



Mother Nature tells you everything

SmartScreen™

...Paperless recorders



• Versatile:

Universal sensor input, standard DIN cut out, high-resolution display, universal power supply makes G-Tek's SmartScreen paperless recorders truly versatile

• Easy To Use:

User friendly and smart phone like features makes it very easy to use. Support of Indian languages makes it unique amongst the paperless recorders.

• Compact:

In a size of 164(H) x 221(W) x 138(D) mm, it packs maximum of 40 channels makes it the most compact in its category.

• High-Speed:

State-of-the-art AFE with 24 bit $\Sigma\Delta$ ADC for each channel
With a scan rate of 70mSec for all the channels, it is equipped to record any of your fastest processes.

• Calibration:

With easy to use calibration features, onsite and at factory, it gives one of the highest accuracy in its class.

• Isolation:

It has full 1.5KV isolation between channel to channel and channel to earth.

• Easy to Connect:

With MODBUS compliant TCP/IP protocol support, it is very easy to integrate in your network.
Full support of FTP server makes it easy to download stored data from the recorder.

• Software:

gtekNet™ a client-server based application is available to control multiple recorders remotely.
Downloading the stored data in PenDrive and transferring it in PC is also possible.

• 21CFR Part 11 Complaint:

With 21CFR Part 11 compliance, rest assured about your data security. It has a built-in SD card of 16GB.
Data stored in SD card is encrypted and hence not possible to alter or edit.

• Analogue Inputs :

G-Tek offers fully isolated 4 channel analogue input per card or 8 channel only channel to Earth isolated card.

**G-Tek's
SmartScreen
paperless recorders**

- Versatile**
 - Easy To Use**
 - Compact**
- for all your
process-recording
requirement



Display Screen :

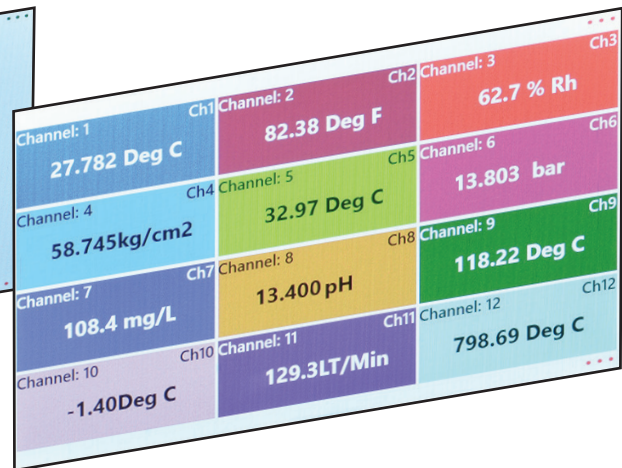
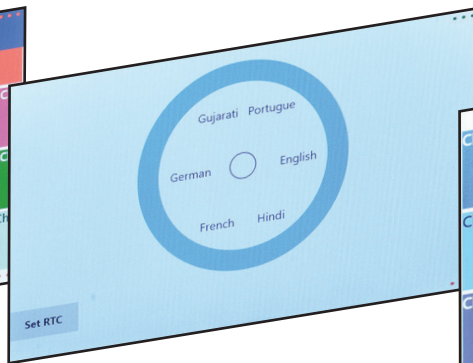
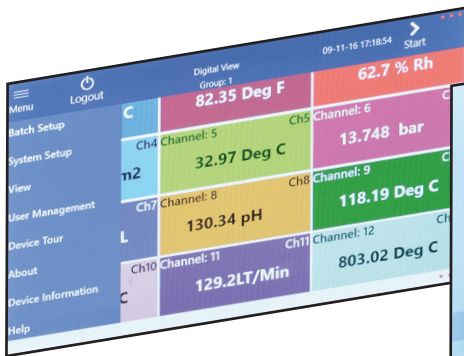
Smart screen series of recorders come with enhanced 7"LCD, 800x480 pixel display.

Multilingual Support :

For the first time, now a paperless recorder supports Indian languages. Languages like Hindi and Gujarati are supported along with other languages like English, German and Portuguese. It is possible to add other languages as well. So if you want your language to be included, you may contact us and we will be glad to add your language in the SmartScreen recorders.

