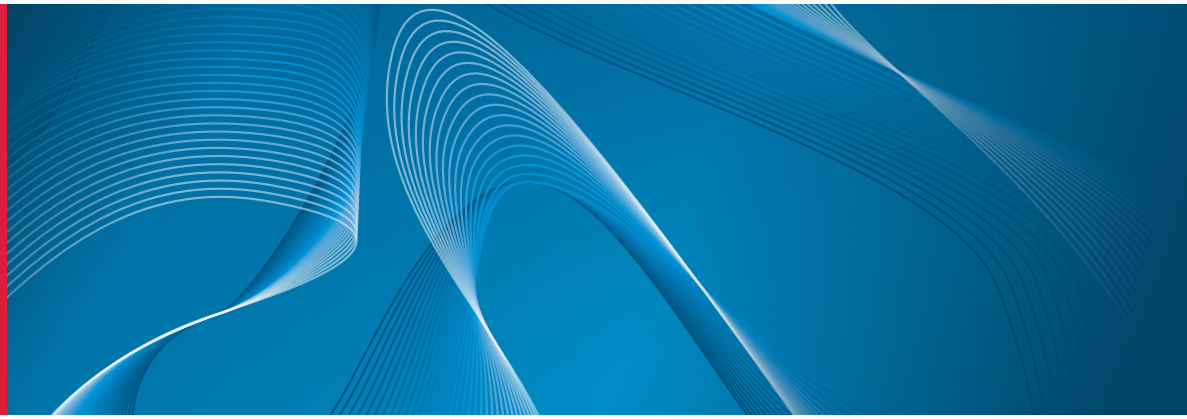
CARDIOVIT CS-200 EXCELLENCE

Designed for high-volume workload, equipped with the latest technology to save time and boost productivity

SCHILLER
The Art of Diagnostics

CARDIOVIT CS-200 EXCELLENCE

Experience the CARDIOVIT CS-200 Excellence and get a view of the future where precision and performance converge.



Thanks to its new processor – 3rd Generation Core i7 CPU – the CS-200 Excellence is now one of the fastest and most efficient devices on the market.

Especially designed for enterprise hospitals, the CS-200 Excellence masters each task.

STAND-ALONE OR CONNECTED

The CS-200 Excellence optimizes digital workflow with seamless connectivity to EMR, PACS, and SCHILLER's SEMA Cardiology Information System. Whether used as a stand-alone system or a complete enterprise solution, it is a scalable solution that fits your needs today and tomorrow.

AUTONOMOUS EMERGENCY ECG

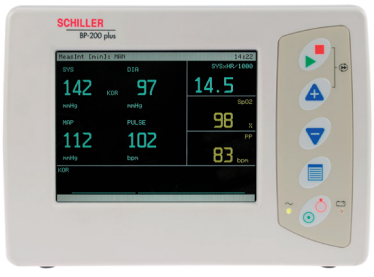
In an emergency every second counts. SCHILLER offers the unique ability to print an emergency ECG even before the system boots up.

ONE-BUTTON OPERATION

Immediate access to the desired function.

EASY DATA ENTRY

Data entry as easy and fast as possible. Simply enter the data via bar code scanner.



AUTOMATIC SpO_2 AND BP

SpO_2 and blood pressure are automatically recorded during exercise testing and sent to the CS-200 Excellence. The BP-200 plus and the SCHILLER K-Sound Analysis (SKA) allow unparalleled accurate blood pressure measurements, with both auscultatory and oscillometric techniques.

1. Intuitive user interface
   - Monitor ST changes with auto-comparison of current and reference beats.
   - Watch for ST level and slope changes using the 12 or 16*-lead average complexes.
2. All wires are integrated internally
3. SCHILLER 12/16-lead thermal printer
4. Large writing surface for clinical documentation
5. Two big accessory drawers
6. System base cover for external printer. Integrated power isolation transformer providing a stable work platform

BOOST PRODUCTIVITY

Thanks to rich on-screen information content, with customizable display layout, integrated resting ECG during Exercise Testing, Wizard, Dynamic Protocol and much more, our system saves time and boosts productivity.

UNIQUE DYNAMIC PROTOCOL

The system suggests the most appropriate exercise protocol, based on patient age, body weight and questionnaire. No modifications during the test are necessary.[1]

WIZARD

The WIZARD is an intuitive tutorial which guides the user one step at a time, highlighting the next available function. It is designed for nurses, technicians and all other clinicians to perform the exercise test without a long preparation period.

