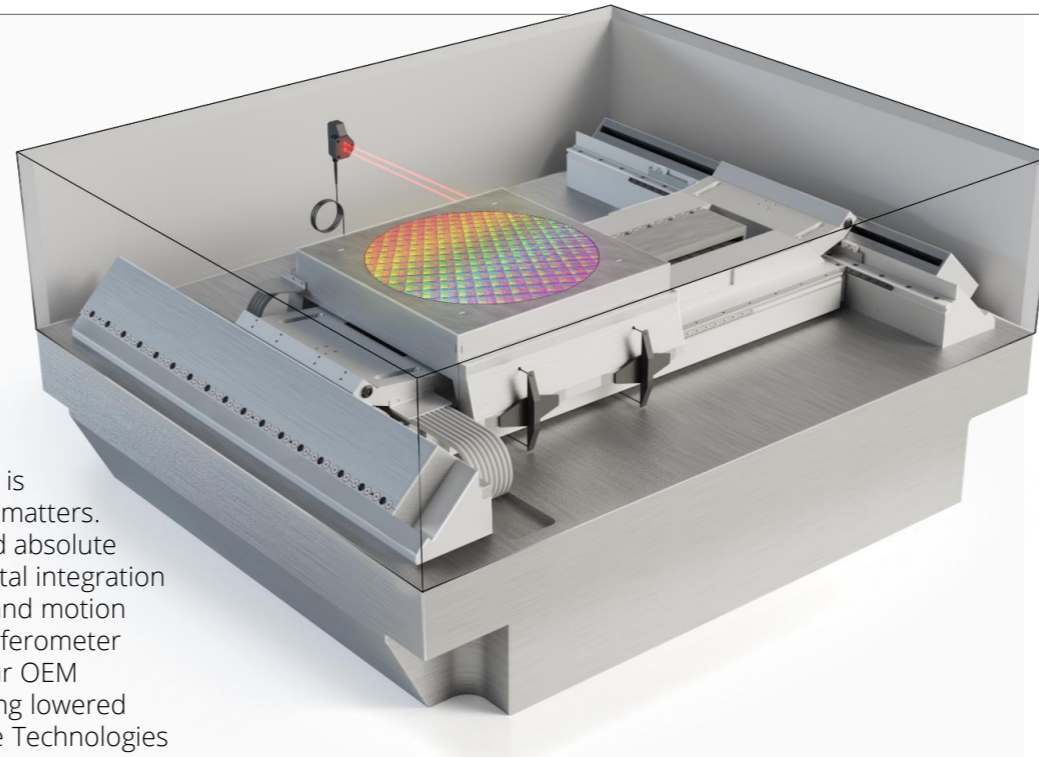


# Pico Scalar

## Position Measurement Solutions

Prodrive Technology's Pico Scalar offers a high accuracy position measurement solution for precise motion systems. The Pico Scalar is ideal for (vacuum) stages where high reliability and long availability matters. Our solution features sub-nanosecond latency synchronization and absolute position measurement. We combine this with uncompromised digital integration options for seamless synchronization between the measurement and motion control system. Prodrive optical expertise provides innovative interferometer solutions focusing on reducing TCO (total cost of ownership) for our OEM Equipment partners; reducing direct cost of systems, while providing lowered operational and maintenance costs. For over two decades Prodrive Technologies has been a research, development and production partner for the semiconductor industry. Combining this experience with our robust quality management system, we understand what it takes to implement copy exact and change control, supporting our solutions from concept to end-of-life and beyond.



### Position Measurement Performance

Number of sensor axes per MU	1 – 6
Working distance	0 – 6000 mm
Target velocity	0 – 1 m/s
Sensor resolution	25 $\mu$ m
Sensor repeatability	200 $\mu$ m (In vacuum conditions)
Measurement bandwidth per axis	40 MHz (optical) 5 MHz digital output
Signal stability (2.5s)	0.1 nm
Thermal drift	< 50nm / C

### Measurement modes and features

Default mode	Relative displacement single ended
Differential measurement	Included
Homing feature software	Included
Absolute distance measurement	Included; 20s
Sensor alignment	Manual on sensorhead
Target alignment	Visible laser (600nm)

### Environmental conditions

Temperature	15 – 35 C
Pressure	High Vacuum - Ambient
Humidity	0 – 95 % (non-condensing)
Availability	10 yrs+
Lifetime	10 yrs+

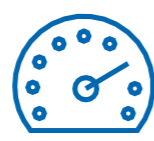
### Product features



10+ years lifetime/reliability



10+ years of extended availability



Absolute Position Measurement



System integration options with sub-ns timing latency



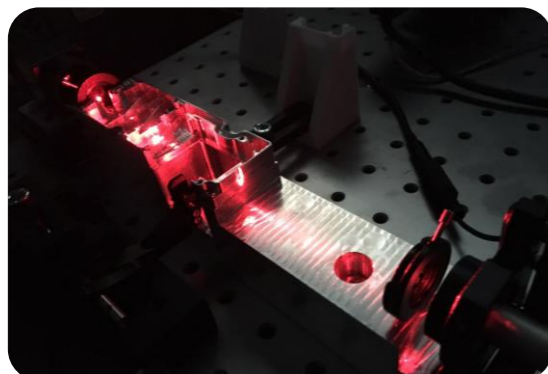
Highly position accuracy 200pm



Most cost effective solution

### System Integration

Output	Sin/Cos, S0S90, ENDAT, EtherCat G/G10
Power supply	12VDC; 8W
Configuration Interface	Web-based, PMP-based
Fibre length	Up to 5 meter
Laser source wavelength	1550nm; Class 3B



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