8960 Series 10 CDMA Mobile Test/Lab Application

Preliminary TIA/EIA-98-D Capability Listing

Revision Date: June 13, 2002

TIA/EIA 98-D Test	Test Description	E6702A A.01	E1962B B.03	E1962B B.04-5	Comments
1.3	Fundamental Channel Test Mode 1 (F/R RC1)	Yes	Yes	Yes	Supports SO2 and SO55 on Traffic Channel
	Fundamental Channel Test Mode 2 (F/R RC2)	Yes	Yes	Yes	Supports SO9 and SO55 on Traffic Channel
	Fundamental Channel Test Mode 3,(F/R RC3)	Yes	Yes	Yes	Supports SO2 and SO55 on F-FCH & R-FCH
	Supplemental Channel Test Mode 3,(Forward RC3)	Yes	Yes	Yes	Supports SO32 (TDSO) on F-SCH
	Fundamental Channel Test Mode 4,(F-RC4 & R-RC3)	Yes	Yes	Yes	Supports SO2 and SO55 on F-FCH & R-FCH
	Supplemental Channel Test Mode 4,(Forward RC4)	Yes	Yes	Yes	Supports SO32 (TDSO) on F-SCH
	Fundamental Channel Test Mode 5,(F-RC5 & R-RC4)	Yes	Yes	Yes	Supports SO9 and SO55 on F-FCH & R-FCH
	Supplemental Channel Test Mode 5,(Forward RC5)	Yes	Yes	Yes	Supports SO32 (TDSO) on F-SCH
3.1	Frequency Requirements	Yes	Yes	Yes	E1692B Supports Band Class 0, 1, 3, 4, 5, 6 & 10
3.2.1.1	Idle Handoff in Non-slotted Mode Test 1	No	No	No	Requires two synchronized Base Station Emulators
	Idle Handoff in Non-slotted Mode Test 2	No	No	No	Requires two synchronized Base Station Emulators
3.2.1.2	Idle Handoff in Slotted Mode on paging Channel	No	No	No	Requires two synchronized Base Station Emulators
3.2.1.3	Idle Handoff in Slotted Mode on the Forward Common Control Channel	No	No	No	Requires two synchronized Base Station Emulators
3.2.1.4	Idle Handoff to Another Frequency	No	No	No	Requires two synchronized Base Station Emulators
3.2.2.1	Neighbor Set Pilot Detection & Incorrect Detection in Soft Handoff	Yes	No	No	Requires Soft Handoff Capability and Pilot Measurement detection
3.2.2.2	Candidate Set Pilot Detection & Incorrect Detection in Soft Handoff	Yes	No	No	Requires Soft Handoff Capability and Pilot Measurement detection

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3.2.2.3	Active Set Pilot Loss Detection in Soft Handoff	Yes	No	No	Requires Soft Handoff Capability and Pilot Measurement detection
3.2.3.1	Access Probe Handoff	No	No	No	Requires two synchronized Base Station Emulators
3.2.3.2	Access Handoff	No	No	No	Requires two synchronized Base Station Emulators
3.3.1	Demodulation of Non-Slotted Paging Channel with AWGN	No	No	No	The Test Set can set up the proper forward channel conditions. The Test Set cannot retrieve the mobile accumulated statistics parameters.
3.3.2	Demodulation of Slotted Paging Channel with AWGN	No	No	No	The TEST SET cannot send an Audit Order.
	3.3.2.2.1 – Spreading Rate 1 Paging Channel	No	No	No	The Test Set supports only IS-2000 rev. 0 channels. Does not support enhanced access, FCCCH, BCC, CPCCH.
	3.3.2.2.2 – Spreading Rate 3 Paging Channel	No	No	No	Possible future enhancement
3.3.3	Demodulation of Broadcast Control Channel in AWGN	No	No	No	Possible future enhancement
	3.3.3.2.1 – Spreading Rate 1 BCC	No	No	No	Possible future enhancement
	3.3.3.2.2 – Spreading Rate 3 BCC	No	No	No	Possible future enhancement
3.3.4	Demodulation of Broadcast Control Channel in Multipath Fading Channel	No	No	No	Possible future enhancement
	3.3.4.2.1 – Spreading Rate 1 BCC	No	No	No	Possible future enhancement
	3.3.4.2.2 – Spreading Rate 3 BCC	No	No	No	Possible future enhancement
3.3.5	Demodulation of Forward Common Control Channel	No	No	No	Possible future enhancement

