

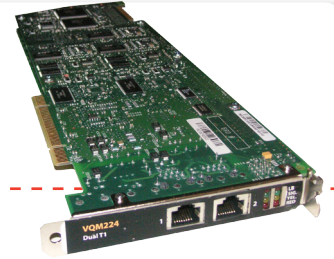
# Test Modules & Agents

## Quick Reference

### Test Modules



#### Call/Speech Quality & Trunk Testing



VQM4	Analog (FXO)		2 test ports
VQM12	Analog (FXO)		6 test ports
VQM24	T1		12 test channels
VQM224	Dual T1		24 test channels
VQM30	E1	ISDN/PRI, SS7	15 test channels
VQM230	Dual E1		30 test channels



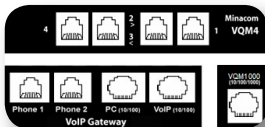
#### Fax/Modem Quality

VQM38	Analog (FXO)		1 Fax test port
VQM92	Analog (FXO)		1 Modem test port



#### VoIP Performance

VQM1000	Ethernet 10/100/1000 (RTP/RTCP, ICMP, DNS, etc.)		1 GigE test port ► multiple simultaneous tests
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#### Signaling Gateways

VoIP Gateway	Ethernet 10/100 (MGCP/SIP/H.323/SCCP)		supports VQM 4, 12, 38, 92 modules ► 2 analog (FXO) inputs
SS7 Gateway (VQM7)	4x T1/E1 (ISUP)		supports VQM 24, 224, 30, 230 modules
Wireless Gateways	GSM 850/1900, 900/1800 MHz CDMA 800, 1900 MHz TDMA 800, 1900 MHz		supports VQM 4, 12, 38, 92 modules ► 2 analog (FXO) inputs

Tektronix' Communications Business Division -

# Enabling Next-Generation Network Innovation

Test Agents	INTERFACES						SIGNALING													
	Analog		T1		E1		Analog Fax/Modem		IP	Wireline			VoIP			Wireless				
	VQM 4	VQM 12	VQM 24	VQM 224	VQM 30	VQM 230	VQM 38	VQM 92	VQM 1000	PRI	SS7	Analog	SIP	MGCP	H.323	SCCP	CDMA	TDMA	GSM	
<b>► Call &amp; Speech Quality</b>																				
	Caller ID	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Conferencing	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DTMF Transparency	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Echo & Noise (Fax)	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Echo & Noise (Human)	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fax Connection	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fax Transmission	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ITU-T PESQ	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IVR	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MCI VQES	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Network Timers/CDC	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Speech and DTMF	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>► Connectivity Testing</b>																				
	Ring Detection	✓	✓									✓			✓	✓	✓	✓	✓	✓
	Alert (Ring) Detection			✓	✓	✓	✓				✓	✓								
	Answer Detection			✓	✓	✓	✓				✓	✓								
<b>► Legacy Trunk Testing</b>																				
	ROTL 100			✓	✓						✓	✓								
	ROTL 102			✓	✓						✓	✓								
	ROTL 105			✓	✓						✓	✓								
	ROTL 108			✓	✓						✓	✓								
<b>► Fax/Modem Testing</b>																				
	Fax Connection	✓	✓					✓			✓		✓	✓	✓	✓	✓	✓	✓	✓
	Fax Transmission	✓	✓					✓			✓		✓	✓	✓	✓	✓	✓	✓	✓
	Modem Connection							✓	✓		✓									
<b>► Internet / IP Services</b>																				
	DNS Resolution								✓											
	Ping								✓											
	RTP Streamer								✓											
	Trace Route								✓											
	Video Connection								✓				✓	✓						
	Video MOS								✓											
<b>► Cable VoIP</b>																				
	MTA VoIP Loopback			✓	✓	✓	✓		✓		✓			✓						
	Transponder RTP Loopback								✓											
	Transponder eMTA Voice-Path			✓	✓	✓	✓		✓				✓							
	Tollgrade VoIP Responder	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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