ASML TWINSCAN XT 1250D ArF SCANNER

Configuration Items:

Track Pre-warning signal (APR)s: APR enabled

Avoid Track INPUT/OUTPUT conflicts, Raise AS after APRs: Avoid Track

INPUT/OUTPUT conflicts enabled

Active wafer release for dry WSs: FALSE

Closing disk types: No closing disk present

Safeguard to prevent loading of reticles with too wide or mispositioned pellicles: Disabled

Continuous clampable wafer table for dry WSs: Absent

Type of wafer table on chuck 1 & 2 for immersion machines: Zerodur version 1

WS Immersion throughput packages: None

WS Immersion thermal control packages: None

Wafer Stage Configurations: Wafer Stage type 2 configuration

Wafer Carrier Locations: Right

Wafers per Carriers: 25

Wafer Mark Sensors: Absent

Wafer Id Readers: Absent

Wafer Sizes:300mm

Wafer Tracks: Present

Wafer Stage Types: Dual Chuck

Wafer Stress Relaxations: FALSE

Lower Docking Plates: Present

WS Balance Masss: Stainless Steel

WH Robot Power Amplifiers: CPM 20

Wafer Stage Fast Stiff X Move Electronicss: Present

Wafer Stage Mirror Block Down Electronicss: Present

Universal Prealignments: Disabled

Interferometer axis version at exposures: 3 plus 1 axis

Wafer Handling Pneumaticss: Dedicated

Wafer Switchs: Absent

Chuck 1 & 2 wafer sizes: 300mm

Type of immersion hood for immersions: None

Specifies chuck1 & 2 layout relev. for Immersions: Chuck does not support immersion

Specifies chuck1 & 2 configs: Dry

Specifies chuck1 & 2 versions: not specified

Changed Short Stroke diff XY controllers: Disabled

Docking wheels at WH unloads: Present

Docking plate heights: Low

Immersion Hood versions: Absent

Carrier Handler Types: Mark I 300 Foup
Wafer Handling Load & Unload Robot Types: Double Fold Arm, 12 mm Z stroke
Wafer Handling Store Units: Absent
Wafer Handler wrt BF Shifted in Zs: Not Shifted
Reticle streaming lites: Disabled
Enhancements in Reticle Monitors: no enhancements
Reticle streaming: Disabled
Improvements for reticle handlings: Disabled
Extend IRIS maximum particles scanned to 50000.s: Absent
Zeroing type for Encoders Measurement Systems: Using extra hall sensors for zeroing
Reticle Stage Chuck Types: Glued Leafspring, TYPE_2: Glued LS, Pneum. GC, IFM / ENC
Nitrogen purging of Reticle Stages: RS is not purged
Reticle Carrier Locations: Right
Integrated Reticle Inspection Systems: PPD1 with IRIS1 functionality
Integrated Reticle Librarys: IRL with original functionality
Reticle Sizes: 6 inch
Reticle Carrier Tag Readers: Present
Reticle Stage Long Stroke Motor Types: Cobalt Ferro 18 teeth
Reticle Stage Long Stroke Configs: TYPE_3:CoFe_18 motor, SB controlled, int. vacuum supply, pneum GC
Automated Reticle Transport Systems: Absent
Reticle Stage Lenscooler Boxes: Lenscooler Box with anti-aliasing Filter
Maximum Reticle ID Lengths: 24 Characters
Reticle Stage Measurement System on Scans: Heidenhain Encoders
Relative direction of ws to rs on the X axiss: Same
RS Object Fields: Normal
Reticle exchange types: Retex option: E
Iris feature Scans: Absent (Overrules Absent)
Reticle Handler types: Original
2D Barcode Readers: Absent
Integrated Reticle Inspection System Configurations: Disable creation of OSIRIS viewable files.
WS Immersion Hood Only Testrigs: Absent
Version of RS/WS IO librarys: Version 1
Dynamic Performance Calculations: Mark 1
Stages Sample Rates: 5.0 kHz
Interferometer Electronics: Ifsr
Capacitive z-height sensor type.s: Dual Z sensor board
Ifm config at measure sides: 8 axes
Dose System Performance Test sequences: Test sequence 1
PEP-ADC Intensitys: Disable PEP-ADC Intensity
Online Lamp Peak: Disable Online Lamp Peak
Dose Intensity Optimizations: Dose Intensity Optimization