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	3.3.5.2.1 – Spreading Rate 1 F-CCCh	No	No	No	Possible future enhancement
	3.3.5.2.2 – Spreading Rate 3 F-CCCh	No	No	No	Possible future enhancement
3.3.6	Reception of Common Power Control Channel and Common Assignment Channel	No	No	No	Possible future enhancement
	3.3.6.2.1 – Spreading Rate 1 Forward Common Power Control Channel and Common Assignment Channel with Rate = ¼	No	No	No	Possible future enhancement
	3.3.6.2.1 – Spreading Rate 1 Forward Common Power Control Channel and Common Assignment Channel with Rate = ½	No	No	No	Possible future enhancement
	3.3.6.2.1 – Spreading Rate 3 Forward Common Power Control Channel and Common Assignment Channel	No	No	No	Possible future enhancement
3.4.1	Demodulation of Forward Traffic Channel with AWGN (F-FCH)	Yes Except step 7	Yes Except step 7	Yes Except step 7	Uses loopback Service Options 002, 009, or 055
3.4.1	Demodulation of Forward Traffic Channel with AWGN (F-SCH)	Yes	Yes	Yes	E1962B uses Test Data Service Option (SO32)
3.4.2	Demodulation of Forward Traffic Channel with Fading (F-FCH)	Yes	Yes	Yes	**Requires an external fader and AWGN generator to perform per the standards.**
3.4.2	Demodulation of Forward Traffic Channel with Fading (F-SCH)	Yes	Yes	Yes	**Requires an external fader and AWGN generator to perform per the standards. E1962B Uses TDSO (SO32)**
3.4.3	Demodulation of Forward Traffic Channel During Soft Handoff	Partially	No	No	Requires internal fading capability – Can complete static form of test

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3.4.4	Decision of Power Control Bit for Channels Belonging to Different Power Control Sets During Soft Handoff - Test 1	Partially	No	No	Power measurement must be performed by Spectrum Analyzer in Zero Span
	Decision of Power Control Bit for Channels Belonging to Different Power Control Sets During Soft Handoff - Test 2	Partially	No	No	Power measurement must be performed by Spectrum Analyzer in Zero Span
3.4.5	Decision of Power Control Bit for Channels Belonging to the Same Power Control Set	Partially	No	No	Requires internal fading capability – Can complete static form of test
3.4.6	Demodulation of Power Control Sub-channel During Soft Handoff	Functionally	No	No	Channel Power measurement may be used; however, Spectrum Analyzer will provide greatest accuracy
3.4.7	Demodulation of Forward Traffic Channel in Multipath Fading Channel with Closed Loop Power Control (FPC_MODE=000)	No	No	No	Possible future enhancement
3.4.8	Demodulation of Forward Traffic Channel During Soft Handoff with Closed Loop Power Control (FPC_MODE=000)	No	No	No	Possible future enhancement
3.4.9	Demodulation of Forward Traffic Channel in Multipath Fading Channel with Closed Loop Power Control (FPC_MODE=011 or 100)	No	No	No	Possible future enhancement
3.4.10	Demodulation of Forward Traffic Channel in Multipath Fading Channel with Closed Loop Power Control (FPC_MODE=000) and Transmit Diversity (OTD or STS)	No	No	No	Possible future enhancement
3.4.11	Demodulation of Power Control Subchannel During Reverse Pilot Channel Gating	No	No	No	Possible future enhancement

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3.4.12	Demodulation of Power Control Subchannel During Reverse Fundamental Channel Gating	No	No	No	Possible future enhancement
3.4.13	Behavior of the Quality Indicator Bit of the Forward Dedicated Control Channel	No	No	No	Possible future enhancement
3.5.1	Receiver Sensitivity	Yes	Yes	Yes	
	Receiver Dynamic Range	Yes	Yes	Yes	
3.5.2	Single Tone Desensitization Test 1	Yes	Yes	Yes	**Requires a single external CW signal generator to perform the test.**
	Single Tone Desensitization Test 2	Yes	Yes	Yes	
3.5.3	Intermodulation Spurious Response Attenuation Test 1	Yes	Yes	Yes	**Requires two external CW signal generators to perform the test.**
	Intermodulation Spurious Response Attention Test 2	Yes	Yes	Yes	
3.5.4	Adjacent Channel Selectivity	Yes	Yes	Yes	**Requires external CDMA signal generator**
3.5.5	Receiver Blocking (Band Class 6)	Yes	Yes	Yes	**Requires external CDMA signal generator**
3.6.1	Conducted Spurious Emissions	No	No	No	Use the HP 859XE + HP 85725C CDMA Spectrum Analyzer.
3.6.2	Radiated Spurious Emissions	No	No	No	Use the HP 859XE + HP 85725C CDMA Spectrum Analyzer.
3.7.1	Supervision Paging Channel	Partially	Partially	Partially	The TEST SET can perform this test but does not provide accurate timing measurements.
3.7.2	Supervision Forward Channel Test 1	No	No	No	The TEST SET has no provision for sending corrupted frames as required in this test.

