



# Windows® CE Products BOX-PC® PANEL-PC

## BOX-PC / PANEL-PC for Windows CE

Industrial computers designed for use with Windows CE

CONTEC provides these units as a general-purpose platform equipped not only with Windows CE but also with our exclusive "CONTEC Manager", software tools.

Additional software can be loaded on the onboard NAND Flash for easy configuration of your application.

※ BOX-PC is a registered trademark of CONTEC CO., LTD.



## Product Lineup

Contec offers a variety of models to choose from. Options include installation style, screen size and input interface.

### Windows CE .NET 4.2 | SH-4

#### Box PCs

IPC-BX 10 series

F-04

DVI  
(Includes VGA adapter)



#### Panel PCs

IPC-PT 10 series - Panel Mount

F-05

12.1inch TFT SVGA



10.4inch TFT VGA



6.5inch TFT VGA



IPC - DT 15 series - Open Frame for embedding

F-05

12.1inch TFT SVGA



10.4inch TFT VGA



6.5inch TFT VGA



### Windows CE .NET 4.0 / 3.0 | SH-3

#### Box PCs

IPC-BX MSH3 series

F-07

Analog RGB



#### Panel PCs

IPC-PT SSH3 series

F-09

6.4inch TFT VGA



#### Panel PCs

IPC-PT MSH3 series

F-10

10.4inch TFT VGA



## Pictograms

### Box PCs

Video output interface

DVI  
(Includes VGA adapter)

Analog RGB

Video signal output

### Panel PCs

Screen size

12.1inch TFT

10.4inch TFT

10.4inch TFT

6.4inch TFT

6.5inch TFT

The size and type of LCD panel.

# Windows® CE Products

## Develop a Windows® CE Embedded System as easily as operating a PC

When developing a Windows® CE system, you first need to build a kernel including drivers to compliment the dedicated hardware. You then have to develop an application program that is compatible with your system. Developing a Windows CE system often requires a lot of time and labor.

CONTEC has developed a standard kernal complete with OS and custom development environment. System configuration can be accomplished by developing your application program and copying it onto Flash ROM.

With the use of CONTEC's proprietary CONTEC MANAGER you can concentrate on the application development. eMbedded Visual Tools, a program for application development which can be purchased directly from Microsoft, allowing development of your application at an extremely low initial cost.

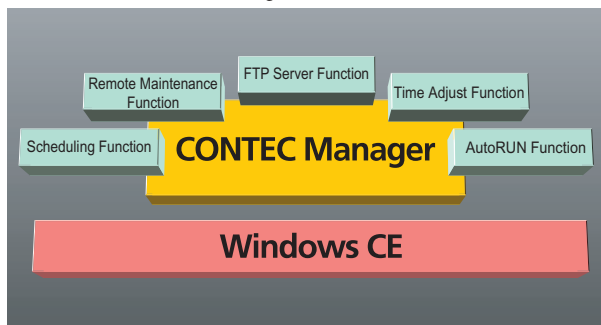
Application development for embedded systems that is as easy as developing applications for a Windows PC.

## CONTEC Manager Supports Your Development Work

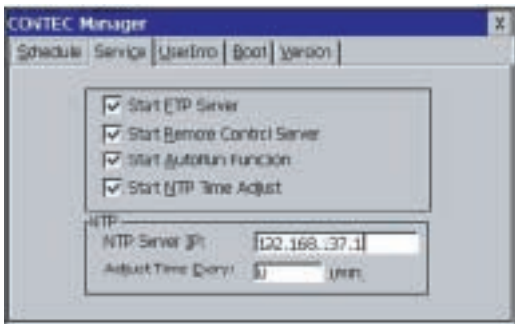
Equipped with our proprietary CONTEC Manager, these products provide a variety of functions including an FTP server, remote maintenance, scheduling, NTP automatic timing and AutoRUN. Central updates for applications can be accomplished when using the FTP server function, even when the MSH3x Series is installed on several different lines. With the AutoRUN function, you can automatically execute applications by inserting an ATA card and running a simple macro.

The need for reducing TCP is increasingly emphasized with OA PCs, CONTEC MANAGER achieves similar reduction with FA computers using the FTP server and remote maintenance functions.

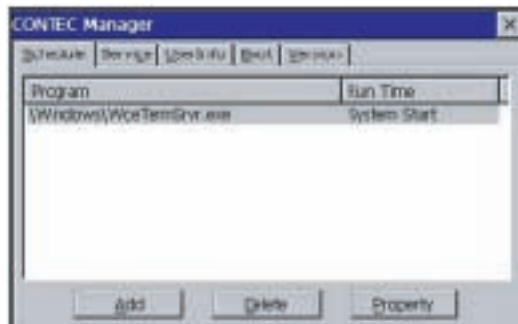
### Functions of CONTEC Manager



### CONTEC Manager (Service Tag)



### CONTEC Manager (Schedule Tag)



- news box
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- Panel PCs
- Flat Panel Displays
- Silicon Disk Drive
- Options
- Box PCs & Panel PCs with Windows CE
- Analog I/O
- Digital I/O
- Counters & Motor Controls
- Communication
- GPB
- Remote I/O
- Bus Expansion System
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&EIT
- Multi-Programmable Display
- Remote Monitoring Solution
- Service & Products

## F-02

- Windows CE .NET 4.2 SH4
- IPC-BX 10
- IPC-PT 10
- IPC-PT 15
- Windows CE .NET / 3.0 SH3
- IPC-BX MSH3
- IPC-PT SSH3
- IPC-PT MSH3

### Touch Panel



Indicates touch panel function

### Resolution

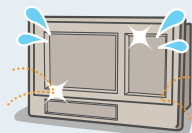


Screen resolution  
SVGA : 800 × 600  
VGA : 640 × 480

### Dust-proof / Water-proof



Dust / water-proof performance of the front side



### IP65-Compliance

Indicates the level of dust and water resistance of the PC front side when properly mounted.



Denotes protection from water sprayed at low pressure from every angle

Denotes complete protection against dust

Stands for "International Protection"

Box PCs with Windows CE &  
Panel PCs with Windows CE

## Features of Box and Panel PC for Windows .NET 4.2 | SH-4

### 1. CONTEC Manager

CONTEC Manager, a package of original software tools, is preinstalled providing additional functions such as remote maintenance.

