Industrial Embedded
Testing sensors

info@texense.com - www.texense.com

teXense
controls by TEXYS

Texense Sensor Range / Automative & Industry
Embedded sensors manufacturer

Texys International

- Our expertise in embedded sensors is recognized in the top of Motorsport industry
- Texense sensors are used worldwide since 1998 in racing series like Formula1, NASCAR, IndyCar, , TUSC, WTCC, Moto GP, WRC, V8 Supercars, GT…
- …and also in testing labs or testing centers of major car manufacturers, automotive industry, aeronautics & aerospace industries (civil & military), independent Testing centers, marine.
- TEXYS quality management system has been approved according to ISO 9001 standard

ISO 9001:2008
BUREAU VERITAS
Certification

Values

- Innovation
  - *To give our customers a step forward*
- Performance
  - *Reliability & accuracy of our products*
- Commitments
  - *Customers satisfaction*
- Service
  - *Support & reactivity*

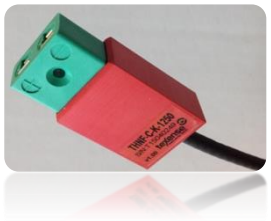


Thermocouple conditioners single channel

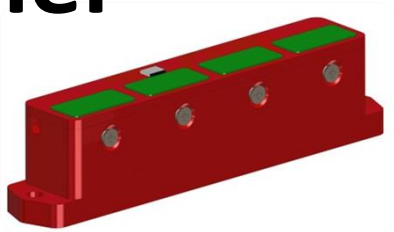
- **THA Analog conditioner connector**
  - Patented conditioner (FR_0209687; US_6,942,382)
  - 0-5 V output
  - Junction type: K, J, T …
  - Temperature ranges: -50/+200°C, -100/+400°C, 0-1000°C, 0-1250°C
  - Aluminum housing
  - 2 in-line flying leads compact design housing also available (THAB) – for easy installation on existing harness

- **THN Digital conditioner connector**
  - 0-5 V or 0-10V output
  - Sampling frequency: 5 Hz (10Hz on demand)
  - 12V or 24 V supply
  - Junction type: K, J, T, R, …
  - Temperature range: -50/+200°C, -100/+400°C, 0-1250°C
  - Optional: aluminum housing, 600 V probe insulation, military connector & IP64 housing

- **THNF-A / THNF-CAN: High sampling rate digital & analog / CAN bus thermocouple conditioners connectors**
  - Sampling frequency : 1KHz
  - analog/digital or CAN bus output
  - 12V or 24 V supply
  - Junction type: K, J, T…
  - Temperature range: any from -20/+120°C to 0-1250°C
  - Aluminum or plastic housing
  - user programmable (for CAN bus or digital release) with tAST®, texense® Android Smart Tool

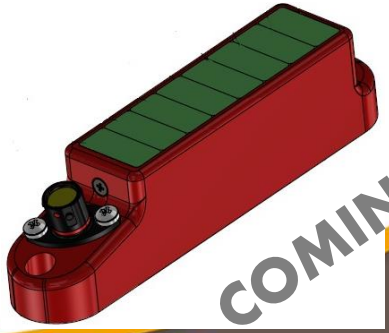


Thermocouple conditioners multichannel



- **THNx4-CAN / THNF4-C digital multichannel thermocouple conditioners connectors**
  - Sampling rate : 5 Hz/channel (THNx4-CAN) ; **250 Hz/channel (THNF4-C)**
  - 4 channels CAN bus output
  - 12V supply
  - Junction type: K, J, T…
  - Temperature range: any from -20/+120°C to 0-1250°C
  - user programmable (CAN IDs, baud rate, emission freq., units) with tAST®, texense® Android Smart Tool

- **THNx4-CAN-IS-MC digital multichannel thermocouple conditioner connector**
  - 4 channels CAN bus output
  - 12V or 24V supply
  - probe insulation : 600 V
  - Junction type: K
  - Temperature range: any from -50/+200°C to 0-1250°C
  - Military connector & IP67 housing
  - user programmable (CAN IDs, baud rate, emission freq., units) with tAST®, texense® Android Smart Tool



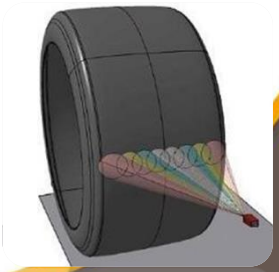
- **THNx8-CAN digital multichannel thermocouple conditioner connector**
  - Sampling rate : 125 Hz /channel
  - 8 channels CAN bus output
  - 12V supply
  - Junction type: K, J, T…
  - Temperature range: any from -20/+120°C to 0-1250°C
  - user programmable (CAN IDs, baud rate, emission freq., units) with tAST®, texense® Android Smart Tool

