

*Franchised Suppliers of the world's
most Innovative Electronic
Products and Solutions*

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About BT2000



Broadband Technology 2000 Ltd (BT2000) is a long established design-led, franchised, electronic component distributor and manufacturer's representative.

We are a technically focused supplier of leading edge, world class solutions used to enhance our customer's product specifications. Established in 1995, BT2000 is a team of experienced electronic component sales, marketing and engineering professionals who are focused on demand creation.

Our unique local knowledge of the diverse market within our UK & Eire territory allows us to manage the introduction of product from the embryonic stage to full production assisting with the approval, test and management control documentation expected from a fully ISO approved company.

Our franchised suppliers are carefully selected to allow a non conflicting synergistic complement to our already impressive portfolio. This, in turn, allows us a close working relationship with both customers and suppliers setting high quality expectations and delivering the best service.

Our high attention to detail mean that we are driven to supply competitively priced solutions to meet the stringent delivery requirements set by the ever demanding market.

Our extensive warehouse facilities, unique shipping knowledge and controls allow us to manage the shipment of a variety of different goods worldwide.

Our winning team look forward to sharing our mutual business opportunities with you to further expand and enhance our businesses.

SENSORS

MEMSIC



MEMSIC Inc., HQ in Andover, USA, provide advanced IC sensor solutions based on integrated MEMS technology and mixed signal circuit design.

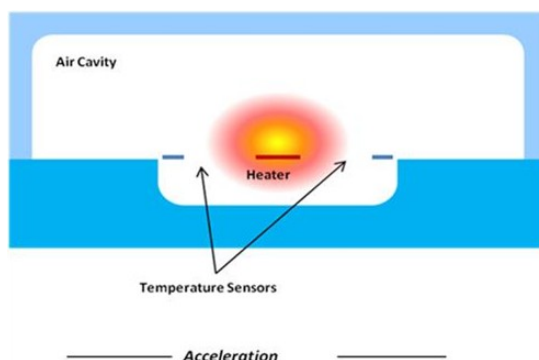
Accelerometers

| Part Number | Axes | Range (+/- g) | Output | Sens'ty | Offset Drift (mg/°C) | BW (Hz) | Noise (mg rms) | Supply Voltage (V) | Sleep Mode | Size (mm) | Temp Output | Temp Comp (ON OFF) |
|--------------|--------|---------------|------------------|----------|----------------------|---------|----------------|--------------------|------------|-----------|-------------|--------------------|
| MXP7205VF | 2(XY) | 5 | SPI | 800 c/g | 1 | 29 | 2.7 | 4.5 - 5.2 | | 5 x 5 | | On |
| MXP7205VW | 2(XZ) | 5 | SPI | 800 c/g | 1 | 29 | 2.7 | 4.5 - 5.3 | | 5.5 x 5.5 | | On |
| MXR7305VF | 2(XY) | 5 | Analog | 0.25 V/g | 2 | 27 | 3.1 | 4.5 - 5.3 | | 5 x 5 | | On |
| MXR7250VW | 2 (XZ) | 5 | Analog | 0.25 V/g | 1.3 | 27 | 3.1 | 4.5 - 5.3 | | 5.5 x 5.5 | | On |
| MXR9150MZ | 3(XYZ) | 5 | Analog | 0.15 V/g | 1 | 17 | 2.5 | 2.7 - 3.6 | Y | 7 x 7 | | On |
| MXC6232xMP | 2(XY) | 2 | I ² C | 512 c/g | 0.8 | 17 | 0.7 | 2.7 - 3.6 | Y | 5 x 5 | Y | On |
| MXC6255XU | 2(XY) | 2 | I ² C | 64 c/g | 0.3 | 10 | 0.6 | 2.5 - 5.5 | Y | 3 x 3 | | On |
| MXC6255XC | 2(XY) | 2 | I ² C | 64 c/g | 0.6 | 10 | 0.9 | 2.5 - 5.5 | Y | 1.2 x 1.7 | | On |
| MXD6235MP | 2(XY) | 2 | PWM | 12.5%/g | 1.5 | 17 | 1.6 | 2.7 - 3.6 | | 5 x 5 | | On |
| MXC6232xEP | 2(XY) | 1.5 | I ² C | 512 c/g | 0.8 | 17 | 2.9 | 2.7 - 3.6 | Y | 5.5 x 5.5 | Y | Off |
| MXR6500MP | 2(XY) | 1.7 | Analog | 0.5 V/g | 1.5 | 17 | 1.6 | 2.7 - 3.6 | | 5 x 5 | | On |
| MXR9500MZ | 3(XYZ) | 1.7 | Analog | 0.5 V/g | 1 | 17 | 2.5 | 2.7 - 3.6 | Y | 7 x 7 | | On |
| MXD2020EL | 2(XY) | 1 | PWM | 20 %/g | 0.4 | 17 | 0.8 | 3.0 - 5.3 | | 5 x 5 | Y | Off |
| MXR7900CF | 2(XY) | 1 | Analog | 0.9 V/g | 0.3 | 19 | 1.3 | 4.5 - 5.3 | | 5 x 5 | | Off |
| MXA2500EL | 2(XY) | 1 | Analog | 0.5 V/g | 0.4 | 17 | 0.8 | 3.0 - 5.5 | | 5 x 5 | Y | Off |
| MXR2999EL | 2(XY) | 0.5 | Analog | 1 V/g | 0.4 | 17 | 0.8 | 3.0 - 5.3 | | 5 x 5 | Y | Off |
| MXC4005XC | 3(XYZ) | 2, 4, 8 | I ² C | 1024 c/g | 0.8 | 10 | 3 | 1.6 - 3.6 | Y | 1.7 x 1.2 | Y | On |
| MXD6240/41AU | Roll | 0 +/- 90 | 1-Wire | | | 3.125 | | 3 - 5 | | 3 x 3 | | Yes |
| MXC6244AU | 2 | 8 | I ² C | 1024 c/g | 0.1 | 11 | 0.75 | 2.7 - 5.5 | Y | 3 x 3 | | On |
| MXC6245XU | 2 (XY) | 2 | I ² C | 1024 | 0.1 | 11 | 1.5 | 2.7 - 5.5 | Y | 3 x 3 | | On |