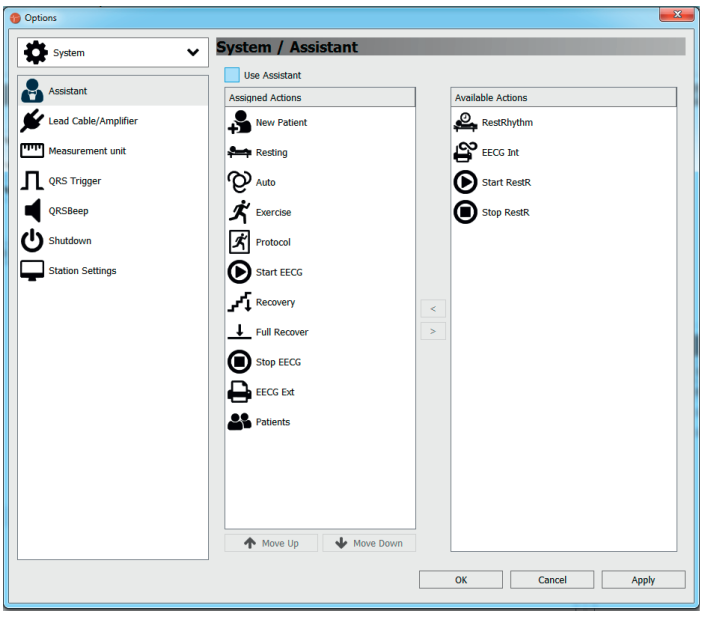
ECG REVIEW

Full Disclosure data enables review of every beat and arrhythmia for enhanced clinical confidence. Even during the exercise it is possible to compare ECG strips from previous stages or even previous tests.