Infrared temperature sensors

- **IRN2 / IRN3 Linear Analog & Digital infrared temperature sensor**
  - Temperature ranges: -20/+100°C, +200°C, +300°C, + 500°C; +30/ +600°C, +50/+800°C; +300/+1000°C, + 1200°C
  - Accuracy : 2% FS – Response time: 50ms
  - Supply voltage: 3.3 to 30V
  - output: 0-5V (Std), 0-3 V, 0-10V (optional), digital output (Ascii data @ 50hz)
  - M12 threated or rectangular housing – IP65 rated
  - Operating temperature: -20/+120°C
  - IP67 rated version : IRN2-Sd

- **New IFbN Optical Fiber digital temperature sensor for very harsh environment**
  - Temperature ranges: from +50/+200°C up to +50/+1200°C
  - Accuracy: 2% FS
  - Photodiode technology: fast response time (< 5ms) & law emissivity materials
  - Supply voltage: 5 to 30 V
  - Output voltage: 0-5 V
  - adapted to very harsh environment: high operating temp (up to 800°C according to optical fiber housing arrangement), EMI, fluid high pressure, oil mist , target difficult to reach …

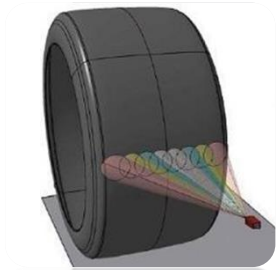
- **IRN8-C 8 channels digital infrared temperature sensor**
  - Measurement: 8 channels in line (total beam angle: 41.5°)
  - Range: -20°C to +200°C
  - Accuracy @FS: +/- 1%
  - Communication through CAN bus 2.0A
  - Resolution: 0.1°/bit
  - Sampling frequency : 10Hz
  - Used for tire surface temperature measurement on whole foot-print (automotive, civil or military aircraft or vehicles, ….)



Wireless devices for contactless temperature measurements

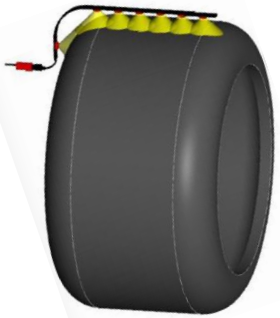
New IRN8-W Wireless 8 channels digital infrared temperature sensor

- Measurement: 8 channels in line (total beam angle: 41.5°)
- Range: -20°C to +200°C
- Accuracy @FS: +/- 1%
- Communication through CAN bus 2.0A
- Resolution: 0.1°/bit
- Sampling frequency : 10Hz
- RF tri-band (868, 902, 920 MHz)
- Used for tire surface temperature measurement on whole foot-print (automotive, civil or military aircraft or vehicles, ….)



New IRN-RC-W Wireless multichannel digital infrared temperature sensor

- Measurement: form 3 up to 8 IR lens (FOV 45° or 90°) on flexible strip
- Range: -20°C to +200°C
- Accuracy @FS: +/- 1%
- Communication through CAN bus 2.0A
- Resolution: 0.1°/bit
- Sampling frequency : 10Hz
- RF tri-band (868, 902, 920 MHz)
- Used in limited space for tire surface temperature measurement on whole foot-print & side-wall (automotive, civil or military aircraft or vehicles, ….)

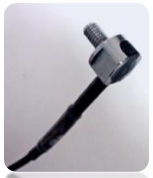


Air or fluid temperature sensors

- **PT100/1000 liquid temperature sensor**
  - Temperature range: -50°C to + 200°C
  - Accuracy : Class A for PT1000 – Class 1/3 for PT100
  - Sensitive element : PT100 or PT1000
  - Available dimensions : M6x1.0 – M8x1.0 – M8x1.25 threated – 10 or 14 mm length
  - Material : stainless steel – IP 66 rated
  - Operating temperature: -50/+200°C

- **TS M6 / TS M8 liquid or air temperature sensor**
  - Temperature range: -50°C to + 150°C
  - Accuracy : 2% FS
  - Supply voltage: 5 to 16 V (M6) – 5 V (M8)
  - Sensitive element : silicon sensor
  - Available dimensions : M6x1.0 – M8x1.0 – M8x1.25 threated – 10 or 14 mm length – 1/8" NPT
  - Material : stainless steel –IP66 rated
  - Operating temperature: -50/+150°C
  - -- Air temperature version also available (TS-150-M6-AIR)

