

# Q-Tel<sup>®</sup> RMS<sup>®</sup> Rehabilitation Management System 4.0

## PRIMARY BENEFITS:

- **Connectivity.** The system links easily to your EHR system using the industry standard HL7 protocol so you can download patient demographic information and upload session data as PDF reports.
- **Clarity.** Simple left-to-right icons match the typical workflow for most rehab programs, and each program module is accessible with just one click.
- **Reporting.** Q-Tel RMS provides all the reports you need, including Individual Treatment Plan (ITP), a Customizable Patient Query Report, and Customized Patient Outcomes Graphs.
- **Reliability.** Q-Tel RMS is tested to the highest standards; many of our older systems with more than 10 years in service are still going strong.
- **Support.** We provide excellent support and service including a 13-month on-site warranty, remote support, and competitively priced service contracts.



## Q-TEL RMS SEAMLESSLY CAPTURES AND MANAGES PATIENT AND PROGRAM DATA

Cardiac and pulmonary rehab centers trust the Quinton Q-Tel RMS to support the crucial work of patient recovery. The system captures and manages essential patient data while you focus on your patient.

- Advanced, dependable, and diagnostic-quality telemetry ensures the accuracy of the ECG data while built-in technical, clinical, and life-threatening alarms let you spend less time watching monitors and more time working with patients.
- Q-Tel RMS captures and displays multi-lead, real-time ECG signals with diagnostic accuracy and programmable arrhythmia alarms.
- Q-Tel RMS is equipped to capture and report Chronic Heart Failure, Cardiac, and Pulmonary Rehabilitation prevention program data elements.
- Q-Tel RMS lets you view and document changes without ever stopping the patient's exercise routine.
- Q-Tel RMS links to hospital information systems using HL7 and PDF-based standards allowing you to download patient information and upload session data. This reduces errors and saves time by eliminating redundant data entry.

## ENHANCED WORKFLOW REDUCES UNNECESSARY STEPS SO YOU CAN FOCUS ON PATIENT CARE

Q-Tel RMS puts all your information right at your fingertips. You can generate reports on the progress of each patient - for an individual session, or across multiple sessions.

- Q-Tel RMS can generate appropriate reports showing the progress of each patient.
- The Individual Treatment Plan (ITP) captures and reports patient goals, interventions, and progress towards meeting those goals in the key areas recommended by AACVPR, with simplified collection and transfer of data to the registry.
- Highly customizable patient query reports make it easy to present accreditation data on attendance, enrollment, provider lists, and more to support individual facility requirements.
- Customer specific in-service and training support is offered at no charge.
- On-site service repairs and support are provided by our experienced field service engineers.



