

MICROVISION

RTM-3 Response Time Module

APPLICATIONS

- OLED, LCD & PDP Displays

MEASUREMENTS

- Motion Blur & Artifacts
- MPRT
- Response Time
- Gray Level Transition Time
- Overshoot Percentage
- Flicker

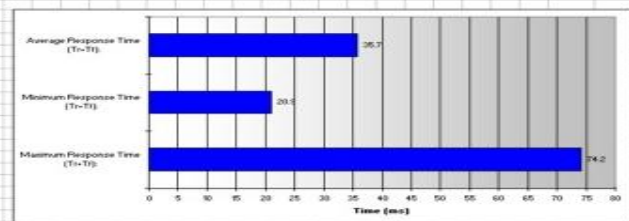
FEATURES

- Fully Automatic Testing
- Auto Gain/Scaling
- Customizable Setup
- Proprietary Filtering Algorithms
- Large Dynamic Range
- BNC Output for Oscilloscope
- 2D and 3D Plots & .csv File Output

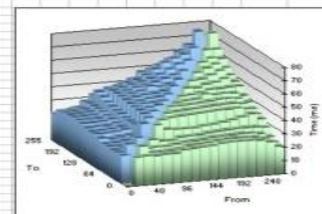
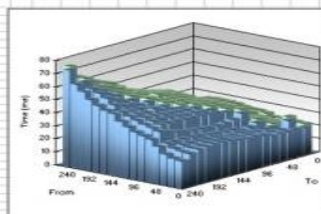
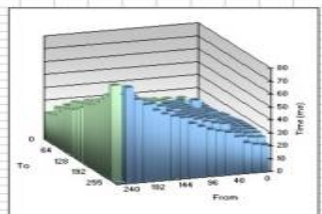
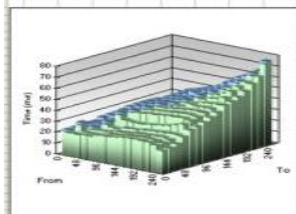


RTM-3 Unit on Stand

	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240	255
0		211	254	252	217	217	237	245	248	252	264	267	268	267	263	247	269
16	231		269	266	216	219	225	245	248	253	264	269	272	269	269	252	217
32	214	263		225	227	229	237	250	252	267	267	270	272	277	276	256	236
48	212	258	225		225	248	244	264	267	270	280	285	280	282	285	284	285
64	217	254	227	265		246	268	303	301	302	312	316	326	337	359	373	329
80	217	259	229	248	244		269	370	376	381	384	391	395	399	399	345	
96	237	226	237	244	310	269		262	289	385	398	406	418	412	414	408	364
112	245	245	295	264	363	370	382		403	463	469	414	423	429	435	425	393
128	246	249	262	267	301	376	369	403		466	456	422	453	443	447	445	422
144	252	262	267	278	362	361	385	403	468		429	424	444	459	464	469	469
160	264	264	267	288	312	364	399	409	436	429		465	460	461	469	510	486
176	267	268	278	285	316	331	406	414	422	434	465		450	459	512	551	551
192	269	272	273	299	326	395	419	423	453	444	460	490		506	504	579	547
208	267	283	277	293	327	389	413	429	443	463	491	498	528		575	602	585
224	263	289	276	295	365	399	414	431	447	464	489	523	554	576		642	644
240	247	262	265	294	373	368	405	425	445	469	510	551	579	603	643		742
255	209	237	238	285	329	345	364	393	422	469	484	511	547	595	644	742	



Maximum Response Time (T_MT): 74.2
 Minimum Response Time (T_MT): 20.9
 Average Response Time (T_AT): 35.7
 Rise-Fall Time: Rise-Fall Time



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SYSTEM OVERVIEW:

The RTM module can be used on its own or integrated into the SS400 series display analysis system.

The RTM sensor consists of a variable focus aperture lens system imaged on a photodiode. The photodiode output is filtered and then input into a 16-bit data acquisition card with a variable sample rate and gain.