- **CTK : Caliper Temperature Kit (PT M4 probe + APTAB amplifier)**
  - Temperature range: -50°C to + 250°C
  - Accuracy : Class A for PT100 – Class B for PT1000
  - Sensitive element : PT100 or PT1000
  - Available dimensions : M4x1.0 threated – 13 mm height
  - Material : stainless steel – IP 66 rated
  - Operating temperature: -50/+250°C



Tire Pressure Monitoring System

TPMS Tire Watch Racing (Car or motorbike tires purposes)

- Miniaturized RCU: 111x64x23mm – Weight < 100 g
- Supply Voltage: 9 to 16 V
- Output Data: CAN bus 2.0A active, up to 1 Mbps
- Each Wheel Unit Sensor (WUS) transmits an unique encrypted serial number
- RF Wireless communication between RCU & WUS
- WUS: pressure (0 to 3.5 bar relative) & temperature (-40/+125°C) measurements
- WUS transmission mode : each second in running mode
- WUS battery autonomy : 1 year
- Software included

-- optional: Display, remote trigger, analog output

TPMS Tire Watch S3P Trucks vehicles

- Compact RCU: 123x120x50mm – Weight = 250 g
- Supply Voltage: 12 to 24 V
- Output Data: CAN bus (J1939 compliant)
- Each Wheel Unit Sensor (WUS) transmits an unique encrypted serial number
- RF Wireless communication between RCU & WUS
- WUS: pressure (0 to 14 bar relative) & temperature (-30/+85°C) measurements
- WUS transmission mode : every 2 minutes in running mode
- WUS battery autonomy : 8 years
- Software included
- Optional: Display, remote trigger, analog output

Inertial sensors

- **AC-CAP Capacitive type accelerometers**
  - Axis : X, XY, XYZ
  - Measurement ranges: +/- 5G; +/-10G; +/- 15G; +/- 20G
  - Accuracy : 1%
  - Supply voltage: 5 to 16V
  - output: 0-5V
  - Rectangular housing – IP66 rated
  - Operating temperature: -20/+100°C

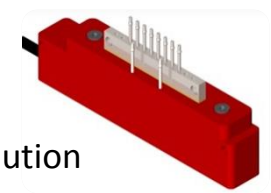
- **GYRP & GYRN3-S Gyroscopes**
  - Axis : X or Y, XYZ
  - Measurement ranges: +/- 50°/sec; +/-100°/sec; +/- 150°/sec
  - Accuracy : 2%
  - Supply voltage: 5 to 16V
  - output: 0-5V
  - Operating temperature: -20/+105°C
  - optional 5th, 8th or 10th order filtering on new GRYN3-S version

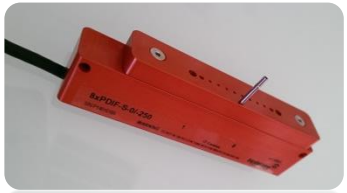
- **IB-4 & IB-6 IMU**
  - IB-4 : 3 axis accelerometer + 1 axis Gyroscope
  - IB-6 : 3 axis accelerometer + 3 axis Gyroscope
  - Supply voltage: 5 to 16V
  - output: 0-5V or CAN digital output available
  - Compact rectangular housing – IP66 rated
  - Operating temperature: -20/+85°C

Windtunnel & aerodynamics sensors

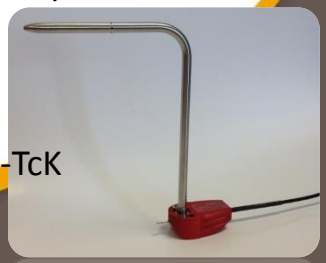
- **DPS**
  - Single channel pressure differential sensor
  - Measurement ranges: 5 , 12.5, 25, 50, 70, 76 mBar
  - Accuracy : 0.25% FS
  - 0.5 V unidirectional offset or 2.5 V bidirectional offset
  - Supply voltage: 5 to 16V
  - output: 0-5V
  - Operating temperature: 0/+85°C

- **4xPDIF-S; 8xPDIF-S & 8xPDIF-S-2**
  - 4 or 8 channels differential pressure sensors compatible with scanivalve manifold (with 1 or 2 references)
  - Measurement ranges: +/- 50 to +/- 1000 mBar ; +/- 0.7 to +/- 15 PSI
  - Accuracy : +/- 0.5%
  - Supply voltage: 5 to 16V
  - CAN output with programmable IDs , Baud rate, Frequency, Unit/Resolution
  - 89x35x14 aluminum rectangular housing – IP64 rated
  - Operating temperature: +5/+85°C