Micro Electro Mechanical Acceleration Sensor

MEMSIC's unique thermal technology uses heated gas molecules to detect acceleration and is the fundamental principle behind their accelerometer IC products.

- * Unique thermal technology
- * High Reliability due to no moving parts
- * Low Cost structure due to standard CMOS integration.



SENSORS



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Magnetometers

| Part Number | Axes | FSR | Output | Sensitivity | Noise | Supply Voltage | Supply Current | Sleep Mode | Size | S/R Offset Nuling |
|-------------|------|---------|------------------|-------------|----------|----------------|----------------|------------|-----------|-------------------|
| | | (+/- G) | | | (mG rms) | (V) | (mA @ 7cps) | | (mm) | |
| MMC3416xPJ | 3 | 16 | I2C | 2048 c/G | 1.5 | 1.62 - 3.6 | 0.14 | Y | 1.6 x 1.6 | Y |
| MMC3530KJ | 3 | 30 | I ² C | 1024 c/G | 2 | 1.62 - 1.98 | 0.16 | Y | 1.4x1.4 | Y |
| MMC3630KJ | 3 | 30 | I ² C | 1024 c/G | 2 | 1.62-3.6 | 0.32 | Y | 1.2x1.2 | Y |
| MMC5883MA | 3 | 8 | I2C | 4096 c/G | 0.6 | 1.62 - 3.6 | 0.1 | | 3 x 3 | T |

MEMSIC's family of magnetometer components are available in both dual-axis and three-axis versions. They are based on anisotropic magnetoresistive (AMR) Permalloy technology sensors, which have superior accuracy and response time characteristics, while consuming significantly less power than alternative technologies. The MEMSIC magnetometers are ideal for electronic compass, GPS navigation and magnetic field detection applications.

Tilt Sensors

| Part Number | Axes | Range | Output | Sensitivity | Bandwidth | Resolution | Supply Voltage | Package Type | Dimensions |
|-------------|-------|-----------|--------|-------------|------------|------------|----------------|--------------|------------|
| | | (+/--deg) | | (mV/deg) | (Hz) | (deg rms) | (V) | | (cm) |
| CXTA01-T | 1(X) | 75 | 0-5V | 35 | DC-50 | 0.05 | 6 to 30 | Nylon | 4.5 x 2.7 |
| CXTLA02-T | 2(XY) | 20 | 0-5V | 100 | DC-6 | 0.05 | 6 to 30 | Nylon | 4.5 x 2.7 |
| CXTA02-T | 2(XY) | 75 | 0-5V | 35 | DC-50 | 0.05 | 6 to 30 | Nylon | 4.5 x 2.7 |
| CXTILT02EC | 2(XY) | 75 | RS-232 | Selectable | Selectable | Selectable | 8 to 30 | Aluminium | 10.2 x 5.7 |



SENSORS



ACEINNA

With headquarters in Boston, Massachusetts, ACEINNA was spun off from MEMSIC, Inc. in 2017. ACEINNA, Inc. is a leading MEMS based sensing solutions company, focusing on the development of innovative Inertial Measurement Unit (IMU) and current sensing technologies that are essential to next generation cars, robots and other autonomous applications. Our product lines cover MHz bandwidth Magneto-Resistance (MR) based electric current sensors, high-performance open source IMUs, Real Time Kinematic (RTK) navigation systems, and centimeter-precision positioning services.