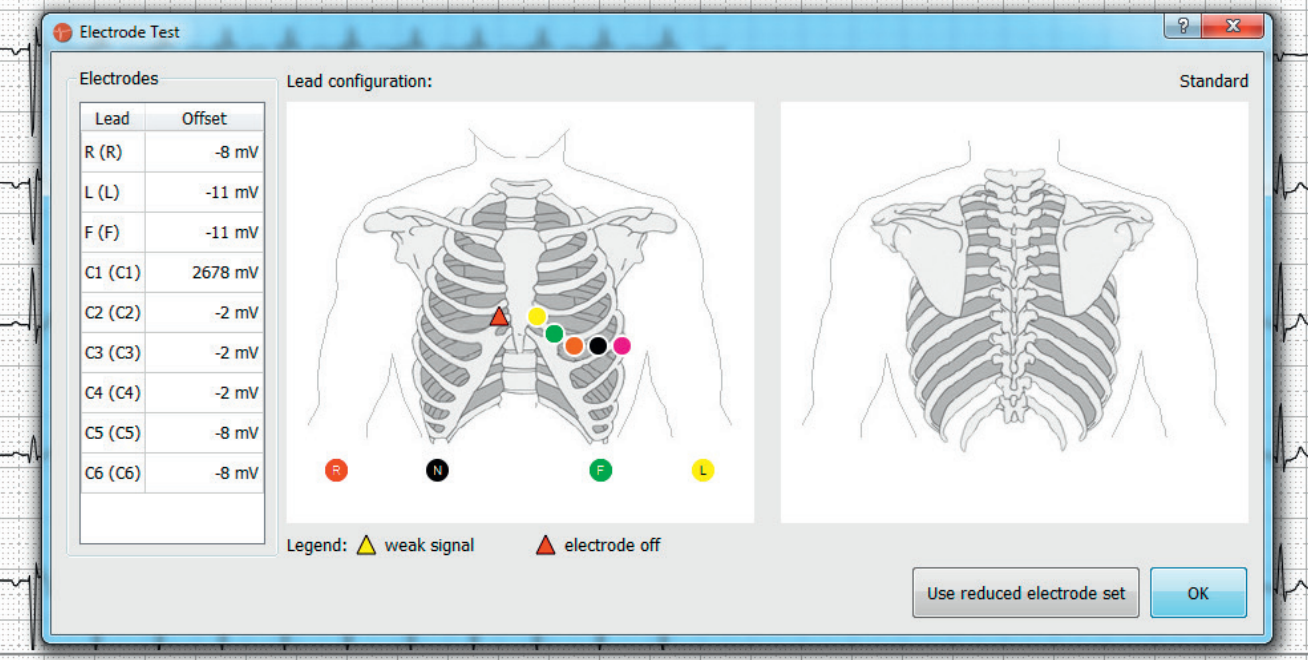
MULTI-VIEW HOOK-UP SCREEN

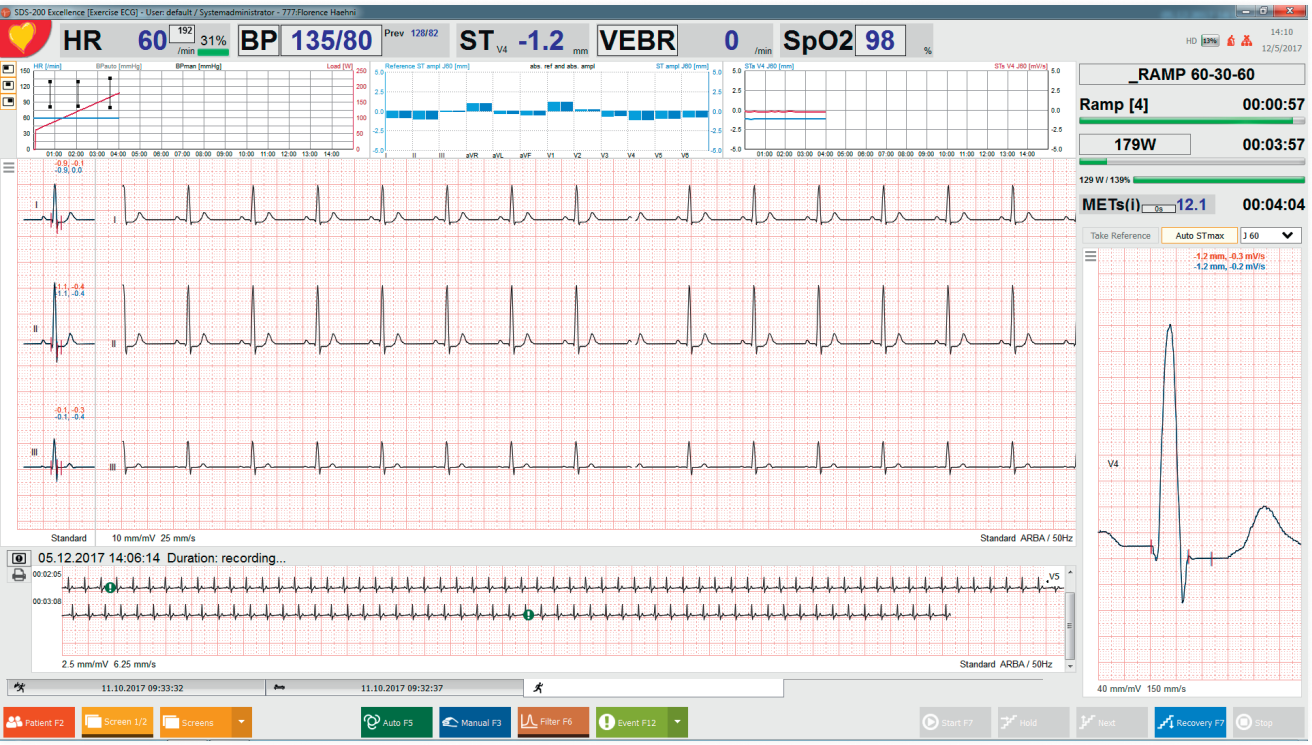
Quickly and easily attach lead wires:

- Colour-coded electrode placement diagram
- Dynamic “noise level” triangle
- Real-time ECG waveform display all help identify hook-up problems before you start the test



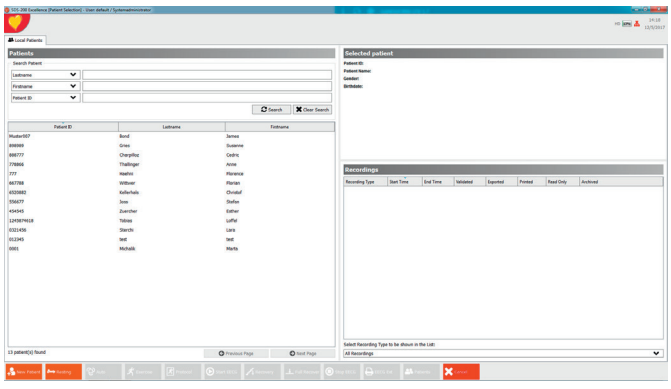
1 J Cardiopulm Rehabil. 2006 Jan – Feb;26(1):16 –23. A nomogram to select the optimal treadmill ramp protocol in subjects with high exercise capacity: validation and comparison with the Bruce protocol. Maeder M, Wolber T, Atefy R, Gadza M, Ammann P, Myers J, Rickli H.



