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 LCD touch-screen display.

**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.

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

Physical Specifications
- Size (WxHxD): 314mm × 132mm × 239mm
- Weight: <4kg

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

Hardware Specifications

Display
- Type: Color TFT LCD Touch Screen
- Size (diagonal): 8 inches
- Resolution: 800 × 600 pixels

Printer
- Type: Thermal dot array
- Horizontal resolution: 16 dots/mm (at 25 mm/s paper speed)
- Vertical resolution: 8 dots/mm
- Paper width: 48 mm
- Recording speed: 12.5 mm/s, 25 mm/s, 50 mm/s
- Recording modes: Real-time recording, periodic recording, alarm recording

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)

*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.
Connectors

Power 1 x AC power inlet
Wired network 1 x RJ45 interface (10-100 BASE-TX, IEEE 802.3)
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

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
Measurement Specifications

SunTech Advantage NIBP

Measurement Range
- Adult: SYS 40~260 mmHg, DIA 20~200 mmHg
- Child: SYS 40~160 mmHg, DIA 20~160 mmHg
- Neonate: SYS 40~130 mmHg, DIA 20~100 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

Measurement Modes
- Adult: Manual, AUTO, STAT, Average
- Child: Manual, AUTO, STAT, Average
- Neonatal: Manual, AUTO

Pulse Oximetry (SpO₂) - Masimo SET

SpO₂

Measurement Range: 0% to 100%
Resolution: 1%
Accuracy:
- 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

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.

Average Time: 2-4s, 4-6s, 8s, 10s, 12s, 14s, 16s
Update Period: <30s
Recovery Time After Defibrillation: <5s

Pulse Rate

Measurement Range: 25 bpm to 240 bpm
Accuracy: ±3 bpm (non-motion conditions)
          ±5 bpm (motion conditions)
Resolution: 1 bpm

Perfusion Index
Measurement range: 0.05% to 20%
**Pulse Oximetry (SpO₂) - Generic**

**SpO₂**
- **Measurement Range**: 0% to 100%
- **Resolution**: 1%
- **Accuracy**: 70% to 100%: ±2%
  - 40~69% : ± 3%
  - 0% to 39%: unspecified
- **Alarm Range**: 0% to 100%, high/low limit can be adjusted continuously
- **Average Time**: Normal: 8s, Slow: 16s, Fast: 4s
- **Update Period**: <30s
- **Recovery Time**: After Defibrillation <5s

**Pulse Rate**
- **Measurement Range**: 20bpm to 250 bpm
- **Resolution**: 1 bpm
- **Accuracy**: ±1% or ±1 bpm, whichever is greater

**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
  - Standard Mode (Axillary/Rectal): ± 0.1°C
  - Direct Mode: ± 0.1°C
- **Measurement Time**: Quick Mode (Oral): 6s - 10s
  Standard Mode (Axillary) 10s - 14s, (Rectal) 14s – 18s
  Direct Mode (All Sites) 60s – 120s
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.
# SunTech CT50 Part Numbers

## CT50 Monitor Configurations*

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>99-0130-02</td>
<td>SunTech CT50, BP, Masimo SpO₂ (includes Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor 2501, and SpO₂ Adapter Cable)</td>
</tr>
<tr>
<td>99-0130-03</td>
<td>SunTech CT50, BP, Masimo SpO₂, Printer (includes Masimo M-LNCS DCI Adult SpO₂ Reusable Sensor 2501, SpO₂ Adapter Cable, 1 roll thermal paper)</td>
</tr>
<tr>
<td>99-0130-06</td>
<td>SunTech CT50, BP, Nellcor Comp. SpO₂ (includes Nellcor compatible Adult SpO₂ Reusable Sensor, and SpO₂ Adapter Cable)</td>
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<tr>
<td>99-0130-07</td>
<td>SunTech CT50, BP, Nellcor Comp. SpO₂, Printer (includes Nellcor compatible Adult SpO₂ Reusable Sensor, and SpO₂ Adapter Cable, 1 roll thermal paper)</td>
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<tr>
<td>99-0130-10</td>
<td>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)</td>
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<tr>
<td>99-0130-11</td>
<td>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)</td>
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<tr>
<td>99-0130-14</td>
<td>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)</td>
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<tr>
<td>99-0130-15</td>
<td>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)</td>
</tr>
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</table>

*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

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<tr>
<td>52-0014-00</td>
<td>CT50 Reusable SpO₂ Pediatric Finger Sensor</td>
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<tr>
<td>52-0014-01</td>
<td>CT50 Reusable SpO₂ Neonatal Finger Sensor</td>
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## Nellcor™-Compatible SpO₂ Accessories

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<tr>
<td>52-0014-00</td>
<td>CT50 Reusable SpO₂ Pediatric Finger Sensor</td>
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<tr>
<td>52-0014-01</td>
<td>CT50 Reusable SpO₂ Neonatal Finger Sensor</td>
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<tr>
<td>Code</td>
<td>Description</td>
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<tr>
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<tr>
<td>52-0014-02</td>
<td>CT50 SpO₂ Extension Cable</td>
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<tr>
<td>52-0014-03</td>
<td>CT50 Reusable Adult SpO₂ Finger Sensor</td>
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<tr>
<td>52-0009-02</td>
<td>Covidien Filac 3000 Temperature Accessories</td>
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<tr>
<td>52-0009-00</td>
<td>F3000 Oral/Axillary Temp Probe, 9’</td>
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<tr>
<td>52-0009-01</td>
<td>F3000 Rectal Temp Probe, 9’</td>
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<tr>
<td>98-0599-41</td>
<td>Blood Pressure Cuffs (Each) OPD Child (12-19cm)</td>
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<td>98-0599-43</td>
<td>BP Cuff, Bayonet</td>
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<tr>
<td>98-0599-45</td>
<td>OPD Small Adult (17-25cm) BP Cuff, Bayonet</td>
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<td>98-0599-4A</td>
<td>OPD Adult (23-33cm) BP Cuff, Bayonet</td>
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<td>98-0599-47</td>
<td>OPD Adult Plus (28-40cm) BP Cuff, Bayonet</td>
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<tr>
<td>98-0599-4C</td>
<td>OPD Large Adult (31-40cm) BP Cuff, Bayonet</td>
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<td>98-0600-41</td>
<td>Blood Pressure Cuffs (Box of 5) OPD Child (12-19cm)</td>
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<tr>
<td>98-0600-43</td>
<td>BP Cuff, Bayonet</td>
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<td>98-0900-02</td>
<td>CT50 Accessories</td>
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<td>99-0184-00</td>
<td>Deluxe Mobile Stand</td>
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<td>CT40/50 WiFi Dual Band USB Dongle</td>
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<td>91-0028-16</td>
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<td>91-0003-05</td>
<td>AC Power Cord, Europe</td>
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<td>98-0900-02</td>
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<tr>
<td>99-0184-00</td>
<td>CT50 Rechargeable Lithium Ion Battery</td>
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<tr>
<td>52-0029-00</td>
<td>CT50 Barcode Scanner</td>
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<tr>
<td>52-0029-00</td>
<td>Printer Paper</td>
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