- **PI-4, PI-6 &PI-6-TcK Pitot assembly (Pitot tube + pressure sensor)**
  - Max Air speed ranges : 166 km/h (PI-4 only); 235 km/h (PI-4 only); 330 km/h; 394 km/h; 410 km/h
  - Accuracy : 0.25% (PI-4 only); 1% (PI-6)
  - Supply voltage: 5 to 16V
  - output: 0-5V
  - Air temperature measurement (integrated thermocouple K probe -40/+150°C range) for PI-6-TcK
  - Operating temperature: 0/+85°C



Miniaturized amplifiers

- **APTAB-100, -500, -1000 PT probe amplifier**
  - Temperature range: -50°C to + 200°C ; -100 to + 400°C
  - Type available for : PT100, PT500, PT1000 probes
  - Accuracy : 0.075%FS @ +25°C
  - Supply voltage : 6 to 30 V
  - Output voltage : 0-5 V
  - 2 in-line flying leads compact design housing for easy installation on existing harness
  - Operating temperature: -40/+125°C

- **8xPT1000 8 channels PT probe amplifier**
  - Temperature range: -50°C to + 200°C ; -100 to + 400°C
  - Type : PT1000 3-wires
  - Output data: temperature on 2 bytes per channel with 0.1° resolution (CAN Bus 2.0)
  - Supply voltage : 6 to 16 V
  - IP67 rated housing 70x21x23mm
  - Operating temperature: -40/+125°C

- **XN4 digitally controlled analog strain gauge amplifier**
  - Supply voltage : 5 to 16 V
  - Bridge supply voltage : 5 V
  - Bridge gauge impedance 120 to 1000 Ω (up to 10KΩ on demand)
  - Output signal : 0-5 V ; +/-5 V & +/- 10V optional module
  - Programmable parameters (Laptop with texense® USB cable) : Offset, Gain, Compensation
  - Cut-off frequency : 90Hz up to 8KHz (up to 100KHz on demand)
  - Operating temperature: -40/+125°C
  - AMPT-2L version for remote purposes

Miniaturized amplifiers

- **AMPC charge amplifier with TEDS**

- in-line charge converter for use with charge output piezoelectric accelerometers
- Range: 1 to 10 mV/pC
- Accuracy: +/- 1°C
- Non linearity: +/- 0.3%
- Frequency: 5 Hz
- Supply voltage : 6 to 30 V
- low consumption: 6 mA
- Output voltage : -5 to +5 V
- 2 in-line flying leads compact design housing (40x14x8mm) for easy installation
- Operating temperature: -40/+85°C

-TEDS option (3 wires according to IEEE 1451.4 Class1)

-Purposes: use with charge output sensors where restricted installation space, low consumption and mass loading are of concern (structural testing, aerospace component monitoring, …)

Interfaces

- **V-2-mA converter**
  - Converter 0-5 V or 0-10V to 4-20mA
  - Input supply voltage: 8 to 40 V (for 0-5V input signal) 15 to 40V (0-10V)
  - Output signal: 4-20 mA
  - Sensor supply voltage: 6.5 V (0-5V input) 12.5 V (0-10V input)
  - Dimensions: 47x13.5x8 mm
  - Material: aluminum – IP 64 rated
  - Operating temperature: 0/+120°C

- **A-CAN-DG analog to CAN dongle converters**
  - 8 analog inputs : 0-5 V or +/- 10V
  - 2 digital inputs
  - Analog sampling & speed calculation (per channel): 500Hz (up to 1KHz on demand)
  - Anti-aliasing filter optional
  - Programmable parameters: IDs, Baud rate, emission frequency, speed unit, cut off frequency…
  - Supply : 6 to 16 V
  - V1 housing with Sub-D connector or V2 IP67 aluminum housing with Lemo connector
  - Operating temperature: -20/+80°C (V1) ; -40/+125°C (V2)
  - user programmable (CAN IDs, baud rate, emission freq., units) with tAST®, texense® Android Smart Tool

KVASER CAN Interfaces

Kvaser products include a complete range of CAN interfaces, covering USB to CAN, CAN to Wireless, PCI, PCI Express, Mini PCI Express, PC104+ and PCI104, as well as dataloggers and products for LIN.