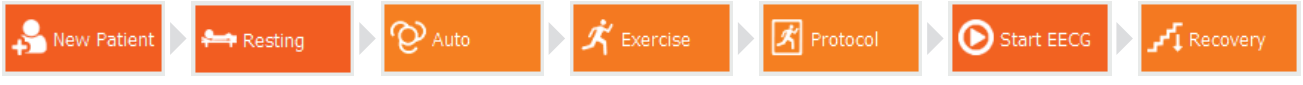


WIZARD PLANNER

Plan your wizard steps according to your needs by assigning the actions that should be carried out.



The wizard will guide you through the planned steps by highlighting the buttons accordingly.



SUPERIOR DIAGNOSTIC TOOLS

Hyper Q™: analysis of high-frequency QRS signals

Sophisticated filters: industry-leading analysis program for artefact and noise management

16-lead acquisition and analysis: in resting and exercise ECG s

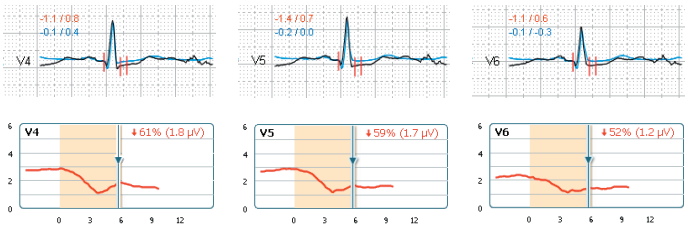
SAECG (LATE POTENTIAL ANALYSIS)

This analysis is a non-invasive alternative to invasive testing for ventricular arrhythmia. It allows detection of micropotentials that occur after the QRS complex. Gain time thanks to straightforward measurement data recording; pushing one button is enough.

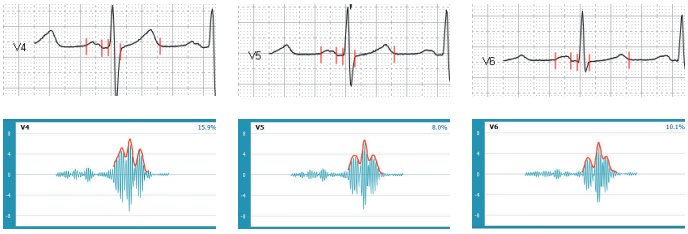
HYPER Q™

Unique, scientifically and clinically proven analysis of high-frequency QRS signals, which significantly improves the accuracy and effectiveness of routine exercise and resting ECG

- More sensitive diagnosis of ischaemic patients
- Fewer false alarms in non-ischaemic patients
- Gender-independent accuracy
- Determined diagnosis in patients with equivocal exercise and resting ECG
- Reduces health care costs by saving unnecessary expensive diagnostic tests
- Prevents unnecessary exposure to radioactive or invasive procedures