Current Sensor ICs

Current Sensors - ACEINNA is applying its leadership and expertise in Anisotropic Magneto Resistive (AMR) magnetic sensing to AC and DC current sensing. AMR based current sensors are easily scaled for small or large current ranges. ACEINNA improves on existing current sensing technology in the follow ways: Improved Over Temperature Accuracy, Increased Dynamic Range and Resolution, Increased Bandwidth (1 MHz), Better Input Referred Bias Stability

| Part Number | Nominal Current | Accuracy | Bandwidth | Response Time | Supply Voltage | Over Current Detection Time | Offset | Package Type | Package Size |
|--------------|-----------------|-----------------|-----------|---------------|----------------|-----------------------------|--------|--------------|--------------|
| MCA1101-50-5 | +/- 50A | 1.5% of Reading | 1.5MHz | 300ns | 5.0V | 200ns | 40mA | SOIC16 | 10 x 10mm |
| MCR1101-50-5 | +/- 50A | 1.5% of Reading | 1.5MHz | 300ns | 5.0V | 200ns | 40mA | SOIC16 | 10 x 10mm |
| MCA1101-20-5 | +/- 20A | 0.6% of Reading | 1.5MHz | 300ns | 5.0V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCR1101-20-5 | +/- 20A | 0.6% of Reading | 1.5MHz | 300ns | 5.0V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCA1101-5-5 | +/- 5A | 1.0% of Reading | 1.5MHz | 300ns | 5.0V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCR1101-5-5 | +/- 5A | 1.0% of Reading | 1.5MHz | 300ns | 5.0V | 200ns | 20mA | SOIC16 | 10 x 10mm |

| Part Number | Nominal Current | Accuracy | Bandwidth | Response Time | Supply Voltage | Over Current Detection Time | Offset | Package Type | Package Size |
|--------------|-----------------|-----------------|-----------|---------------|----------------|-----------------------------|--------|--------------|--------------|
| MCA1101-50-3 | +/- 50A | 0.7% of Reading | 1.5MHz | 300ns | 3.3V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCR1101-50-3 | +/- 50A | 0.7% of Reading | 1.5MHz | 300ns | 3.3V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCA1101-20-3 | +/- 20A | 0.6% of Reading | 1.5MHz | 300ns | 3.3V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCR1101-20-3 | +/- 20A | 0.6% of Reading | 1.5MHz | 300ns | 3.3V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCA1101-5-3 | +/- 5A | 1.0% of Reading | 1.5MHz | 300ns | 3.3V | 200ns | 20mA | SOIC16 | 10 x 10mm |
| MCR1101-5-3 | +/- 5A | 1.3% of Reading | 1.5MHz | 300ns | 3.3V | 200ns | 20mA | SOIC16 | 10 x 10mm |

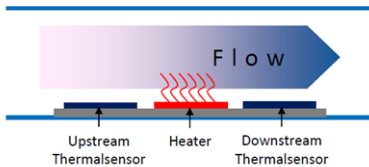
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Flow & Differential Pressure Sensors



The **MDP200** differential pressure sensor is a highly accurate and stable pressure sensor, designed for industrial, HVAC, and medical applications. The sensor is offered in a +/- 500 Pa configuration with custom ranges available. The sensor is available in board and manifold mount, with straight and angled connector pins.

Inertial Systems

Inertial Systems - provide end-users and systems integrators with fully-qualified MEMS-based solutions for measurement of static and dynamic motion. These are standalone and embedded multi-axis (9DOF) strap-down inertial measurement systems supporting a wide range of applications including INS, AHRS, VG and others. The precisely calibrated OpenIMU hardware combined with the Open Source Development Platform in MS VS Code provides the most cost effective solution for inertial measurement applications.

Tilt Sensors - Ruggedized, environmentally sealed inertial sensors that can survive tough construction, agriculture and industrial applications



Inertial Measurement Units (IMU) - Open IMU solutions offer best-in-class IMU performance with fully customizable, open source algorithms



Inertial Navigation Systems (INS) - GNSS & IMU sensors combined to deliver cm level accuracy positioning and inertial positioning estimation.



SENSORS



SENSAGGIO

Sensaggio Technologies, based in Rozzano (MI) Italy designs, manufactures and distributes ratiometric, absolute pressure sensors. The pressure sensors, based on piezoresistive technology using ceramic materials are TS , IATF and UL certified. The ratiometric pressure transducer utilizes a Piezoresistive Wheatstone bridge with a chemically etched ceramic diaphragm.

PERFORMANCE: resistant to extreme temperatures, excellent hysteresis, high accuracy, fast response time and excellent surge resistance

COMPATIBILITY: Suitable for HVAC-R refrigerant gases, also for new gas HFO 1234ze, R1234yf, R407c, and related oil.