For further details see [F-02](#)

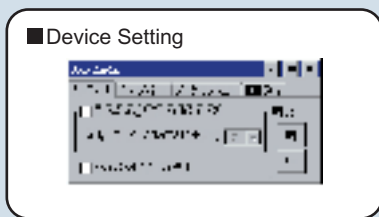
### 2. Supported Functions

- Graphics
  - Hardware cursor
  - TFT LCDs - VGA / SVGA
- Touch panels
  - CONTEC's Flat Panel Displays
- Interfaces
  - Serial port (including Debug port function)
  - USB (USB1.1-compliant host driver, HID driver)
  - General-purpose digital I/O
  - Audio output
  - Function switch (on front side of panel pc)
  - PC/104 (I/O, memory, interrupt access)
- Wireless LAN
  - CONTEC's FLEXLAN\* Series Wireless LAN PC card
- PCI add-on
  - CONTEC's PCI-compliant serial communication board

The specifications of onboard devices, interfaces and expansion slots may vary depending on the product and configuration.

### 3. Device Set-up

CONTEC's original GUI device setup tool is provided in the control panel, allowing you to change the setting of various devices such as desktop shell, backlight and GUI screen.



### 4. CONTEC Original BIOS with Update Function

CONTEC provides a dedicated BIOS to support hardware initialization and various boot options. This BIOS is located on an EEPROM that is equipped with a BIOS updating function to facilitate the process.

### 5. High-Speed Startup

The operating system is stored in XIP-ROM enabling the unit to be running in a minimum of 10 seconds once the power is turned on.

### 6. Terminal Server Client

These units can be used as Thin Clients under Windows 2000 Server. The connection can be established easily in the setup Wizard.

### 7. Dial-Up (PPP) Server

Through the tools provided by CONTEC Manager you can dial up from a phone line to conduct file transmission or remote maintenance.

### 8. Remote Access

Using a networked PC, you can monitor the system operation status or set operation modes using the Web browser.

### 9. NF Disk

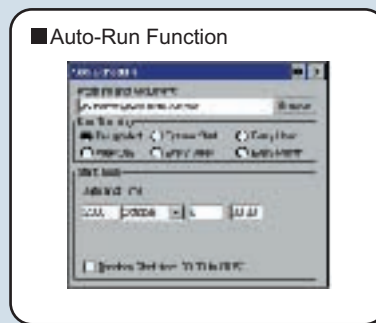
The onboard NAND flash is recognized as a disk by Windows® CE thus allowing application software to be copied onto it.

### 10. Object Store/ Registry Backup

Allows modification of the Windows® CE modules without changing the image (NK.BIN). The registry setup can also be backed up through this function.

### 11. Auto-Run

Inserting an ATA or CF card will automatically start an application allowing automatic completion of predetermined operation sequences.



### 12. Watchdog Timer

The onboard watchdog timer can be accessed from your application.

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- Communication
- GPIB
- Remote I/O
- Bus Expansion System
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&EIT
- Multi-Programmable Display
- Remote Monitoring Solution
- Service & Products

## F-03

- Windows CE .NET 4.2 SH4
- IPC-BX 10
- IPC-PT 10
- IPC-PT 15
- Windows CE .NET / 3.0 SH3
- IPC-BX MSH3
- IPC-PT SSH3
- IPC-PT MSH3

# Box PCs with Windows CE

## Windows CE .NET 4.2 | SH-4 Postcard Size Box PC

### IPC-BX 10 Series

#### BOX-PC® 10 Series Windows CE .NET 4.2, SH-4 / 240MHz, 128MB Memory

##### IPC-BX/M10DC5-4E

Hitachi SH-4 240MHz CPU,  
32MB RAM, Windows CE .NET 4.2

NEW

DVI  
(Includes VGA adapter)



For Dimensions see Page F-11

#### Features

- Compact (Postcard size)
- 128MB (SDRAM) system memory
- 32MB built-in rewritable Flash ROM allows you to add / delete programs
- Interfaces include 2x serial ports, USB, PC card, 100BASE-TX, general-purpose I/O and stereo sound.
- 10 second (min) high-speed start-up achieved by memory loading boot function
- CONTEC Manager supports system development via schedule, FTP server, AutoRUN and boot functions
- PC/104 add-on capability

#### Specifications

Model	IPC-BX/M10DC5-4E	
Interfaces	Display Type,	DVI (Analog RGB or PANEL Link output) *1
	Number of Colors	or LCD output*1*2, 65536 colors
	Resolution	VGA(640 × 480), SVGA(800 × 600)
CPU	SH-4 HD6417751RBP 240MHz	
Memory	Flash memory (NFDISK) *3 : 32MB 2 × RS-232C	
COM	COM1 (16550, 9-pin D-SUB) COM2 (16550, 9-pin D-SUB)	
RTC	Benchmark bq3287AMT Error tolerance ± 1 minute/month	
Ethernet	1 × 10BASE-T/100BASE-TX, National Semiconductor DP83816A	
PC Card slot	2 × PCMCIA Type II or 1 × Type III	
General-purpose I/O	4 × each Opto-isolated inputs and outputs 3.3V CMOS-level I/O 16 channels (I/O: 8 channels output: 8 channels)	
USB	2ch (USB 1.1)	
Output terminals for external speakers	φ 3.5 Stereo mini jack Full-scale output level 1.0Vrms (Typ.)	
Expansion Bus (PC/104)	Supporting Interrupt function	
	Does NOT support DMA or bus mastering functions	
Allowable expansion boards	3 (Max.)	
Operating Temp. / Storage Temp.	0 to 50°C / -10 to 60°C	
/ Humidity	/ 20 - 90%RH (no condensation)	
Floating Dust Particles / Corrosive Gases	Not to be excessive /None	
Electricity resistance	Atmospheric discharge	Contact discharge: 4kV (EN 61000-4-2, IEC 1000-4-2, Level2) Atmospheric discharge: 8kV (EN 61000-4-2, IEC 1000-4-2, Level3)
	Line-noise	AC line: 2kVSignal line: 1kV (EN61000-4-4, JEC1000-4-4 Level 3)
Vibration Resistance	10 - 57Hz/semi-amplitude 0.15mm One cycle (10-150-10 Hz) of 1oct/min test at 19.6m/s2 (2G) between 57 and 150Hz x 10 times in three (X/Y/Z) directions (80 minutes each) (JIS C0040-compliant, IEC60068-2-6-compliant)	
Impact Resistance	Tested with 11-ms half-sine wave at 98m/s2 (10G) three times in each of three (X/Y/Z) directions (JIS C0041-compliant, IEC60068-2-27-compliant)	
Input Power Supply	+5VDC Input range: ± 5% 1.5A (Max.)	
Dimensions (mm)	145(W) × 103(D) × 49(H) (5.7" × 4.06" × 1.93")	
Weight	Approx. 700g *4 (1.54 lbs)	

