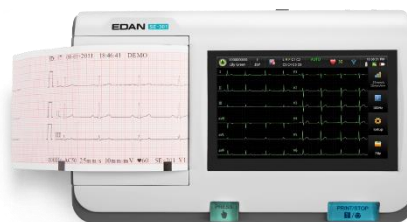


# SE-301

## Electrocardiograph



### Specification

|                                |                               |                                                                                                                                      |
|--------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Physical Specifications</b> | Dimensions                    | 224 mm×143 mm×54 mm                                                                                                                  |
|                                | Weight                        | 1kg (Excluding recorder paper and battery)                                                                                           |
|                                | Display                       | 5 inch, 800×480 multicolor LCD touch screen                                                                                          |
| <b>Power Supply</b>            | Mains Supply:                 | Operating Voltage = 100V-240V<br>Operating Frequency = 50Hz/60Hz<br>Power adapter output voltage: 19V, 2A                            |
|                                | Internal Li-ion Battery Pack: | Rated voltage = 14.8V<br>Rated capacity=2500mAh<br>(5 hours continuous printing, 500 ECG reports)<br>Necessary Charge time≤3.5 hours |
| <b>Recording</b>               | Recorder:                     | Thermal dot-matrix recorder                                                                                                          |
|                                | Printing Density:             | 8 dots per mm / 200 dots per inch (amplitude axes)<br>40 dots per mm / 1000 dots per inch (time axes, @ 25 mm/s)                     |
|                                | Recorder Paper:               | Folded thermal paper, 80mm×70mm×200pages<br>Rolled thermal paper, 80mm×20m                                                           |
|                                | Paper Speed:                  | 5mm/s, 6.25mm/s, 10mm/s, 12.5mm/s, 25mm/s, 50mm/s                                                                                    |
|                                | External Printer:             | HP 1010/1510/2010/1050/2000, HP M401/2015/2035/1525, HP 1020/1020PLUS/1106, or HP 1505                                               |
| <b>HR Recognition</b>          | HR Range:                     | 30 BPM ~300 BPM                                                                                                                      |
|                                | Accuracy:                     | ±1 BPM                                                                                                                               |
| <b>ECG Unit</b>                | Leads:                        | 12 standard leads                                                                                                                    |
|                                | Acquisition Mode:             | simultaneously 12 leads                                                                                                              |
|                                | A/D Converter:                | 24 bits                                                                                                                              |
|                                | Resolution:                   | 0.1575 $\mu$ V/LSB                                                                                                                   |
|                                | Time Constant:                | ≥3.2s                                                                                                                                |
|                                | Frequency Response:           | 0.01Hz ~ 300Hz (-3dB)                                                                                                                |
|                                | Gain:                         | 2.5, 5, 10, 20, 10/5, AGC (mm/mV)                                                                                                    |
|                                | Input Impedance:              | ≥50M $\Omega$ (10Hz)                                                                                                                 |
|                                | Input Circuit Current:        | ≤0.01 $\mu$ A                                                                                                                        |
|                                | Input Voltage Range:          | ≤±5 mVpp                                                                                                                             |
|                                | Calibration Voltage:          | 1mV±2%                                                                                                                               |
|                                | CMRR:                         | ≥140dB                                                                                                                               |
|                                | Sampling Frequency            | 16000 Hz                                                                                                                             |

