TRUMP in the field of Medical industry

---------- Medical Analyzing and Monitoring system

Patient Monitors

Multi-Parameter Patient Monitor

Central Monitoring System

Fetal monitor

Fetal Doppler

Multi-Parameter Patient Monitor

TRUMP-F-01

[Features]

- • 6 Standard parameters: ECG, RESP, NIBP, SP02, 1-TEMRPR/HR.
- • 12.1" high resolution color TFT LCD display.
- • Real time S-T segment analysis, pace-maker detection.
- • Large-font display and On-line help function.
- • Indication of Incorrect manipulation and malfunction analysis.
- • Patient info input management function
- • Multi-lead ECG waveforms display in phase.
- • Large volume of tabular and graphic trends information storage and easy to recall.
- • Capture dynamic waveforms.
- • Efficient resistance to interference of defibrillator and HF knife.
- • UP to 2 hours working capacity of built-in rechargeable battery.
- • Unique accessory management cabinet.
- • Networking capacity
- • Options of IBP and EtCO2.

◆ Safety

IEC60601-1 approved, Category I BF, CF Type

◆ Dimension and Weight

Dimension: 300mm×500mm×350mm

Weight＜9.0KGS

◆ Operation Environment

Temperature: Working : 0~ 40℃

Transportation and storage : -20~ +60℃
Humidity: Working＜85%
Transportation and storage ≤93%
Power: AC100-240V, 50/60Hz
Patient range: Neonate, Pediatric, and adult patients

◆ Performance Specifications

- Display: 12.1 "color TFT
- Rolling and refreshing waveform display
- Resolution: 800×600
  Large-font display
  Standard display
  Multi channels display
- Indicator: Power/battery indicator light
  QRS beep and alarm sound
- Battery: Rechargeable lead acid cell, 12V/4AH Max.24 hours for charging, 2 hours for continuous working
- Trace: 6 waveforms
- Sweep Speed: 12.5mm/s. 25mm/s. 50mm/s
- Trend time: above 72 hours
- Alarm: User-adjustable High .Medium and Low limits 3-level Audible and visual alarm
- Networking: Connected to central monitoring system
- Recorder: Built-in .thermal array
  Plethysmogram waveform: 2 channels
  Record mode: manual, on alarm, time-defined
  Recording width: 50mm
  Printing speed: 25mm/s
- Recording type: Frozen waveform record
  NIBP recall record
  Trend table record
  Alarm record
  Fixed- time record

Standard Display: 4 waveforms

Technical Specification:

◆ ECG

Lead mode: 5 -lead (R, L, F, N, C)
Lead selection: I, II, III, avR, avL, avF, V
Waveform: 2 and 6 channel selectable

Gain selection: 0.25 mm/mv, 0.5 mm/mv, 1 mm/mv, 2 mm/mv

Sweep speed: 12.5mm/s; 25mm/s; 50mm/s
Heart Rate range: Adult: 15~300bpm:
Neonate/ Pediatric: 15~350bpm
Accuracy: ± 1bpm or ± 1%, whichever is greater
Resolution: 1bpm
Filter: Surgery mode: 1~20Hz
Monitor mode: 0.5~40Hz
Diagnostic mode: 0.05~130Hz
Scaling signal: 1mV, ±3%
Protection: Withstand 4000VAC/50 voltage isolation against electrosurgical interference and defibrillation
Alarm range: 15~350bpm
S-T segment detection:
Measurement range:-2.0mV~ +2.0mV
Alarm Range: -2.0mV~ +2.0mV
Accuracy: -0.8mV ~ +0.8mV
Error: ±0.02mV
Arrhythmia analysis: Yes

◆ **NIBP**

- Method: Digital Automatic oscillometric
- Operation mode: Manual/Automatic/Continuous
- Auto measurement time: Adjustable (1 ~480min)
- Measurement Unit: mmHg/ Kpa selectable
- Measurement types: Systolic, Diastolic, Mean
- Measurement range:
- Range of Systolic pressure: Adult: 40~270mmHg
  Pediatric: 40~200mmHg
  Neonate: 40~135mmHg
- Range of mean pressure: Adult: 20~235mmHg
  Pediatric: 20~165mmHg
  Neonate: 20~110mmHg
- Range of diastolic pressure: Adult: 10~215mmHg
  Pediatric: 10~150mmHg
  Neonate: 10-iOOmmHg
- Over-pressure protection: Double safety protection
  Resolution: 1mmHg
  Alarm: Systolic, Diastolic, Mean

Multi-waveforms Display

◆ **SpO2**

Measurement range: 0-100%
Resolution: 1%
Accuracy: ±2% (70-100%); 0-69% unspecified
Alarm range: 0-100%

Pulse Rate:
Range: 20~300bpm
Resolution: 1bpm
Error: ± 1bpm or ±2%, whichever is greater

- **Respiration**

Method: Thoracic impedance
Measurement range:
Adult: 7~120rpm
Neonate/Pediatric: 7-150rpm
Apnea alarm: YES, 10～40s
Resolution: 1rpm
Accuracy: ±2rpm

- **Temperature**

Compatible probe: YSI or CYF
Measurement Range: 5～50℃
Resolution: 0.1℃
Accuracy: ±0.1℃
Channel: dual-channel, provide T1, T2, DT
Refreshing time: about 1s
Average measuring time <10s

- **IBP**

Measurement range: -10~300mmHg
Pressure name: ART, PA, CVP, RAP, LAP, ICP, P1, P2
Channel: 2 channels
Pressure transducer: Sensitivity: 5 μ V/V/mmHg
Impedance range: 300-3000Ω
Accuracy: ± 1mmHg or ±2%, whichever is greater (exclusive of transducer)
Alarm Range: -10~300mmHg

- **EtCO2**

Measurement method: Side stream CO2
Measurement range: 0~99mmHg

Accuracy: ± 2mmHg (0~40mmHg)
Sampling Range: 100ml/min
Sampling rate accuracy: 15%
Respiration rate: 0~120rpm
Respiration accuracy: ±2rpm (0~70rmp)
±5 rpm (>70rmp)

Respiration time <240msec (10% to 90%)

Delay time <2s

- **Standard Configuration:** ECG, NIBP, RESP, 1-TEMP, SPO2, PR
- **Optional:** Thermal Recorder, 1-IBP, 2-IBP, ETCO2

TRUMP-F-02

[Features]

- • 6 Standard parameters: ECG, RESP, NIBP, SPO2, 1-TEMP, PR/HR.
- • 12.1 "high resolution color TFT LCD display.
- • Real time S-T segment analysis, pace-maker detection and ARR analysis.
- • Drug calculation and titration table.
- • Multi display Selectable including Standard, large font, trend coexist, OxyCRG dynamic view and bed-to-bed view display.
- • Indication of Incorrect manipulation and malfunction analysis.
- • On-line help and Patient info input management function.
- • Multi-lead ECG waveforms display in phase.
- • Large volume of tabular and graphic trends information storage and easy to recall.
- • Capture dynamic waveforms.
- • Efficient resistance to interference of defibrillator and HF knife.
- • UP to 2 hours working capacity of built-in rechargeable battery.
- • Unique accessory management cabinet.
- • Networking capacity and nurse-calling system
- • Options of IBP and EtC02.
- • Safety: IEC60601 1 approved, Category I BF, CF Type
- • Dimension and Weight

  Dimension: 300mm×500mm×350mm

  Weight ＜9.0KGS
- • Operation Environment

  Temperature: Working 0～+40℃

  Transportation and storage -20～+60℃

  Humidity: Working ≤85%

  Transportation and storage≤93%

  Power: AC100-240V, 50/60Hz

  Patient range: Neonate, Pediatric, and adult patients

Specification:

Performance Specification:

Display: 12.1 "color TFT
Rolling and refreshing waveform display
Resolution: 800×600
Multi display Selectable including:
Standard display
Multi channels display
Large-font display
Trend coexist display
OxyCRG dynamic view display
Bed-to-bed view display.