#### Options

Name	Description
AC power supply	
IPC-POA100SH	Dedicated power supply
Optional Accessory	
PIO-16/16L(104)	32-channel digital I/O, PC-104 bus
PCE50/37P-1.5	Digital I/O cable
IPC-SHCL-2T	LCD interface board
IPC-SHBLK	Case expansion
IPC-SHDIN	DIN rail mounting bracket
Manual	
IPC-BX/M10DC5-HME	Hardware manual
IPC-SH4CE4-SME	Software manual

\*1: DVI and LCD interfaces cannot be used simultaneously.

\*2: External connection is supported via optional adapter.

\*3: Number of rewrites: 300,000 (Assumed life of CF card)

\*4: Cable, optional items and bracket not included.

news box

CONTEC SOLUTION

Company Profile

Box PCs

Panel PCs

Flat Panel Displays

Silicon Disk Drive

Options

Box PCs & Panel PCs with Windows CE

Analog I/O

Digital I/O

Counters & Motor Controls

Communication

GPIO

Remote I/O

Bus Expansion System

Software

Accessories & Cables

Distributed Monitor & Control Network: F&EIT

Multi-Programmable Display

Remote Monitoring Solution

Service & Products

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Windows CE .NET 4.2 SH4

IPC-BX 10

IPC-PT 10

IPC-PT 15

Windows CE .NET / 3.0 SH3

IPC-BX MSH3

IPC-PT SSH3

IPC-PT MSH3

# Panel PCs with Windows CE

Windows CE .NET 4.2 | SH-4  
**Slim, Compact Design**



## IPC-PT 10 Series

**Panel-Mount  
 Panel PC 10 Series**  
 Windows CE .NET 4.2, Fanless, 240MHz SH-4 Processor

Touch Panel IP65

		
12.1 inch TFT SVGA	10.4 inch TFT VGA	6.5 inch TFT VGA
12.1" TFT color SVGA (800 × 600)	10.4" TFT color VGA (640 × 480)	6.5" TFT color VGA (640 × 480)
<b>IPC-PT/LS10AC-4E</b>	<b>IPC-PT/MV10AC-4E</b>	<b>IPC-PT/SV10DC1-4E</b>

PC-PT/L10AC, PC-PT/LS10AC and IPC-PT/MV10AC Series are also available in 12 and 24VDC versions. Please contact us for details.

For Dimensions see Page F-11

## IPC-PT 15 Series

**Open-Frame  
 Panel PC 15 Series**  
 Windows CE .NET 4.2, Fanless, 240MHz SH-4 Processor

Touch Panel IP65

		
12.1 inch TFT SVGA	10.4 inch TFT VGA	6.5 inch TFT VGA
12.1" TFT color SVGA (800 × 600)	10.4" TFT color VGA (640 × 480)	6.5" TFT color VGA (640 × 480)
<b>IPC-PT/LS15AC-4E</b>	<b>IPC-PT/MV15AC-4E</b>	<b>IPC-PT/SV15DC1-4E</b>

For Dimensions see Page F-11

### Features

- Slim, compact design with IPC-PT 10 Series has lightweight aluminum face (Embedding portion = 49/46/60mm)
- LCD arm mountable (VESA-standard 70mm).
- 128MB(SDRAM) system memory
- Built-in rewritable 32MB Flash ROM available for user programs
- Interfaces include 2x serial ports, USB, PC card, 100BASE-TX, general-purpose I/O and stereo sound. Drivers for interfaces are also provided.
- 10 second (min) high-speed start-up achieved by memory loading boot function
- CONTEC Manager supporting system development via schedule, FTP server, AutoRUN and boot functions.
- IPC-PT 10 Series have IP65-compliant dust proof / water resistant front panels
- Optional expansion unit [IPC-PAC(PCI)-C1] is available to add 1x short-size PCI slot. \*1

\* It cannot be used for IPC-PT/SV10, IPC-PT/SV15.

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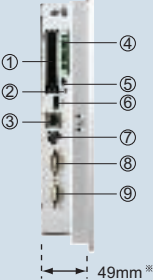
### F-05

- Windows CE .NET 4.2 SH4
- IPC-BX 10
- IPC-PT 10
- IPC-PT 15
- Windows CE .NET / 3.0 SH3
- IPC-BX MSH3
- IPC-PT SSH3
- IPC-PT MSH3

# Panel PCs with Windows CE

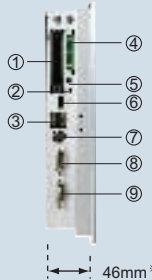
## Interfaces

■ IPC-PT/LS10AC-4E



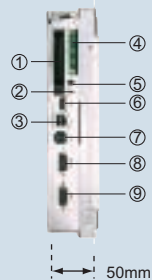
49mm\*

■ IPC-PT/MV10AC-4E



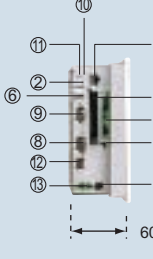
46mm\*

■ IPC-PT/LS15AC-4E  
■ IPC-PT/MV15AC-4E



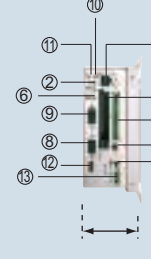
50mm\*

■ IPC-PT/SV10DC1-4E



60mm\*

■ IPC-PT/SV15DC1-4E



65mm\*

\* Mounting Depth

The interface is the same on both models excluding display.