RESISTANCE: suitable for critical applications, with aggressive fluids

COMPLIANCE: compliant with RoHS and Reach regulation — UL and TS certified

RANGE: 0-700 (psi) 0 -46 (bar)

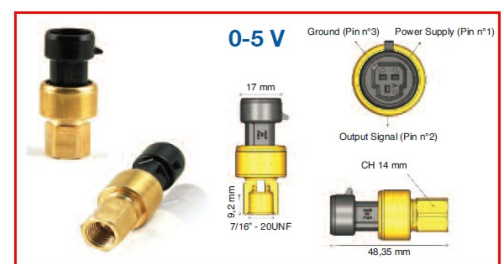
OUTPUT: 0 to 5V, 4 to 20mA

TYPE: absolute

MEDIA: air, gases, liquids

APPLICATIONS:

- HVAC-T (transportation: bus, truck, ships, trains...)
- Oil system pressure
- Fuel system pressure
- HVAC after market
- AD blue
- HVAC-R (industrial automation)
- Process monitoring
- Automation process control
- Data instrumentation
- HVAC-R portable monitoring system

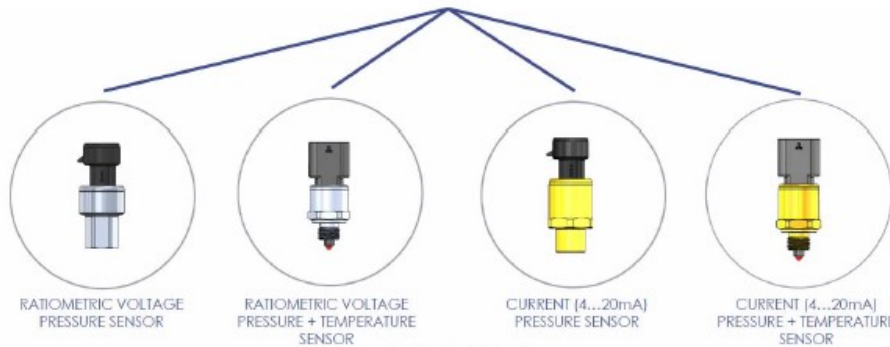


AREAS: Automotive, Industrial, Medical, Consumer, Aviation/Defense

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GENERAL FEATURES

| | |
|--------------------------------|--|
| Pressure ranges | 0 to 5.2 bar (abs), through 1 to 46 bar (abs) (other pressure range and transfer function available on request) |
| Over pressure | 25 to 91 bar (abs) typical |
| Burst pressure | Brass, min 110 bar (abs) |
| Pressure connection | 7/16" 20UNF (other connections available on request) |
| Pressure connection material | Brass (other materials available on request) AL SS |
| Tightening torque | Brass, 12 to 16 Nm |
| Electrical connection | Packard connector (other connections available on request) |
| Electrical connection material | PBT GF30 |

ELECTRICAL FEATURES

| | |
|--------------------------|---|
| Power supply (Vdd) | 5Vdc \pm 10% (Protected against polarity inversion and short circuit) |
| Supply current (Idd) | < 10 mA @ 5,5Vdc (8,5 mA typical) |
| Output voltage (Vout) | 10% Vdd to 90% Vdd typical |
| Output current (Iout) | 5mA typical |
| Output load | 20 K Ω min. (Pull-up or Pull-down) |
| Insulation resistance | 1 G Ω @ 50Vdc |
| Output response time | 10 ms typical |
| Power supply overvoltage | 18Vdc |
| Reverse voltage | -14Vdc |

PERFORMANCE FEATURES

| | |
|---|---|
| Operating temperature | -40°C to 135°C |
| Storage temperature | -40°C to 150°C |
| Accuracy | \pm 1,2% F.S. (linearity, hysteresis, repeatability and calibration) Static error band @ 25°C, 5.0Vdc |
| Temperature error | \pm 0,013% F.S./°C |
| Cycle life | 10 millions F.S. cycles |
| IP code | IP67 (with connector female IP67 plugged) |
| Fluids compatibility | HVAC refrigerants, new HFO 1234ze refrigerant and associated oils (other fluids compatibilities available on request) most gases and liquids |
| Vacuum pressure (referred to refrigerant circuit) | 0 bar (abs) |
| Drop (any axis) | 1,5m |
| Vibration: IEC 60068-2-64:2008 | 12g (rms) |
| Shock: IEC 60068-2-27:2008 | 50g, 6ms |
| Weight | 30 grams typical |