# Q-Tel RMS REHABILITATION MANAGEMENT SYSTEM 4.0

FEATURE	SPECIFICATIONS*		
<b>SYSTEM</b>			
<b>ECG PERFORMANCE</b>	<p><b>APPLICABLE STANDARDS</b> — AAMI EC-11-1991 for diagnostic ECG (The Q-Tel RMS system meets or exceeds the following performance requirements of AAMI EC-11: gain accuracy, frequency response, CMRR, system noise, dynamic range, and input impedance. The system does not offer a calibration pulse and prints exclusively at 25 mm/s.)</p> <p><b>DISPLAY AND ANALYSIS FILTER</b> — Muscle artifact, baseline wander and 50/60 Hz line. User can turn all filters on or off</p> <p><b>BANDWIDTH</b> — 0.05 - 150 Hz, compliant with AAMI EC11-1991 for diagnostic electrocardiographic devices</p>		
<b>ECG DISPLAY</b>	<p><b>CONTENT</b> — 4, 8 and 12 channel ECG display and alphanumeric data I/O</p> <p><b>DISPLAY</b> — 3.5 - 8 seconds, depending upon number of channels</p> <p><b>DATA</b> — ECG traces, heart rate, target heart rate, blood pressure, patient demographics and risk profiles, workload, METs, RPE, patient weight, and other user selectable parameters</p> <p><b>GAIN</b> — 2.5, 5, 10, 20, 40 mm/mV</p> <p><b>LEAD GROUPS</b> — 4 and 5 wire lead sets, supporting the standard limb set, limb plus one chest lead, and the modified chest lead</p>		
<b>ECG ANALYSIS</b>	<p><b>HEART RATE</b> — Moving median estimate based upon R-R intervals</p> <p><b>ALARMS</b> — Includes 7 programmable technical alarms and up to 13 programmable arrhythmia alarms with automatic strip print or automatic strip record</p>		
<b>POWER REQUIREMENTS</b>	100-240 VAC 50/60 Hz 400 W (Master/slave tower)		
<b>ENVIRONMENTAL</b>	<p><b>OPERATING TEMPERATURE</b> — 59°F to 90°F (15°C to 32°C)</p> <p><b>OPERATING RELATIVE HUMIDITY</b> — 30% to 80% non-condensing</p> <p><b>STORAGE TEMPERATURE</b> — 40°F to 113°F (-40°C to 45°C)</p> <p><b>STORAGE RELATIVE HUMIDITY</b> — 20% to 80% with condensation</p> <p><b>VENTILATION CLEARANCES</b> — Workstation: 6 in (min) behind; Laser printer: 3 in (min) on each side</p>		
<b>HARDWARE</b>			
	<table border="0"> <tr> <td style="vertical-align: top;"> <p><b>MASTER AND SLAVE TOWERS</b></p> <p><b>CPU</b> — Intel®-compatible PC platform, P4 3.2 GHz processor (min)</p> <p><b>RAM</b> — 4 GB (min)</p> <p><b>HARD DRIVE</b> — 500 GB SATA (min)</p> </td> <td style="vertical-align: top;"> <p><b>TURNKEY WORKSTATION</b></p> <p><b>CPU</b> — Intel compatible PC platform, P4 1.5 GHz processor (min)</p> <p><b>RAM</b> — 2 GB (min)</p> <p><b>HARD DRIVE</b> — 20 GB SATA (min)</p> </td> </tr> </table>	<p><b>MASTER AND SLAVE TOWERS</b></p> <p><b>CPU</b> — Intel®-compatible PC platform, P4 3.2 GHz processor (min)</p> <p><b>RAM</b> — 4 GB (min)</p> <p><b>HARD DRIVE</b> — 500 GB SATA (min)</p>	<p><b>TURNKEY WORKSTATION</b></p> <p><b>CPU</b> — Intel compatible PC platform, P4 1.5 GHz processor (min)</p> <p><b>RAM</b> — 2 GB (min)</p> <p><b>HARD DRIVE</b> — 20 GB SATA (min)</p>
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<b>DISPLAY</b>	Color LCD, 1920 x 1200; 24 in (61 cm)		
<b>KEYBOARD AND MOUSE</b>	USB keyboard and optical mouse		
<b>X12+ TRANSMITTER</b>			
<b>CHANNEL</b>	Easily programmable to any 1 of 64 channels using the function keys		
<b>DISPLAY</b>	1.25 in x 0.62 in (3.2 cm x 1.6 cm) LCD display shows live ECG, lead fail, lead quality, power ON/OFF, low battery		
<b>LEADS CONNECTOR</b>	Single-block, 4 or 5 lead		
<b>FUNCTION KEYS</b>	Up/Right, Down and Enter keys for ON, menu navigation and CALL		
<b>FREQUENCY RANGE</b>	WMTS 608 MHz (608.48 MHz to 613.52 MHz) or outside USA: 2400 MHz (2400.96 MHz to 2482.56 MHz)		
<b>DEFIBRILLATION PROTECTION</b>	Protected against defibrillation in compliance with AAMI standards and IEC 60601-2-25		
<b>PATIENT CALL BUTTON</b>	Depression of any button while monitoring inserts the call signal into the transmitted data stream		
<b>RADIATED POWER</b>	Does not exceed 0.5 mW		
<b>DIMENSIONS (H X D X W)</b>	3.5 in x .98 in x 2.5 in (9.1 cm x 2.5 cm x 6.4 cm)		
<b>WEIGHT</b>	With battery: 4.8 oz (136 g); Without battery: 4.0 oz (114 g)		
<b>BATTERY</b>	<p><b>TYPE</b> — 1 AA alkaline</p> <p><b>DURATION</b> — 24 hours (typical)</p>		
<b>DATA STREAM CONTENT</b>	Encoded lead potentials, battery voltage, lead potency or impedance		
<b>SAMPLE RATE</b>	500 samples/second/channel		
<b>PACEMAKER SPIKE DETECTION</b>	10,000 samples/second/channel at the transmitter. Detected pacemaker spikes are transmitted as part of the encoded data stream and are displayed in all acquired leads		
<b>ENVIRONMENTAL</b>	Classified according to IEC 60601-1 and IEC-60601-2-25 as ordinary equipment		