- **Trace:** 6 waveforms
- **Sweep speed:** 12.5mm/s, 25mm/s, 50mm/s
- **Indicator:** Power/battery indicator light
  QRS beep and alarm sound
- **Battery:** Rechargeable lead acid cell. 12V/4AH
  Max.24 hours for charging, 2 hours for continuous working
- **Trend time:** above 72 hours
- **Alarm:** User-adjustable High, Medium and Low limits 3-level
  Audible and visual alarm
- **Networking:** Connected to central monitoring system
- **Recorder:**
  Built-in thermal array
  Plethysmogram waveform: 2 channels
  Record mode: manual, on alarm, time-defined
  Recording width: 50mm
  Printing speed: 25mm/s
- **Recording type:**
  Frozen waveform record
  NIBP recall record
  Trend table record
  Alarm record
  Fixed- time record

Bed to Bed view Display

Multi-Lead ECG Waveforms Display in Phase

Technical Specification:

- **ECG**
  Lead mode: 5 -lead (R, L, F, N, C)
  Lead selection: I, II, III, avR, avL, avF, V

Waveform: 2 and 6 channel selectable
Gain selection: 0.25 mm/mv, 0.5 mm/mv, 1 mm/mv, 2 mm/mv
Sweep speed: 12.5mm/s; 25mm/s; 50mm/s
Heart Rate range: Adult: 15~300bpm:
Neonate/ Pediatric: 15~350bpm
Accuracy: ± 1bpm or ± 1%, whichever is greater

Trend Coexist Display

Resolution: 1bpm
Filter: Surgery mode: 1~20Hz
Monitor mode: 0.5~40Hz
Diagnostic mode: 0.05~130Hz
Scaling signal: 1mV, ±3%
Protection: Withstand 4000VAC/50 voltage isolation against electrosurgical interference and defibrillation
Alarm range: 15~350bpm
S-T segment detection:
Measurement range:-2.0mV~ +2.0mV
Alarm Range: -2.0mV~ +2.0mV
Accuracy: -0.8mV ~ +0.8mV
Error: ±0.02mV
Arrhythmia analysis: Yes
Drug concentration analysis: Yes
Oxygen Cardio-respirogram: Yes, Respiration Rate and Respiration wave
Tendency coexistence: Yes, keep 2 hours.

◆ **NIBP**

Method: Digital Automatic oscillometric
Operation mode: Manual/Automatic/Continuous
Auto measurement time: Adjustable (1 ~480min)
Measurement Unit: mmHg/ Kpa selectable
Measurement types: Systolic, Diastolic, Mean
Measurement range:
Range of Systolic pressure: Adult: 40~270mmHg
Pediatric: 40~200mmHg
Neonate: 40~135mmHg
Range of mean pressure: Adult: 20~235mmHg
Pediatric: 20~165mmHg

OxyCRG Dynamic View Display

Neonate: 20~110mmHg
Range of diastolic pressure: Adult: 10~215mmHg
Pediatric: 10~150mmHg
Neonate: 10-100mmHg
Over-pressure protection: Double safety protection
Resolution: 1mmHg
Alarm: Systolic, Diastolic, Mean

SPO2

Measurement range: 0-100%
Resolution: 1%
Accuracy: ±2% (70-100%); 0-69% unspecified
Alarm range: 0-100%
Pulse Rate:
Range: 20~300bpm
Resolution: 1bpm
Error: ± 1bpm or ±2%, whichever is greater

- **RESPIRATION**

  Method: Thoracic impedance
  Measurement range: Adult: 7~120rpm:
  Neonate/Pediatric: 7-150rpm
  Apnea alarm: YES, 10～40s
  Resolution: 1rpm
  Accuracy: ±2rpm

- **TEMPERATURE**

  Compatible probe: YSI or CYF
  Measurement Range: 5～50℃
  Resolution: 0.1℃
  Accuracy: ±0.1℃
  Channel: dual-channel, provide T1, T2, DT
  Refreshing time: about 1s
  Average measuring time <10s

- **IBP**

  Measurement range: -10~300mmHg
  Pressure name: ART, PA, CVP, RAP, LAP, ICP, P1, P2
  Channel: 2 channels
  Pressure transducer: Sensitivity: 5 μ V/V/mmHg
  Impedance range: 300-3000Ω
  Accuracy: ± 1mmHg or ±2%, whichever is greater (exclusive of transducer)

  Alarm Range: -10~300mmHg

- **EtCO2**

  Measurement method: Side stream CO2
  Measurement range: 0~99mmHg
  Accuracy: ± 2mmHg (0~40mmHg)
  Sampling Range: 100ml/min

Sampling rate accuracy: 15%
Respiration rate: 0~120rpm
Respiration accuracy: ±2rpm (0~70rmp)
±5 rpm (>70rmp)
Respiration time <240msec (10% to 90%)
Delay time <2s

- **Standard Configuration:** ECG, NIBP, RESP, 1-TEMP, SPO2, PR
- **Optional:** Thermal Recorder, 1-IBP, 2-IBP, ETCO2

TRUMP-G-01

[Features]

- • 12.1" Large-screen Color TFT Display
- • Light Weight and Portable, Easy Operation Mode
- • AC/DC Power Supply, Uninterrupted Monitoring
- • Built-in High-capacity Battery, Up to 5 Hours Working Time
- • Adjustable Colors for Parameter Data and Curve
- • Maximum 96 Hours Storing and Replaying of Trend Graphic Data
- • Maximum 90 Minutes Capturing and Replaying of ECG Waveforms
- • Protection Against Interference from Defibrillation and High-frequency Electrotome
- • Digital Sp02 Technique, Precise Measurement for Low Perfusion and Finger Shaking
- • Individual Digital Module Structure, Convenient for Maintenance and Upgrade
- • Voice/Light Alarms Accurately Transmit Diseases
- • IP Network Interface, Compatible with Central Monitoring System

Technical Specifications

- **ECG**

Lead Number: 5
Lead Selection: I, II, III, avR, avL, avF, V1-V6
Gain Selection: X0.5, X1, X2, X4
Sweep Speed: 12.5mm/s, 25mm/s, 50mm/s
ECG Channel Display: 2 Channels

HR Range: 0-250bpm
Accuracy: ±1bpm

◆ **NIBP**

Measurement Technique: Automatic Oscillometric
Measurement Range:
Adult: 30-240mmHG
Pediatric: 20-240mmHG
Neonate: 12-135mmHg
Accuracy: ±5 mmHG
Resolution: 1 mmHG
Measure Mode: Manual /Automatic
Automatic Measuring Interval: 1-240min
Unit: mmHg, kPa

◆ **Temperature**

Range: 20℃-45℃
Accuracy: ±0.1℃
Resolution: 0.1℃
Unit: ℃, ℉

◆ **Pulse**

Range: 0-250bpm
Accuracy: +1bpm
Resolution: 1bpm

◆ **SpO2**

Range: 0-100%
Accuracy:±1%(90-100%)
+ 2% (70-89%)
Resolution: 1%

◆ **Respiration**

Range: 0-100bpm Accuracy: +1bpm Resolution: 1bpm
Graphic and Tabular Trends
Parameters Display: HR, Sp02, Respiration, Systolic Pressure, Average Pressure, Diastolic Pressure, Pulse Rate

Feature: 96 Hours Storing of Trend Graph, Capable of Tracing and Showing Parameter Data of Any Selected Point

◆ **Alarm**

Range: Adjustable from Lower to Upper Limit
Indication: Audible and Visual
Cause: Irregular Indication
Printer
Type: 50mm Thermal Printer
Port: Standard Parallel

Safety
In Compliance with IEC60601 and GB9706 Related Standards
Physical Specification
Weight: 6kg
Dimension: 320mm×170mm×280mm

◆ **Standard Configuration**

ECG/HR, SpO2, NIBP Temperature, Pulse, Respiration

◆ **Optional Configuration**

NELLCOR SpO2
Built-in Printer
Specially Accessories for Neonatal and Pediatric Patient

TRUMP-G-02

[Features]

- • 12.1" Large-screen Color TFT Display
- • Light Weight and Portable, Easy to operate
- • AC/DC Power Supply, Uninterrupted Monitoring
- • Built-in Battery, Support 5 Hours Working Time
- • Different Main Interfaces Selectable
- • 3-Hour Trends can Show directly on the Main Interface
- • Maximum 128 Hours Graphic and Tabular Trends Review
- • 5 Minutes ECG Waveforms Replay and S-T Segment Analysis
- • Protection Against Interference from Defibrillation and High-frequency Electrotome
- • Digital Sp02 Technique, Precise Measurement for Low Perfusion and Finger Shaking
- • Individual Digital Module Structure, Convenient for Maintenance and Upgrade
- • Voice/Light Alarms Accurately Transmit Diseases
- • Networking Capability, Compatible with Central Monitoring System

