







Charged Device Model (CDM) Systems Comparison

(Data compiled on May 15th, 2021, from official websites)

	ESDEMC ES640-150/300 	GTS Scorpion Robotic CDM tester 	Thermo Scientific Orion3 CDM tester 	Hanwa HED-C5000R 	TET Model 1100 	Fraunhofer EMFT MCDM3 
Hardware Specifications						
Max XY Motion Area (mm)	320X 320 / 150 X 150	152.4 X 152.4		80 X 200		190 X 220
Field Plate Surface Area (mm)	470 X 395 / 210 X 210	127 X 127	101.6 X 101.6			
Min XY Step Size (µm)	1	25.4	25.4	50		+/- 1 (step or re-position?)
Max Z Travel Distance (mm)	50 (Customizable)	76.2	38.1			
Voltage Control Range (V)	±1 ~ 2000 (Customizable)	±25 ~ 2000	±25 ~ 2000	± ? ~ 4000	± ? ~ 2000	± ? ~ 3000
Humidity Control Methods	Renewable Desiccant Drying Unit, or Nitrogen, Fully Airtight	Nitrogen 0.05 scfm at 60 psi	Nitrogen 0.25 scfm at 60 psi			
Supports Standards and Test Methods	ESDA/JEDEC JS-002 AEC-Q100-011 Rev-D AEC-Q101-005 Rev-A ESDA CC-TLP ESDA LI-CCDM Unique RP-CCDM Customization & Obsolete Support	ESDA/JEDEC JS-002 AEC-Q100-011 Rev-D AEC - Q101-005 Rev-A JEDEC (JESD22-C101F, Obsolete) ESDA (ANSI/ESD S5.3.1, Obsolete) AEC (AEC-Q100-011, Obsolete) Unique Contact First AD	ESDA/JEDEC JS-002 AEC-Q100-011 Rev-D AEC - Q101-005 Rev-A ESDA LI-CCDM	ESDA/JEDEC JS-002 AEC-Q100-011 Rev-D AEC - Q101-005 Rev-A AEC (AEC-Q100-011, Obsolete) JEITA (Japanese standard);	ESDA/JEDEC JS-002 AEC-Q100-011 Rev-D AEC - Q101-005 Rev-A AEC (AEC-Q100-011, Obsolete) JEITA (Japanese standard);	ESDA/JEDEC JS-002 AEC-Q100-011 Rev-D AEC - Q101-005 Rev-A ESDA CC-TLP ESDA LI-CCDM
Camera Number & Resolution	3 (XY + V) XY=1920X1080, V=2592X1944	2 (X + V)	2 (XY) XY=1280X1024	2 (X + V)		2
Operating Humidity Range RH	10 ~ 80%	10 ~ 80%	30 ~ 60%			
Software Features						
Automatic System Calibration	Available					
Frequency Compensation	Available					
Test Speed Optimization	Fast Motion, Adaptive Charge Delay					
Multiple Devices Per Batch	Available with 9+ DUTs					
Additional Considerations						
Services	On-site installation, training, remote assist, consulting					
Support	Rolla, MO, USA + Beijing, China	Milpitas, CA, USA	San Jose, CA, USA	Ogaito, Wakayama, Japan	Tokyo, Japan	Munich, Germany
Warranty	2 Years					