

# QML

## Version: STD

### IN LINE PLASMA CLEANING SYSTEM

QML is a compact in line plasma cleaning system suitable for handling "strip" form factor substrates.

It includes all the subassemblies necessary to deliver excellent cleaning and surface modification results.

The features contained in this system allow a reliable and repeatable cycling of the plasma process for 24/7 operation.

**This In Line system includes:**  
A universal interface conveyor which receives the substrate from the upstream system, makes it available for the plasma system and represents the substrate to the downstream system, via SMEMA 1.2 protocol (ASM™ protocol available).

Ready to interface with standard belt and ASM™ style conveyors.

A 13.56 MHz RF system inclusive of an automatic tuning network.

One Mass Flow controlled gas input line.

A dry vacuum pump contained in the body of the machine.

A high precision capacitance pressure gauge.

An all-aluminum chamber with no welded joints, Nickel coated for maximum performance.

Two Automatic doors.

A PC controller with an LCD Touch Screen User interface.



SCI Automation Pte. Ltd.  
210 Tuas South Avenue 2, West Point BizHub  
Singapore 637210

Tel: +65 6465 1886 Fax: +65 6465 1887  
www.sciplasma.com

General Enquiry  
Email: sales@sciplasma.com



#### APPLICATIONS

- For strip form factor leadframes and substrates only
- Cleaning of leadframes prior to wire bonding
- Organic decontamination prior to wire bonding
- Adhesion promoter prior to molding
- Adhesion promoter of die attach materials on leadframes or PBGA strips
- General activation, cleaning and decontamination
- Adhesion promoter for flip chip packages prior to Underfill

#### OPTIONS

- Extra gas line with Mass Flow Controller
- Hydrogen Generator
- N2 Purge Line

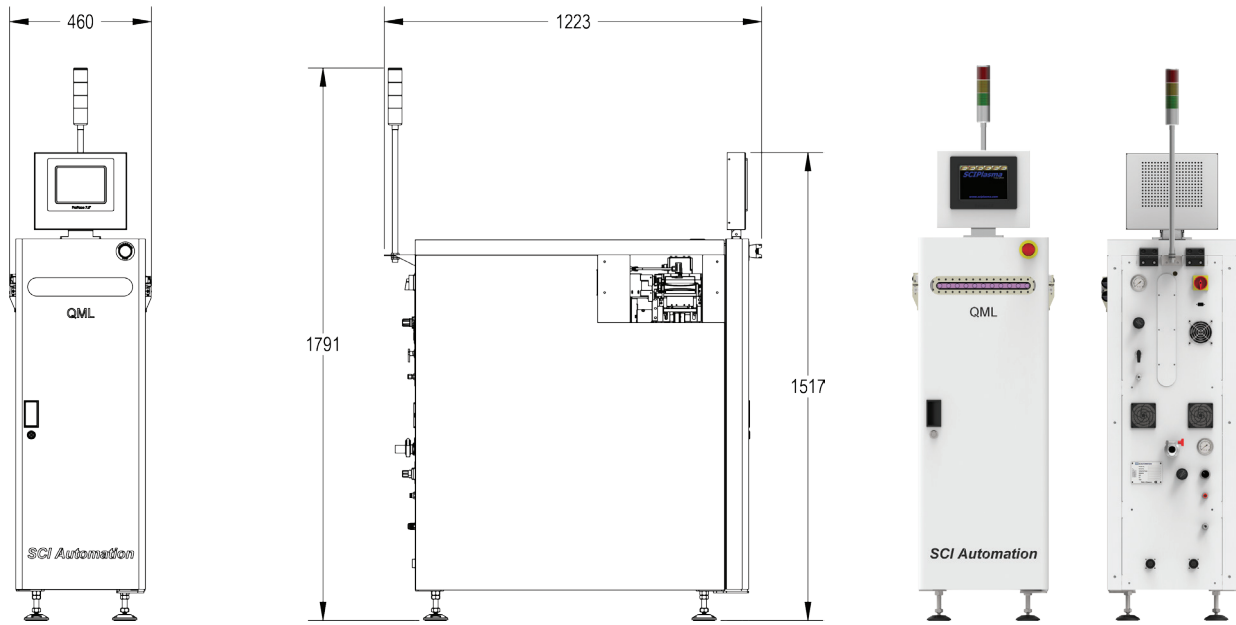
#### PROCESS GASES

- Ar
- O2
- N2
- He
- Ar/O2 in various mix ranges
- Ar/H2 in various mix ranges
- Other gases on request

#### SOFTWARE SPECIFICATIONS

Microsoft Window™ based software, inclusive of:

- Fully automatic operation mode
- Manual operation mode
- Setup page with all variables stored in a SQL database
- User page with security level selection and storage for controlled access to the machine
- Program page, for the selection and entry of all the process variables that are stored in the SQL database
- Automatic log creation and storage
- Multiple alarm settings for a totally controlled process
- SECSGEM (optional)



SPECIFICATION TABLE	System Name/ Type	QML	Inline Plasma System
	Machine Dimensions	Footprint (mm)	460x1223x1517h
	Weight	Kg	230
	Leadframe	Min Dimensions (mm)	10x100x0.1h
		Max Dimensions (mm)	80x280x1h
	Chamber	Material	Aluminum, Nickel Coated
		Dimensions (mm)	120x300x40h
		Volume (Liters)	1.44
		Plasma Type	Direct Plasma
	RF Power	Frequency (MHz)	13.56
		Max. Power (Watts)	200
		Automatic Tuning Network	Type
	Functions		Auto Tuning; Preset Tuning
	Configuration		All Silver conductor on the RF Path
	Electrode Configuration	Geometry	Planar
	Pressure Sensor	Type	Capacitive
		Range (mBar)	1-1x10 <sup>-3</sup>
	Gas Lines	Quantity	1
		Type	Digital Mass Flow
	Pumping System	Vacuum Pump	Dry Pump 27 m <sup>3</sup> /h <sup>-1</sup>
	Controller	PLC	CPU; Digital I/Os; DAC and ADC
		User Interface	7.5" Active Touch Screen
	System Facilities	Electrical Power Supply	Single Phase 100-240V 50/60 Hz, 2.5KVA
		Gas Fittings	Swagelok 6mm OD
		Process Gas Max. Pressure	1.5 Bar
		Process Gas Purity	99.995 or better
		Compressed Air	CDA 4 - 6 Bar
		CDA Fittings	8mm OD fast connect fitting
Exhaust pipe		25 mm OD	
Standards		SEMI	S2, S8
Options		Cleanroom ready	
	Others	CE	
	Gas Generators	H2	
	Extra Gas Line	200ml/min Digital Mass Flow Gas line	
		N2 Purge line	

Specifications are subject to change without notice.