- ① PCMCIA
- ② Reset
- ③ LAN
- ④ I/O
- ⑤ Sound

- ⑥ USB
- ⑦ Keyboard
- ⑧ COM 1
- ⑨ COM 2
- ⑩ USER LED

- ⑪ POWER LED
- ⑫ DIP-SW (SW1)
- ⑬ +12VDC power supply connector
- ⑭ AC Adapter jack

## Specifications

Model	IPC-PT/LS10AC-4E	IPC-PT/LS15AC-4E	IPC-PT/MV10AC-4E	IPC-PT/MV15AC-4E	IPC-PT/SV10DC1-4E	IPC-PT/SV15DC1-4E
CPU	SH4 HD6417751RBP 240MHz					
Memory	System memory: 128MB (SDRAM), Flash memory (NFDISK)*1: 32MB, Flash memory for OS: 32MB					
Display	Type 12.1-inch TFT color LCD SVGA (800 × 600)		10.4-inch TFT color LCD VGA (640 × 480)		6.5-inch TFT color LCD VGA (640 × 480)	
	Number of colors 65536					
Touch panel	Resolution 4,096 × 4,096 (emulated in 800 × 600)		4,096 × 4,096 (emulated in 640 × 480)			
	Detection method Analog resistive					
Interfaces	Keyboard / Mouse PS/2 (6-pin MINI-DIN), accommodates both keyboard and mouse with commercial branch cable -					
	Serial COM1(16550, 9-pin D-SUB), COM2(16550, 9-pin D-SUB, selectable RS-422A/485) COM1(16550, 9-pin D-SUB), COM2(16550, 9-pin D-SUB)					
	Audio φ3.5 Stereo mini jack Full-scale output level 1.0Vrms(Typ.)					
Ethernet	10BASE-T/100 BASE-TX 1ch, NS DP83816A					
PC card slot	PCMCIA Type II × 2, or Type III × 1					
General-purpose I/O	3 × each Opto-isolated input and output				4 × each Opto-isolated input and output	
USB	1ch (USB1.1)				2ch (USB1.1)	
OS	Windows CE.NET 4.2					
Power Supply / Instantaneous Blackout	AC100V (input range: AC100V~240V 50VA) / 17ms or less	+12VDC (input range: 12VDC ± 5% 2.5A)	AC100V (input range: AC100V~240V 50VA) / 17ms or less	+12VDC (input range: 12VDC ± 5% 2.5A)		
Dimensions (mm) (excluding panel)	303(W) × 243(H)	252(W) × 190(H)	292(W) × 227(H)	216(W) × 164(H)	190(W) × 155(H)	138(W) × 105(H)
Front Panel Protection	IPC-PT/10 series: Dust-proof / water-proof - IP65 compliant IPC-PT/15 series: Dust-proof / water-proof - IP65 compliant (using attached packing)					
Weight	Approx. 3.5kg *2	Approx. 2.8kg *2	Approx. 3.3kg *2	Approx. 2.4kg *2	Approx. 1.5kg *2	Approx. 1.4kg *2

\*1: Rewritable times: 300,000; MTBF=4,797,667 hours (Rate of CF card presumed failure)

\*2: Exclusive of cables, optional accessories and screws, etc.

## Options

Name	Description
Screen Protective Seal	
IPC-CV6	Protective seals for 6.4-inch display (10pcs)
IPC-CV	Protective seals for 10.4-inch display (10pcs)
IPC-CV12	Protective seals for 12.1-inch display (10pcs)
PCI Expansion unit	
IPC-PAC(PCI)-C1	1 slot expansion unit for PCI Half Size
Stand	
IPC-SND-03 *1	Desk Stand
AC Adapter	
IPC-ACAP12-01	+12VDC output AC adapter
Cable	
IPC-ACC03E3	AC cable (2m, 125VAC)

Name	Description
Manual	
IPC-PT/SV10DC1-HME	English manual of IPC-PT/SV10DC1
IPC-PT/SH4-HME	English manual of IPC-PT/SH4
IPC-PT/SV15DC1-HME	English manual of IPC-PT/SV15DC1
IPC-PT/15SH4-HME	English manual of IPC-PT/15SH4
IPC-PT/SH4CE4-SME	English manual of software (Windows CE.4.2)

Manuals are available on CD-ROM or you can download them for free from our Web site.

news box

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Windows CE .NET 4.2 SH4

IPC-BX 10

IPC-PT 10

IPC-PT 15

Windows CE .NET / 3.0 SH3

IPC-BX MSH3

IPC-PT SSH3

IPC-PT MSH3

# Box PCs with Windows CE

## IPC-BX MSH3 Series

### Postcard Size Box PC with Windows CE .NET 4.0

#### IPC-BX/MSH3WS-CE400E

Hitachi SH-3 200MHz CPU, 32MB RAM, Windows CE .NET 4.0



For Dimensions see Page F-11

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## F-07

- Windows CE .NET 4.2 SH4
- IPC-BX 10
- IPC-PT 10
- IPC-PT 15
- Windows CE .NET / 3.0 SH3
- IPC-BX MSH3**
- IPC-PT SSH3
- IPC-PT MSH3

CONTEC's IPC-BX/MSH3WS Series, equipped with Hitachi's SH-3CPU RISC chip, incorporates basic interfaces including keyboard, ethernet, serial and VGA. This high-quality box computer is compact in size and is compliant with Windows CE.net applications.

Designed for embedding, Windows® CE allows you the flexibility of installing necessary components only. It outperforms other Windows® operating systems with its compactness, easy control of system power, quick start-up and low cost - all making it an attractive choice for embedded applications.

As embedded PCs, CONTEC's IPC-BX/MSH3WS Series offer an ideal replacement for conventional PCs, PLCs and microcomputers that are often used exclusively for embedded applications. These units are available with a variety of options to help meet application development needs.

\* CONTEC accepts orders for CE-related hardware development and offers system support for OEMs.

