



# VCSe™ 2000/9000 Communication Platforms

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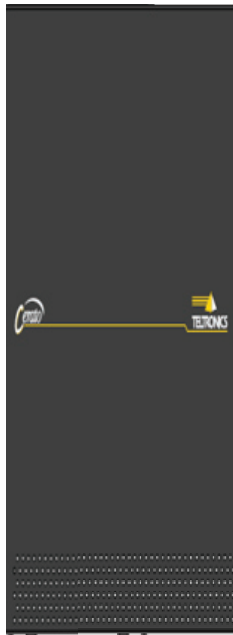
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VCSe™ 2000 MDC/LDC  
Common Control Shelf



VCSe™ 2000/9000  
MDX/LDX  
Telephony Expansion  
Shelf



VCSe™ 9000 VME  
Common Control  
Cabinet



Cerato® Arcata™  
2826 Dual Mode  
Endpoint

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# Enabling Voice Communication Solutions... Advanced for Today, Fit for Tomorrow



Expanding on the **strength, reliability** and **flexibility** of the 20-20<sup>®</sup>, the next generation, IP-enabled Cerato<sup>®</sup> VCSe<sup>™</sup> 2000/9000 is a proven, resilient converged technology platform, that delivers feature-rich IP communications, sophisticated networking and advanced applications, to medium and large businesses.

- **Exceptional Voice Quality & Reliability**
- **Scalability & Investment Protection**
- **Lower Total Cost of Ownership**
- **Improved Productivity**
- **Wide Selection of Phones**

## **Exceptional Voice Quality and Reliability**

Built on four decades of industry experience, Cerato VCSe 2000/9000 communications platforms are designed to make businesses more efficient and responsive. As companies continue to migrate toward converged voice and data solutions, implementing a product that offers superior voice reliability is critical in driving business results.

Delivering superior voice quality with 99.999% reliability, the Cerato VCSe 2000/9000 addresses VoIP stability with fully integrated redundancy, where all calls remain active, even in the event of a failure.

## **Scalability and Investment Protection**

The Cerato VCSe 2000/9000 voice products offer a new, compact design with a complete suite of analog, digital, and VoIP interfaces. Whether a business is ready for convergence today or a year from now, the options are open and the investment secure. In addition, current MedTel Services system users have a clear migration path to Cerato platforms including the ability to employ existing devices.

With its distinctive non-blocking design and scalability up to 9,216 ports, Cerato VCSe 2000/9000 models, share a common interface for trunks and lines; significantly minimizing upgrade expenses while maximizing business investment.

## **Lower Total Cost of Ownership**

The Cerato VCSe 2000/9000 offers exceptional ease-of-installation, ease-of-use and an easy-to-navigate graphical administrative interface to significantly lower ongoing maintenance and operating expenditures. Through network consolidation and the ability to perform moves, adds, and changes without vendor involvement, businesses enjoy reduced total cost of ownership for their voice communication system.

## **Improved Productivity with Advanced Features**

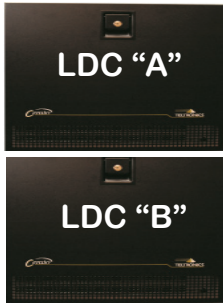
With multimedia applications such as Advanced Conferencing, SIP-based Unified Messaging, Advanced Security, the Accommodator Hospitality package, and Contact Center support, businesses can provide employees with powerful communications tools — ensuring an enterprise-wide return on investment.

## **A Wide Selection of Phones**

From affordable entry-level phones to products that deliver advanced applications, MedTel Services offers a wide variety of VoIP, digital, dual-mode and soft-phones allowing businesses to increase productivity by matching user requirements with phone features. MedTel Services' Arcata<sup>™</sup> Family of Endpoints support a comprehensive suite of telephony features and applications with solutions designed to meet varying communication needs from small-to-large.