SENSORS

SENSDEV GMBH

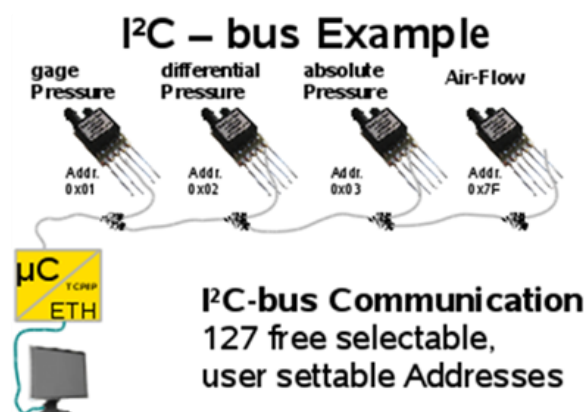
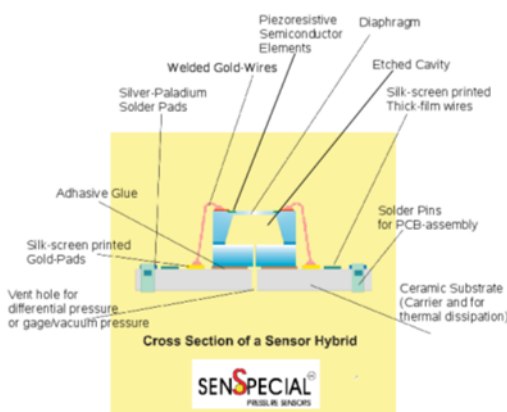


SensDev GmbH, based in Germany, is a Silicon Pressure sensor supplier. Ranges are 0.6mbar to 25bar, 10 μ L/s to 1000m³/h. Applications include Medical respirators & inhalers, Automation Systems and Test Equipment.

Silicon Pressure Sensor Product Range

SCPB Series

- **Both Analogue & 15 bit digital output in single package Amplified analogue and 15 bit digital serial output (via I²C or SPI)**
- **Measuring range of ± 0.25 mbar to 0.40 bar**
- **Temperature compensated (-40C to +125C)**
- **Wide supply voltage range from 3.3V to 40V**
- **Fast response times of 0.56ms to 20ms (factory selectable)**
- **All filter capacitors are on-board**
- **State of the art 600nm semiconductor technology**
- **Non corrosive, non ionic pressure media using either 5mm diameter PA black or 3mm diameter metal pressure tubes**
- **Saving of power, board space & components by utilising I²C**
- **127 user settable I²C bus addresses**
- **Each unit has its own traceable serial number on its EEPROM and label**
- **All sensors can be Parylene coated making them hydrophobic**
- **Output filter shifting average user settable from 1 to 128 samples for one output**
- **For security: failure handling will error code output on I²C bus**



SENSORS



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SENSDEV GmbH

Applications

- **Medical equipment:** Respiration, breath control, genium analysis, ear & nose diagnostics, dialysis, alcohol control
- **Environmental control:** exhaust measurement, gas analysis
- **Automotive:** Diesel particle filter, suspension, car air condition
- **Security (explosive media),** fuel-level control
- **Automation:** Positioning, vacuum handling, pressure controller
- **Civil aviation:** speed, altitude & vario, fuel-level control
- **Building automation:** filter control, heating, air-conditioning



POWER

Vinatech



VinaTech, based in Korea, is a fast growing manufacturer of Electric Double Layer Capacitor (EDLC) and Hybrid Capacitor (P-EDLC) HY-CAP brand of Super Capacitors. The HY-CAP series offers high capacitance ranges from 500mF to 3000 Farad in EDLC and the Hybrid P-EDLC technology doubles the capacitance density to 800F.

Product Range

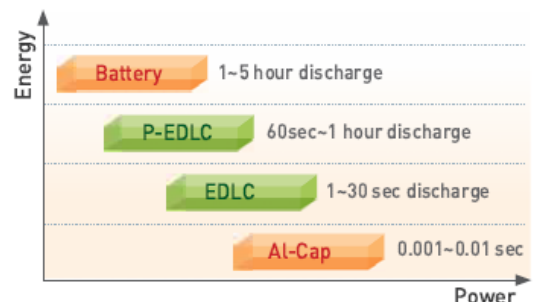


EDLC Super-Capacitors

EDLCs are passive electronic components that, unlike batteries, store energy by physically separating positive and negative charges. These Low ESR capacitors may have 1/10th of the energy but deliver 10x the Power of a standard battery. They offer high power densities and provide significant energy storage capacities. They store energy in the double layer formed near the carbon electrode surface.

Advantages

- Low impedance, better load handling when paralleled with battery.
- First 3V Range
- First Hybrid Range
- Rapid charging -EDLCs charge in seconds.
- Simple charge methods - no full-charge detection is needed



EDLC Characteristics

- Rated 2.5V / 2.7V / 3V / 5V / 5.4V / 6V (0.5F – 3000F)
- High power density - low internal resistance (ESR)
- 500,000 cycle life (semi-permanent)
- Wider operating temperature
 - Rated 2.7V: -40°C to 65°C
 - Rated 2.5V: -25°C to 70°C

PEDLC Characteristics

- Rated 2.3V (10F – 800F)
- High power density (2 time that of EDLC)
- 100,000 cycle life
- Low current & long time backup applications
- Operating Temperature range: -25°C to 60°C

High Power Density Characteristics

- Extra Low ESR for Higher power density
- Ideal for energy harvesting, GPS tracking, Lifts, metering, emergency lighting etc...
- Rated 3V (360F)
- 500,000 cycle life
- Temperature range: -40°C to 65°C