Features	
● Compact (Postcard size)	● Ethernet interface (10BASE-T)
● 32MB memory	● 3 serial interface ports (2 connectors provided on front)
● 32MB flash ROM	● Card slots for function expansion
● 32MB XIP ROM	1× PCMCIA Type-II, 1× Compact Flash Type-III (memory card only)
● PC/104 interface	● 10 seconds from power on to start up using Xip-ROM module

### Specifications

Model	IPC-BX/MSH3WS-CE400E
CPU	SH3 SH7709S 200MHz
Memory	Flash memory 32MB, DRAM 32MB, XIP ROM 32MB
COM	COM1: 16550, 9-pin D-SUB COM2: With built-in CPU SCIF, 9-pin D-SUB COM3: With built-in CPU SCI, software switchable, 20-pin pin header
Touch Panel I/F	Supported as RS-232C interface
Ethernet	10 BASE-T NE2000 compatible
PIO I/F	CMOS 16-bit, signal voltage: 0V to 3.3V, 8-bit input, 8-bit output
A/D I/F	6-ch /10-bit / conversion speed: 9.0µsec/ch (Max.), Input range: 0V to 3.3V / Input capacity: 20pF, Conversion accuracy: ± 8LSB <sup>*1</sup>
D/A I/F	2-ch / 8-bit / conversion speed: 9.0µsec/ch (max), Output range: 0V to 3.3V/ output voltage: 3mA, Conversion accuracy: ± 6LSB <sup>*1</sup>
Expansion bus(PC/104 bus)	Interrupt available / DMA, bus master functions not available
Allowable expansion boards	3 boards (1 board <sup>*2</sup> )
Keyboard / Mouse interface	PS/2 (6-pin MINI-DIN)
LCD I/F	Up to 800 × 600 (256 color), Compatible with CONTEC LCD unit / External connection with optional connector
CRT I/F	Compatible with VGA/SVGA (256 colors) (15-pin HD-SUB)
PC Card slot	PCMCIA Type II × 1, CF CARD Type I × 1 (memory card only)
Operating Temp. / Storage Temp. / Humidity	0°C to 50°C / -10°C to 60°C /20 to 90% (no condensation)
Floating dust particles / Corrosive gases	Not excessive / None
Electricity Resistance	Atmospheric discharge: 4kV (EN 61000-4-2, IEC 1000-4-2, Level2) Atmospheric discharge: 8kV (EN 61000-4-2, IEC 1000-4-2, Level3)
Line-noise <sup>*3</sup>	AC line: 2kV Signal line: 1kV (EN61000-4-4, JEC1000-4-4 Level 3)
Vibration Resistance	10-50 Hz /semi-amplitude 0.15mm 50-500 Hz / 2.0G X,Y,Z axis, 23 min. (IEC68-2-6 compliant)
Impact Resistance	10G X,Y,Z axis, 11ms semi-sinusoidal wave (IEC68-2-27 compliant)
Power Supply	5VDC ± 5%, Max. 1.3A (main unit only)
Power Consumption (main unit only)	Max. 1.3A
Dimensions (mm)	145(W) × 103(D) × 65.8(H)
Weight	980g (2.16 lbs)

<sup>\*1</sup>: The accuracy of the onboard A/D and D/A depends upon the installation environment. Not recommended for use in applications requiring high precision.  
<sup>\*2</sup>: This is the number of allowable boards when the optional LCD connection interface [IPC-SHCL-2T] is connected.  
<sup>\*3</sup>: When using a dedicated power supply unit [IPC-POA100SH or IPC-POA100SHL]

### Options

Name	Description
AC Adapter	
IPC-POA100SH	Exclusive power supply unit
IPC-ACC0DE3	AC cable (100VAC)
Mounting bracket	
IPC-SHDIN	DIN rail mounting bracket
Optional Accessory	
PIO-16/16L(104)	32-channel digital I/O, PC-104 bus
PCE50/37P-1.5	Digital I/O cable
IPC-SHCL-2T	LCD interface board
IPC-SHPRN	Printer interface board
IPC-SHPRN/S	Printer & Sound interface board
IPC-SHBLK	Case expansion
Manual	
IPC-BX/MSH3-HME	Hardware manual
IPC-CE.NET1-SMU	Software manual for Windows CE .NET 4.0
IPC-BX/MSH3-SME	Software manual for Windows CE .NET 3.0

Manuals are available on CD-ROM or you can download them for free from our Web site.

# Box PCs with Windows CE

## Postcard Size Box PC (Standard Type) with Windows CE 3.0

### IPC-BX/MSH3VS-300E

Hitachi SH-3 200MHz CPU, 32MB RAM, Windows CE 3.0



IPC-BX/MSH3H

For Dimensions see Page F-11

## Features

- Compact (Postcard size)
- Interfaces include  
10BASE-T LAN, 3× serial ports (2× connectors on front of unit), Keyboard, LCD(optional), PC/104
- Card slots for function expansion  
1× PCMCIA Type-II, 1× Compact Flash Type-III (memory card only)
- 3× boot methods  
On-board Flash ROM: Can be used in stand-alone mode
- Network:  
For central management of operating systems and applications during development
- ATA card:  
Makes it easier to change operating systems or applications  
Can also transfer to on-board flash ROM.

## Specifications

Model	IPC-BX/MSH3VS-300E
CPU	Hitachi SH3 SH7709S 200MHz
Memory	Flash 32MB, DRAM 32MB
XIP ROM	-
COM	RS-232C: COM1: 9-pin 16550-compliant D-SUB; COM2: 9-pin D-SUB with built-in CPU SCIF RS-232C/RS-485: COM3: software switchable, 20-pin pin header with built-in CPU SCI
Touch Panel I/F	RS-232C
Ethernet	10 BASE-T (NE2000 compatible)
PIO I/F	CMOS 16-bit, signal voltage: 0V to 3.3V, I/O direction setting in 8-bit units.
A/D I/F	6-channel 10-bit, Max. 9.0μsec, signal voltage 0V to 3.3V, resolution: ± 8LSB*1
D/A I/F	2-channel, 8-bit Max. 9.0μsec, signal voltage 0V to 3.3V, resolution: ± 6LSB*1
Expansion bus(PC/104 bus)	DMA, bus master not supported, interrupts are supported
Allowable expansion boards	4 boards (2 boards*2)
Keyboard / Mouse interface	PS/2 (6-pin MINI DIN connector)
LCD I/F	Up to 800 × 600 (256 colors), with optional external connector (compatible with CONTEC LCDs)
CRT I/F	Compatible with VGA/SVGA (256 color) (15-pin HD-SUB)
Printer I/F	Available with optional IPC-SHPRN or IPC-SHPRN/S (compatible with Windows CE3.0)
PC Card slot	1 × PCMCIA Type II, 1 × CF CARD Type I (memory card only)
Operating Temp. / Storage Temp. / Humidity	0°C to 50°C / -10°C to 60°C / 20 to 90% (no condensation)
Floating dust particles / Corrosive gases	Not excessive / None
Electricity	Atmospheric discharge: Contact discharge: 4kV (IEC1000-4-2, EN61000-4-2, Level2), Atmospheric Discharge: 8kV (IEC1000-4-2, EN61000-4-2, Level3)
Resistance	Line-noise *3: AC Line: 2kV, Singel Line: 1kV (EN61000-4-4, JEC1000-4-4, Level3)
Vibration Resistance	10~50Hz / semi-amplitude 0.15mm, 50~500Hz / 2.0G, 23min each in x, y, z directions (IEC68-2-6 compliant)
Impact Resistance	10G, half-sine shock for 11ms each in x, y, z directions (IEC68-2-27 compliant)
Power Supply	5VDC ± 5%, 4-pin nylon connector
Power Consumption (main unit only)	1.3A (Max.)
Dimensions (mm)	145(W) × 103(D) × 49(H)
Weight	800g