◆ **Standard Configuration**

ECG/HR, SpO2, NIBP, Temperature, Pulse, Respiration

◆ **Optional Configuration**

NELLCOR SpO2
IBP
EtCO2
Built-in Printer

Specially Accessories for Neonatal and Pediatric Patient

Technical Specifications

- **ECG**

Lead Number: 5
Lead Selection: I , II, III, avR, avL, avF, V1-V6
Gain Selection: ×0.5, ×1, ×2, ×4
Sweep Speed: 12.5mm/s, 25mm/s, 50mm/s
ECG Channel Display: 3 Channels, 7 Channels
HR Range: 0-250bpm
Accuracy: +1bpm

- **NIBP**

  Measurement Technique: Automatic Oscillometric
  Measurement Range:
  Adult: 30-240mmHG
  Pediatric: 20-240mmHG
  Nonate: 12-135mmHg
  Accuracy: +5 mmHG
  Resolution: 1 mmHG
  Measure Mode: Manual /Automatic/ Continuous
  Automatic Measuring Interval: 1-240min
  Unit: mmHg, kPa

- **Temperature**

  Range:20℃-45℃
  Accuracy: ±0.1℃
  Resolution: 0.1℃
  Unit: ℃, ℉

- **Pulse**

  Range: 0-250bpm
  Accuracy: + 1bpm
  Resolution: 1bpm

- **SpO2**

  Range: 0-100%
  Accuracy: ±1% (90%-100%)
  ±2% (70%-89%)
  Resolution: 1%

- **Respiration**

  Range: 0-100bpm
  Accuracy: +1bpm
  Resolution: 1bpm

- **Graphic and Tabular Trends**

  Parameters Display: HR, Sp02, Respiration, Systolic Pressure, Average Pressure, Diastolic Pressure, Pulse Rate

Feature: 128 Hours Storing of Trend Graph, Capable of Tracing and Showing Parameter Data of Any Selected Point

◆ **Alarm**

Range: Adjustable from Lower to Upper Limit

Indication: Audible and Visual

Cause: Irregular Indication

◆ **Printer**

Type: 50mm Thermal Printer

Port: Standard Parallel

◆ **Safety**

In Compliance with EC60601 and GB9706 Related Standards

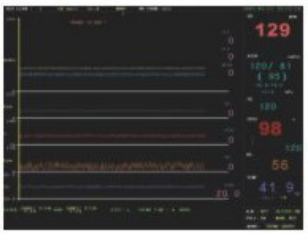
◆ **Physical Specification**

Weight: 6kg

Dimension: 320mm×170mm×280mm

Alarm Setting Interface

7 Channels Display Interface



Trends Graph Review Interface

Parameters Setting interface

TRUMP-E SERIES

TRUMP-E-01

- • 15" color TFT display with 7 waveforms
- • Suitable for adult, pediatric and neonatal patient care
- • Basic parameters (ECG, RESP, DUAL-TEMP, SpO2, NIBP) in a durable case for bedside monitoring and transport
- • Audible and visual alarms with adjustable alarm ranges
- • Full mounting solutions including wall mount, rolling stand
- • Networkable with central monitoring system

• Powerful data management and storage capacity (75-hour graphic and tabular trends for all parameters, 300NIBP measurement, 60events, 20 arrhythmia events with waveforms, etc.)
• Expansion module available now in clinical departments including IBP, EtCO2, FHR/TOCO; Three of four new expansion modules available every year

TRUMP-E-02

- • 10.4" and 12.1" color TFT display with 7 waveforms
- • Suitable for adult, pediatric and neonatal patient care
- • Optional Li-ion battery, automatically and rapid charge, lasting for at least 3 hours
- • Basic parameters (ECG, RESP, DUAL-TEMP, SpO2, NIBP) in a durable case for bedside monitoring and transport
- • Audible and visual alarms with adjustable alarm ranges
- • Full mounting solutions including wall mount, rolling stand
- • Network with central monitoring system
- • Powerful data management and storage capacity (75-hour graphic and tabular trends for all parameters, 300NIBP measurement, 60 events, 20 arrhythmia events with wave-forms, etc.)
- • The application has been expanded to the most clinical departments in the hospital. Only one patient monitor could meet every different need of departments.
- • Expansion module available now in clinical departments including IBP, EtCO2, FHR/TOCO; Three of four new expansion modules available every year
- • 3-channel thermal recorder with adjustable audible and visual alarm

Technical Specification:

◆ **ECG**

Input: 5 wires ECG cable (RA, LA, RL, LL, V)
Lead section: I, II, III, aVR, aVL, aVF, V1～V6
Gain（mm/mV）: ×1/2, ×1, ×2,
Sweep speed (mm/sec): 12.5, 25, 50
Heart rate range: 20-250 BPM
ST segment analysis

◆ **SpO_2**

Sensors: Dual-wavelength light emitting diodes
Test Range: 40～99%
Pulse Rate Range: 20～250 bpm

◆ **Non-invasive blood pressure**

Measurement type: adult, pediatric, neonate

Measurement method: Automatic Oscillation

Measuring Interval: adjust between 0～480min

Blood Pressure Range: 20～250 mmHg

◆ **Respiration:**

Measure Method: Thoracic Impedance

Scope of measure: 0～99 times/min

◆ **Temperature**

Measurement range: 27 - 45 ℃

Unit: ℃ or ℉

Channel: 2

◆ **Power requirements**

Power supply: AC220V/50Hz, DC12V

◆ **Operation Environment**

Temperature: 0 - 40 ℃

Relative humidity ≤ 70%

◆ **Dimension:** 380mm (W) × 330mm (H) × 245mm (D)

◆ **Weight:** 5kg (not including battery and expansion module)

TRUMP-G-03

[Features]

Trend Graph Interface

2-hour trends data with waveforms for all parameters display on the same screen. It can show all the parameters' variation.

A User-friendly Interface TRUMP-G-03 has simple and clear interfaces. The user can choose various display screens according to the different environment, like standard interface, big font Interface and short trend interface, etc. The color of waveforms and parameters can be changed for different clinical requirements.

Excellent Performance TRUMP-G-03 use individual module design, which is convenient for maintenance and upgrade. The inner structure consists of high quality ECG Module, SpO2 Module, NIBP Module, Main Control Module and Power Supply Module, etc.

Super Reliability TRUMP-G-03's design and production strictly comply with the CE standards. The safety, stability and durability of the product are well guaranteed. We use high quality "medical level" material and control each manufacture process seriously. Furthermore, we take more than 10 days aging inspection for testing the reliability.

Rich Clinical Information TRUMP-G-03 owns excellent software processing technique, including

arrhythmia analysis, pacemaker analysis, OxyCRG, S-T segment analysis, drug dose calculation etc. The user can get the required information for clinic decision-making promptly.

Power-off Protection TRUMP-G-03 can save 24 hours' full data, alarm recall and trend graphic after power failure. It can provide you powerful information protection.

Alarm System TRUMP-G-03 has 3-level intellectualized light/voice alarm, breath asphyxia alarm and alarm recall function. It can transfer the change of illness accurately and timely. It can also replay and analysis the

patient status in time.

Nurse Call System TRUMP-G-03's nurse call system can alarm with the patient monitor at the same time. It can transfer the abnormal patient situation in time.

Patient Information System TRUMP-G-03 has powerful information system, which supports patient information input, multi- language selection, 120 hours' trend graphic storage and review. It can meet the requirements of clinic analysis and data management.

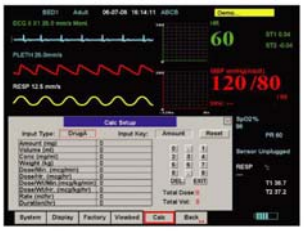
Network System TRUMP-G-03 use Ethernet, support wire and wireless network. It can set up maximum 128 units' central monitoring system.

Standard Configuration:

ECG/HR, SpO2, NIBP, Temperature, Pulse, Respiration

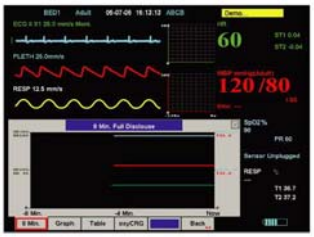
Big Font Interface

Basic parameters (ECG, SpO2, NIBP) in large font for distance view and long-time observe monitoring.



Drug Dose Calculation Interface

It can calculate transfusion speed, drug computation, drug dose. The function supplies more help for doctors.



OxyCRG

Display of the interactive relation between heart rate, respiration and oxygen parameter. It is convenient for observing the clinic change of neonate.

