Vital Signs Monitor
with BP, Temperature* and SpO₂*

*Temperature & SpO₂ optional
SunTech CT50

The CT50 vital signs monitor easily provides reliable blood pressure (BP), SpO2, and temperature measurements for neonatal, pediatric, and adult patients. Intervals can be set to automatically take BP readings, and clinical alarms can be programmed for each parameter. The CT50 uses SunTech’s trusted Advantage™ BP technology, and offers industry-leading Masimo SET® pulse oximetry, as well as Covidien Filac 3000 temperature. Innovative features such as BP averaging and HL7 messaging are included. The intuitive, touch-screen interface provides users all of the necessary features for reviewing, analyzing, and transferring vital signs data.

**Reliable:** Uses SunTech Advantage™ BP, the market-leading clinical-grade automated BP technology, optional Covidien Filac 3000 Digital Thermometry, and optional Masimo SET Pulse Oximetry.

**Accurate:** Averaging Mode allows clinicians to automate the process of taking and averaging multiple office BP measurements. This process has been shown to improve the quality and accuracy of office BP measurements while reducing or eliminating white coat response.¹⁻³

**Connected:** Connects to a network via ethernet or optional WiFi. Uses industry standard HL7 IHE profiles to facilitate communication of patient information and measurement data with the EMR. Built-in memory can store over 1000 patients and 5000 measurement events.

**Flexible:** Portable design with a rechargeable lithium-ion battery capable of over 8 hours of continuous operation⁴. Easy to Use: Intuitive user interface with simple icons and clear 8 inch LCD touch-screen display (800 x 600 pixels).

**Accessories**
- Deluxe Mobile Stand: High quality, hospital-grade mobile stand with basket and lockable, anti-static casters.
- Barcode Scanner: For easily scanning patient information into the CT50.
- USB WiFi Dongle: For wireless networking and mobility.
- Printer: To instantly print readings at device.

**Technical Specifications**

**Environmental Specifications**
- Operating temperature: +5°C to +40°C
- Operating humidity: 15% to 85% (non condensing)
- Transportation and storage temperature: -20°C to +55°C
- Transportation and storage humidity: 10% to 93% (non condensing)

**Power Specifications**
- Input voltage: 100V-240V AC
- Frequency: 50Hz/60Hz
- Input current: 0.7A-1.5A

**Physical Specifications**
- Size (WxHxD): 314mm × 132mm × 239mm
- Weight (Includes lithium battery, with no accessories): <4kg

**Hardware Specifications**

**Battery**
- Type: Rechargeable lithium ion
- Size: 200mm×57mm×24mm
- Weight: < 360 g
- Rated voltage: 10.8 VDC
- Capacity: 6600 mAh
- Operating time*: > 8 hours
- Charge time: 6h to 100% (while powered off)

**Connectors**
- Power: 1 x AC power inlet
- Wired network: 1 x RJ45 interface
- USB: 4 x USB
- Equipotential ground: 1
- Nurse call: 1 x RJ11 interface
- DC output: 1 x 15V/1.2A

**Data Storage**
- Number of Patients: >1,000
- Measurement Events: >5,000
- Alarm Events: >100,000
- Log Events: >10,000

⁴New, fully-charged battery at 25°C ambient temperature, using continuous SpO2, NIBP on AUTO mode for 15 minute intervals, & taking a digital temperature measurement every 15 min.

*One new and fully charged battery at 25°C ambient temperature, with NIBP in AUTO mode set for 15 minute interval, continuous SpO2, and taking manual Temp every 15 minutes.
## Measurement Specifications

### Pulse Oximetry (SpO₂)

<table>
<thead>
<tr>
<th>SpO₂</th>
<th>Masimo SET</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Range</td>
<td>0% to 100%</td>
<td>0% to 100%</td>
</tr>
<tr>
<td>Resolution</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Accuracy</td>
<td>70% to 100%: ±2% (adult/pediatric, non-motion conditions) 70% to 100%: ±3% (neonate, non-motion conditions) 70% to 100%: ±3% (motion conditions) 0% to 69%: unspecified</td>
<td>70% to 100%: ±2% 40~69%: ± 3% 0% to 39%: unspecified</td>
</tr>
<tr>
<td>Average Time</td>
<td>2.4s, 4.6s, 8s, 10s, 12s, 14s, 16s</td>
<td>Normal: 8s, Slow: 16s, Fast: 4s</td>
</tr>
<tr>
<td>Update Period</td>
<td>&lt;30s</td>
<td>&lt;30s</td>
</tr>
<tr>
<td>Time After Defibrillation</td>
<td>&lt;5s</td>
<td>&lt;5s</td>
</tr>
<tr>
<td>Pulse Rate Range</td>
<td>25 bpm to 240 bpm</td>
<td>20 bpm to 250 bpm</td>
</tr>
<tr>
<td>Resolution</td>
<td>1 bpm</td>
<td>1 bpm</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±3 bpm (non-motion conditions) ±5 bpm (motion conditions)</td>
<td>±1% or ±1 bpm, whichever is greater</td>
</tr>
</tbody>
</table>

Note: The Masimo SPO₂ sensor for adult/pediatric/neonate has been validated for motion accuracy in human blood studies on healthy adult volunteers in induced hypoxia studies while performing rubbing and tapping motions at 2 to 4 Hz at an amplitude of 1 to 2 cm and a non-repetitive motion between 1 to 5 Hz at an amplitude of 2 to 3 cm in induced hypoxia studies in the range of 70-100% SpO₂ against a laboratory co-oximeter and ECG monitor. 1% has been added to the results to account for the effect of fetal hemoglobin. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