Digital view:

It displays the instantaneous data of the channel. Channels are clubbed in a GROUP. There can be a maximum of 12 channels in a group and such six groups can be configured. Same channel can be in more than one group. These groups can be reconfigured before the start of the batch or while viewing historical data. Channels can be turned ON or OFF for viewing in a group. Channels will be still scanned and data stored.



• Network Connectivity:

These recorders are MODBUS TCP IP compliant. All the parameters of the recorders can be configured remotely. The recorder has built-in FTP server.

• Web Server:

These recorders have a built-in web server. User can see the data in tabular and graphical form using any standard browser from any networked connected PC. **No need to install any software.**

• Relay Output :

Each relay card has 4nos of fully isolated 1A; 230V resistive relays. User can assign any relay to any channel. Relay can be configured as High / Low / On-Off or with PID control for a given set point.

• gtekNet™:

G-Tek's network software g-tekNet™ is a client-server application. SmartScreen easily integrates with this software. Using g-tekNet™ you can connect as many as SmartScreen recorders along with other host of equipment manufactured by g-tek and control it remotely. You can view the data using standard browser from anywhere – over intranet or internet. With g-tekNet™'s host of report generation facility and 21CFR Part 11 compliance, you can be sure of the data security.

• Voltage / Current Output :

User configurable analog outputs like Voltage or Current. Fully configurable output on either Set Point or on Process Value. PID controller. The 24bit resolution DAC makes it one of the best in its class. Outputs are isolated and fully protected for short circuit and/or over voltage.

Vertical (Strip) Graph:

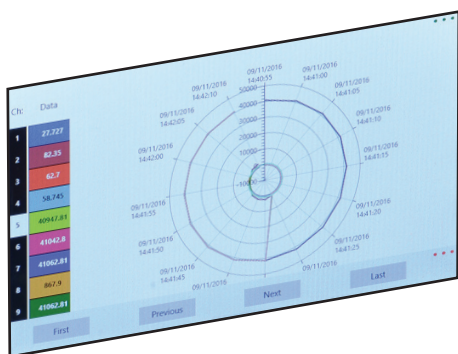
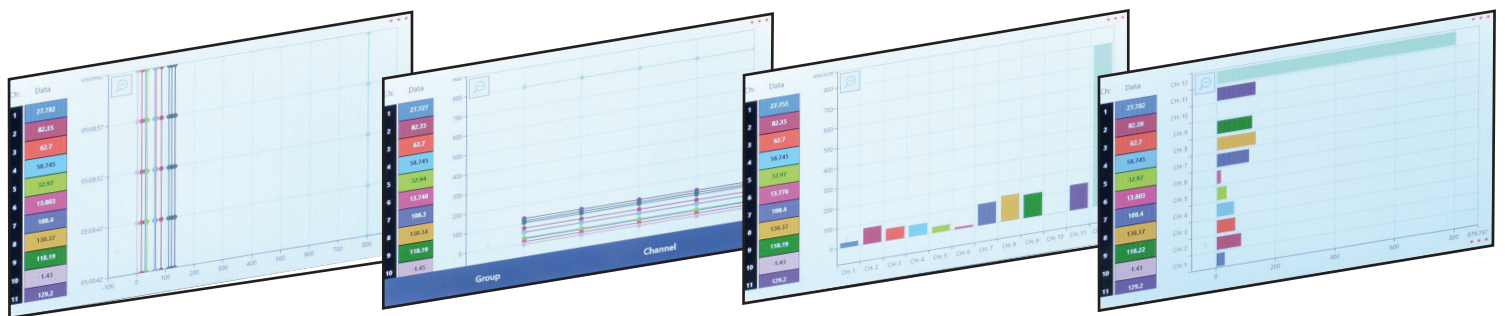
This view displays the channel data in STRIP chart form of the graph. User can select the group for which he wants to see the strip chart. Instantaneous data of each displayed channel is indicated on the side panel. User can remove the channel from the view.

