

# Modular System Industrial Panel PCs

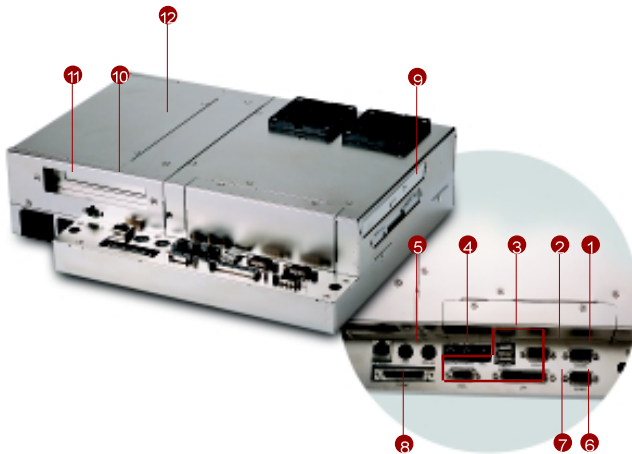
## AMB-2000HT/AMB-2020HT



▲ AMB-2000HT  
10.4" LCD + ACS-2300  
Control Box



▲ AMB-2020HT  
12.1" LCD + ACS-2300  
Control Box



▲ ACS-2300



▲ 1 Meter Remote Operating

- |                                |                            |
|--------------------------------|----------------------------|
| 1. Dual USB Ports              | 7. PS/2 keyboard connector |
| 2. LAN Controller(Ethernet)    | 8. External panel port     |
| 3. Serial COM port connector   | 9. 24x CD-ROM drive/FDD    |
| 4. VGA port                    | 10. Power on/off           |
| 5. SPP/ ECP/ EPP parallel port | 11. Power connector        |
| 6. PS/2 mouse connector        | 12. Cooling fan            |

### Introduction

The AMB-2000HT/AMB-2020HT modular system panel PC, are PC-based industrial computers that is designed to serve as a Man Machine Interface. They are full-function PC-based systems with a 10.4" VGA (640 x 480) or 12.1" SVGA (800 x 600) color TFT hi-brightness, long-life time LCD displays and works with different control modules via a 50-pin cable. The compact dimensions are ideal for automation applications when the installation space is critical. These PCs are characterized by their space saving, flexible selection of control boxes. AMB-2000HT/AMB-2020HT have a heavy-duty steel chassis with a sealed plastic front panel which meets the toughest industrial and environmental standards.

### Features for AMB-2000HT series

#### (10.4" LCD + ACS-2300 Control Box)

- 10.4" VGA color TFT LCD display
- Plastic front panel and heavy-duty stainless steel chassis
- Water-proof front panel meets NEMA 4/12 & IP65
- All-in-one SBC, NS Geode GXm 233MHz
- Four 16C550 RS-232C ports; one RS-232C port can also be set as RS-422/485
- Disk drive space for CD-ROM, FDD and HDD
- DiskOnChip flash disk socket
- Resistive touchscreen (optional)

### Specifications for AMB-2000HT series

#### (10.4" LCD + ACS-2300 Control Box)

- **Construction:** Heavy-duty steel chassis & NEMA 4/12 plastic front panel.
- **CPU:** NS Geode GXm 233MHz
- **Memory:** 32MB SDRAM (Up to 128MB)
- **Display:** 10.4" VGA (640 x 480) color TFT LCD
- **LCD/CRT controller:**  
NS Cx5530 Chipset  
UMA supports up to 2.5MB display memory
- **Network (LAN):** Realtek RTL8139B 10/100 Base-T Ethernet controller
- **I/O ports:**  
4 serial ports: 3 x RS-232, 1 x RS-232/422/485  
(One is reserved for touchscreen)  
1 parallel port (support ECP/EPP)  
1 PS/2 keyboard interface  
1 PS/2 mouse interface
- **Disk Drive Housing:**  
3.5" HDD or  
2.5" FDD and Slim 1.44MB FDD or  
2.5" HDD and Slim 24x CD-ROM
- **USB connector:** Dual USB ports
- **Front panel color:** PMS cool gray 4C
- **Mounting:** Panel mount or Wall mount (ACS-2300 Control Box only, optional)
- **Power supply:**  
Universal 70W switching power supply
- **Dimension (W x H x D):**  
330 x 252 x 95mm (13" x 10" x 3.7")
- **Gross weight:** 8.2Kg (18.1 lbs)