### Covidien Filac 3000 Thermometer

| Measurement Range | 30.0°C - 43.0°C |
| Measurement Site | Oral, Axillary, Rectal |
| Measurement Modes | - Direct Mode (all sites, direct measurement) - Standard Mode (Axillary/Rectal, calculated) - Quick Mode (Oral, calculated) |
| Unit of Measure | °C, °F |
| Resolution | 0.1°C/F |
| Accuracy | Quick Mode (Oral): ± 0.3°C (Axillary/Rectal): ± 0.1°C |
| Standard Mode | (Axillary/Rectal): ± 0.1°C |
| Direct Mode | ± 0.1°C |
| Measurement Time | Quick Mode (Oral): 6s - 10s (Axillary) 10s - 14s (Rectal) 14s - 18s |
| Standard Mode | 60s – 120s |

### SunTech Advantage NIBP

| Measurement Range | SYS 40~260 mmHg DIA 20~200 mmHg |
| Pressure Accuracy | ±3 mmHg over full range in operating conditions |
| Unit of Measure | mmHg, kPa |
| Recovery Time After Defibrillation | <5s |
| Pulse Rate Range | 30 ~ 220 bpm |
| Pulse Rate Accuracy | ± 2% or ± 3 bpm, whichever is greater |
| Intervals for AUTO Measurement | 5min to 240min |

### Limited Warranty

SunTech Medical, Inc. provides to the original purchaser the following limited warranty from date of invoice:

- Main unit, SpO₂ modules, temp modules: 2 years
- OPD Blood Pressure Cuffs: 2 years
- Accessories (SpO₂ sensors, temp probes, BP hose, etc): 90 days
With more than 30 years dedicated to developing our world-class blood pressure technology, we are confident that we don’t miss a beat - so you won’t either. It’s our legacy. It’s SunTech Medical. 

**It’s The Difference In Clinical Grade.**

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SunTech CT50 Part Numbers

CT50 Monitor Configurations*

99-0130-02  SunTech CT50, BP, Masimo SpO₂ (includes Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor 2501, and SpO₂ Adapter Cable)
99-0130-03  SunTech CT50, BP, Masimo SpO₂, Printer (includes Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor 2501, SpO₂ Adapter Cable, 1 roll thermal paper)
99-0130-06  SunTech CT50, BP, Nellcor Comp. SpO₂ (includes Nellcor compatible Adult SpO₂ Reusable Sensor, and SpO₂ Adapter Cable)
99-0130-07  SunTech CT50, BP, Nellcor Comp. SpO₂, Printer (includes Nellcor compatible Adult SpO₂ Reusable Sensor, and SpO₂ Adapter Cable, 1 roll thermal paper)
99-0130-10  SunTech CT50, BP, Masimo SpO₂, Temp (includes Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor 2501, SpO₂ Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers)
99-0130-11  SunTech CT50, BP, Masimo SpO₂, Temp, Printer (includes Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor 2501, SpO₂ Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers, 1 roll thermal paper)
99-0130-14  SunTech CT50, BP, Nellcor SpO₂, Temp (includes Nellcor-compatible Adult SpO₂ Reusable Sensor, SpO₂ Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers)
99-0130-15  SunTech CT50, BP, Nellcor Comp. SpO₂, Temp, Printer (includes Nellcor-compatible Adult SpO₂ Reusable Sensor, SpO₂ Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers), 1 roll thermal paper)

*All systems include 10’/3m BP Patient Hose, Battery, Quick Start Guide, Adult Plus OPD Cuff, Large Adult Plus OPD Cuff

Masimo SET SpO₂ Accessories

Masimo M-LNC-10 SpO₂ Patient Cable 10’/3.0m, 2525  Contact Masimo for price and availability
Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor, 2501  Contact Masimo for price and availability

Standard SpO₂ Accessories (Nellcor-Compatible)

52-0014-00  CT50 Reusable SpO₂ Pediatric Finger Sensor
52-0014-01  CT50 Reusable SpO₂ Neonatal Finger Sensor
Covidien Filac 3000 Temperature Accessories
52-0009-00  F3000 Oral/Axillary Temp Probe, 9’
52-0009-01  F3000 Rectal Temp Probe, 9’

Blood Pressure Cuffs (Each)
98-0599-41  OPD Child (12-19cm) BP Cuff, Bayonet
98-0599-43  OPD Small Adult (17-25cm) BP Cuff, Bayonet
98-0599-45  OPD Adult (23-33cm) BP Cuff, Bayonet
98-0599-4A  OPD Adult Plus (28-40cm) BP Cuff, Bayonet
98-0599-47  OPD Large Adult (31-40cm) BP Cuff, Bayonet
98-0599-4C  OPD Large Adult Plus (40-55cm) BP Cuff, Bayonet

Blood Pressure Cuffs (Box of 5)
98-0600-41  OPD Child (12-19cm) BP Cuff, Bayonet
98-0600-43  OPD Small Adult (17-25cm) BP Cuff, Bayonet
98-0600-45  OPD Adult (23-33cm) BP Cuff, Bayonet
98-0600-4A  OPD Adult Plus (28-40cm) BP Cuff, Bayonet
98-0600-47  OPD Large Adult (31-40cm) BP Cuff, Bayonet
98-0600-4C  OPD Large Adult Plus (40-55cm) BP Cuff, Bayonet

CT50 Accessories
46-0040-00  Deluxe Mobile Stand
45-0005-00  CT40/50 WiFi Dual Band USB Dongle
91-0028-16  10’/3.0m Patient BP Hose, Bayonet to Bayonet
91-0003-00  AC Power Cord, Americas
91-0003-05  AC Power Cord, Europe
91-0003-06  AC Power Cord, UK
98-0900-02  CT50 Rechargeable Lithium Ion Battery
99-0184-00  CT50 Barcode Scanner
52-0029-00  Printer Paper