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Hy Cap/ Module Snap-In Standard (16V)

VEM16R0606QG

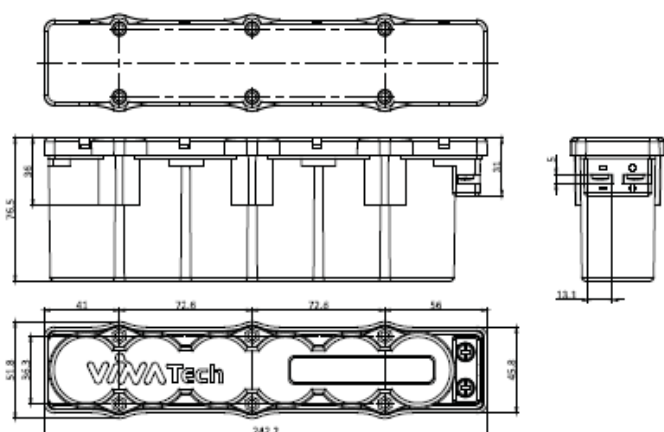
FEATURES

- Ultra-low internal resistance
- High power and reliable performance
- Over 500,000 duty cycles
- Compact & fully enclosed splash proof design

TYPICAL APPLICATIONS

- Automotive
- Consumer electronics
- Renewable energy system
- Short term UPS & Telecommunications
- Wind turbine pitch control

DRAWING



SPECIFICATION

| ELECTRICAL | VEM16R0606QG |
|-------------------------------------|---|
| Rated Capacitance | 60 F |
| Maximum ESR _{OC} , initial | 22 mΩ |
| Rated Voltage | 16 V |
| Maximum Peak Current(1 second) | 200 A |
| Maximum Continuous Current | 20A |
| Leakage Current, maximum | 22 mA |
| TEMPERATURE | |
| Operating Temperature | -40°C ~ 65°C |
| Storage Temperature | -40°C ~ 70°C |
| CELL VOLTAGE MANAGEMENT | |
| Cell Voltage Management | ACTIVE / PASSIVE |
| PHYSICAL | |
| Mass, typical | 0.67 kg |
| Power Terminals | M5 Thread |
| Environmental Protection | IP54 |
| POWER & ENERGY | |
| Usable Specific Power | 2,400 W/kg |
| Specific Energy, E _{max} | 3.33 Wh/kg |
| Stored Energy | 2.13 Wh |
| LIFE | |
| High Temperature (1500 hours) | Capacitance: -20% of initial value, ESR: Within 2 times of initial value |
| Room Temperature (25°C) | Capacitance: -20% of initial value, ESR: Within 2 times of initial value |
| Cycle Life | 500,000 cycles |

POWER

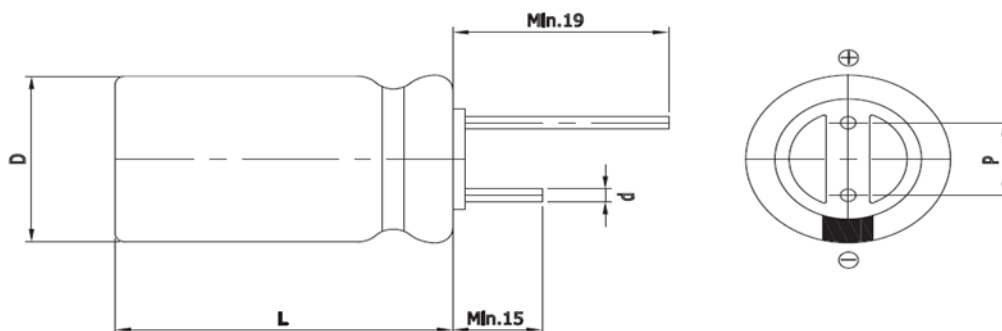


VPC Pulse Capacitor

VPC (VINATech Pulse Capacitor)

- Low Self Discharge
- Wide Operating Temperature Range
- High Operating Voltage
- High Capacitance

VINATech, the market leader in EDLC technology, has developed the VPC Lithium Hybrid EDLC Capacitor to meet growing demands for environmentally friendly and cost effective solutions for long term back up and pulse management for IoT and AMR applications.