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	Supervision Forward Channel Test 2	No	No	No	
4.1	Transmit Frequency Accuracy	Yes	Yes	Yes	Uses the rho or EVM measurement method.
4.2.1	CDMA to CDMA Hard Handoff	Partially	Partially	Partially	Performs F_1 to F_2 Hard handoffs, but cannot make the required timing measurement.
4.2.2	Transmit Power after Hard Handoff	No	No	No	
4.2.3	Candidate Frequency Single Search	No	No	No	
4.3.1	Time Reference	Yes	Yes	Yes	Uses the rho or EVM measurement method.
	Time Reference Slew Rate	Partially	Partially	Partially	**Requires external fader & external timing measurement device**. E1962A requires mobile test mode to set-up call.
4.3.2	Reverse Pilot Channel to Code Channel Time Tolerance	Yes	Yes	Yes	
4.3.3	Reverse Pilot Channel to Code Channel Phase Tolerance	Yes	Yes	Yes	
4.3.4	Waveform Quality and Frequency Accuracy	Yes	Yes	Yes	Uses the rho or EVM measurement method.
4.3.5	Code Domain Power	Yes	Yes	Yes	
4.4.1	Range of Open Loop Output Power	Yes	Yes	Yes	E1962A uses channel power meter to capture access probe. E1962B uses access probe power meter to measure.
	Spreading Rate 1 Enhanced Access Channel	No	No	No	Support for Enhanced Access Channel is a possible future enhancement
	Spreading Rate 3 Enhanced Access Channel	No	No	No	SR3 support is a future enhancement

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4.4.1	Range of Open Loop Output Power	Yes	Yes	Yes	E1962A uses channel power meter to capture access probe. E1962B uses access probe power meter to measure.
	Spreading Rate 1 Enhanced Access Channel	No	No	No	Support for Enhanced Access Channel is a possible future enhancement
	Spreading Rate 3 Enhanced Access Channel	No	No	No	SR3 support is a future enhancement
4.4.2	Time Response of Open Loop Power Control	No	No	Yes	Feb 02 version provides graphical results
4.4.3	Access Probe Output Power	Yes	Yes	Yes	Use Call Limit to ignore probes
	Spreading Rate 1 Enhanced Access Channel Probe Acquisition	No	No	No	Support for Enhanced Access Channel is a possible future enhancement
	Spreading Rate 3 Enhanced Access Channel Probe Acquisition	No	No	No	SR3 support is a future enhancement
4.4.4	Range of Closed Loop Power Control Test 1 9600 (4 parts)	Partially	Partially	Partially	The TEST SET can verify the control range in dB, but cannot make the timing measurements.
	Transmit Closed Loop Range of Correction Test 2 9600 (1 part)	No	No	No	Requires timing measurement capability.
	Transmit Closed Loop Range of Correction Test 3 4800 (3 parts)	Partially	Partially	Partially	The TEST SET can verify the control range in dB, but cannot make the timing measurements.
	Transmit Closed Loop Range of Correction Test 4 2400 (3 parts)	Partially	Partially	Partially	The TEST SET can verify the control range in dB, but cannot make the timing measurements.
	Transmit Closed Loop Range of Correction Test 5 1200 (3 parts)	Partially	Partially	Partially	The TEST SET can verify the control range in dB, but cannot make the timing measurements.
4.4.5	Maximum RF Output Power	Yes	Yes	Yes	Uses average power meter.

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4.4.6	Minimum Controlled Output Power	Yes	Yes	Yes	Uses channel power meter that is cross- calibrated to the average power meter.
4.4.7	Standby Output Power and Gated Output Power	Partially	Partially	Partially	E1962B has graphical Gated Power measurement but cannot measure standby output power.
4.4.8	Power Up Function Output Power	No	No	No	
4.4.9	Code Channel to Reverse Pilot Channel Output Power Accuracy	Yes	Yes	Yes	Feb 02 version includes numerical table of channel gains.
	4.4.9.2.1 – Code Channel Output Power for the Enhanced Access Channel Header, Enhanced Access Channel Data and Reverse Common Control Channel Data	No	No	No	Possible future enhancement
	4.4.9.2.2 – Code Channel Output Power for the Reverse Traffic Channel	Yes	Yes	Yes	Feb 02 version includes numerical table of channel gains.
4.4.10	Reverse Pilot Channel Transmit Phase Discontinuity	No	No	No	
4.5.1	Conducted Spurious Emissions	Yes	Yes	Yes	Feb 02 version includes user selectable pass/fail limits.
4.5.2	Radiated Spurious Emissions	Yes	Yes	Yes	**Requires external spectrum analyzer.**
4.5.3	Occupied Bandwidth (Band classes 3 & 6 only)	Yes	Yes	Yes	**Requires external spectrum analyzer**