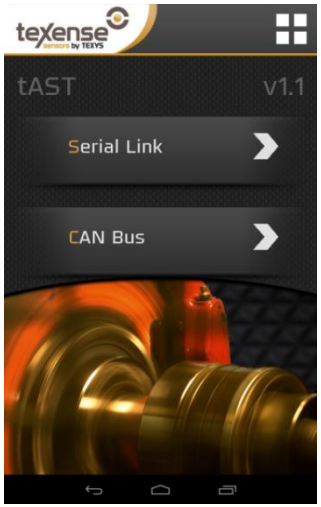
See all the Kvaser products range @ http://www.kvaser.com/products-services/our-products/

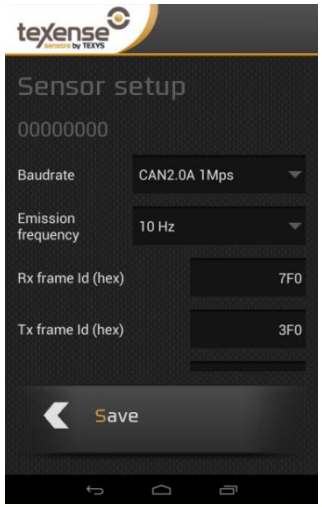
Kvaser USBcan Professional

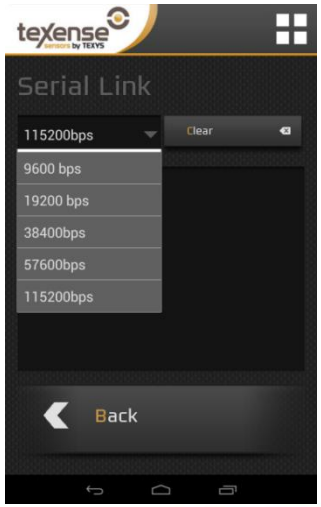
- The Kvaser USBcan Professional with MagiSync is a high performance, two channel CAN bus interface with a standard USB1.1 connection. It enables several interfaces to be easily connected to a PC and when combined with the Kvaser Linx, also supports bus types like J1587.
- Bitrate : 5-1000 kbps
- mps sending : 20000 mps
- mps recevie : 20000 mps
- Automatic and accurate clock synchronization between several Kvaser USBcan Professional interfaces through Kvaser MagiSync™.
- Dimensions: 50x90x25 mm
- weight : 150g
- Operating temperature: -40/+85°C

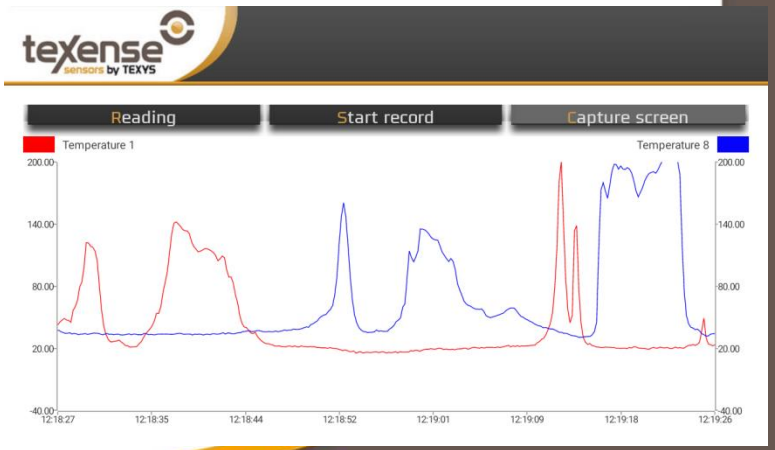
Android App

- **tAST®, texense® Android Smart Tool**
  - Users friendly app for Android Smartphone or Tablet PC
  - Parameters set-up of CAN based texense® sensors & serial link digital programmable conditioners (XN4, …)
  - CAN sensors parameters:
    - CAN line checking
    - Baud rate
    - Emission frequency
    - CAN ID
    - Units
    - Gain factor
    - Response time
  - Display features: sensors data on 4 digit (real time), graphic display
  - sensors data export (.csv file)
  - tAST® includes a free app to be downloaded from Google Play and the texense® USB dongle









TEXYS Worldwide

Headquarter & Subsidiary

Official dealers

Contact us

teXense
sensors by TEXYS

info@texense.com - www.texense.com

Texense Sensor Range / Automative & Industry
Embedded sensors manufacturer

Texys International

ZA des chamonds
Rue Edouard Branly
58640 Varennes-Vauzelles (FRANCE)
Phone + 33 (0)3 86 21 27 18
Fax + 33 (0)3 86 21 24 49

Texys America

Three Woodfield Crossing
8425 Woodfield Crossing Blvd
Suite 100
Indianapolis, IN 46240 (USA)
Phone (317) 469-4828
Fax (317) 469-7596