Optional Configuration:

12-lead ECG, IBP, EtCO2, ICG, Multi-gas/O_2, CF Card, Nurse Call System , Built-in Recorder, Special Accessories for Neonatal and Pediatric Patient

TRUMP-D Series

[Features]

- •Displayer: 9.4" /10.4" /12.1" color TFT LCD screen. Adjusting of lightness continuously make patient more comfortable in midnight
- •Battery: Rechargeable high-energy built-in battery
- •Advanced streamline outline design, portable, compact, lightweight

• Operating menu with multi-language interface selection: English, Spanish, Portuguese, Chinese, French, etc.
• Easy operation with user friendly menu structure design and rotary dial
• Against electrosurgical interference and defibrillation and no need to disconnect the monitor from the patient in process of defibrillating.
- • WAN communication function to network with central monitoring system and make long-distance monitoring, diagnosis, maintenance and software upgrade possible
- • Optional built-in wireless networking function
- • Support external printer to record graph and trend
- • Intelligent audio and visual comprehensive alarm
- • In-hospital applications include emergency pre-and post-operative care, ambulatory surgery, intermediate care/step down units, labor and delivery, and hospital-based special procedure areas.
- • Suitable for use in physicians' offices, clinics, outpatient surgical centers, extended care facilities and other patient care areas, which of require affordable monitoring
- • Standard configuration: ECG, HR, PR, SpO2, ST analysis, RESP*2 (RA-LL impedance and nasal cavity), NIBP (with venous punch), TEMP*2(surface and rectal type), Drug dose calculation.

TRUMP-D-01

(with-ETCO2)

(with printer)

- • Displayer: 10.4" color TFT LCD screen with maximum 7-waveform display. Adjusting of lightness continuously make patient more comfortable in midnight
- • Intelligent audio and visual comprehensive alarm
- • Standard configuration: ECG, HR, PR, SpO2, ST analysis, RESP*2 (RA-LL impedance and nasal cavity), NIBP (with venous punch), TEMP*2(surface and rectal type), Drug dose calculation.
- • Optional configuration: Wireless connection, Recorder and ETCO2.

TRUMP-D-02

TRUMP-D-04

D-02A (with-ETCO2)

D-02B (with printer)

D-04

- • Displayer: 12.1" color TFT LCD screen with maximum 8-waveform display.
- • Intelligent audio and visual comprehensive alarm
- • Optional configuration: Wireless connection, Recorder and ETCO2, 2-IBP

TRUMP-D-03

D-03B
with nasal cavity pipe

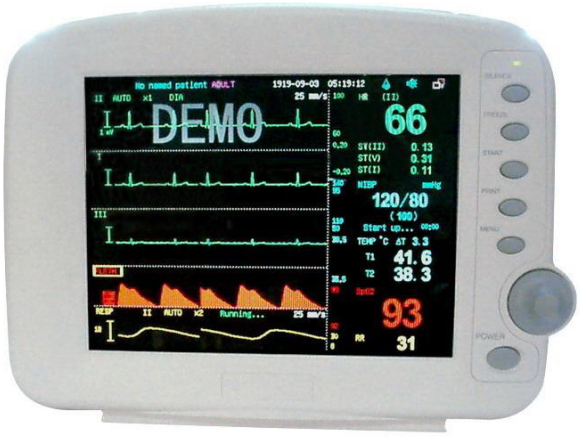
D-03A
with big character display format

- • Displayer: 10.4" color TFT LCD screen with maximum 7-waveform display. Adjusting of lightness continuously make patient more comfortable in midnight
- • Intelligent audio and visual comprehensive alarm
- • Standard configuration: ECG, HR, PR, SpO2, ST analysis, RESP*2 (RA-LL impedance and nasal cavity), NIBP (with venous punch), TEMP*2(surface and rectal type), Drug dose calculation.
- • Optional configuration: Wireless connection, Recorder and ETCO2, 2-IBP

- • Displayer: 9.4" color TFT LCD screen with maximum 7-waveform display.
- • 72 hours data storage.
- • Intelligent audio and visual comprehensive alarm
- • Standard configuration: ECG, HR, PR, SpO2, ST analysis, RESP*2 (RA-LL impedance and nasal cavity), NIBP (with venous punch), TEMP*2(surface and rectal type), Drug dose calculation.
- • Optional configuration: Wireless connection, Recorder and ETCO2

TRUMP-D-05

- •Displayer: 10.4" color TFT LCD screen with maximum 7-waveform display.
- • Intelligent audio and visual comprehensive alarm, review 300 alarm states
- • Standard configuration: ECG, HR, PR, SpO2, ST analysis, RESP*2 (RA-LL impedance and nasacavity), NIBP (with venous punch), TEMP*2(surface and rectal type), Drug dose calculation.
- • Optional configuration: Wireless connection, Recorder .



TRUMP-B SERIES

TRUMP-B series patient monitor is competent for the monitoring of the Echocardiograph, Heart Rate, Temperature, Blood Pressure, Respiration and SpO2.

[Feature]

A. Low power waste.
B. Analysis for arrhythmia and ST segment. Store 96 hours daily data and abnormal data.
C. Automatic identify NIBP measurement for adult child and baby.
D. E-Document instruction for operator. E. Inside Printer and Battery

Technical Specifications

◆ **ECG:**

Sensitivity: ×(0.5、0.75、1.0、1.5、2.0), test error: ±5%

Range frequency: 1Hz～42Hz(＋0.4dB，-0.3dB)；

Common-mode rejection ratio: ≥60dB

Anti interference of high frequency and abnormal signals.

◆ **Oxygenation of the blood:**

Test range: 40%～99%

Accuracy: 85%～99%，±2% (absolute value)

60%-85%， ±4% (absolute value)

◆ **Non-invasive blood pressure:**

Systolic pressure: 4kPa～37kPa,

Diastolic pressure: 1.3kPa～27kPa

Test error: ±0.7kPa or ±5% of bigger value

◆ **Body Temperature:**

Range: 32℃ ～43℃,

Accuracy: ±0.3℃

◆ **Breath frequency:**

Test range: 4times/min ～120times/min

Test error: ±10% or ±2 times/min of bigger value

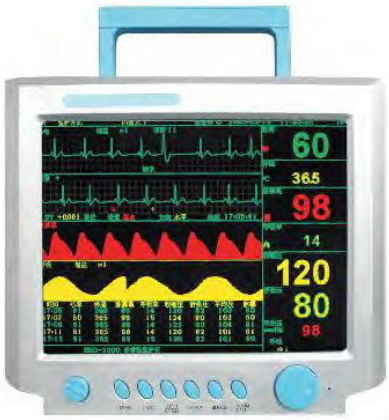
◆ **Limit alarm:** ECG leads exfoliated, Abnormal cardiac rhythm, ST segment deflection, Abnormal body temperature, Abnormal blood pressure, Abnormal oximetry.

TRUMP-C SERIES

[Features]

- •Large screen of 12.1", color TFT induction-style display;
- •Powered by direct and alternating current;
- •Personalized interface marked in Chinese and English, the user may arbitrarily design operating interface;
- •Has the function of cardiograph curve play-back, ST, 96-hour storage of tendency information and review;
- •Has the function to prevent the vibration and surmount the interference from high-frequency electric scalpel and capable of adopting to various clinical conditions;
- •Be able to monitor adults, children, newborn and infants and input patients'data;

TRUMP-C-01



Technical Specification

◆ **ECG:**

Bandwidth: 0.5Hz ～50Hz
CMRR≥80dB
Input impedance ≥5MΩ
Input linear: ±3%
Gain Selection: Auto, ×1/2, ×1, ×2, ×4
ECG Leads: I, II, III, aVR, aVL, aVF, V1～V6
Measure Method: Thoracic Impedance
Respiration waveform: 1/2, 1, 2, 4,

◆ **Temperature:**

Resolution: 1℃

◆ **NIBP**

Measuring Method: Automatic Oscillation

Cuff Inflation: ＜20 sec
Cuff Deflation: ＜40 sec
Original cuff inflation pressure:
Adult mode --180mmHg
Pediatric--100mmHg
Neonatal--80mmHg
Cuff Pressure Range: 0～300 mmHg(40KPa)
Measuring Range: PS: 40～250mmHg
PD: 20～220 mmHg
PM: 30～240mmHg
Working Mode: Manual/ Automatic/ STAT
Measuring Type: Adult/ Pediatric / Neonatal
Measuring Interval: adjust between 0～250min

◆ **SpO_2**

Sensors: Dual-wavelength light emitting diodes
Test Range: 0%～100%
Resolution: 1%
Accuracy: 70%～100%, ±2%
50%～69%, ±3%
Pulse Rate Range: 20～250 bpm
Pulse Accuracy: ±2 bpm
Sampling rate: 1 time/min