# Q-Tel RMS REHABILITATION MANAGEMENT SYSTEM 4.0

FEATURE	SPECIFICATIONS*
<b>RECEIVER</b>	
<b>SENSITIVITY</b>	100 dBm
<b>ANTENNA</b>	Dual passive antenna system. Open field range: 100+ meters. Optional powered antenna system available to extend coverage
<b>CHANNELS</b>	64 channels per receiver for 608 MHz and 2400 MHz systems
<b>PRECEIVER BOARD</b>	Available as 4 or 8 independent receivers per receiver board. Up to 12 receivers per tower
<b>LEADS</b>	4 or 5 leads of diagnostic ECG data per receiver
<b>PERIPHERALS</b>	
<b>LASER PRINTER</b>	Resolution: 600 dpi (min); Paper Dimensions: 8.5 x 11 in (US letter) or 210 x 300 mm (A4); Monthly Duty Cycle - 3,000 to 12,000 pages; Dimensions: 16.3 x 16.9 x 15.7 in (415 x 428 x 398 cm) at 52.1 lbs (23.7 kgs)
<b>NETWORK SWITCH</b>	Type: 10/100TX; Ports: 8 RJ-45 ports; Dimensions: 1.4 x 9.8 x 4.6 in (3.6 x 24.9 x 11.6 cm) at 2.0 lbs (0.9 kgs)
<b>NETWORK VPN</b> (for hospital network connection)	Security Features: Firewall, AES 128-bit encryption, VPN Tunnel; Dimensions: 6.1 x 7.5 x 1.25 in (15.5 x 19.0 x 3.2 cm)
<b>EXTERNAL HARD DRIVE</b>	Capacity: 500 GB (min); Type: USB 2.0
<b>POWER SUPPLIES</b> (for towers)	UPS: 1000VA/600W 120VAC (min); Isolation Transformer: 120 Volts, required in the patient vicinity
<b>CHART RECORDER</b> (optional)	Recording Technique: High-resolution thermal dot array, temperature controlled thermal print head; Printed Data: One and two-channel ECG waveform and alphanumeric printing; Speed: 25 mm/sec; Paper: Blank or pre-gridded thermal, ECG grid, 5 cm (2 in) wide rolls; Feed: Continuous from roll
<b>SOFTWARE</b>	
<b>REPORTS</b>	<b>OUTCOMES</b> — 11 standard outcomes reports covering individual session results, progress reports, and full disclosure <b>ADMINISTRATIVE</b> — 11 standard reports including daily billing, physician list, patient demographics, and statistical summaries
<b>THIRD-PARTY SOFTWARE</b>	Windows® 7 Professional SP1, Microsoft® Excel 2010, Microsoft SQL Express 2008, Adobe® Acrobat® Reader 9 <i>Mortara recommends installing all Microsoft critical and security updates on an ongoing basis to protect the Q-Tel RMS system from Internet based attacks. Additionally, a commercially available anti-virus software package should be used with Q-Tel RMS. Virus scanning should not be performed on the system when using the Q-Tel RMS application. In all cases, Q-Tel RMS application files must be excluded from the virus scan. Mortara does not recommend installing any other unqualified software on your Q-Tel RMS system.</i>
<b>MORTARA SOFTWARE</b>	Q-Tel RMS software, Q-Progress software, Purge/Archive utility, Backup/Restore utility
<b>NETWORKING</b>	TCP/IP compatible networking for file storage, distribution, and printing. Q-Tel Towers run on a private Q-Tel Workgroup.
<b>COMMUNICATION PROTOCOL/FORMAT</b>	TCP/IP; HL7 and PDF
<b>SERVICE</b>	Mortara field service engineer or qualified technician only
<b>WORKSTATION SOFTWARE</b>	
<b>MINIMUM SPECIFICATIONS</b>	Processor: equivalent to Intel Pentium 4, 1.5 GHz or faster; System memory: 2 GB; CD or DVD drive: 8X or faster; Hard drive: 20 GB; Video: 1280 x 1024 resolution; Operating System: Windows 7 Professional 32-bit with SP1; (64 bit not supported.) Network: 100Mbps NIC Card or 802.11G wireless card