## **The Right Choice**

The Cerato VCSe 2000/9000 meets the specific needs of businesses and maintains the commitment of investment protection. This feature-rich platform not only maximizes an organization's competitive advantage today, but continues to provide an ongoing solution that's fit for tomorrow.



Low Density Common Control Shelf  
Single Processor per Shelf  
Shelf Equipped with Sixteen 16 Port Card Slots  
Two Shelves Required for Full Hot Standby Redundancy  
Supports 256 to 2048 Non-Blocking Ports  
Optional N+1 Shelf Power Supplies



Mid Density Common Control Shelf  
Shelf Supports Either Single or Redundant Hot Standby Common Controls  
Shelf Equipped with Twelve 32 Port Card Slots and Four 64 Port Card Slots  
Supports 256 to 2048 Non-Blocking Ports  
Includes N+1 Shelf Power Supplies



VME Common Control Cabinet  
Complete Redundant Hot Standby VME Processors  
Supports 1024 to 9216 Ports  
Includes Redundant Shelf Power Supplies



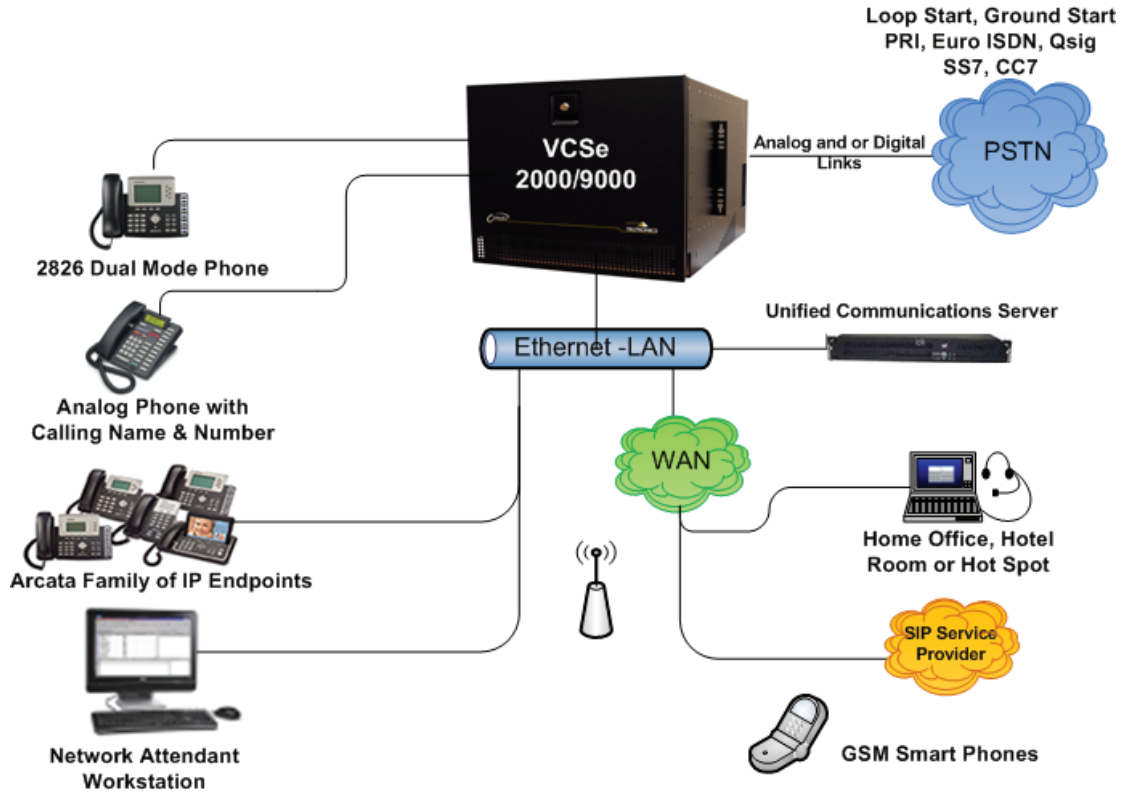
Low Density eXpansion Shelves  
Shelf Equipped with Sixteen 16 Port Card Slots  
Supports 256 Non-Blocking Ports  
Optional N+1 Shelf Power Supplies