\*1: The accuracy of A/D and D/A depends on the installation environment including power supply, wiring and ambient temperature.

Connection to machinery requiring high degree of accuracy not recommended.

\*2: Number available when the optional LCD connection interface (IPC-SHCL-2T) is used.

\*3: When using dedicated power supply unit (IPC-P0A100SH or IPC-P0A100SHL)

Please refer to left page (F-07) for the Options.

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IPC-PT 10

IPC-PT 15

Windows CE .NET / 3.0 SH3

IPC-BX MSH3

IPC-PT SSH3

IPC-PT MSH3



# Panel PCs with Windows CE

## IPC-PT SSH3 Series

### Open Frame Panel PC with Windows CE .NET 4.0

#### IPC-PT/SSH3VW-CE400E

6.4" TFT color, Hitachi SH3/200MHz, 32MB RAM, Windows CE.Net 4.0



For Dimensions see Page F-12

### Open Frame Panel PC with Windows CE .NET 3.0

#### IPC-PT/SSH3VV-CE300E

6.4" TFT color, Hitachi SH3/200MHz, 32MB RAM, Windows CE 3.0



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- Windows CE .NET 4.2 SH4
- IPC-BX 10
- IPC-PT 10
- IPC-PT 15
- Windows CE .NET / 3.0 SH3
- IPC-BX MSH3
- IPC-PT SSH3
- IPC-PT MSH3

Features
<ul style="list-style-type: none"> <li>● Compact (Postcard size)</li> <li>● 32MB flash ROM</li> <li>● PC/104 interface</li> <li>● 32MB memory</li> <li>● 32MB XIP ROM *1</li> <li>● Ethernet interface (10BASE-T)</li> <li>● 3 serial interface ports (2 connectors provided on front)</li> <li>● Card slots for function expansion                             <ul style="list-style-type: none"> <li>1× PCMCIA Type-II, 1× Compact Flash Type-III (memory card only)</li> </ul> </li> <li>● 10 seconds from power on to start up using Xip-ROM module</li> </ul>

\*1: IPC-PT/SSH3VW-CE only

Interfaces
<ul style="list-style-type: none"> <li>■ IPT-PT/SSH3VW-CE400E (left side)</li> <li>■ IPC-PT/SSH3VV-CE300E (left side)</li> </ul> <ul style="list-style-type: none"> <li>RESET SW</li> <li>DIP-SW</li> <li>COM2</li> <li>COM1</li> <li>LAN</li> <li>Keyboard/Mouse</li> <li>Touch Panel</li> <li>Card Slot</li> <li>Compact Flash Slot</li> <li>Terminal for 12VDC power supply</li> <li>Jack for AC switching adapter</li> </ul> <p>IPC-PT/SSH3VV-CE300E</p>

### Specifications

Model	IPC-BX/MSH3WS-CE400E	IPC-BX/MSH3WS-CE400E
CPU	Hitachi SH3 SH7709S: 200MHz	
Memory	Flash: 32MB, DRAM: 32MB, XIP ROM: 32MB	Flash memory: 32MB, DRAM: 32MB
Display		
Type	6.4" TFT color LCD 640 × 480 (VGA)	
Number of colors	256	
Touch panel		
Resolution	1,024 × 1,024 (emulated in 640 × 480)	
Detection method	Analog resistive	
Interfaces		
Keyboard / Mouse	PS/2 (6-pin MINI DIN connector)	
Serial	2× RS-232C (9-pin D-SUB ×2), 1× RS-232C/RS-485 (30-pin header, software selectable) / 2× RS-232C 9-pin D-SUB, 1× RS-232C/RS-485/Pin header connector	
PC card slot	1× PCMCIA Type II, 1× CF CARD Type I (Memory Card only)	
General-purpose I/O	Digital I/O *1, Analog to Digital *1, Digital to Analog *1	
Expansion bus (PC/104)	DMA, Bus Master not supported / interrupts are supported - Supports up to 2 expansion boards (total current consumption must be less than 1A)	
OS	Windows CE .NET 4.0	Windows CE 3.0
Power supply / Instantaneous blackout	12VDC ± 5%, 1.0A (Max.), supplied from Terminal*2 or AC adapter*3 / 20ms or less (when AC adapter is used)	
Front panel protection	IP65 compliant (using attached packing)	
Dimensions (mm)	135.6 ± 0.5(W) × 102 ± 0.5(H) (Exclusive of panel)	
Weight	Approx. 1.375kg	Approx. 1.3kg

\*1: When using 30-pin header connector  
 \*2: MC 1, 5/3-GF-3.5 (PHOENIX CONTACT)  
 \*3: Using IPC-ACAP12-01 (AC switching adapter)

### Options

Name	Description
AC Adapter	
IPC-ACAP12-01	+12VDC output AC adapter
Screen Protective Seal	
IPC-CV6	Protective seals for 6.4-inch display (10pcs)
Manual	
IPC-PT/SSH3-HMU	Hardware manual

### IPC-PT/SSH3VW-CE400E

Name	Description
Manual	
IPC-CE.NET1-SMU	Software manual for Windows CE 4.0

### IPC-PT/SSH3VV-CE300E

Name	Description
Manual	
IPC-CE.NET1-SMU	Software manual for Windows CE 3.0

Manuals are available on CD-ROM or you can download them for free from our Web site.