Horizontal Graph:

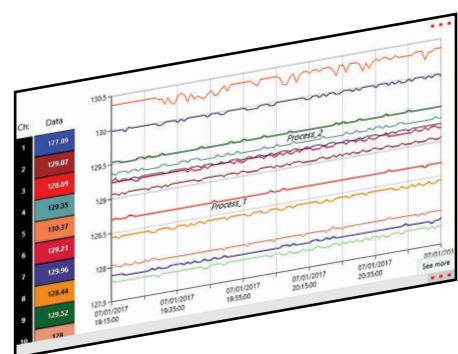
This view is similar to strip chart with a difference that now time axis is horizontal instead of vertical. Here also user can do all the manipulation as in strip graph.

Bar Chart:

This view displays the instantaneous data in a standard bar form. They are easy to understand the process changes. There are two forms of Bar Charts, Horizontal and vertical. Here also using the GROUP and CHANNEL tab, user can set the view. The digital value is displayed in the bar for convenience.



Filter	Batch Start	Batch Stop
ALL	09-11-2016 14:26:25	09-11-2016 14:51:16
CSV		
Graph		
Export	PR_Test02_0911161...	09-11-2016 12:05:08
View	PR_Test02_0911161...	09-11-2016 12:05:08
Export	PR_Test02_0911161...	09-11-2016 10:48:33
View	PR_Test02_0911161...	09-11-2016 10:48:33
Export	PR_Test02_0911161...	09-11-2016 10:40:21
View	PR_Test02_0911161...	09-11-2016 10:40:21
Export	PR_Test02_0911161...	09-11-2016 14:27:31
View	PR_Test02_0911161...	09-11-2016 14:27:31
Export	PR_Test02_0911161...	09-11-2016 14:07:58
View	PR_Test02_0911161...	09-11-2016 14:07:58
Export	PR_Test02_0911161...	09-11-2016 12:11:36
View	PR_Test02_0911161...	09-11-2016 12:11:36
Export	PR_Test02_0911161...	09-11-2016 17:48:24
View	PR_Test02_0911161...	09-11-2016 17:48:24



Circular Chart:

Most user friendly, preferred for better readability, user can see all the channels data at a glance.

Historical Data View:

SmartScreen series of recorders allow the user to view the previously recorded batches while the current batch is running. User can export the data to Pen Drive in csv format for easy analysis using any of the spreadsheet software. User can zoom in and out the graph. The left panel displays the digital data pointed by the marker on graph. As you move the marker, data will also follow. User can see this data in either strip form or in horizontal graph form.

Adding notes for future reference:

While reviewing historical data, user can add notes also. Just go to the data point, and add a note for easy future reference. Notes can be easily retrieved at later date.

Detailed Technical Specifications

Display and Operator Panels

Display Type :	TFT Color LCD
Display Size :	7"
Viewable Screen :	155mmX86mm
Display Resolution :	800X480 pixels
Color Resolution :	24bits
Touch Screen :	10 finger Capacitive
Display Screen :	Digital View / Bar Chart / Horizontal trend / Vertical Trend/ Circular Chart / Menus and other user interface screen
Multilingual :	Supports Indian languages like Hindi and Gujarati; Other language support can be extended on request

General Specifications

CPU :	1.2GHz 64-bit quad-core ARMv8 CPU
Internal Data Storage :	SD Card - 16 GB; Expandable to 32 GB
USB Host :	1; In Front
Data Update Rate :	2 Hz
Data Store Interval :	1 Seconds to 18 Hours
21CFR Part 11 Compliance :	Optional
Maximum No of Slots per recorder :	5

Communication

Communication Port:	10/100Base T (IEEE 802.3) Ethernet Port
Connector :	RJ 45
Protocols Supported :	MODBUS TCP/IP Slave; HTTPS; FTP
Communication Activity LED :	Yes
Isolation :	1.5KV 1Minute; (As per IEC 61010-1)

Environmental

Temperature :	(Operation) 5°C to 45°C (Limiting) 0°C to 50°C (Storage) -20°C to 60°C
Humidity :	(Operation) 10 to 80 % RH Non Condensing (Storage) 5 to 90 % RH Non Condensing
Altitude :	<2000 meter

Safety / EMI-EMC

EMI-EMC :	IEC 61326-1 Class B
Safety :	IEC 61010-1
Pollution Degree :	II
Installation Category :	IV
Vibration :	2g Peak (10Hz-150Hz)
Shock :	IEC 61010-1
IP Rating :	IEC 61010-1