The response time functions is designed to measure Rise (T_{on}) and Fall (T_{off}) times of a blinking target as specified in ISO-9241 and VESA FPDM 2.0, section 305-1. Please refer to these documents for the specification requirements and note on the general Response Time Measurement Procedure.

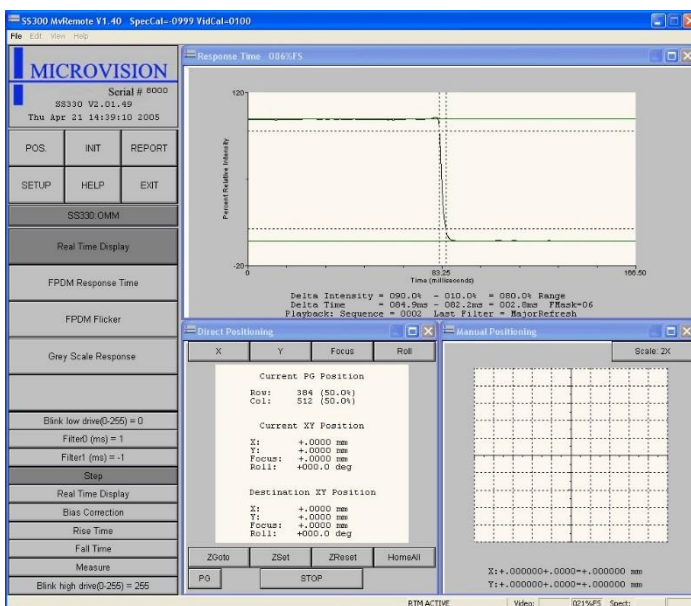
Also included is an automatic gray level transition time measurement. The response time module can measure as array of gray levels automatically from 0-255.

The standard RTM-3 has a minimum measured transition time of 100 μ s making it suitable for LCD and plasma displays. The High-Speed version (RTM-HS) has a minimum measured transition time of 10 μ s making it suitable for OLEDs as well.

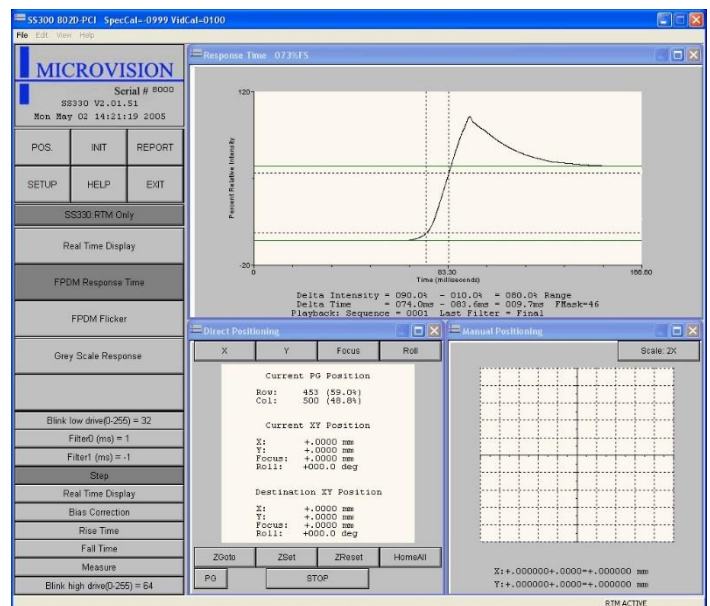
RTM SPECIFICATIONS:

Optical Type:	Photodiode
Samples Rate:	100khz or 1Mhz (RTM-HS)
Resolution:	16-Bit
Detector Response:	10kHz or 100kHz (RTM-HS)
Transition Time:	0.1ms to 4 sec
	(RTM-HS) 0.01ms to 4 sec
Lens:	25mm ϕ +mount, f1.6 to f22
Sync:	Software
Repeatability:	3%
Interface:	USB

Specifications are subject to change without notice.



Fall time



Rise time with overshoot