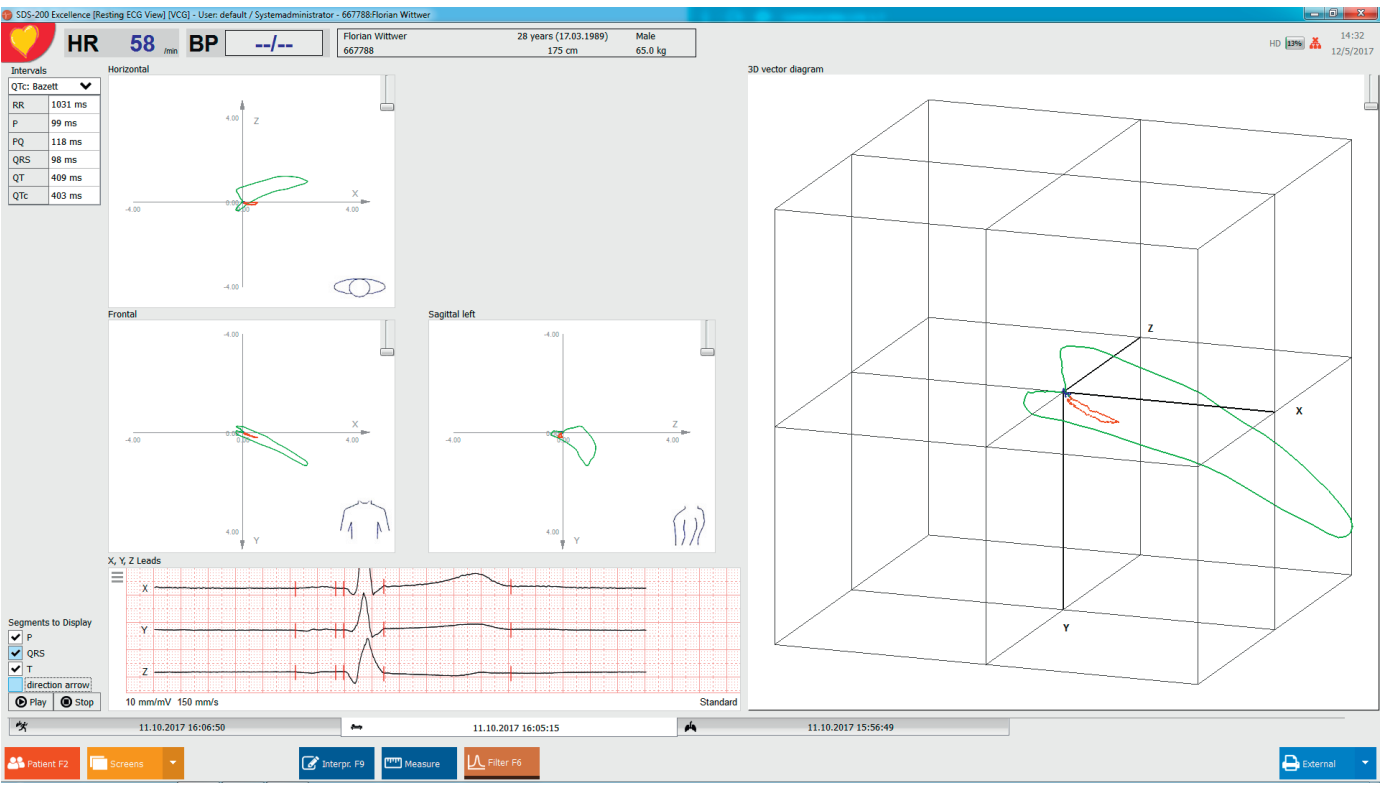
Exercise ECG: Patient with normal ST and negative Hyper Q
75 years, male, CAD: ST segment analysis shows no abnormalities. However, the HyperQ analysis correctly detected significant ischaemia.



Resting ECG: Patient with positive Hyper Q and ACS (Acute Coronary Syndrome)
62 years, female, ACS: as displayed above, ST segment analysis shows no abnormalities. However, the HyperQ analysis correctly detects significant ischaemia.

VECTOR 3D

3D view of the cardiac electrical activity, and a complete diagnosis of frontal and posterior walls.



SOPHISTICATED, ADAPTIVE MULTIPURPOSE FILTER

SCHILLER offers an industry-leading analysis program for artefact and noise management. The RNS filter provides the physician with excellent ECG quality and accurate measurements without overfiltering and without compromising clinical significance.

SCHILLER 16-LEAD ECG ACQUISITION AND ANALYSIS

While in the past resting ECG analysis programs were limited to 12 simultaneous leads, the SCHILLER 16-lead algorithm analyses now up to 16 leads of simultaneously acquired ECG waveforms to provide an interpretation of rhythm and morphology for a wide variety of patient populations. The algorithm reflects newly updated guidelines and recommendations, such as the 2007 AHA/ACCF/HRS Recommendations Part II[1], and the 2009 AHA/ACCF/HRS Recommendations Part VI[2] for the Standardization and Interpretation of the ECG.

The SCHILLER 16-lead algorithm goes beyond traditional 12-lead interpretation of the resting ECG. It also provides for incremental diagnostic capabilities not associated with analysis programs of the past. The 16-lead integrated analysis takes advantage of optional right chest and back electrodes to provide extended interpretations for adult chest pain.

In Exercise ECG, the use of right precordial leads (16-lead ECG) along with the standard six left precordial leads greatly improves the sensitivity of exercise testing for the diagnosis of coronary artery disease[3].

