON LED: PC switched on
    - DISK LED: accessing hard disk
    - LAN LED: sending or receiving data via the built-in Ethernet link.

On the back panel:
- A connector for Control box connection
- Twelve threaded holes for securing the Control box

MPC NT• 0NNN 00N touch screen front panels

MPC NT• 0NNN 00N front panels with touch screen comprise:
1. A color TFT active-matrix LCD screen with high-definition analog touch panel:
   - either 12" SVGA for a maximum display definition of 800 x 600
   - or 15" XGA for a maximum display definition of 1024 x 768.
2. An aluminum alloy front panel with IP 65 membrane (mounted on a nickel steel frame).
3. Two brightness adjustment keys.
4. An access plug fitted to the mini-DIN PS/2 connector for a keyboard or external pointing device.
5. An infrared IrDA-compatible port for downloading software and data.
6. Three LEDs with, from left to right:
    - ON LED: PC switched on
    - DISK LED: accessing hard disk
    - LAN LED: sending or receiving data via the built-in Ethernet link.

On the back panel:
- A connector for Control box connection
- Twelve threaded holes for securing the Control box
Control boxes

Control boxes are available in three models with varying power and expansion capabilities:

- Small Control box MPC AN0 2N 00N 1a with no PCI/ISA bus expansion slot, comprising a monobloc assembly including the Control box and its power supply.
- Medium Control box MPC BN0 2N 00N 1b with 3 PCI/ISA bus expansion slots.
- Large Control box MPC CN0 2N 00N 1c with 6 PCI/ISA bus expansion slots.

The table below shows the number and type of PCI/ISA bus slots in each model:

<table>
<thead>
<tr>
<th>Model</th>
<th>Total number of slots</th>
<th>Number of ISA bus slots</th>
<th>Number of PCI bus slots</th>
<th>Number of PCI/ISA bus slots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Large</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

The Medium and Large models comprise:

2 Processor sub-assembly
3 Power supply sub-assembly
4 PCI/ISA bus expansion card sub-assembly

Description of sub-assemblies

- The processor sub-assemblies 2 comprise the following elements:
  5 Connector for MPC NA/NB/NT front panel screen
  6 3 1/2" floppy disk drive (MPC AN0 model)
  7 Removable drawer for CD-ROM drive and 3 1/2" disk drive (MPC BN0/CN0 models)
  8 Slot for optional CD-ROM drive (MPC AN0 model)
  9 Hard disk access door (MPC BN0/CN0 models)
 10 Two USB connectors
 11 Two mini-DIN PS/2 connectors for keyboard and external pointing device (1)
 12 One 9-pin male SUB-D connector marked COM4 for RS 232 serial link
 13 One 9-pin male SUB-D connector marked COM1 for RS 232 serial link
 14 One 25-pin female SUB-D connector marked PRINTER for bi-directional parallel link
 15 One 15-pin female SUB-D connector marked VGA for external video monitor
 16 One RJ45 connector for Ethernet 10/100 Mbps link
 17 An air vent. A second air vent is located on the opposite side. These vents are fitted with anti-dust filters.

- The power supply sub-assemblies 3 (MPC BN0/CN0 models) comprise the following elements:
  18 Power supply connector
  19 PC On/Off switch

Note: On the Small model MPC AN0, these elements are located on the Control box on the opposite side from elements 5 to 18.

- The PCI/ISA bus expansion card sub-assembly 4 (MPC BN0/CN0 models) comprises three or six slots (according to the model) complying with IBM PC standards (ISA bus and PCI bus).

(1) Ports not operational when the Control box is fitted with the MPC NA/NE/NT front panel screen.
## Characteristics

### Magelis iPC industrial PCs

#### Modular iPC range

### Front panel characteristics

<table>
<thead>
<tr>
<th>Type</th>
<th>Screen Type</th>
<th>Definition</th>
<th>Number of colors</th>
<th>Brightness</th>
<th>Optimum viewing angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA2</td>
<td>12&quot; color TFT active-matrix SVGA LCD</td>
<td>800 x 600</td>
<td>262 144</td>
<td>≥ 200 cd/m² adjustable</td>
<td>Horizontal 110, vertical 90</td>
</tr>
<tr>
<td>NB2</td>
<td>15&quot; color TFT active-matrix XGA LCD</td>
<td>1024 x 768</td>
<td></td>
<td></td>
<td>Horizontal 160, vertical 160</td>
</tr>
<tr>
<td>NT2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NT5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Data entry