Power Requirement:

Supply Voltage (Mains Operated through adapter) :	85-265VAC 47-63Hz
Power :	35W Max with Maximum Configuration
Fuse Type :	None

Analog Input Board

No Of Output Channel Per Board :	4
No of Slots consumed per Board :	1
Sensor Input Type;	
Range and Accuracy :	Refer to Table 1
Linearization :	For RTD; Thermocouples; Square Root; 3/2 Power; 5/2 Power; Log10
Linearization Error :	± 0.3 ° Max
Resolution :	User Settable up to 0.0001
CJC Accuracy :	± 0.5 °C
Sensor Open / Short / Out of Range :	Yes
Samples per Second :	Max 26 Samples per Second all Channels
Input Impedance RTD / TC / Volt :	>20 M Ω
Input Shunt for 4-20mA and 0-20mA :	50 Ohm ±0.1% 1/4W External

CMRR :	>120 dB @ 50, 60 Hz @ 13 Samples per Second
NMRR :	>60dB @ 50,60 Hz at 13 Samples per Second
Maximum Common Mode Voltage :	30V DC
Isolation Channel – Channe ;	2.5KVrms 1minute (IEC 61010-1)
Isolation Channel – Earth :	2.5KVrms 1minute (IEC 61010-1)
Input Protection :	60V AC/DC Max

Analog Output Board

No of Inputs per Board :	4
No of Slots consumed per Board :	1
Output Type User Settable :	mA / Volt
Accuracy :	± 0.1% FSR
Temperature Drift :	± 0.01% FSR/°C @ 25 °C
Resolution :	16Bits
Step Response :	250mSec (10-90%)
Output Refresh Rate :	500mSec
Self-Diagnostics :	Fault Indication for each output
Isolation Channel – Channel :	2.5KVrms 1minute (IEC 61010-1)
Isolation Channel – Earth :	2.5KVrms 1minute (IEC 61010-1)

mA

Range :	0-20mA; 4-20mA
Open Circuit Indicator :	Yes
Maximum load resistance :	600Ω
Maximum load Inductive :	50mH
Maximum Current Output :	24mA
Short Circuit Protection :	Yes

Voltage

Range :	0-5V; 0-10V; ±5V; ±10V DC
Output Impedance :	1K Ω Maximum
Maximum Capacitive Load :	1µF
Maximum Load :	10mA
Sort Circuit :	Protected

Table-1 Accuracy At 25 Deg °C

Sensor Type	Standard	Range	Error	Error % Input	Error % Range	Error Temperature Coef ppm/C
RTD Type						
Pt 100	IEC751	-200 To + 850	0.01°C	0.04%	0.04%	30ppm
T/C Type						
B	IEC584.1	+200 To +1800	0.03°C	0.05%	0.06%	25ppm
C	Hoskins	- 0 To +2300	0.12°C	0.05%	0.06%	25ppm
E	IEC584.1	-100 To +1000	0.03°C	0.05%	0.06%	25ppm
J	IEC584.1	-200 To +1200	0.02°C	0.05%	0.06%	25ppm
K	IEC584.1	-200 To +1372	0.04°C	0.05%	0.06%	25ppm
N	IEC584.1	-200 To +1300	0.04°C	0.05%	0.06%	25ppm
R	IEC584.1	0 To +1750	0.04°C	0.05%	0.06%	25ppm
S	IEC584.1	-100 To +1750	0.04°C	0.05%	0.06%	25ppm
T	IEC584.1	-100 To +400	0.02°C	0.05%	0.06%	25ppm
mV						
0 To 1 Volt	-	±9999	-	0.03%	0.03%	25ppm
±1 Volt	-	±9999	-	0.03%	0.03%	25ppm
0 To 5 Volt	-	±9999	-	0.03%	0.03%	25ppm
±5 Volt	-	±9999	-	0.03%	0.03%	25ppm
0-10 Volt	-	±9999	-	0.03%	0.03%	25ppm
±10 Volt	-	±9999	-	0.03%	0.03%	25ppm
mA- DC						
4-20 mA	-	±9999	-	0.03%	0.03%	25ppm
0-20 mA	-	±9999	-	0.03%	0.03%	25ppm