1 AHA/ACCF/HRS Recommendations for the Standardization and Interpretaton of the Electrocardiogram, Part II: Electrocardiography Diagnostic Statement List. J Am Coll Cardiology, 2007:49:1128-135.

2 AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram, Part VI: Acute Ischemia/Infarction. Circulation 2009; 100:e262-e270.

3 N Engl. Med 1999;340:340-5.

DESIGNED AND MANUFACTURED IN SWITZERLAND

Technical Data

CARDIOVIT CS-200 Excellence

System

Device
Dimensions: 160 x 76 x 80 cm
Weight: 85 Kg incl. Trolley
Operating System: WINDOWS™ embedded 64-bit

Ambient conditions
Temperature: – Operation: 10 to 40 °C – Transport/storage: -10 to 50 °C
Humidity: – Operation: 15 to 95 % non-condensing – Transport/storage: 10 to 95 % non-condensing
Pressure: – Operating: 700 to 1060 hPa – Transport/storage: 500 to 1060 hPa
IP protection class: IP20

Electrical data
Power supply: 100-240 V AC, 50/60 Hz
Power consumption: Approx. 150 VA (max), < 7 W standby
Backup Battery: Bridging of power interruption of at least 3 minutes (ECG direct print possible) 12 V lead acid Battery
Defibrillation protected

ECG amplifier
Frequency range: 0 –350 Hz (IEC/AHA)
Input impedance: >100 MOhm
Leads-off detection
Sampling frequency: 8000 samples/second/channel

Interfaces
LAN (RJ45 /100 MB)
RS-232 (x7 for ergometers and peripheries)
QRS trigger output
Analogue ergo output
Analogue signal in/out
USB (x4)
USB 3.0 (x2)
Audio
DVI (x2)
For communication functions see options

Filter
ARBA Filter: High & low pass filter & baseline correction to suppress muscle tremor and high-frequency noise, without affecting the QRS complex
RNSF: Robust noise suppression filter – reduces noise and baseline artifact while preserving the diagnostic quality of the ECG signal (for Resting and Exercise ECGs)
Line Filter: 50 or 60 Hz

Recording functions
Simultaneous recording of 12 channels
Simultaneous recording of 16 channels (with optional 14-wire cable)
Lead Sequence: Standard, Cabrera
QT correction: Bazett, Fredericia, Fremingham or Hodges
Lead selection: Right precordial, left posterior, Frank, Nehb
Computerized measurements: – QT Dispersion – Measurements – Pacemaker measurement
Rhythm recording: – Events – Full disclosure (max. 2 h) – 10 seconds of ECG signal from the stored Rhythm Recording – Arrhythmia Detection
Exercise ECG: – Full disclosure – RISK Duke Treadmill score – Arrhythmia Detection – Echo View – Previous test retrieval – **For additional recording functions see options**

Components

Monitor
24" full HD 1920 x 1080 LCD
Displayed leads: 12 or 16 (Optional)

Printer
Internal Thermal Printer
Selectable Print Formats
Real-time rhythm strip (Manual mode)
Printing number of traces in real-time rhythm: 12
Thermopaper Format: Z-folded modified A4
Paper speed: 5/12.5/25/50 mm/s
Sensitivity: 2.5/5/10/20 mm/mV
External Laser or Ink printer (optional)

Memory
Internal memory: 250 GB mSATA HD and RAM: 8 GB

Options

Hardware
SCHILLER vacuum electrode system

Software
Exercise ECG: – HyperQ diagnosis for exercise ECG (4.150271)
Vector ECG (5.035003)
HyperQ diagnosis for resting ECG (4.150319)
AF Toolbox (5.035012)
Signal averaging ECG (5.035008)

Communication
SEMA3 Server required – XML/ PDF export to HIS/EMR – DICOM/ HL7 ECG export to HIS/PACS (5.602101) – HIS/ EMR patient import for PDQ (5.602102) – HIS / EMR Results Export (5.602103) – HIS/ EMR/ PACS order import for Worklist (5.602104)

Standards

Certification:
Protection class according 60601-1: II
Applied Part according 60601-1: CF
Classification according Directive 93/92/EEC: IIa
Notified body: CE 0123

Warranty

See general terms of condition on www.schiller.ch

Technical datasheet for Part no.: 2.500508 2018/06, EN

SCHILLER
The Art of Diagnostics

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