Laser Gas Life extensions: Disable Laser Gas Life extension
Type of multi foil lens elements: none
Depolarizer types: fixed depolarizer present
PSE & PCE Locations: not applicable
Intensity Calibration Per DOEs: Disabled
Pupil qualification methods: Centre of gravity method
Polarized illumination amorph DOE: Only unpolarized illumination
Fresnel corrections for WSSSs: Disabled
Is NA accuracy measurement allowed: Disabled
Exchangeable Pupil Lens Elements: No EPLE
Multifunction Active Lens Elements: 0
Multifunctional Active Elementss: 0
Use Sigma Calibrations: no Sigma Calibration
Use Sigma WIP Preserving Offsetss: no Sigma WIP Preserving Offsets
THFFC FDE model lens dependents: Disabled
TIS diffusers: absent
Determination of NA ellipticitys: Disabled
XML output for LITHOGUIDEs: Disabled
Use validity ranges around UIP data when Enabled: Use exact matching for UIP data
Number of EXLE elements: 0
Functional use of Active Elements: ALE function as ALE
Polarization Shaping Element Retractors: No PSER hardware installed in the machine
Method for alignment of the laser beams: Align the beam by minimizing the uniformity tilt over the slit (LUBF)
Pupil TIS angular sensitivity calibration and corrections: TIS Pupil Measurement will not be improved
Describes at what plane the BMU measures: BMU readings are directly used as if they are at DOE1 plane
Lens Types: 12
Light-source Architectures: Laser
Light-source Types: Cymer Laser: XLA 165
Light-source Wave-lengths: 193nm
DOSEMAPPERs: Present
DOSE_MAPPER_1s: Present
REMA architectures: REMA C
Illuminator Types: 120
Zoom Axicon Architectures/ Types: ZZA/120
NA Control Architectures/ Types: NA2 Torlon/ 120
Automated DOE Exchangers/ Architectures: Present/ 5 slots MIP Control
UNICOMs/ Architectures: Present/ 1 Motor
Test Tables: Absent
Imaging Electronics Architectures: B Architecture
Attenuator Types: Variable

Test Table Z Axiss: Worm Wheel
PUPICOMs/ Architectures: Present/ DC Motor with gearbox
Number of Z Lens Manipulatorss: 5
Number of Active Lens Elementss: 1
Number of Bi-directional Active Lens Elementss: 0
Number of Active Manipulator Elementss: 0
Number of Active Elementss: 1
Number of Half Dome Mirrorss: 0
Number of Semi-Active X-Y Lens Manipulatorss: 4
Setup sensor board versions: Setup SSD version 1
Imaging Generic Power Amplifiers: Generic Power Amplifier
Imaging Control Rack Configurations: IPDR
Type of projection multiplexer boards: MUX Absent
LEC Rack in Electronic Architectures: Present
Projection GPA Configuration Versions: Version 2
Number of Lens NEXZ Manipulatorss: 5
Number of Lens Z Manipulators Using Camdisks: 0
Spotsensor surface coatings: Bilatal
Energy Sensors: VLOC
Spot Sensor Chuck 1s & 2s: VLOC
Modelling for MAXYSs: Absent
Uniformity Improvement Packages: Present
Number of pre-amps available per Z-manipulators: 0
Immersions: Absent
Pupil measurements with ILIASs: Present
Automatic CUAs: Absent
Beam Controls: Beam adjustment
Extended Spot Sensor Matchings: Present
Number of Rxms/ Ryms: 5/5
Diaphragm Limiters: Absent
NA1 motor types: None
Spot Sensor Reticle Stages: Absent
Smooth Field Uniformitys: Absent
Exchangeable Last Lens Elements: Present
Exchangeable Pupil Lens Elements: Absent
Number of manipulable ELLE axess: 0
UV Shutter versions: UV Shutter version 1
Dosecontrol Hardwares: ISB
Illuminator platforms: Aerial 2
Polarizations: Absent
Automatic PCE exchangers: Absent
Automatic CUA exchanger architectures: Not applicable
Test table architectures: Aerial 2