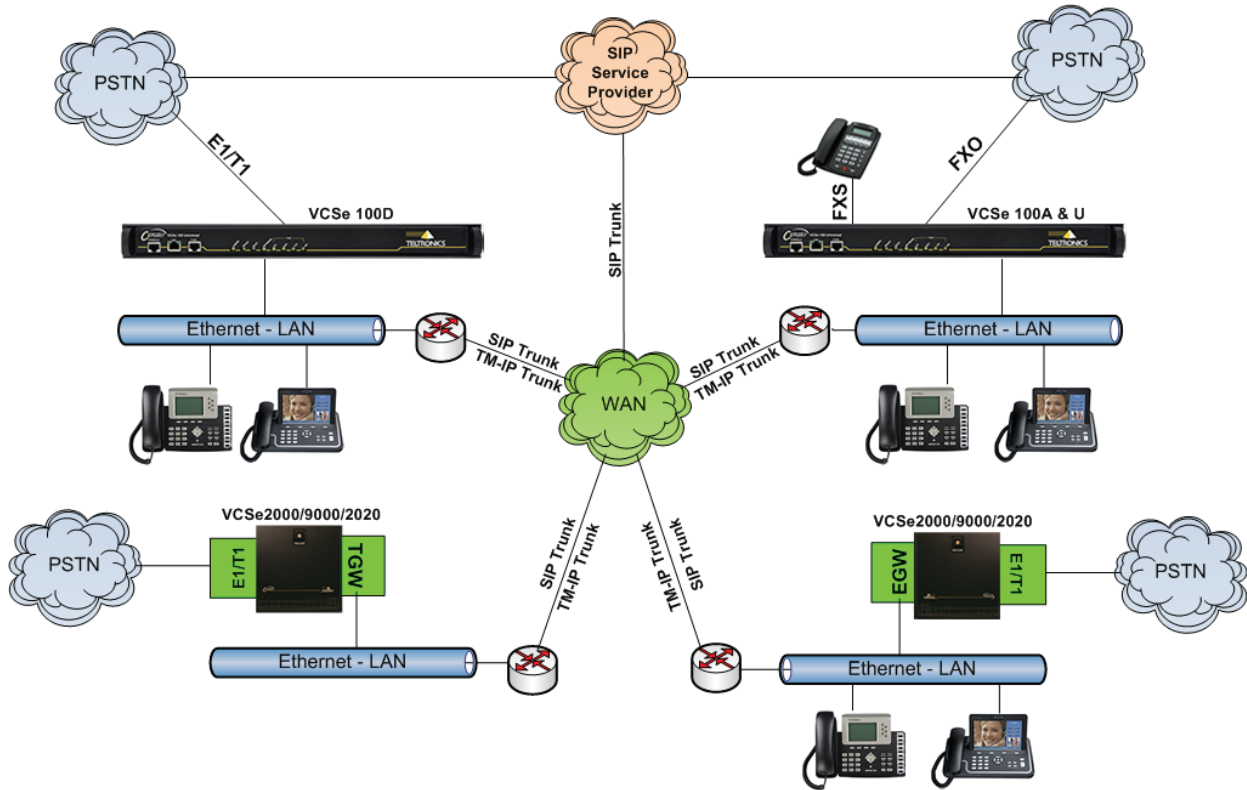
Mid Density eXpansion Shelves  
Shelf Equipped with sixteen 32 Port Card Slots  
Supports 512 Non-Blocking Ports  
Optional N+1 Shelf Power Supplies

- LDC & LDX Shelves Utilize 16 Port Card Slots and Supports IP32/E1/T1/Hex & Octal cards.
- MDC & MDX Shelves Utilize 32 Port Card Slots and Support IP32/64/E1/E2/T1/T2/Hex & Octal cards.
- Both LDX & MDX Shelves can be used in a Single System Configuration with either LDC/MDC or VME Common Control Shelves/Cabinet.