◆ **IBP**

Measuring parameters: PS, PD, PM

Accuracy: ±2%
Measuring part: artery, pulmonary artery, center artery, right atrium, left atrium, encephalic
Sampling rate: 60times/sec
Environment temperature: 0℃～60℃

◆ **CO2density**

Measuring Method: Side stream type
Measuring parameters: AWRR, EtCO2, PETCO2
Accuracy: ±2mmHg
Alarm range: 0～120mmHg
Sampling rate: 60times/ sec
Environment temperature: 0℃～60℃
Environment relative humidity: 5～95%
Scope of atmospheric pressure: 500～800mmHg

◆ **Other specification and parameter**

Power supply: 220VAC, 50Hz/DC16V
Consume: less than 80W

Alarm mode: Audible and visual alarm
Display flicker frequency: 1Hz
Puncture voltage：4000V, AC, 50Hz
Safety standard: I type BF
Weight: 5kg

TRUMP-C-04 / 05

Technical Specification:

◆ **ECG:**

Heart Rate Range: 20～250 bpm
Bandwidth: 0.05～75Hz Accuracy: ±1%
ECG Leads: GND, standard I, II, III; limbs aVR, aVL, aVF, V1～V6
Sweep Speed: 12.5mm/s, 25mm/s, 50mm/s
Gain Selection: Auto, ×1/2, ×1, ×2
VPC (arrhythmia) analysis: 50-set VPC events recall
ST Segment Analysis: -2.0～2.0mv
5 minutes ECG waveform recall

◆ **Temperature**

Range: 28℃～43.2℃
Unit: ℃ or F
Resolution: 0.1℃
Accuracy: ±0.2℃

◆ **Respiration**

Method: thoracic impedance
RESP Range: 0～100bpm
Accuracy: ±2bpm

◆ **NIBP**

Measuring Method: Automatic Oscillation
Working Mode: Manual/ automatic/ STAT 5 minutes
Unit: mmHg, KPa
Measuring Range: PS: 50～240mmHg, 6.7～32.0 KPa
PD: 15～180 mmHg, 2.0～24.0KPa
PM: 25～200mmHg, 3.4～26.6KPa
Cuff Pressure Range: 0～320mmHg
Measuring Type: adult/ Pediatric/ Neonatal
Cuff Inflation: ＜20 sec
Cuff Deflation: ＜40 sec

◆ **SpO2**

SpO2 Range: 35～100%
Resolution: 1%
Accuracy: ±2% (90～99%), ±4% (70～89%)
Pulse Rate Range: 30～250bpm
Pulse Accuracy: ±2bpm

◆ **Power supply**

Voltage: 250VAC Frequency: 50Hz
Power Consumption: about 50W

TRUMP-C-06

[Features]

"7 lead (I, II, III; limbs aVR, aVL, aVF, V) and 12 lead(I, II, III; limbs aVR, aVL, aVF, V1～V6) can be displayed in one screen; Be of great advantage to cardiopathy diagnosis and analysis

• Has the function of 10 minutes focus on guardianship, storage of lead waveform and review;

• Has the function of reviewing the history of alarm and non-invasive blood

• At the lowest, AMP can reach 0.1%

Technical Specification:

◆ **ECG:**

Bandwidth: 0.05Hz ～100Hz
CMRR≥80dB
Input impedance ≥5MΩ
Input linear: ±3%
Gain Selection: Auto, ×1/2, ×1, ×2, ×4
ECG Leads: 7 Leads(I, II, III, aVR, aVL, aVF, V) or 12 Leads(I, II, III, aVR, aVL, aVF, V1～V6)
Electrode potential drift: ±0.5V
Noise: ≤40Uv
Calibration signal: 1mV±3%
Heart Rate Range: 10～300 times/minute; Accuracy: ±1%; Resolution: 1bpm
Scanning speed: 12.5, 25, 50mm/sec
ST segment accuracy: ±5%(-2mV～2 mV);
Resolution: 2%

◆ **Respiration:**

Measure Method: Thoracic Impedance
Respiration waveform: 1/2, 1, 2, 4,

Input impedance ≥1MΩ
Scope of measure: 0～80 times/min
Resolution: 1bpm; Accuracy: ±2%

◆ **SpO_2**

Sensors:Dual-wavelength light emitting diodes
Test Range: 0～100%; Resolution: 1%; Accuracy: 70～100%, ±2%
Sampling rate: 1time/sec
Pulse Rate Range: 20～254 bpm; Resolution: 1 bpm; Accuracy: ±1 bpm

◆ **NIBP**

Measuring Method: Automatic Oscillation
Accuracy: ＜1mmHg
Measuring Range: PS: 50～240mmHg, 6.7～32.0 KPa
PD: 15～180 mmHg, 2.0～24.0KPa
PM: 25～200mmHg, 3.4～26.6KPa
Cuff Inflation: ＜20 sec
Cuff Deflation: ＜40 sec
Original cuff inflation pressure:
Adult mode --180mmHg
Pediatric--100mmHg
Neonatal--80mmHg
Cuff Pressure Range: 0～300 mmHg(40KPa)
Measuring Range: Neonatal : 10～155mmHg
Pediatric: 10～200 mmHg
Adult : 10～270mmHg
Working Mode: Manual/ Automatic/ STAT

Measuring Type: Adult/ Pediatric / Neonatal
Measuring Interval: adjust between 1～720min
Overvoltage protection: protect in 3 segment base on adult/ pediatric/ neonatal

◆ **Temperature**

Range: 0℃～50℃
Resolution: 0.1℃
Accuracy: ±0.1℃

◆ **Other specification and parameter**

Power supply: AC 220V±10%, 50Hz/DC16V
Consume: less than 80W
Temperature: 0℃～40℃
Relative humidity: ≤90%
Alarm mode: Audible and visual alarm
Display flicker frequency: 1Hz
Puncture voltage：4000V, AC, 50Hz

Safety standard: IEC-601-1
Weight: 7.5kg

TRUMP-J-01

[Features]

- • Easy-to-read 12.1" active color TFT display
- • Easy to learn and use smart by means of dedicated function keys and rotary knob
- • Preventing from electrotome and defibrillator
- • Humanization design for audible and visual alarm
- • Different windows can be selected for user's needs.
- • It can keep tabular and graphical trend for one week in order to check and analyze.
- • ECG waves of 60 sections for 1 hour can be stored and replayed
- • Digital technology makes SPO2 detection accurate even under motion and low perfusion
- • Monitoring adults, pediatrics, and neonates
- • Two power supply: Internal Battery and AC power
- • EtCO2 is adopted with advanced technology of NON-DISPERSIVE INFRA RED, temperature and time compensation system assures accuracy and stability.(optional)
- • Inside printer can provide report of all kinds of data for parameters or ECG waves (optional)

• The monitors is easy to connect with central workstation, which constitutes the central monitoring system.

• Easy and various bracket to fix

Technical Specification

◆ **ECG**

Lead input: 3leads or 5 leads (RA, LA, LL, RL, V) Lead selection: I, II, III, aVR, aVL, aVF, V (5 Lead) /I, II, III (3 leads)

Gain selection: ×5,×10,×15,×20(mm/mV)

HEART RATE MEASUREMENT:30-254BPM

Accuracy:1BPM

◆ **Non-invasive blood pressure**

Technology: Oscillometric

Unit: mmHg/KPA

MEASUREMENT Modes: Auto, Manual, STAT

Patient type: adult, children, neon

◆ **SPO2 Measurement/Display**

Range:0%～100%

Accuracy ±2%(70～100%)±3%(50～69%)

◆ **Pulse**

Range: 25～254BPM

Accuracy±3BPM

Respiration

Method: impedance method (or CO2 method)

Measurement from Leads: RA to LA

Range: 7-150BPM or 6-60BPM (CO2 method)

Accuracy: ±2BPM

◆ **Temperature**

Probe: YSI 400 series compatible

Range: 29℃ to 45℃

Accuracy: ±0.1℃

Channel number: two

◆ **EtCO2 (optional)**

Technology: NON-DISPERSIVE INFRA RED

Measurement range: 0%-10%

Differentiation:0.1%

Accuracy: ±8% of the result(0.06.0%)

±10% of reading (6.0.010.0%)

◆ **Recorder (optional)**

Recording width:48mm

Paper rolling speed: 25mm/S

Recording type: ECG wave and real time parameter

◆ **Trend**

Trend diagrams and tables for one week can be stored and replayed.