Illumination modes: All illumination modes
DUV Lightsource Power Levels: 45.00 Watt
Lens Top Tool Connections: Lens Top Tool can be mounted on top of the Lens
Scanning Energy Sensor Calibrations: Static Energy Sensor Calibration
Position of Spot Sensor on Chuck 1s: Spot Sensor Position on Chuck 1 layout 1
Position of Spot Sensor on Chuck 2s: Spot Sensor Position on Chuck 2 layout 1
Z-capture for low relfectivity wafers: Off
TIS plate deformation corrections: Disabled
FSM Flexibility packages: Disabled
Field width optimised leveling: Disabled
Constrained fits: Disabled
Levelling throughput improvement on measure sides: No levelling throughput package
Point-to-Point LS Machine Matchings: Disabled
Circuit Dependent FECs: Present
Focus Monitorings: Present
Extended LS areas: Disabled
Air Gauges: Absent
Type of Air Gauges: No Air Gauge device present
Reticle shape corrections: Disabled (Overrules Enabled)
LS focus nodes: LS focus node 3
Level Sensor Processing Racks: LCSR
LS_PEMM_CONFIGs: Present
LS_CPU_CONFIGs: 3 CPU's available
Base Liner overlay high order intrafields: Disabled
BaseLiner focus high order intrafields: Disabled
BaseLiner focus control.s: Disabled
Pattern Matcher fullchips: Absent
Pattern Matchers: Absent
Maximum numerical aperature (NA) that can be used in Lot Productions: level 0
Log missed translations: Disabled
Allow even orders usages: Present
Multilingual UIs: Absent
Improved Maintenance action scheduling.s: Disabled
Recipe Creators: Light
Lot Report Data Categorys: Enhanced Diagnostics
CDCs: Enabled
EFESEs: Absent
PED control modes: Absent
Proximity Matchings: Present
mbds controls: Present
Enhanced exposures 1s: Present
Data collection not covered by FOCUS and OVERLAYs: InformPro Data Collection
disabled

Overlay Data Collections: Disabled
XML Lot Report Content Levels: Basic
Enable the Maintenance Assistants: Disable Maintenance Assistant
EDA Interfaces: Disabled
Equipment Constants via SECS interfaces: Disabled
LCI WaitWatcher plug-ins: Absent
Reorder Lot Services: Absent
Shot Data Collections: Absent
Focus Data Collections: Absent
Alignment Recipe Overrides: Disabled
Enable to support SMASH XY mark types.s: not supported
Specifies which mark types are supporteds: ASML marks only
Alignment laser configurations: 2 color laser
OADB Improved Dynamic Ranges: Disabled
board configurations: ODB + ADB
Alignment Camera Mirrors: Absent
Athena Narrow Marks Twinscans: Present
Alignment Sensor Types: Athena Narrow Marks OM
Athena Focus Improvements 1s: Present
Max alignment speeds: Setting 2
AA processing racks: AACR processing rack
Particle Extraction Mass Flow Meters: Absent
purging configurations: purging CONFIG 3
Bubble Extraction Seal Settings: Not Applicable
Ultra Pure Water flow controller (WICC)s: absent
LCW Circuit set-ups: Flow Version 1
In situ Wafer TablesStone Cleanings: Absent
Clean Air Configurations: Others
Metroframe Circuit Water Cabinets: Absent
CT Miscellaneous Racks: Present
Clean Air Temperature Controls: Driver and ACC
Purge Hoods configurations: Compressed Clean air and Extremely Clean Dry air
Nitrogen Purge Utility Controls: Absent
Reticle Cleanings: Absent
Metroframe types: TYPE_I
Inlet restriction for clean airs: Inlet restriction at right side
Reticle Stage purged mini environments: Present
Gas Control Unit Types: High Flow (HF)
Wet Imaging Control Cabinets: Not Applicable
Readout location of Pneumatic Facility Unit sensors: Machine Base Diagnostics System (MBDS)
Laminar Bottom Hoods: Absent
Extreme Clean Humiditied Airs: Absent

Lens Circuit Water Flows: High

Motor Circuit Water Flows: Normal

SPM temp correction for lens axiss: Disabled

2 Sided IFM-beams for WS-X (expose/ measure)s: Not available

Diff pressure correction for IFM beams: Absent

IFM Laser Configurations: AOM Recombo Laser

Position Control Rack Configurations: Rack Configuration type 3

Position Control Power Rack Configurations: TYPE_3: Stages Power Rack upto E-spec

Number of Motion Controllerss: 5 Motion Controllers present

Position Control Motion Control racks: PMCR

Reticle Stage Short Stroke X/Y11/Y12/Y21/Y22/Y11/Y11 amp.s: PADC 100V/16A

Wafer Stage Short Stroke 1 XY1/ XY2/XY3 amp.s: PADC 100V/16A

Wafer Stage Short Stroke 2 XY1/ XY2/XY3 amp.s: PADC 100V/16A

Reticle Stage Short Stroke Z1/Z2/Z3 amp.s: Pass Low Current 8.5A

Wafer Stage Short Stroke 1 Z1/Z2/Z3 amp.s: Pass Low Current 8.5A

Wafer Stage Short Stroke 2 Z1/Z2/Z3 amp.s: Pass Low Current 8.5A

Reticle Stage Long Stroke Y11/Y12/Y21/Y22 amp.s: 450V20A: PAAC AT-pepD

Reticle Balance Mass 1/2 amp.s: 450V20A: PAAC AT-pepD

Wafer Stage Long Stroke E/M X amp.s: 400V16A: PAAC AT-D

Wafer Stage Long Stroke E Y1/Y2/CS amp.s: 400V16A: PAAC AT-D

Wafer Stage Long Stroke M Y1/Y2/CS amp.s: 400V16A: PAAC AT-D

Wafer Stage Balance Mass 11/12/21/22 amp.s: 325V14A: PAAC AT-C

Pressure update rate for fringelength corrections: Pressure update rate 2 or 4 Hz

