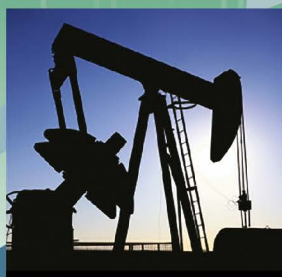




ESI Technology Ltd

GenSpec *DYNAMIC*



USB PRESSURE TRANSDUCER



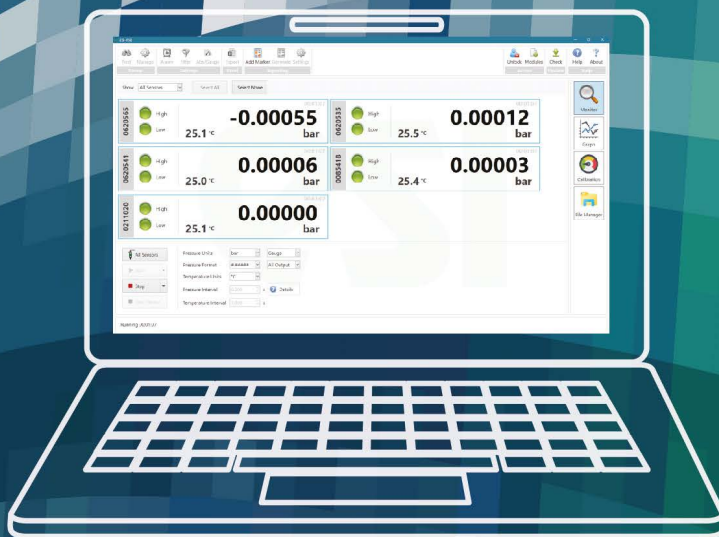
ESI Technology Ltd



THE NEW GenSpec ***DYNAMIC*** PRESSURE TRANSDUCER

USB Transducer with ultra fast sampling rate

- Sample rate software selection up to **1 KHz**
- Pressure Ranges **-1 to 2.5 to 0-5,000 bar**
- Accuracy (NLHR) **±0.15% of span BFSL**
- ESI-USB© software included
- Measures up to **16 inputs** simultaneously
- Auto detect and configuration
- USB 2.0 compatible
- Create **customised** test certificates
- Support for easy integration with applications created by C#, VB, LabVIEW and Excel VBA (API DLL library)
- **Silicon-on-Sapphire** Sensor Technology



ESIT

GenSpec **DYNAMIC** **GD4200-USB**

Since the **GS4200-USB**® was introduced it has remained a unique character on the pressure measurement market and is used worldwide on hundreds of systems and applications.

It has been a success! But we wanted to make it better, and something our customers have always expressed interest in is a faster response time. We have responded with the GenSpec Dynamic USB Transducer, or the **GD4200**. Combined with all of its other features, we're sure that the **GD4200-USB** will become your ideal digital pressure measurement solution.



SPEED

With a selectable sample rate up to 1000 readings per second (1000Hz) the **GD4200-USB** ensures that all pressure fluctuations are captured and you don't miss a thing!



SOS SENSOR TECHNOLOGY

The **GD4200-USB** is manufactured with Silicon-on-Sapphire (SOS) sensor technology. Pressure sensors constructed using SOS exhibit exceptional performance and outstanding stability.

The sapphire substrate allows the sensor to operate over a very wide temperature range without loss of performance due to its outstanding insulation properties.

The SOS sensor element is then bonded to a titanium diaphragm instead of traditional stainless steel. High overpressures, very low hysteresis and great corrosion resistance are the result.



PRICE

We know how expensive data loggers can be. The **GD4200-USB** is an extremely cost effective solution for monitoring pressure and temperature with no need for costly I/O interface boards with configurable sampling speeds to suit your system needs.



PLUG-IN & PLAY

Pressure measurement has never been so easy! With the **ESI-USB**® software you can connect your transducer to your laptop or PC and be up & running within ten minutes.

The software recognises the transducer by its serial number. The software auto-updates and is compatible with Windows 7, 8 & 10.



PRESSURE RANGE

With pressure ranges from vacuum all the way up to 5,000 bar we have a **GD4200-USB** for most applications.



TEMPERATURE MONITORING

In addition to measuring and recording pressure the **GD4200-USB** also charts and collects temperature data for analysis by the user.



CERTIFICATE GENERATOR

Using the **ESI-USB**® software you can generate customised test certification with your own test parameters and company logos.



PORTABLE

Whether you are looking to perform test and calibration, spot checks or local, direct monitoring the **GD4200-USB** is the convenient solution. With no need for any additional hardware or software you can test and record data on-site.