VCSe™ 2000/9000 is Easy to Configure and Expand



VCSe™ 2000/9000 Site Configuration



VCSe™ 100/2000/9000 IP Networked



## VCSe™ 2000/9000 Communication Specifications

Interfaces	IP/Analog/Digital Phones Ports	Conference Ports	T1/E1 Digital Trunk Units	VoIP IP TU Trunk Channels	Simultaneous Phone Calls	Standalone & Network Capability	Network Interfaces	
Cerato VCSe 2000	2048	256	64	1920	Non-blocking to 2048 ports	Yes	10/100 Base T (Ethernet, RJ-45 Connection, 802.1 p-tagging, V-LAN Support	
Cerato VCSe 9000	9216	768	288	8640	Non-blocking to 9216 ports			
<b>VoIP Specifications</b>								
	Voice Specifications			Voice Codecs		Fax Support		
Cerato VCSe 2000	G.168 Echo Cancellation, VoIP Packet Coalescing, SIP RFC 3261 and 2833, DTMF Detection, Auto Codec Negotiation, Dynamic Jitter Buffer, Loss Packet Handling			G.711 a-law/u-law, G.729 a,b, Voice Activity Detection and Comfort Noise Generation		Modem, T38 and Fax Clear Channel Auto Detect		
Cerato VCSe 9000						RFC 3261 - SIP, 2976 - SIP Info, 3821 - SIP Replace, 3515 - SIP Refer, 2396 - URI, 2388 - DTMF, DTMF - RTP in-band		
<b>Trunks</b>								
	Analog - FXO Interface		Digital T1 Signaling		Digital T1 Coding & Framing		Digital E1 Coding & Framing	
Cerato VCSe 2000	Loop Start/Ground Start, 2 and 4 Wire E&M, and Direct Inward Dial, Single Frequency 2600Hz (DTMF, MF, and Dial Pulse)		AT&T, NI-2, 4ESS, 5ESS, and Non-Standard: China, DMS100/250, SS7, ISUP, Loop/Ground Start, 2 and 4 Wire E&M Wink, Timed, Tone & Immediate Start, Teltronics Defined Network		NET5, QSIG, NTT, RZ, ISUP and Non-Standard: China, Chile, Czech Republic, Poland, Russia, Venezuela, Teltronics Defined Network (TDN), ISUP, Loop/Ground Start, 2 and 4 Wire E&M Wink, Timed, Tone & Immediate Start		T1/E1 CCS, T1/E1 CAS	
Cerato VCSe 9000					ZCS/AMI or B8ZS & D4 or ESF		AMI or HDB3 and CRC4 off/on	
<b>Common Control Physical Specs</b>								
	Input Power		Input Current		19" rack mount		Operating Temperature	
Cerato VCSe 2000 MDC/LDC	MDC Shelf includes N+1 Shelf Power Modules LDC Shelf includes Card Slot for optional N+1 Shelf Power Module		16A @ -42 to 56 VDC		MDC, LDC, MDX & LDX Yes, Rack Mounting Included Bracket		Operating Humidity	
Cerato VCSe 9000 VME	Includes Redundant Common Control Power Supplies		22A @ -42 to 56 VDC		10 - 80% non-condensing		Storage Temperature	
<b>Telephony Shelves Physical Specs</b>								
	Input Power		Input Current		Weight		Certifications	
MDX LDX	DC Power: -48VDC		12A @ -42 to -56 VDC <20dBm C		85 lbs / 38.6 Kg		EN60950 FCC Part 15 FCC Part 68	

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*Ideas That Communicate*

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