|                              |                             |                                                                                                                                                                                                                                                                                                         |
|------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pacemaker</b>             | Amplitude:                  | ±2 to ±700 mV                                                                                                                                                                                                                                                                                           |
|                              | Width:                      | 0.1 to 2.0 ms                                                                                                                                                                                                                                                                                           |
|                              | Sampling Frequency:         | 16,000/sec/channel                                                                                                                                                                                                                                                                                      |
| <b>Filter</b>                | AC Filter:                  | On/Off (50/60Hz)                                                                                                                                                                                                                                                                                        |
|                              | DFT Filter:                 | 0.01Hz, 0.05Hz, 0.32Hz, or 0.67Hz                                                                                                                                                                                                                                                                       |
|                              | EMG Filter:                 | Off/25Hz/35Hz/45Hz                                                                                                                                                                                                                                                                                      |
|                              | LOWPASS Filter:             | 300Hz / 270Hz / 150Hz / 100Hz / 75Hz                                                                                                                                                                                                                                                                    |
| <b>Data Transmission</b>     | Report Format:              | PDF, XML, DICOM, FDA-SCP                                                                                                                                                                                                                                                                                |
|                              | Data Transmission:          | Wi-Fi, Ethernet, RS232, 4G Network                                                                                                                                                                                                                                                                      |
|                              | Data Management System:     | SE-1515 Data Management System, bi-directional communication                                                                                                                                                                                                                                            |
|                              | HIS connection:             | DICOM Worklist/DICOM Storage/HL7                                                                                                                                                                                                                                                                        |
| <b>Wi-Fi (Optional)</b>      | Transmitting Frequency:     | 2.4GHz                                                                                                                                                                                                                                                                                                  |
|                              | Frequency Band:             | 2.400-2.500GHz (2.4 GHz ISM band)                                                                                                                                                                                                                                                                       |
|                              | Modulation Type:            | OFDM with BPSK, QPSK, 16-QAM, and 64-QAM<br>802.11b with CCK and DSSS                                                                                                                                                                                                                                   |
|                              | Transmitting Power:         | 17 dBm for 802.11b DSSS                                                                                                                                                                                                                                                                                 |
|                              |                             | 17 dBm for 802.11b CCK<br>15 dBm for 802.11g/n OFDM                                                                                                                                                                                                                                                     |
| <b>4G (Optional)</b>         | Bands                       | FDD LTE: Band 1, Band 2, Band 3, Band 4, Band 5, Band 7, Band 8, Band 20, all bands with diversity<br>WCDMA/HSDPA/HSUPA/HSPA+: Band 1, Band 2, Band 5, Band 8, all bands with diversity<br>GSM/GPRS/EDGE: 850 MHz/900MHz/1800 MHz/1900MHz                                                               |
|                              | Rate                        | GPRS: UL 85.6 kbit/s; DL 85.6 kbit/s<br>EDGE: UL 236.8 kbit/s; DL 236.8 kbit/s<br>WCDMA CS: UL 64 kbit/s; DL 64 kbit/s<br>WCDMA PS: UL 384 kbit/s; DL 384 kbit/s<br>HSPA+: UL 5.76 Mbit/s; DL 21.6 Mbit/s<br>DC-HSPA+: UL 5.76 Mbit/s; DL 42 Mbit/s<br>LTE FDD: UL 50 Mbit/s; DL 150 Mbit/s@20M BW cat4 |
| <b>Safety Specifications</b> | Comply with:                | IEC 60601-1:2005/A1:2012<br>EN 60601-1:2006/A1:2013<br>IEC 60601-1-2:2007<br>EN 60601-1-2:2007/AC:2010<br>IEC/EN 60601-2-25                                                                                                                                                                             |
|                              | Anti-electric-shock type:   | Class I with internal power supply                                                                                                                                                                                                                                                                      |
|                              | Anti-electric-shock degree: | CF type with defibrillation-proof                                                                                                                                                                                                                                                                       |
|                              | Patient Leakage Current:    | NC <10μA (AC) / <10μA (DC)<br>SFC <50μA (AC) / <50μA (DC)                                                                                                                                                                                                                                               |
|                              | Patient Auxiliary Current:  | NC <10μA (AC) / <10μA (DC)<br>SFC <50μA (AC) / <50μA (DC)                                                                                                                                                                                                                                               |
| <b>Environment</b>           | Temperature:                | Transport & Storage: -20°C (-4°F) ~ +55°C (+131°F)                                                                                                                                                                                                                                                      |

|                       |                       |                                                                                |
|-----------------------|-----------------------|--------------------------------------------------------------------------------|
| <b>Specifications</b> |                       | Working: +5°C (+41°F) ~ +40°C (+104°F)                                         |
|                       | Relative Humidity:    | Transport & Storage: 15%~95% Non-Condensing<br>Working: 15%~95% Non-Condensing |
|                       | Atmospheric Pressure: | Transport & Storage: 70kPa ~106kPa<br>Working: 86kPa ~106kPa                   |