ACCURACY

The **GD4200-USB** boasts a standard accuracy of 0.15% making it the ideal solution for high accuracy applications. Temperature tolerance is excellent from a chilly -50 °C to a hot +125 °C you can rely on the data that the **GD4200-USB** provides.



MONITOR AND RECORD MULTIPLE

Measure and Monitor 16 Inputs at Once! Using a USB hub you can connect and collect data from up to 16 USB transducers and display live readouts on one screen at the same time.



AFTER-SALES SUPPORT

Got a question about the **GD4200-USB**? Need a bit of technical advice? We are on the other end of the phone (or email) ready to help.

Would you like more information? Contact our sales team on **+44 (0)1978 262255** or email sales@esi-tec.com

SPECIFICATION

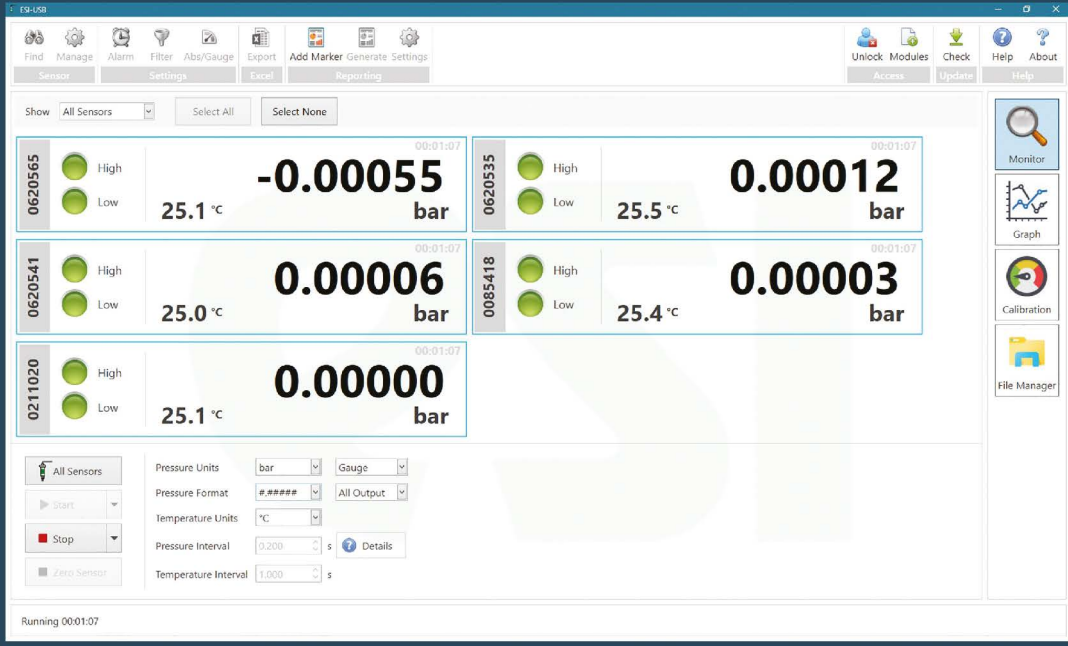
TYPE

GD4200-USB

Sensor Technology	▶	Silicon-on-Sapphire (SoS)
Output Signal	▶	USB 2.0 compatible
Supply Voltage	▶	5 VDC via USB bus
Pressure Reference	▶	Gauge (default); Absolute reference input by user
Standard Pressure Ranges	▶	-1 to 2.5 bar; 0 -16 bar; 0-100 bar; 0 - 400 bar; 0-1,000 bar; 0 -1500 bar; 0 -2000 bar; 0- 4000 bar; 0-5000 bar
Overpressure Safety	▶	2x for ranges up to 400 bar; 1.5x for 1500 bar and 2000 bar ranges; 1.25x for 4000 bar range; 1.2x for 5000 bar range
Pressure Accuracy NLHR	▶	$\leq \pm 0.15$ % of span BFSL
Sample Rate	▶	0 - 5 Hz resolution >21 bits 5 - 1000 Hz resolution >16 bits
Operating Ambient Temperature	▶	-20 °C to +85 °C
Operating Media Temperature	▶	-50 °C to +125 °C
Storage Temperature	▶	+5 °C to +40 °C (recommended best practice)
Temperature Effects	▶	± 1.5 %FS total error band for -10 °C to +80 °C. Typical thermal zero and span coefficients ± 0.015 %FS/ °C
Electromagnetic Compatibility	▶	Certification: CE Marked
Wetted Parts	▶	Titanium alloy
Pressure Media	▶	All fluids compatible with titanium alloy
Pressure Connection	▶	1/4" BSP male or F250-C (Autoclave)
Electrical Connection	▶	Mating to USB mini B socket for cable connection to PC Supplied with 2m USB lead rated to IP68 as standard
Temperature Readout	▶	± 0.1 °C resolution