### Features for AMB-2020HT series

#### (12.1" LCD + ACS-2300 Control Box)

- 12.1" SVGA color TFT LCD display
- Plastic front panel and heavy-duty stainless steel chassis
- Water-proof front panel meets NEMA 4/12 & IP65
- All-in-one SBC, NS Geode GXm 233MHz
- Four 16C550 RS-232C ports; one RS-232C port can also be set as RS-422/485
- Disk drive space for CD-ROM, FDD and HDD
- DiskOnChip flash disk socket
- Resistive touchscreen (optional)

### Specifications for AMB-2020HT series

#### (12.1" LCD + ACS-2300 Control Box)

- **Construction:** Heavy-duty steel chassis & NEMA 4/12 plastic front panel.
- **CPU:** NS Geode GXm 233MHz
- **Memory:** 32MB SDRAM (Up to 128MB)
- **Display:** 12.1" SVGA (800 x 600) color TFT LCD
- **LCD/CRT controller:**  
NS Cx5530 Chipset  
UMA supports up to 2.5MB display memory
- **Network (LAN):** Realtek RTL8139B 10/100 Base-T Ethernet controller
- **I/O ports:**  
4 serial ports: 3 x RS-232, 1 x RS-232/422/485  
(One is reserved for touchscreen)  
1 parallel port (support ECP/EPP)  
1 PS/2 keyboard interface  
1 PS/2 mouse interface
- **Disk Drive Housing:**  
3.5" HDD or  
2.5" HDD and Slim 1.44MB FDD or  
2.5" HDD and Slim 24x CD-ROM
- **USB connector:** Dual USB ports
- **Front panel color:** PMS cool gray 4C
- **Mounting:** Panel mount or Wall mount (ACS-2300 control box only, optional)
- **Power supply:**  
Universal 70W switching power supply
- **Dimension (W x H x D):**  
346 x 271 x 93mm (13.6" x 10.7" x 3.7")
- **Gross Weight:** 8.8Kg (19.4 lbs)

### Power Supply

- **Input Voltage:** 85~264V AC
- **Output Voltage:**  
+5V@10A, +12V@1.5A, -12V@0.3A
- **MTBF:** 7200,000 Hrs per MIL — Handbook 217F
- **Safety:** UL, CUL, TUV approved
- **EMI:** FCC Class B, CISPR22B

### Environmental

- **Operating temperature:** 0° to 50°C (32~122°F)
- **Storage temperature:** -20° to 60°C (-4~140°F)
- **Storage humidity:** 5 to 95%, non-condensing
- **Vibration:**  
5 to 17 Hz, 0.1" double-amplitude displacement  
17 to 500 Hz, 1.5G peak to peak
- **Shock:** 10G peak acceleration (11 msec. duration)
- **EMI:** FCC/CE Class A

### Touchscreen (optional)

**Type:** 4/8-wire, analog resistive

**Resolution:** 1024 x 1024

**Light transmission:** 72%

**Lifetime:** 1 hundred million touches

**Operating pressure:** 30-45 grams for finger, 10 grams for stylus pen. Contact bounce< 10ms

**Controller:** RS-232 interface

**Power consumption:** +5V @200mA

**OS support:** MS DOS, Windows 3.1, Windows 95, Windows 98, Windows NT, Windows 2000.

### Ordering Information

- **AMB-2000HT**  
Modular system Panel PC, ACS-2300 with 10.4" color TFT LCD display
- **AMB-2000HTT**  
AMB-2000HT + touchscreen
- **AMB-2020HT**  
Modular system Panel PC, ACS-2300 with 12.1" color TFT LCD display
- **AMB-2020HTT**  
AMB-2020HT + touchscreen
- **ACS-2300**  
All-in-one NS Geode GXm 233MHz SBC, 70W AC power supply
- **Optional**
  - CPU
  - RAM
  - HDD
  - Slim CD-ROM or Slim FDD
  - 70W DC 10~30V power supply
  - AKB-106 (refer to p.98)  
20 function-key membrane keyboard
  - AKB-107 (refer to p.98)  
56 data-entry membrane keyboard