• Your Ordering Code : mail to quote@gtek-india.com

Select your ORDER Code:

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Example ORDER Code:

6	1	2	1	0	0	3	1
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Code : Display Size

6 : TFT LCD 7"

Code : Analog Input Type

1 : ch - ch and ch-GND Isolated

2 : ch - GND Isolated

Code : No of Analog Input Card

1 : 1 AI Card

2 : 2 AI Card

3 : 3 AI Card

4 : 4 AI Card

5 : 5 AI Card

Code :

1 : 85-264 V AC; 47-63Hz

2 : 5 V DC; 7Amp

3 : 85-264 V AC; 47-63Hz + 1 TP

4 : 85-264 V AC; 47-63Hz + 2 TP

5 : 5 V DC; 7Amp + 1 TP

6 : 5 V DC; 7Amp + 2 TP

TP: Power Supply for Transmitter (24V DC 30 mA Max)

Code : Relay

0 : None

1 : 1 Relay Card

2 : 2 Relay Card

Code : Analog O/P

0 : None

1 : 1 DAC Card

2 : 2 DAC Card

Code : Communication

3 : 1 TCP/IP

Code: Security

0 : None

1 : 21CFR Part 11 Compliant

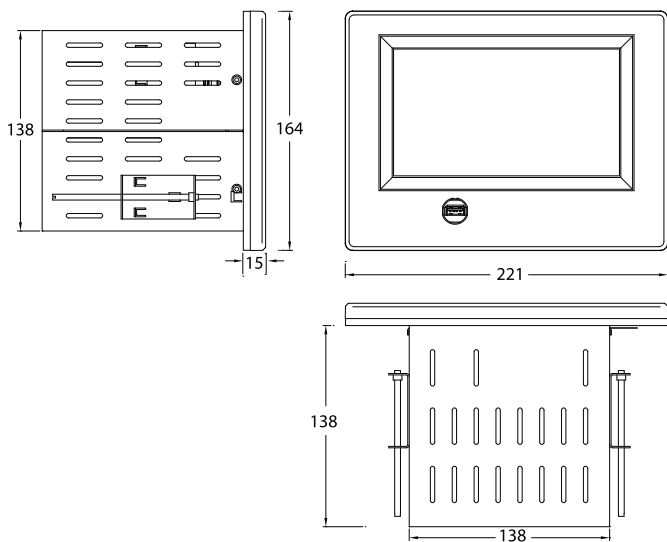
Relay Output Board

No of Inputs per Board :	4
No of Slots Consumed per Board :	2
Relay Output Type :	High / Low / On-Off / PID
Output Type :	1 Form C (C-NC-NO)
Life Expectancy :	Mechanical: 10 ⁷ operations
Relay Contact Ratings :	Electrical: 10 ⁵ operations
Relay Contact Ratings :	1A; 230V AC Resistive
Relay Refresh Rate :	500mSec
Isolation Relay - Relay :	2.5KVrms 1minute (IEC 61010-1)
Isolation Relay - Earth :	1.5KVrms 1minute (IEC 61010-1)

Transmitter Output Power

Maximum no of output :	2
Output Voltage :	24V DC
Max Current :	30mA
Short Circuit :	Protected
Isolation Output - Earth :	1.5KVrms 1minute (IEC 61010-1)

Product Dimension



Overall Dimension:

Dimension H x W x D (mm) :	164 x 221 x 138
Panel Cutout (mm) (H x W) :	138 x 138
Bezel (mm) :	221 x 164
Weight :	1.5 Kg

Dealer / Representative

The specifications given above are an overview, and may be or may not be available in all product variants, or at an additional cost. The company reserves the right to change the specifications without prior notice, as the company follows a continual improvement philosophy for its products.



Manufacturers of :

- Circular Chart Recorders
- Strip Chart Recorders
- Inkless Recorders
- Paperless Recorders
- Scanners & Data Loggers
- Networked Data Loggers
- Application Software
- Web based DAQ

G-TEK CORPORATION

3, mahavir estate, karelibaug
 vadodara-390 018
 tel.: +91-265-2461912
 +91-265-3935701 - 24
 e-mail: info@gtek-india.com
 url: www.gtek-india.com