- **By**: Keyboard, Keyboard and touch screen, Touch screen
- **Keyboard**: 70 standard IBM keys
- **Touch screen**: 2 x 10 keys

### Front panel

- **Pointing device**: Built-in
- **I/O ports**: 1 connection for PS/2 keyboard or PS/2 pointing device
- **Material**: Aluminum alloy with IP 65 membrane on nickel-steel frame
- **Screen protection**: Polycarbonate sheet, Polyester film
- **Mounting**: On any MPC AN02/BN02/BN05/CN02/CN05 Control box

### Control box characteristics

<table>
<thead>
<tr>
<th>Type</th>
<th>Processor</th>
<th>Internal hard disk</th>
<th>RAM</th>
<th>CD-ROM drive</th>
<th>Floppy disk drive</th>
<th>Video card</th>
<th>Expansion slots</th>
<th>Built-in I/O ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPC NA2/0NNN 00N</td>
<td>Intel Celeron 566 MHz</td>
<td>20 GB IDE, 2 1/2&quot;</td>
<td>SDRAM 256 MB, expandable to 512 MB (maximum of 2 memory slots)</td>
<td>Optional</td>
<td>Removable, 24x</td>
<td>3 1/2&quot;, 1.44 MB</td>
<td>-</td>
<td>1 Ethernet TCP/IP 10BASE-T/100BASE-TX link (RJ45 connector), 2 USB links (12 Mbps), 1 RS 232 serial line, COM4 (9-pin male SUB-D connector), 1 RS 232 serial line, COM1 (9-pin male SUB-D connector), 1 bi-directional parallel link (25-pin female SUB-D connector), 1 VGA external video screen connection (15-pin female SUB-D connection), 1 connection for PS/2 keyboard (mini-DIN connector) (1), 1 connection for PS/2 pointing device (mini-DIN connector) (1)</td>
</tr>
<tr>
<td>MPC BN2/0NNN 00N</td>
<td>Pentium III 850 MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>3 slots (1 ISA bus, 1 PCI bus and 1 PCI/ISA bus)</td>
</tr>
<tr>
<td>MPC NT2/0NNN 00N</td>
<td>Intel Celeron 566 MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>6 slots (2 ISA bus, 3 PCI bus and 1 PCI/ISA bus)</td>
</tr>
<tr>
<td>MPC NB5/0NNN 00N</td>
<td>Pentium III 850 MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>6 slots (2 ISA bus, 3 PCI bus and 1 PCI/ISA bus)</td>
</tr>
<tr>
<td>MPC NT5/0NNN 00N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>6 slots (2 ISA bus, 3 PCI bus and 1 PCI/ISA bus)</td>
</tr>
</tbody>
</table>

### Power supply

- **By Control box**

### Internal hard disk

- ~ 115 to 230 V, (threshold values 98 to 264 V), EN 61131-2 compliant

### Power consumption

- Alternating current voltage ratings: 130 W
- Direct current voltage ratings: 120 W

### Environment

- UL 508, UL 60950, cUL, EN 55022, IEC 1131-2, classification in hazardous areas: UL 1604 class 1 - division 2
- UL 508, UL 60950, cUL, EN 55022, IEC 1131-2, classification in hazardous areas: UL 1604 class 1 - division 2
- High-frequency interference, compliant with EN 61131-2
- Electromagnetic emissions, class A/EN 55022/55011
- Safety of property and persons, EN 61131-2, UL/CSA and IEC 529/IEC 950
- UL 508, UL 60950, cUL, EN 55022, IEC 1131-2, classification in hazardous areas: UL 1604 class 1 - division 2
- UL 508, UL 60950, cUL, EN 55022, IEC 1131-2, classification in hazardous areas: UL 1604 class 1 - division 2
- Electromagnetic emissions, class A/EN 55022/55011
- Safety of property and persons, EN 61131-2, UL/CSA and IEC 529/IEC 950
- Electromagnetic emissions, class A/EN 55022/55011
- Safety of property and persons, EN 61131-2, UL/CSA and IEC 529/IEC 950
- Electromagnetic emissions, class A/EN 55022/55011
- Safety of property and persons, EN 61131-2, UL/CSA and IEC 529/IEC 950

### Usage altitude

- 0 to 3000 m max.

### Storage altitude

- 0 to 12,000 m max.

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(1) Port not operational when the Control box is fitted with the front panel screen.