# Panel PCs with Windows CE

## IPC-PT MSH3 Series

### Panel Mount Panel PC with Windows CE 3.0

#### IPC-PT/MSH3VV-CE300E

10.4" TFT color, Hitachi SH3/200MHz,  
32MB RAM, Windows CE 3.0



For Dimensions see Page F-12

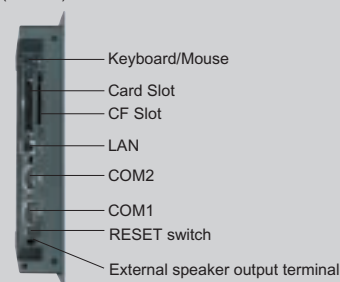
### Features

- Compact size
- 32MB memory
- Ethernet interface (10BASE-T)
- 2 serial interface ports
- Card slots for function expansion

1× PCMCIA Type-II, 1× Compact Flash Type-III (memory card only)

### Interfaces

#### ■ IPT-PT/MSH3VV-CE300E (left side)



### Specifications

Model	IPC-PT/MSH2VV-CE300E
CPU	Hitachi SH3 SH7709S: 200MHz
Memory	Flash memory: 32MB, DRAM: 32MB
Display	
Type	10.4" TFT color LCD 640 × 480 (VGA)
Number of colors	256
Touch panel	
Resolution	1,024 × 1,024 (emulated in 640 × 480)
Detection method	Analog resistive
Interfaces	
Keyboard / Mouse	PS/2 (6-pin MINI DIN connector)
Serial	×2 (COM1: 9-pin 16550-compliant D-SUB; COM2: 9-pin D-SUB with built-in CPU SCIF, RS-422A/485 switchable)
PC card slot	×1 PCMCIA Type II, ×1 CF CARD Type I (Memory Card only)
GPIO	n/a
Expansion bus (PC/104)	n/a
Supported OS	Windows CE 3.0
Power supply / Instantaneous blackout	12VDC ± 5% 1.3A (Max.), supplied from Terminal*1 or AC adapter*2 / 20ms or less (when AC adapter is used)
Front panel protection	IP65-compliant front panel
Dimensions (mm)	292±0.5(W) × 252±0.5(H)
Weight	Approx. 3.5kg

\*1: Using IPC-ACAP200/12-01 (Power supply)

\*2: Using IPC-ACAP12-01 (AC switching adapter)

### Options

Name	Description
AC adapter	
IPC-ACAP12-01	+12VDC output AC adapter
Power supply	
IPC-POA200-/12-01	+12VDC output power supply unit
Screen Protective Seal	
IPC-CV	Protective seals for 10.4-inch display (10pcs)

Name	Description
Other	
IPC-PT/MSH3-HMU	Hardware manual
IPC-BX/MSH3-SME	Software manual
IPC-SND-03	Desk stand