SOFTWARE

ESI-USB® SOFTWARE



The monitor screen displays five sensor data cards. Each card shows a sensor ID, High/Low status indicators, temperature in °C, and pressure in bar. The data is as follows:

Sensor ID	High/Low	Temperature (°C)	Pressure (bar)
0620565	High/Low	25.1	-0.00055
0620535	High/Low	25.5	0.00012
0620541	High/Low	25.0	0.00006
0085418	High/Low	25.4	0.00003
0211020	High/Low	25.1	0.00000

The interface includes a menu bar with options like Find, Manage, Alarm, Filter, Abs/Gauge, Export, Add Marker, Generate Settings, Reporting, Unlock Modules, Check, Help, and About. A sidebar on the right contains icons for Monitor, Graph, Calibration, and File Manager. The status bar at the bottom indicates 'Running 00:01:07'.



The ESI-USB monitor screen



The graph screen displays a multi-line plot of pressure (bar) over time (ddhh:mm:ss). The x-axis ranges from 00:00:00:00 to 00:00:05:00. The y-axis ranges from -0.00060 to 0.00020. The plot shows five distinct data series corresponding to the sensors in the monitor screen. A legend on the right lists the sensors with checkboxes: 0620565, 0620535, 0620541, 0085418, and 0211020. Below the graph, there are checkboxes for 'Show Temperature' and 'Show Alarm Levels', and a 'Time Axis Format' dropdown set to 'Days/Hours/Minutes/Seconds'. A data card for sensor 0620565 is overlaid at the bottom, showing a temperature of 25.1 °C and a pressure of -0.00057 bar. The status bar at the bottom indicates 'Running 00:05:04'.



Graph screen

Free download from
www.esi-tec.com

- Compatible with Windows 7, 8, 8.1 & 10
- Automatic update facility
- Ten selectable pressure units, now including Kpa
- Temperature units in °C and °F
- Storage Space Calculator – Predict how much storage space your test will require
- Change the sample rate of the transducer- top speed 1000 Hz (1,000 samples per second)
- Delay test start & stop times to suit your application
- Zoom in on your test using the new slider feature
- View and record up to 16 connected sensors at full speed
- Read the differential using the Comparison feature



Test Certificate

Test Object Identification


Customer: ESI Technology

Test Object: USB Transducer

Part No: GD4200-USB

Serial No: Various

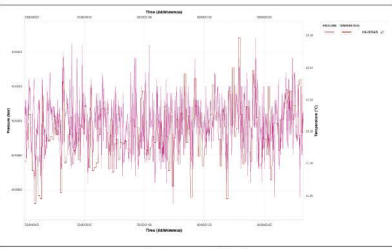
Test Medium: Air



ESI Technology Ltd,
 80000 Road,
 Wrexham Technology Park,
 LL13 7YF, Wrexham, Wales,
 United Kingdom
 www.esi-tec.com

Certification Information

Used Cal. Device: GD4200-USB	Cal of GD4200-USB: 29/08/2017 12:35:15
Serial No: 0620565	Test Date: 28/08/2017 11:43:37
Manufacturer: ESI Technology Ltd	Test Engineer: A N Engineer



Temperature sensor as indication only

Test Engineer: A N Engineer Signature: _____

Project Engineer: _____ Signature: _____

ESI Technology Ltd, 80000 Road, Wrexham Technology Park, Wrexham LL13 7YF, Wales, UK
 www.esi-tec.com, sales@esi-tec.com, Tel: +44 (0) 1929 352255

Page 1 of 1



Customise
 your own
 test certificates

PART CODES

GD4200-USB

	Type	Electrical Connector	Pressure Range	Process Connection
OUTPUT				
USB 2.0 full speed connection ▶	GD4200-USB			
ELECTRICAL CONNECTION OPTION				
Mating to USB mini B socket ▶		-		
PRESSURE RANGE IN BAR				
-1 to 2.5 bar ▶			02.5	
0-16 bar ▶			0016	
0-100 bar ▶			0100	
0-400 bar ▶			0400	
0-1,500 bar ▶			1500	
0-2,000 bar ▶			2000	
0-4,000 bar ▶			4000	
0-5,000 bar ▶			5000	
ELECTRICAL CONNECTION OPTION				
1/4" BSP male (G1/4) ▶				AB
1/4" NPT male ▶				AM
Autoclave F-250-C female (for pressures above 1500bar) ▶				DE

ORDER NUMBER EXAMPLE

GD4200-USB

1500

AB

For options not listed please contact the sales team

ESI Technology Ltd, Sensor House
Wrexham Technology Park, Wrexham,
LL13 7YP, Wales, UK

t. +44 (0)1978 262 255
e. sales@esi-tec.com

www.esi-tec.com