ECG wave of 60 sections (one hour) can be stored and replayed.

◆ **Environmental**

Environment temperature: 5℃～40℃

Relative humidity: less than 80%

Power voltage: AC100～250V frequency:50/60Hz

Air pressure:86～106kPa

◆ **Classification**

Type of Protection: Class I equipment

Degree of Protection: Type CF, Defibrillator-proof

Safety: be true of EN 60601-1 or GB9706

Size and Weight

Size: 32omm(W)×305mm(H)×11140mm(D)

Weight: 5.4Kg

◆ **Performance index :**

Main system: Pentium 4

Display: 1280×1024

Output: HP laser printer

Communication: RS442, Baud rate 115.2 transmit distance 3 KM

Connecting terminal: 1-32

Display cardiowave: blood oxygen capacity wave, breath wave.

Display parameter: heart rate, double temperatures, blood oxygen pulse, Non-invasive blood pressure, carbon dioxide, breath frequency.

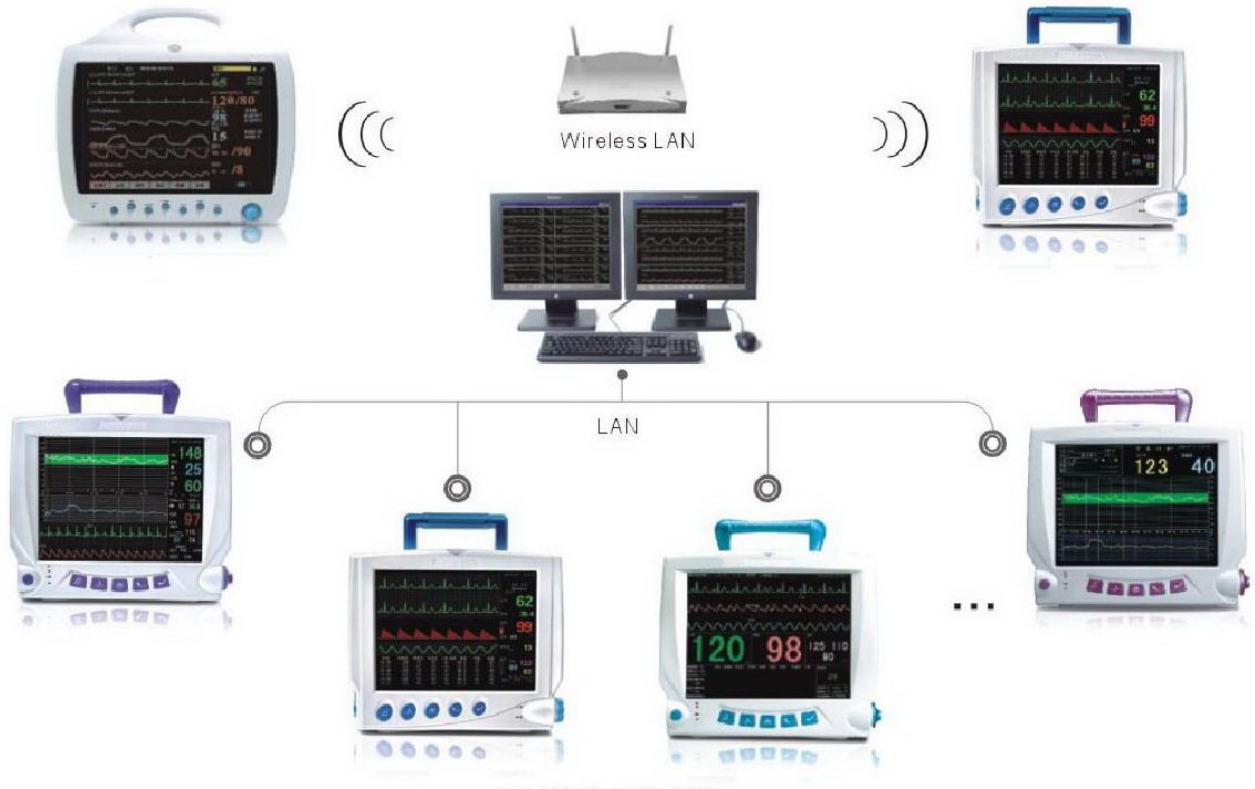
Saving: cardiowave, parameter trend chart, parameter trend form, alarm, parameter form for 240 hours(10days).

Print: Electrocardiogram, trend chart/form, alarm data form, medical history.

Alarm: parameter limits alarming, the sound and light display.

Central Monitoring System

TRUMP-CM-03



◆ **Standard Configuration**

Main Machine: LENOVO computer

Display: 17" TFT screen

Print: HP printer

UPS: Uninterruptable Power Supply

◆ **Features Display**

Size: 17" color TFT display

Resolution: 1280 X1024

Language: English

Waveform: ECG, RESP, Sp02, NIBP, IBP, EtC02. etc.

Parameter: HR, RR, ST, Sp02, PR, NIBP, TEMP, FHR, TOCO, FM, etc.

◆ **Alarm**

High and low limits alarm

Arrhythmia alarm

Audible and visual alarm

◆ **Bedside Monitors**

Support maximuml28 bedside monitors

Display maximum 32 patient's information

Key monitoring interface, display 6 waveforms

Intellectualized Bi-directional Communication

◆ **Data**

720-hour full disclosure waveform review

1240-hour trend graphic review
10,000 alarm records review
50,000 historical patient records

◆ **Recorder**

External thermal array
Real-time recording, review recording and historical reports recording

◆ **Connection Mode**

Complete solution for LAN, wireless LAN and Mixture networking

◆ **Working Environment**

Input Voltage: AC 100V-240V
Input Frequency: 50Hz±l Hz

◆ **Standard Network Interface**

TCP/IP central monitoring system, be able to observe full vital signs information of the patient

◆ **Stable Internet Connection**

Standard configuration for 8 bedside monitors, support maximum 128 units

◆ **Full Disclosure Waveform Observation**

Large screen display, be able to observe 16 bedside monitors' waveforms simultaneously. Dual-screen display is selectable

◆ **Bi-directional Communication**

Unique bi-directional communication function to realize the mutual control of central monitor and bedside monitors

◆ **Large Storage Capacity**

720-hour full disclosure waveform review, 1240-hour trend graph review, 1000 alarm records review, 50000 patient historical data. All the information can be stored in disk

◆ **Data File Review**

Large storage capacity of full monitoring information for easy review, analysis and statistics

◆ **Flexible connection methods:**

LAN, wireless LAN and mixture networking are available for meeting different clinic requirements. The system is compatible with COMEN's multi-parameter patient monitor, maternal/fetal monitor and fetal monitor.

TRUMP-CM-04

[Features]

- • The diversification of the layout of the monitoring fulfills
- different requirements
- • Important monitoring can be done while other beds are
- also monitored
- • Real-time trend graphs

• Powerful data playback including those of ECG, PLETH and RESP

• Providing the records of hospitalization and creating the medical records according to the requirements

• The monitoring system on Windows 2000 Professional, with powerful functions, stability, reliability and flexible interface.

• Monitoring 1 to 8 beds.

Real time monitoring of the patients' information.

• A breakthrough.

Monitoring and saving the patient's information without the time limitation.

- • Perfect menu system, flexible mouse operation and real time prompts.
- • Multi views for monitoring the patient.

  Displaying all the monitored information at the same time.
- • The waveform can be frozen and the monitored data can be selected at will.
- • Multi layouts for the monitoring. Meeting the different needs.
- • Recording all the parameters of the patient.
- • Important monitoring can be done while monitoring other beds at the same time.
- • Providing real time trend graphs.
- • Powerful data playback including those of ECG, PLETH and RESP and trend display.
- • Providing the quick operation of the records of hospitalization and creating the medical records according to the requirements.
- • Provided with the ink jet printer for the real time printing and the printing of the playback and medical record.
- • Flexible network configuration.

  Both-way communication with the monitor beside the patient's bed can be available.