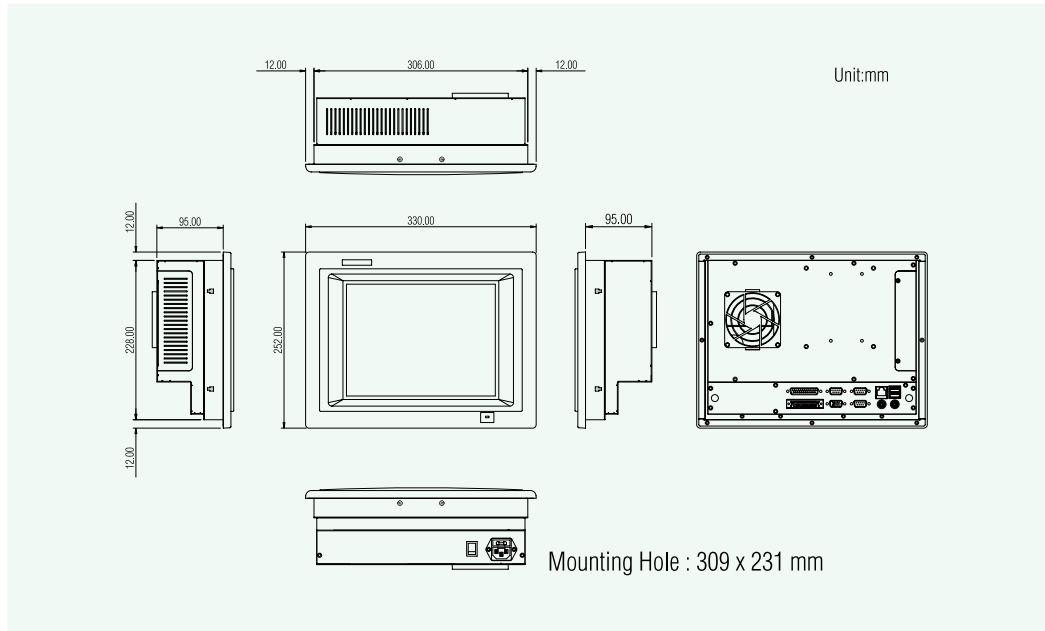
### LCD Specification

Model	AMB -2000HT	AMB -2020HT
Display type	10.4" color TFT LCD	12.1" color TFT LCD
Max. Resolution	640 x 480	800 x 600
Max. Colors	256K	256K
Dot size (mm)	0.33 x 0.33	0.3075 x 0.3075
Luminance (cd/m <sup>2</sup> )	200	250
Viewing angle	90° (H) 50° (V)	120° (H) 100° (V)
Temperature	0° ~ 50 °C (32~122 °F)	0° ~ 50 °C (32~122 °F)
Brightness Control	N/A	Yes
LCD MTBF (Hrs)	50,000	50,000
Back Light MTBF (Hrs)	20,000	25,000

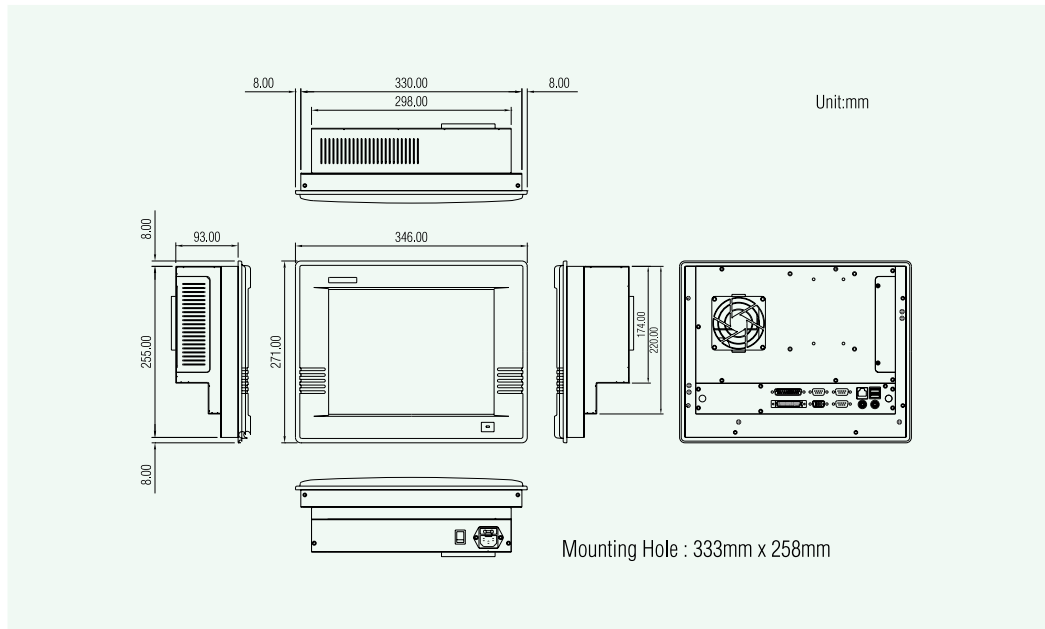


Dimension

AMB-2000HT



AMB-2020HT



ACS-2300

