

MARS-3100R

10.4" Fully-rugged Industrial Tablet PC



Features

- Rugged design protects system from shock/vibration damage
- IP65-rated, fully-sealed chassis for water/dust resistance
- Powerful communication capabilities with optional built-in WLAN, Bluetooth and GSM/GPRS/EDGE modules
- Supports Windows XP for easy development
- Wide -20 to 60° C operation for extreme environments, like ironworks or icehouses

Introduction

The Advantech MARS-3100R series is a 10.4" Industrial Tablet PC for applications such as manufacturing, warehousing, factory maintenance, field service, transportation and police, fire or other emergency services. The rugged design of MARS-3100R resists shock and vibration to safeguard data while on the move. The whole MARS-3100 chassis is fully sealed to IP65 ratings to prevent water and dust damage in outdoor applications. In addition, the optional built-in WLAN, Bluetooth and GSM/GPRS/EDGE modules facilitate data transfer and communication with others.

Powerful System

The MARS-3100R uses an Intel Core Duo ULV U2500 1.2 GHz processor, making it the most powerful model of the MARS-3100 series. This enables the MARS-3100R to run demanding applications like live 3D CAD/CAE demonstrations and other professional programs.

Fully-rugged Design

The wide -20 to 60° C operating temperature, sunlight readable screen and adjustable brightness features of the MARS-3100R makes it a fully-rugged tablet PC that tolerates extreme environments while showing a clear picture.

Wireless Communication

For people on the move, MARS-3100R provides optional built-in GSM/GPRS/EDGE WAN, 802.11b/g LAN and Bluetooth PAN connectivity for complete wireless communication capabilities. All options come with a built-in internal antenna, so users can easily access remote database or exchange information with others no matter where they are.

Specifications

- **Processor** Intel Core Duo Ultra Low Voltage U2500 @ 1.2 GHz
 - **Chipset** Intel 945GM
 - **Graphic** Intel 945GM with 32 ~ 256 MB shared memory
 - **Memory**
 - 512 MB DDR2 533 MHz memory module in one 200-pin SODIMM slot
 - Optional 1 GB DDR2 533 MHz SODIMM
 - **Storage**
 - Removable 2.5" shock mounted HDD
 - Optional CF slot for storage
 - **OS** Supports Windows® XP Professional, Windows® XP Tablet Edition compatible.
- Display**
- **Panel**
 - 10.4" XGA TFT LCD
 - Optional Sunlight Readable solution
 - 8-level brightness

Communication

- **Wireless** Wireless LAN 802.11b/g (Default)
- **WAN** GSM/GPRS/EVDO/EAGE/CDMA (Optional)
- **Bluetooth** Bluetooth v1.2 (Default)
- **GPS** SiRFIII (Optional)

User Control Interface

- Dual panel input, Digitizer and resistive touch screen
- 5-way navigation key
- 3 x application hotkeys (programmable)
- Logon button
- Screen rotation key
- Power button
- WLAN ON/OFF button

I/O Interface

- **RS-232** 1 x 9-pin D-sub RS-232
- **USB** 2 x USB 2.0
- **LAN** 1 x 10/100Base-T, RJ-45
- **VGA out** 1 x 15-pin D-sub VGA
- **Audio** 1 x Microphone jack
1 x Headset jack