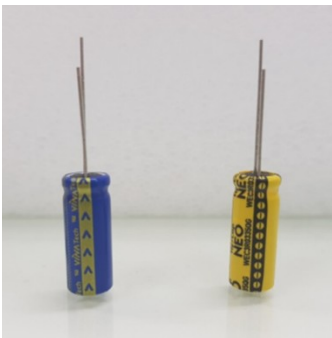
| | | | | |
|--------|------|------|------|------|
| D (Φ) | 8.0 | 8.0 | 10.0 | 12.5 |
| L (mm) | 20.0 | 30.0 | 30.0 | 25.0 |
| d (Φ) | 0.6 | 0.6 | 0.6 | 0.6 |
| P (mm) | 3.5 | 3.5 | 5.0 | 5.0 |

| Part Number | Rated Voltage (V) | Capacitance (F) | ESR(mΩ) | Max. Discharge Current (A) | | Size (mm) D x L |
|---------------|-------------------|-----------------|----------|----------------------------|-----------|--------------------|
| | | | AC(1kHz) | Continuous | Pulse(1s) | |
| VEL 3R8 107 G | 3.8 | 100 | 90 | 0.5 | 2.0 | 10 x 30 |
| VEL 3R8 157 G | 3.8 | 150 | 50 | 1.0 | 4.0 | 12.5 x 25 |
| VEL 3R8 257 G | 3.8 | 250 | 40 | 2.0 | 5.0 | 12.5 x 35 |



Anti-Wetting System

VINATech Hy-cap NEO Supercapacitors eliminate effects of Extreme environments



Following material improvements to the standard VEC range newly patented processes have been applied to the WEC family and has shown remarkable results following long term field tests with customers in many sectors, these have now exceeded over 18 months of constant trials with cycling at 65°C 95RH with no signs of failure.

The new series covers 1 Farad to 100F in Radial options

- Pin for Pin compatible with standard series
- Temperature range -40~65c (extended to 85c when de-rated)
- Low ESR
- 2.7v and 3v options
- 500,000 cycle life
- First real Anti Wetting solution
- Available Now

Carbon Solutions for Fuel Cells

NEW VINATech is the only producer in the world of catalyst support and catalysts for fuel cells and Activated Carbon MEA (Membrane Electrode Assembly). All of these products are based on the company's patented CNF materials technology.

FC (Fuel Cell) is a device that changes chemical energy to electrical energy and a system that generates energy continuously unless the fuel supply stops. FC uses hydrogen and oxygen as its fuel. Fuel cell products are classified by the type of their electrolytes. The fuel cell products VINATech are currently developing include PEMFC (Proton Exchange Membrane FC), DMFC (Direct Methanol FC), MCFC (Molten Carbonate FC), and SOFC (Solid Oxide FC).

WIRELESS & M2M

PCTEL Inc.



PCTEL, based in Chicago, manufacture High Performance Antennas for GPS, Tetra, Public Safety, Defence, Military, SATCOM, Industrial Wireless, Broadband Wireless and SCADA solutions. Brands include MAXRAD, BLUEWAVE, WI-SYS & SPARCO WIRELESS. Covering 27MHz to 6GHz

Product Range

GNSS (Galileo, GLONASS, Beidou), GPS, Embedded & Iridium Antennas and Timing Reference Antennas



Mobile (VHF, UHF, Multiband MIMO, WiFi, LTE, No Ground versions, Covert, Mag Mounts) Antennas



In Building Antennas

VenU® Ceiling Mount Antennas

Wall Mount Antennas



Infrastructure Yagi, Omnidirectional, MIMO, Flat Panel Antennas



WIRELESS & M2M



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PCTEL Antennas Selection Guide

| Freq Range (MHz) | | Antenna Type | Antenna Series |
|------------------|------|--|---------------------|
| From | To | | |
| 27 | 132 | Whip | MLB |
| 108 | 512 | Whip | ASP |
| 118 | 2500 | Whip | PCT |
| 118 | 3800 | Spring Whip | BMAX |
| 132 | 174 | Whip | MHB |
| 132 | 512 | Whip | MWB |
| 132 | 940 | No ground plane required | MBS |
| 136 | 174 | Whip | MWV |
| 136 | 174 | Log Periodic Array | LPA |
| 138 | 470 | Spring Whip | ASP |
| 150 | 512 | Whip | AP |
| 150 | 970 | Yagi | MYA |
| 158 | 223 | Rugged Omnidirectional | PCT |
| 380 | 657 | Whip | MWU |
| 380 | 5900 | Salt & Pepper Pot (No ground plane needed) | MLPV |
| 403 | 470 | Yagi | BMVD |
| 406 | 960 | Yagi - No Tune | BMOY |
| 430 | 928 | Heavy Duty Omnidirectional | BOA |
| 450 | 470 | Whip | MUF |
| 690 | 2700 | Through hole Salt & Pepper Pot | MLPV |
| 698 | 2700 | Omnidirectional | MPAMB |
| 746 | 928 | Fiberglass Omnidirectional | MFB |
| 863 | 5925 | Omnidirectional | MHO |
| 902 | 928 | Whip | MN915 |
| 1390 | 5900 | Dual Polarised Directional Panel | FP |
| 1575.42 | 1602 | Flat | GPS L1/L2 + GLONASS |
| 1575.42 | 2400 | Flat & PUK | 39xxD |
| 2300 | 2700 | Dual Polarised Panel | SP |
| 2400 | 2500 | Linear Polarised Panel | WISP |
| 2400 | 5900 | Omnidirectional - Ground plane independant | BMH |
| 2400 | 5925 | Dual Band Panel | MSP |
| 4900 | 5900 | Bi-Directional | PCT |