TRUMP-CM-05

[Features]

- • Complete solution for telemetry, LAN and wireless LAN

  • Simplified menu and easy to use interface
- • Bi-directional communication with TRUMP bedside patient monitors
- • Large storage capacity of the waveforms and numeric information

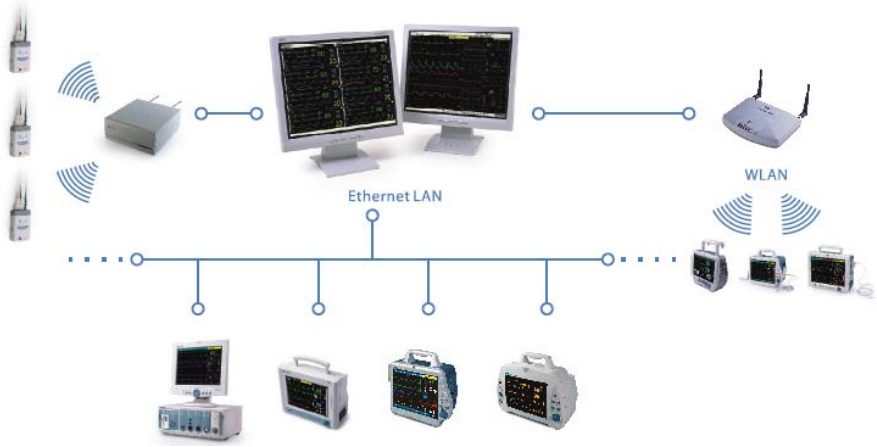
  • Large Font Screen
- Display a none-waveform mode by easily clicking the waveform-hidden bar

  Simultaneously view the vital signs of different patients

  • View Bed Screen

  View complete information of certain patient on the right screen

Be able to display maximum 12 waveforms or full ECG waveforms
• Display maximum 32 patients' information
Monitor maximum 4 waveforms of each patient
• Dynamic Short Trend (on the right screen)



Display the trend data along with the waveforms and measured values
Maximum 4-hour dynamic monitoring

Technical specifications

•Mainframe

Dimension and weight

Dimension: 206mm×455mm×469mm
Weight: 13.5kg

Power Supply

Electrical specifications: AC 100-127/200-240V 6A/3A

Basic configuration

17" color TFT
Intel Pentium IV 2.0G CPU
Windows XP professional operating system
256 MB RAM
40 GB Fixed Disk driver
1RJ45 Network interface
1 serial interface
1 parallel interface
2 USB interfaces
1 Keyboard interface
1 Mouse interface
1 Sound output interface
1 Mic input interface

•Performance

Display

Size: 17" Color TFT
Number of displays: 1 or2sets (optional)
Resolution: 1280/2560×1024

Color: 65536
Waveform: ECG (I, II, III, a VR, aVL, aVF, V1-V6)
PLETH, RESP, CO_2, IBP, Multi-gas, O_2, N_2O
Parameter: HR, ST (I, II, III, aVR, aVL, aVF, VI-V6), RR, PVC, NIBP, IBP, Sp02, PR,TEMP, TB, EtCO2, Multi-gas, O_2, N_2O

◆ **Indicator**

Up to 64-waveform presentation
12.5mm/s, 25mm/s, 50mm/s user-adjustable sweep speed

Alarm indicator light
Alarm sound

◆ **Alarm**

High and low limits alarm
Arrhythmia alarm
Audible and visual 3-level alarm

◆ **Viewbed**

Up to 64 waveforms for 32 bedside monitors
All waveform presentation for one patient
4 hours of dynamic short trend display for all parameters
Multi-leads ECG waveform display
OxyCRG display
Waveform frozen

◆ **Remote Monitor Control**

Bi-directional communication

◆ **Network Management**

Ethernet 802.3
UTP network cable
Hypernet X and TCP/IP protocol
Connected to PM-9000/8000/7000/6000/5000 and MEC-1000
Connected bedside number: up to 64 bedside monitors

◆ **Access Points**

Resistant to interference
10 Base-T Ethernet
Redundant coverage

◆ **WLAN**

IEEE 802.11 compliant
2.4 GHz RF
Direct sequence spread spectrum

◆ **Review**

240 hours trend review for each bedside monitor

720 items parameters alarm review for each bedside monitor
720 NIBP and CO measurements review
200,000 history patient monitoring information
72 hours of 64 channels full-disclosure waveforms store and review
Review information export

◆ **Calculations**

Drug calculation and titration table
Hemodynamic calculation

◆ **Recorder**

External thermal array
Recording width: 48 mm
Paper feed speed: 25 mm/s
Trace: 2 waveforms

◆ **Record type**

8 second real-time recording
16 second real-time recording
Real-time continuous recording
Alarm stripe recording
Real-time alarm recording

TRUMP-CM-01

[Features]

- • CENTRAL Monitoring System fulfills the function of real-time monitoring different bed-side patient monitor& ward by network transmission.
- • Remote central monitoring system includes central servers, nurse working stations, doctor working stations and bedside patient monitors.
- • Either with wire or wireless Ethernet card, beside patient monitor can connect with central monitoring system.
- • Further, central monitoring system can connect & share printer and print trend data.
- • Three connection modes: wire, wireless or Multi-Point Connection Mode.

◆ **Display**

• Simultaneous display with multi 17" TFT LCD monitors
• Each screen can display 8 bedside monitor's information with at least 3 kinds of display mode
• Display of multi waveforms (ECG, RESP, PLETH, CO2, IBP…) and multi parameters (HR, ST, SpO2, PR, RR, TEMP, SBP, DBP, MAP, inCO2, etCO2…)

• 72-hours trend storage and printable information for each patient
• ECG waveform storage with printable information

◆ **Setup and Alarm**

• Operating menu with multi-language selection
• Alarm limit, switch and status of each monitor can be setup by central monitoring system
• Central monitoring system can be setup its own audio and visual alarm limit

◆ **Control**

• ECG lead of each monitor can be changed in central monitoring system

• NIBP measurement on each monitor can be controlled by central monitoring system

◆ • Control bedside patient monitor up to 250 units

Communication

• Support long distance monitoring, diagnosis and software upgrade
• Adaptive network connection for RJ45, Ethernet or RS-232C
• Wireless and /or Wire networking

Fetal monitor Series

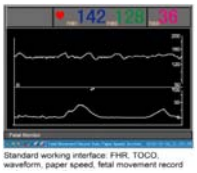
TRUMP-M-01

[Features]

- • 10.2" inch large-screen color TFT display, digital display and waveform oscilloscope of twins' heart rate (FHR) and uterine contraction pressure (TOCO) value.
- • Independent user friendly interface with menu function setting.
- •Unique rotary button control design, portable and convenient.
- • Self-defination of multi-event marks.
- • Directly viewing 1:1 scale of display and print-out waveform.
- • Folding thermal array printer with high resolution, easy paper loading, paper empty auto detection and printing head over-heating protection
- • 7-wafer impulse ultrasound transducer, configured with special HR self correlation reading algorithm to ensure correct and reliable fetal heart rate (FHR) measurement.
- • Highly sensitive, wide scope pressure transducer ensures to achieve effective measurement of uterine contraction pressure (TOCO).
- • Fetal movement auto detection.
- • Signal intensity indication ensures effective transducer position.
- • Auto power failure protection and reliable rechargeable Li-ion battery can realize continual monitoring

function.

- • Net-working capacity, convenient and ease-of-use. Convenient for hospital informatization management and for data analysis of fetal central monitor system.
- • Meets the standard IEC60601-1.1988, class I, type B with special protection from electroshock, safe and reliable in use.



Standard working interface: FHR, TOCO, waveform, paper speed, fetal movement record

Technical specification

Fetal heart rate (FHR) measurement

Measuring method Ultrasound Doppler
Measuring scope 50-240BPM
Measuring tolerance Less than ± 1BPM
Fetal heart rate curve scope 50-240BPM
Fetal heart rate numeric display scope 50~240BPM
Ultrasound working frequency 2MHz, 2.5MHz
Ultrasound output intensity < 5mW/cm2

Uterine contraction pressure (TOCO) measurement

Measuring method: External measuring
Measuring scope: 0-100 unit
Uterine contraction pressure curve scope: 0-100 unit
Uterine contraction pressure numeric display scope: 0-100 unit
Non-linearity tolerance: Less than ±10%
Auto-zero function: Yes


Ultrasonic Probe


Fetal Movement Probe


TOCO Probe

- ◆ **Fetal movement record**
  Manual control button label.
  Auto fetal movement identification
- ◆ **Display** 10.2"color TFT-LCD (800RGB"480)
- ◆ **Event mark** 9 available
- ◆ **Record mode** Thermal array printer
- ◆ **Record paper**
  112mm×100mm folded thermal printing paper
- ◆ **Paper feeding speed** 1, 2, 3cm/min 3 options
- ◆ **Fetal heart rate audible and visual alarm**
  Low limit 120BPM, up limit 160BPM
- ◆ **Alarm trigger time** <3s

