

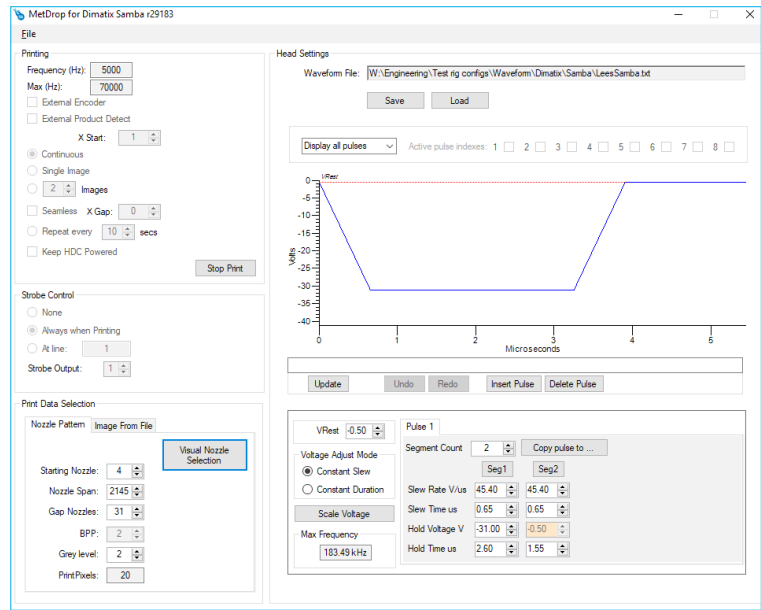
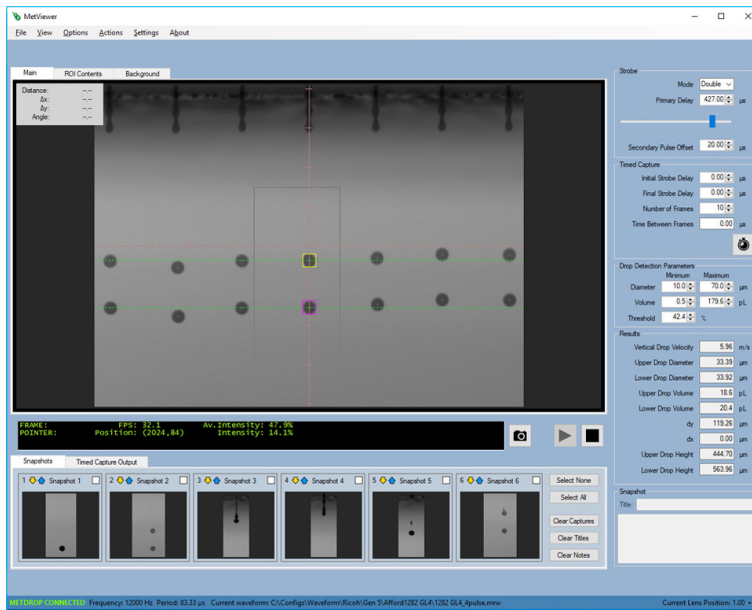
DropWatching Systems

Turnkey tools for evaluating and optimising
printhead and ink combinations

From the leading supplier of industrial inkjet printhead driving solutions, Meteor DropWatchers are essential systems for evaluating and optimising printhead and ink combinations using production-ready electronics that can be transferred straight to manufacturing.



DropWatching Systems



General Specifications

Dimensions	DropWatcher	DropWatcher Control Unit (DCU)	DropWatcher Interface Unit (DIU)
Footprint (WxD)	675 x 281mm	370 x 320mm	250 x 250mm
Height (excluding accessories)	575mm – 730mm	145mm	55mm
Weight (excluding accessories)	15.00kg	6.00kg	2.30kg
Power supply	DCU	DIU	
Supply voltage	95 – 264V	95 – 264V	
Power consumption	210 – 360W printhead dependent	26 – 180W dependent on ink supply load	
Frequency	50/60Hz	50/60Hz	
Interface			
PC Windows 7/10 (64bit OS)	Camera Gigabit Ethernet (cat5 shielded)	Meteor datapath (DCU) Gigabit Ethernet (cat5 shielded)	
Printheads supported*			
Fuji Dimatix	Open waveform model		
Konica Minolta	Open waveform model		
Kyocera	Closed waveform model**		
Ricoh	Open waveform model		
Seiko Instruments	Open waveform model		
Toshiba	Closed waveform model**		
Xaar	Open or closed waveform model depending on printhead type**		

* Ideally, due to subtle differences in waveforms produced by different vendors of printhead drive electronics, waveforms should be evaluated and optimised with the same brand of electronics used in the printer. In cases where this is not feasible, the highly accurate waveforms generated by Meteor drive electronics are the most reliable substitute and formatted for use in all datapaths.

** Closed waveforms from the printhead manufacturer can be used for real time performance evaluation but cannot be edited.

Ink and mist catcher

Included as standard (local extraction source needed)

Ink supply system support

Power	24V 2.5A power supply inside DIU
Communications	RS422 to USB inside DIU
Integration	Mounting plates for Megnajet or other ink delivery systems can be supplied to fit Meteor DropWatcher gantry

Vision System Specifications

Camera module	Mako G-319B		
Connection	Gigabit Ethernet		
Performance	37fps @ 2048 x 1544 pixels		
Optics			
Focus	67mm fixed focal length		
Zoom	7 manual stops (6x to 42x optical magnification)		
Field of view	2.20 x 2.00mm to 0.47 x 0.32mm (horizontal x vertical)		
Resolution	1.30 – 0.21µm/pixel		
Illumination			
Method	Monochrome LED		
Pulse width	120ns		
Wavelength	450nm		
Head (X/Z) & Camera (Y) positioning			
Manual control	X-Axis	Y-Axis	Z-Axis
Range	230mm	80mm	20mm

Measurement Specifications

Software	Drop measurement MetViewer	Waveform optimisation MetDrop
Measurement mode	Single strobe – drop formation and volume measurement Double strobe – velocity and directionality measurement Ramped capture – drop ejection sequence capture User defined Region of Interest	
Measurement limits	Print frequency < 110kHz Drop volume > 0.5pl Drop velocity < 30m/s	
Calibration tool	20 lines per mm Ronchi target (1µm accuracy)	
Calibration method	Software routine - Calibrate once at each magnification	
Reporting	Report file formats PDF, CSV, XML (measurement data and image capture) Image snapshots bmp format Ramp capture sequences bmp, JPEG, TIF, PNG formats Projects Save software settings, images and data to xml file Preferences Configure target file locations and naming prefixes for data management	
Measurement data	Drop diameter (upper and lower drops - double strobe mode) Drop volume (upper and lower drops - double strobe mode) Directionality (centre to centre – double strobe mode) Measurement of primary and/or satellite droplets through adjustable drop detection parameters Waveform file name and parameters captured Print frequency Manual point to point measurements – X/Y distances and angles	

About Meteor

Meteor Inkjet Ltd is the leading independent supplier of industrial inkjet electronics, software, tools and services. Working closely with all major industrial inkjet printhead manufacturers, Meteor offers production-ready solutions to printer OEMs and integrators worldwide.

Ceramic Tiles



Product Decoration



Textiles



Packaging



Functional & 3D



Labelling



Signs, Displays & Décor



Commercial Print



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