70kHz Fastest controller worldwide: Measuring rate up to 70kHz

INTER FACE Ethernet / EtherCAT / RS422 / PROFINET / Ethernet/IP / Analog

Fast surface compensation

Configuration via web interface

Submicrometer resolution

Multi-layer thickness measurement

Robust design with passive cooling

The confocalDT 2471 HS controllers are used for fast distance and thickness measurements of highly reflecting and specular surfaces. The controllers are equipped with enhanced optical components enabling measurin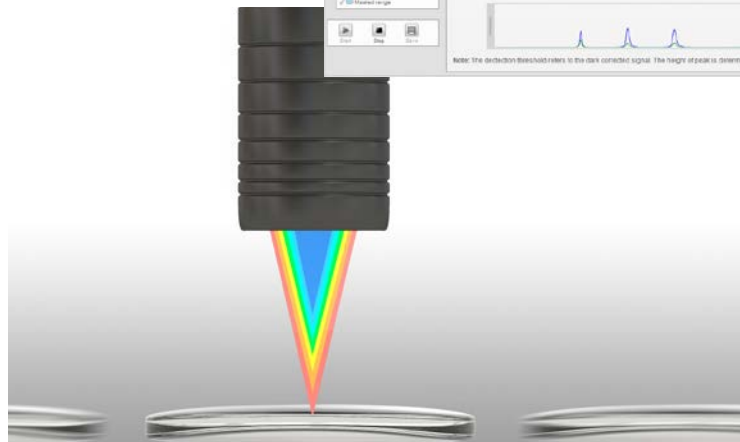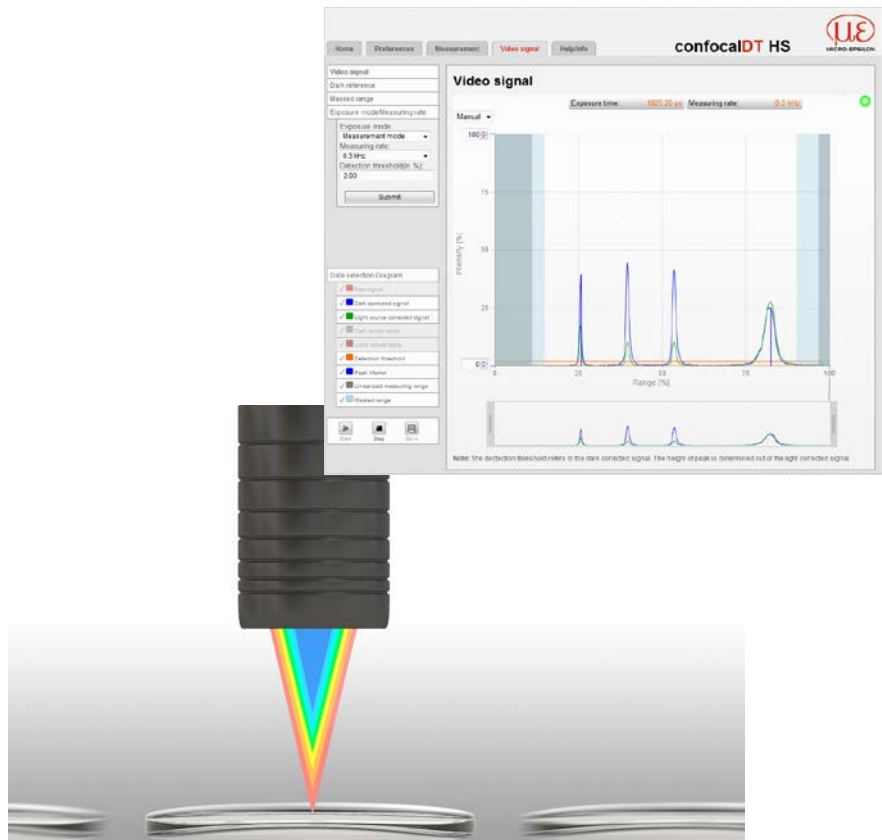g rates up to 70 kHz on reflecting surfaces without having to use an external light source. The confocalDT HS controllers are one of the fastest confocal measuring systems in the world. The active exposure regulation feature in the CCD line enables accurate, fast surface compensation on changing surfaces during dynamic measurement processes.

The controller can be operated with any IFS sensor and is available as a standard version for distance and thickness measurements or as a multi-peak version for multi-layer measurements.

Due to a user-friendly web interface, no additional software is necessary to configure the controller and the sensors. Data output is via Ethernet, EtherCAT, RS422 or analog output.

Model		IFC2471LED	IFC2471MP LED
Resolution	Ethernet/EtherCAT	1 nm	
	RS422	18 bit	
	analog	16 bits (teachable)	
Measuring rate		continuously adjustable from 100 Hz to 70 kHz	
Linearity		typ. < ±0.025 % FSO (depends on sensor)	
Multi peak measurement		1 layer	5 layers
Light source		internal white LED	
No. of characteristic curves		up to 20 calibration tables for different sensors per channel, menu selection	
Permissible ambient light [1]		30,000 lx	
Synchronization		yes	
Supply voltage		24 VDC ±15 %	
Power consumption		approx. 10 W	
Signal input		sync-in / trig-in; 3x encoder (A, B, index)	
Digital interface		Ethernet; EtherCAT; RS422; PROFINET [2]; EtherNet/IP [2]	
Analog output		Current: 4 … 20 mA; voltage: 0 ... 10 V / -10 … +10 V (16 bit D/A converter)	
Switching output		Error1-Out, Error2-Out	
Digital output		sync-out	
Connection	optical	pluggable optical fiber via E2000 socket, length 2 m ... 50 m, min. bending radius 30 mm	
	electrical	3-pin supply terminal strip; Encoder connection (15-pin, HD-sub socket, max. cable length 3 m); RS422 connection socket (9-pin, Sub-D, max. cable length 30 m); 3-pin output terminal strip (max. cable length 30 m); 12-pin I/O terminal strip (max. cable length 30 m); RJ45 socket for Ethernet /(EtherCAT (max. cable length 100 m)	
Installation		free-standing, DIN rail mounting	
Temperature range	Storage	-20 … +70 °C	
	Operation	+5 … +50 °C	
Shock (DIN EN 60068-2-27)		15 g / 6 ms in XYZ axis, 1000 shocks each	
Vibration (DIN EN 60068-2-6)		2 g / 20 … 500 Hz in XYZ axis, 10 cycles each	
Protection class (DIN EN 60529)		IP40	
Material		Aluminum	
Weight		approx. 2.2 kg	
Compatibility		compatible with all confocalDT sensors	
No. of measurement channels		1	
Control and display elements		ON/OFF multifunction button (as well as dark alignment and reset to factory setting after 10 s); 4x LEDs for intensity, range, status, supply voltage	
Features		particularly light-intensive and high measuring rate	

FSO = Full Scale Output
[1] Illuminant: light bulb
[2] Optional connection via interface module (see accessories)

Controller IFC2471 LED