- **Printer failure alarm** Paper empty alarm
- **Output volume** 2～3W speaker, volume adjustable
- **Power Supply**

  AC: 100-240V. 50/60HZ+1 Hz, 40VA
- DC: 14.4V/2000mAh, rechargeable Li-ion battery, continuous work>4h

  Safety level Class I, type B
- **Size** L296 mm×W312 mm×H92 mm
- **Net-working Capacity** Yes

TRUMP-M-04

[Features]

- • 12.1" Large-screen Color TFT Display
- • Light Weight and Portable, Easy Operation Mode
- • Multi-functional configuration, Meet with Various Monitoring Requirements
- • Advanced Digital Signal Processing (DSP) Technique is Applied for Real-time
- • Calculation and Mode Identification
- • High-sensitive Probe, Excellent Signal/Noise Ratio and Accurate Calculation
- • Maximum 12 Hours Storage and Replay of Fetal/Maternal Monitoring Data
- • Built-in Recorder, Able to Print or Store Waveforms and Monitoring Status
- • AC/DC Operation, Build-in Battery, Support 5 Hours Working Time
- • Audible and Visual Alarming Methods
- • IP Network Interface, Compatible with Obstetric Central Monitoring System

Standard Configuration

FHR.TOCO.FM

Optional Configuration

TWINS, Built-in PRINTER, Technical Parameters

- **FHR**

Probe: Multi-wafer Probe, wide -band

Strength of ultrasonic wave: less than 3mW/cm 2

Working frequency: 1.0 MHz or 2.2 MHz

Signal processing: special digital signal progressing (DSP) and mode identification

Range: 20- 220 bpm

- **TOCO**

Range: 0-100 pressure units

FM Counting Method
Manual / Automatic

◆ **Alarm**

Range: Adjustable from Lower to Upper Limit
Cause: Irregular Indication
Indication: Audible and Visual

◆ **Printer**

Type: Built-in 50mm Thermal Printer

Port: Standard Parallel

◆ **Safety**

In Compliance with IEC60601 and GB9706 Related **Standards**
Physical Specification
Weight: 6 kg
Dimension: 320mm×170mm×280mm

TRUMP-M-02

[Features]

- • 5.7" blue screen LCD, digital display and waveform oscilloscope of FHR and TOCO
- • User friendly interface with menu function setting, direct and ease-of-use
- • Preset usual functions shortcut keys for convenient operation
- • Self-define multi-event marks
- • Thermal array printer with high resolution, easy paper loading, paper empty auto detection and printing head over-heating protection
- • 7-chip impulse ultrasound transducer, configured with special heart rate reading algorithm to ensure correct and reliable fetal heart rate (FHR) measurement
- • Highly sensitive, wide scope pressure transducer ensures effective measurement of constriction pressure (TOCO)
- • Fetal movement auto detection
- • Signal intensity indication ensures transducer detecting position
- • Auto power failure protection and reliable rechargeable Li-ion battery can ensure continuous monitoring
- • RS485 or TCP/IP networks ensure convenient and easy hospital informatization management and data analysis of fetal central monitor system
- • High performance and self-adapting wide scope supply voltage design

Fetal Movement Marker

(Accessories)

Ultrasound Doppler Transducer

(Accessories)

TOCO Transducer

(Accessories)

Fetal Doppler Series

TRUMP-N-01

◆ **Safety**

The whole process of design, material purchase and production in compliance with CE standard.

◆ **Precise**

Special HR self correlation reading algorithm and impulse wave working method to ensure correct and reliable fetal heart rate (FHR) measurement.

◆ **Artistic outlook**

Compactness, streamline and portable design.

◆ **Durability**

Qualified material, preciseness production process and experienced workers with IS0 quality management system secure the long life usage of product.

[Features]

- • LCD display with backlight, can be used in any illumination conditions.
- • DSP technology is employed to assure accuracy and reliability of FHR detection.
- • High sensitivity probe with 1 MHz in pulse (Option: 2.0MHz in continuous wave).
- • Ergonomic design, portable and convenient.
- • Built-in speaker and Sound frequency output port.
- • Automatically power off.
- • Multi-displaying of FHR: number, battery status indicator, voice intensity indicator.
- • Three working modes: Real-time

• FHR display, Mean FHR display and Manual counting display. (Option: 2.0MHz)

- • Dimension:
  Dimension: 330×230×70mm G. Weight: <1.0KGS
- • Power Supply:
  Power: Built-in Chargeable Battery, DC, 9V nickel-hydrogen battery
- • Working Environment:
  Temperature: +5°C ~+40°C
  Humidity: <85%
- • Transportation and Storage Environment:
  Temperature: -10°C ~+55°C
  Humidity: <93%


Built-in Speaker and sound frequency output interface.

LED display with backlight


Battery


Assemble battery

Technical Specification:

◆ **LCD Display Dimension:**

39×27mm

Speaker power: 1 W

◆ **Power supply**

Built-in rechargeable battery:

Working Voltage: 9V

Continuous operating time: > 5 hours

◆ **Ultrasound**

Frequency: 1.0 MHz in pulse (Option: 2.0MHz continual wave)

Intensity: < 5mW/cm^2 (Option: <2mW/cm2 of 2.0MHz)

P: < 0.35MPa

◆ **FHR**

Display: LCD display

Measurement Range: 50~210BPM (Option: 30~240BPM of 2.0MHz)

Measurement Accuracy: ±1% or ±1BPM

TRUMP-N-02

TRUMP-N-02 is designed to meet routine examination requirements for pregnant women in hospital, clinic, home etc. The Doppler uses ultrasound technique to detect Doppler sounds from the fetus as early as 10 weeks of pregnancy to the baby's first moment of life. It can display Fetal Heart Rate, SpO2 and Heart Rate with blue backlight.

[Feature]

- • Compact and light weight, easy to operate
- • Accurate fetal heart rate (FHR) detection
- • FHR displayed with value and curve
- • Maternal SpO2 and heart rate (HR) are available
- • Advanced digital signal processing (DSP) technique is applied for real-time calculation of FHR
- • High sensitive transducer, low ultrasound power
- • Date and time display, battery capacity indicator
- • Memorable speaker volume control
- • Auto power off for energy saving technique
- • Built-in speaker and ear-phone output

◆ **Standard Configuration:**

• FHR Value Display AC Adapter Transmission Gel Li-ion Battery

• FHR Curve Display Maternal SpO2 and HR Detection

TRUMP-N-03

[Features]

LCD display FHR nicely

Blue backlight display for use conveniently at night

Unit weight only 250 gram with gallus, convenient to carry

Built-in rechargeable battery can be worked over 6 hours

Digital volume control, earphone jack

Probe replacing conveniently

Specification

Ultrasonic frequency: 2.5 MHZ±10%

Power: 9.6V rechargeable battery

Ultrasonic intensity: ≤5Mw/cm2

Working temperature: 10℃- 40℃

TRUMP-N-04

[Features]

- •High sensitive, the sound of Fetal beat is very loud and clear. It can detect after 12 weeks fetal heart beat
- •Probe replacing conveniently, 5MHz probe is for detecting vascular blood flow
- •2.0MHz / 5.0MHz optional
- •One time charge can be worked over 8 hours
- •Earphone jack

Specification

Ultrasonic frequency: 2.0MHz±10%
Power: 14.4V Ni-MH rechargeable battery
Ultrasonic intensity: ≤5 Mw/cm^2
Working temperature: 10℃-40℃

TRUMP-N-05

[Features]

- • Numeral display, LCD display all detect data, FHR curve, battery and sound volume display, synchronization signal flash indication, more clear and nicety
- • Store and hold monitoring data for up to 12 hours (choose)
- • Have printing function, print out the curve, clearly
- • Changed probe conveniently, high sensitive, can be detect the FHR and vascular, 1.0MHz/ 2.0MHz/ 5.0MHz/ 8.0MHz option
- • RS-232 port, can connect the unit with a computer and exterior stored data

Specification

Ultrasound frequency: 2.0MHz, 5MHz (±10%)
Ultrasound power: ≤10mW/cm^2
Overall sensitivity: ≥90 dB
Spatial-peak tem-peak acoustic pressure: ≤ 0.1MPa
Effective area of transducer: 6.0 ± 0.5cm^2
Input power (when working): ≤20VA
FHR detect range: 60bpm-210bpm

Battery: inside 14.4V battery Ni-MH rechargeable battery
Frequency output power: ≥1.8W
Print speed: 1/2/3 cm/min