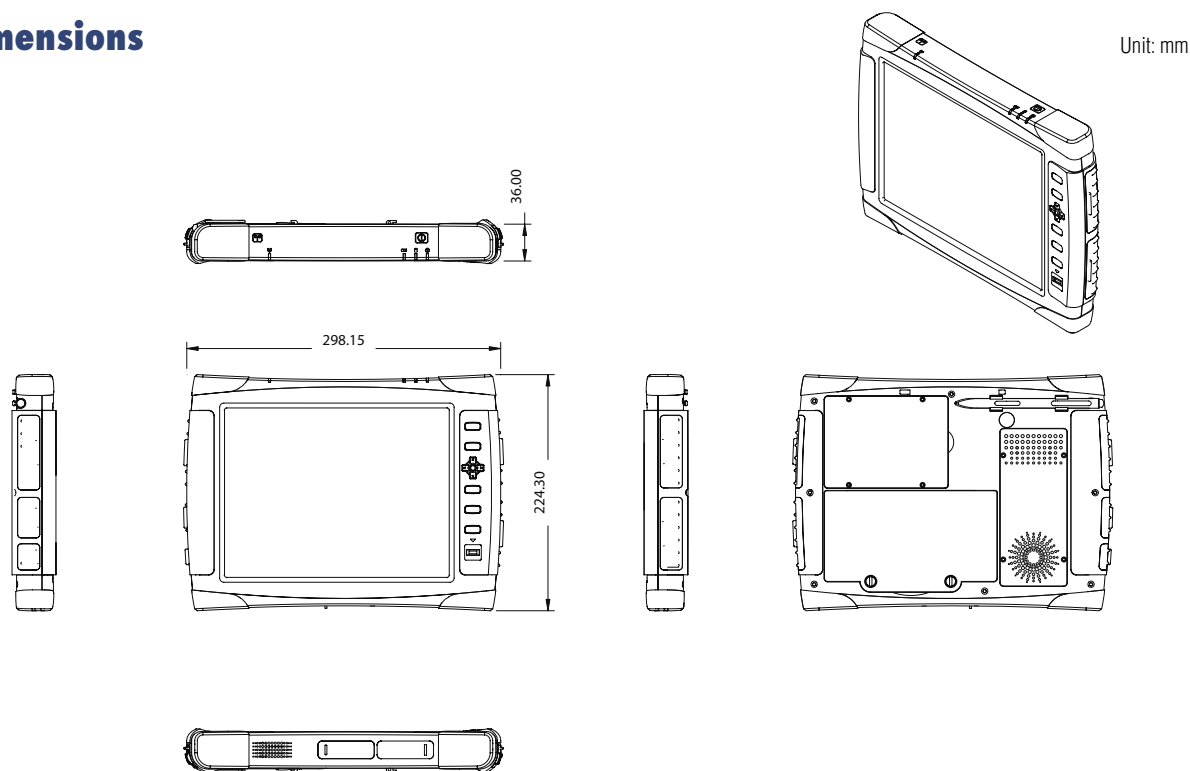
Power

- **Adapter** Auto-switching 100 ~ 240 V, 50 ~ 60 Hz supplying 19 V_{DC} @ 3.42 A
- **Battery** Warm-swappable 11.1 V @ 3600 mAh Li-ion battery pack
- **Battery Life** 2.5 ~ 3.5 hours
- **Charging Time** 2.5 hours

Mechanical

- **Dimension (W x D x H)** 298.15 x 224.30 x 36 mm
- **Weight** 2.1 kg

Dimensions



Environment

- **Operation Humidity** 0% ~ 95% non-condensing
MIL-STD810F Method 507.4
- **Storage Humidity** 0% ~ 95% non-condensing
MIL-STD810F Method 507.4
- **Operation Temperature** -20 ~ 60° C
MIL-STD 810F Methods 501.4 and 502.4 Procedure II
Cold boot (battery mode): 0° C @ 50% charge
Cold boot (adaptor mode): Any
- **Storage Temperature** -40 ~ 75° C
MIL-STD 810F Methods 501.4 and 502.4 Procedure I
- **Thermal Shock** 1.5 ~ 5° C / minute over -20 ~ 60° C
MIL-STD810F-503.4
- **Water/Dust Resistance** Rain blown at 1.7 mm/min, 64 km/hour wind velocity.
Drip test: 280 liter/m2/hour from 1 meter height.
MIL-STD-810F Method 506.4 Procedure I & III
Particle size < 149 µm, 10±7 g/m3, 1.5 ~ 8.9 m/s
wind velocity. MIL-STD-810F Method 510.4 Procedure I
IP65 equivalent
- **Drop** 3 ft free drop to concrete. Basic model only
According to IEC 68-2-32/MIL-STD-810F, Method 516.5
- **Vibration (Integrity)** 0.04 g²/Hz, 20 ~ 1000 Hz
-6 dB/octave 1000 ~ 2000 Hz
MIL-STD810F method 514.5C-17
- **Vibration (Vehicle)** Composite Wheeled Vehicle
MIL-STD810F method 514.5C-3
- **Mechanical Shock** 20 G, 11 ms, Terminal sawtooth, operating
40 G, 11 ms, Terminal sawtooth, Non-operating
- **Crash Shock** 75 G, 11 ms, Terminal sawtooth

- **Low Pressure** 15,000 ft In accordance with MIL-STD810F method
500.4 Procedure I
- **Solar Radiation** 1120±47 W/m² @ 50° C, 7 x 24 hours,
MIL-STD-810F Method 505.4, Procedure II
- **Salt Fog** 5±1% salt solution, 24 hr wet and 24 hr dry, two cycle
MIL-STD-810F Method 509.4

Certifications and Standards

- **Certifications** FCC, CE, UL/cUL, CB and CCC
- **Standards** FCC: FCC15, Class B for emission
CE: EN60950-1 for safety, EN55022 (CISPER22) for
emission and EN55024 for immunity
UL/cUL: UL60950-1 and UL1604
CB: IEC60950-1
CCC: GB4943-2001 for safety, GB9254-1998 for
emission and GB17625.1-2003 for harmonic current
emission

Ordering Information

- **MARS-3100R-51300E** MARS-3100R basic model. 60 GB HDD, 512 MB DDR2
RAM, 802.11b/g, Bluetooth, Windows XP Professional
- **MARS-3100R-51312E** Basic model with fingerprint scanner module and 1.3
M CMOS camera
- **MARS-3100R-51900E** Basic model with GSM/GPRS module
- **MARS-3100R-51340E** Basic model with GPS module
- **MARS-3100R-51940E** Basic model with GSM/GPRS and GPS module