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Windows CE .NET 4.2 SH4

IPC-BX 10

IPC-PT 10

IPC-PT 15

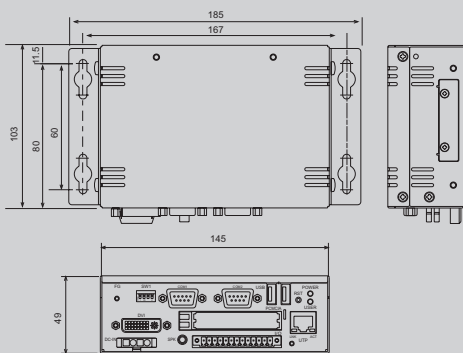
Windows CE .NET / 3.0 SH3

IPC-BX MSH3

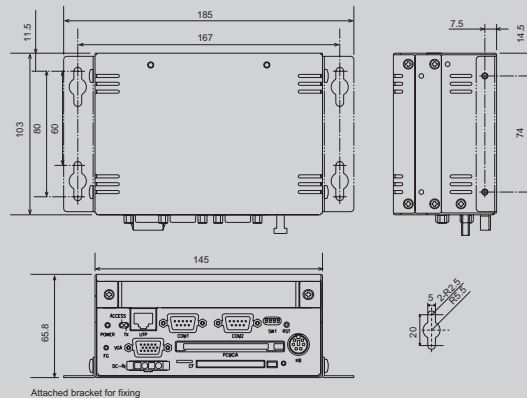
IPC-PT SSH3

IPC-PT MSH3

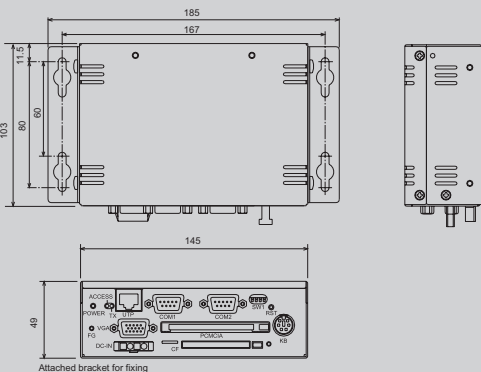
IPC-BX/M10DC5-4E



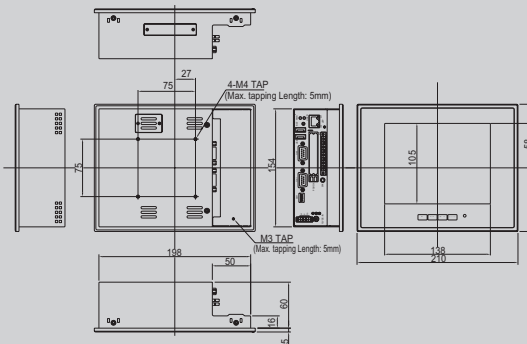
IPC-BX/MSH3WS series



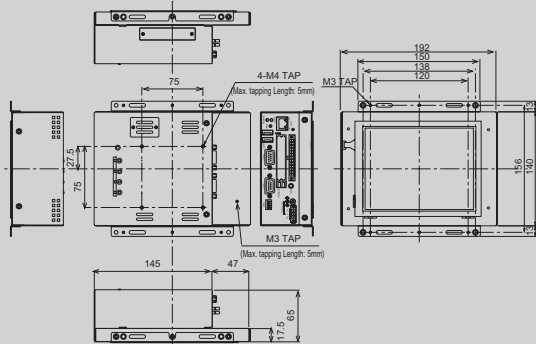
IPC-BX/MSH3VS series



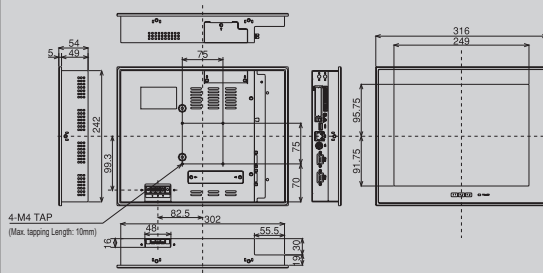
IPC-PT/SV10DC series



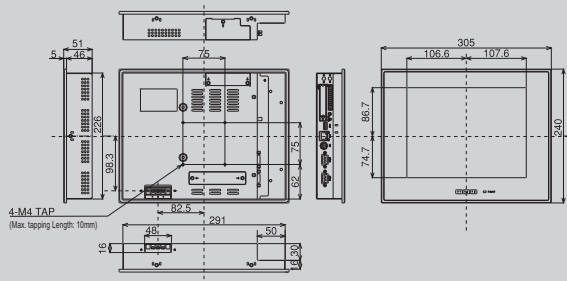
IPC-PT/SV15DC series



IPC-PT/LS10AC series



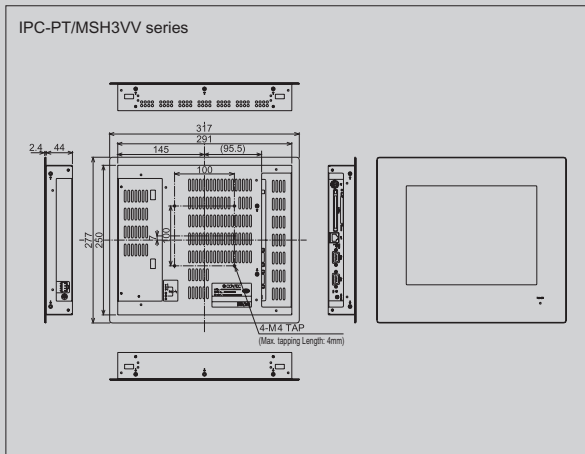
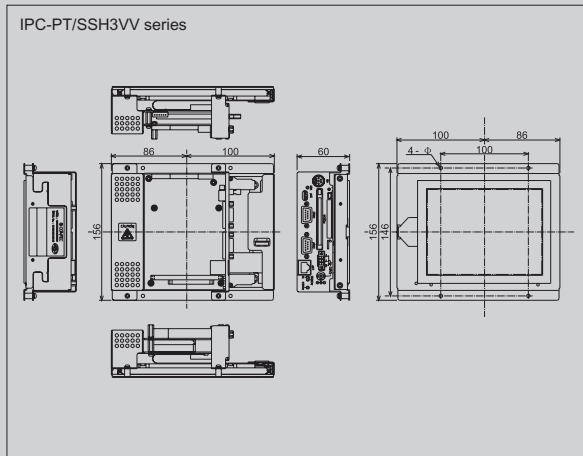
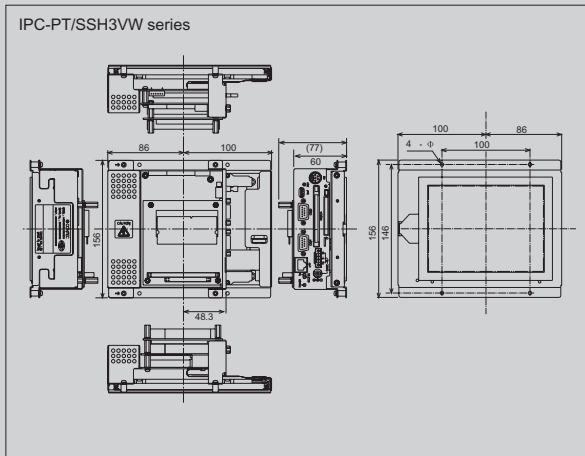
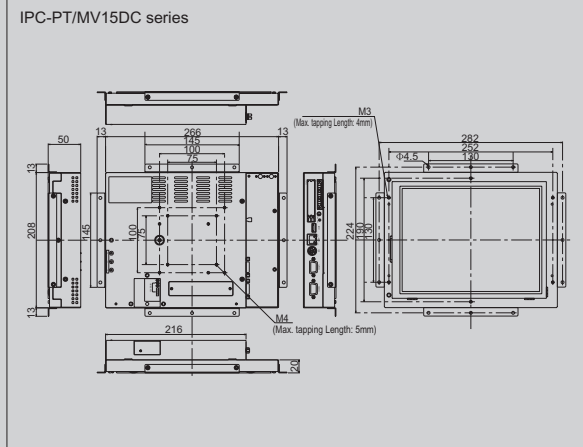
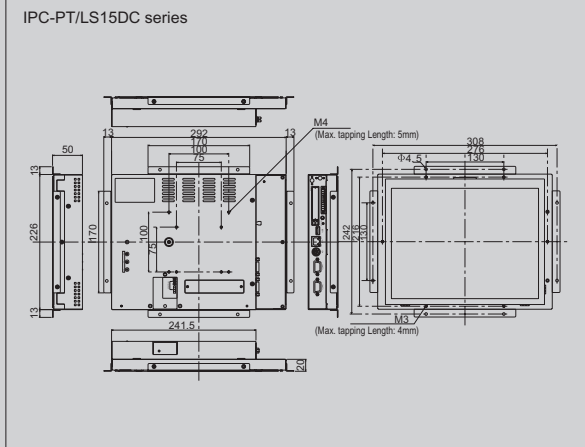
IPC-PT/MV10AC series



Unit: (mm)

# Panel PCs with Windows CE

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Unit: (mm)

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IPC-PT 10

IPC-PT 15

Windows CE .NET / 3.0 SH3

IPC-BX MSH3

IPC-PT SSH3

IPC-PT MSH3