TestStreams: TestStream disabled

Performance Enhancement Packages: None

PEP Image Streamings: Present

Lot Overhead Reductions: LOR2

Extended Zone Alignments: Disabled

Intrafield Higher Order Process Correctionss: Disabled

SMASH Reuse Capture Information in Stage Alignments: Coarse capture scans are done on all stage alignment marks.

Allow wafer plane deviation check with Focus Monitorings: Disabled

Parameter indicates how long overlay data will be stored.s: Short retention period.

Level sensor Ry drift corrections: Disabled

Fading Control Switchs: Disabled

Improved wafer reject modes: Disabled

Automated Lens Heating Calibrations: Disabled

Lens heating History in LH Feedforwards: Enabled

Allow different Exp,TIS Align sets: Absent

Imaging Fading Controls: Disabled

Gridmappers: Disabled

2D grid corrections: Enabled

Double TIS scans: Disabled

Symmetrical Reticle Alignments: Disabled
Ast offset correction in TIS LHFB/LOCO (Version 3)s: Enabled
Choice of avoidance routing.s: Absent
NEXZ-tilt per exposures: The NEXZ-tilt cannot be adjusted per exposure.
Off-axis slits: Projection lens has no off-axis slit.
Improved Edge Field Levelings: Disabled
Enhanced Throughput Reticle Alignments: Present
Wavelength Adjustables: Adjustable
Allow L1L7 Type 1 Optimizations: Absent
Lot Alignment Report Encryptions: Unencrypted
Stage Alignment Filters: Present
Lot Correction Sequences: Unencrypted
Stage Alignment Filters: Present
Lot Correction Sequences: Type B
Lens Heating Feedbacks: Present
Application Specific Lens Heating Calibration and Verifications: Present
Improved Contrast Controls: Absent
ILIAS lens setups: Absent
Air Gauge Improved Levellings: Absent
Process Dependent Gain Corrections: Absent
Enhanced Exposure Overlays: Absent
ALE 1 Uses: Lens heating only
Overlay Nodes: Level 0
E-chuck Flatness Qualification Tests: Disabled
TOP HDs: Absent
Reticle Align High Precisions: Absent
LS spot coverages: Absent
Layout Version Number TIS Plate 1 on Chuck 1s/2s: TIS Plate 1 Layout Version 2
Layout Version Number TIS Plate 2 on Chuck 1s2s: TIS Plate 2 Layout Version 4
Usage of wavelength/ Energy Sensor data by TISs: Disabled
Indication what kind of AM controller hardware is presents: SUCR
Piezo Active Lens Mountss: Absent
ILIAS Functionality For Lithoguides: Present
ISIS Functionality For Lithoguides: Absent
SAMOS Stray Light Test For Lithoguides: Present
PUPIL Measurement For Lithoguides: Present
FOCAL Measurement for Lithoguides: Present
Leveling Verification Test for Lithoguides: Present
Lithoguide Imaging Recipess: Absent
Dose System Performance Test for Lithoguides: Present
ILIAS Sensor Locations: Chuck 2
ILIAS sensor type chuck 2s: Multiple scan grid
ILIAS sensor type chuck 1s: None

Reticle Level Polarization Sensors: Absent

SASO robustness and fiber connectivitys: Disable SASO robustness

Extended X width masking ranges: Disabled

PDO offset for EFL LS spots: Disabled

Assure System Snapshotss: not allowed

Insert a delay time before starting a Lot (lens heating).s: Enabled

Save throughput data to the disks: Disabled

Patch strategys: Patchlevel

Chuck Dedications: Basic

Application Types: Scanner Application

Number of RMCS clients: No clients

MDL Viewers: Site View

ZERO Fiducials: ILIAS MK2

Machine Architectures: XT Machine Architecture

XT Architecture Revisions: Rev1

Machine Types: 1250

Machine Specifications: pep-D Specification

Stand-alone Workstations: FALSE

CP 1As/1Bs/2s/3s/4s/5s/6s: Absent

Wafer Handler Productivitys: Level 0