WIRELESS & M2M

Latest PCTEL Antennas



PCTEL, Inc., based in Chicago, delivers Performance Critical Telecom antenna solutions that support evolving wireless standards for cellular, private, and broadband including SCADA for oil, gas and utilities, fleet management, Industrial operations, Health care, Small cell and Network timing deployment, Defense, Public safety, Education, and Broadband access. The PCTEL High Performance Antennas cover a frequency range of 27MHz to 6GHz and offer a warranty of up to five years.

GNSMB-COV



The GNSMB-COV multi-band antenna provides optimal MIMO 4G LTE and single port 802.11ac Wi-Fi coverage in a covert, low-profile housing. The antenna also incorporates PCTEL's unique high rejection GNSS technology for global guidance and support of carrier voice and data networks. Designed for heavy construction, this antenna will withstand the most rugged applications with a sub 1-inch height profile and conduit for ease in installation.

Important Features:

- No tune, multi-band coverage: dual 4G LTE, Wi-Fi and GPS L1/Galileo E1/ GLONASS L1/Beidou B1 frequencies
- Sub 1-inch height without magnet mount adapter
- IP67 highly ruggedized design provides maximum protection against water or dust ingress under severe environmental conditions
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- Braided conduit for ease in installation

GPS-L125-GL12

The GPS-L125-GL12 is a multi-GNSS high performance antenna designed to meet stringent AAR environmental standards. The antenna features a multi-stacked patch design covering global GNSS frequencies, a high gain, multi-stage LNA and advanced filtering to combat the effects of adjacent band interference. The antenna has a hermetic seal, is IP67 and has a CorrSolve gasket included.



Important Features:

- Advanced Out-of-Band Filtering
- High Gain (35dB typ.)
- CorrSolve gasket included
- Great Multipath Mitigation
- IP67 ingress protection

Applications:

- PTC Rolling Stock Tracking
- Military Vehicle Tracking & Asset Tracking
- Precision Agriculture
- Differential Correction

WIRELESS & M2M



Bringing you Innovation
and Technology with...



GEO-GNSS-AC-S1



PCTEL's GEO-GNSS-AC-S1 is a robust, active, high performance antenna covering both GPS L1 and GLONASS L1 frequency bands. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection. This antenna is ideal for performance in critical asset tracking and network timing synchronization applications.

Important Features:

- GPS L1 & GLONASS L1 Frequencies
- Custom-Tuned Micro Helix Element
- High Rejection Filtering
- 26.5 dB Gain
- IP67* Ingress Protection

Applications

- Defense
- Radio Communications
- Handheld Devices
- Body Worn Asset Tracking
- Public Safety Emergency Responders
- Industrial Network Synchronization

GL9X1AX-SF, GL7X1AX-SF, GL4X4-SF-PLK Series

The Coach™ II Dual Carrier GNSS Multi-Band Antenna, 5G & 4G LTE with 802.11ax supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. These antennas feature four 5G elements compatible with the world's leading multi-carrier cellular routers that support 600 MHz to 3800 MHz frequencies. The platform also incorporates 802.11ax Wi-Fi MIMO connectivity, with four dual band 2.4/5 GHz Wi-Fi elements supporting DSRC 5.99 GHz applications. In addition, PCTEL's proprietary high-rejection multi-GNSS technology is included for high precision tracking and asset management.

Features



Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement

IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions (when installed on sealed surface)

Proprietary high rejection filtering allows wide-band coverage while achieving superior out-of-band rejection for all GNSS frequencies

Meets AAR certification requirements for rail applications

WIRELESS & M2M



Scanner Product Range

PCTEL scanning receivers and test software provide real-world data for wireless network design, planning, deployment, optimization and interference hunting. They efficiently verify in-building public safety network coverage.

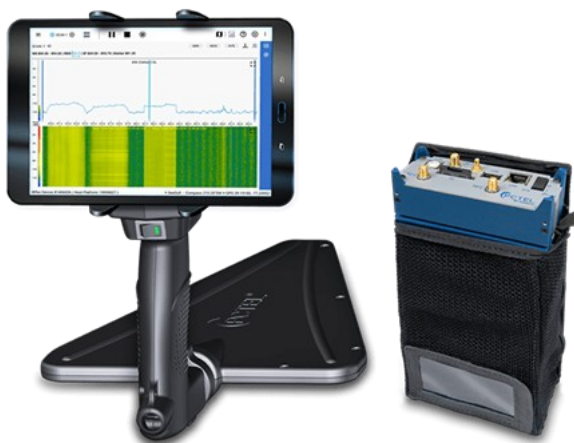
Interference, caused by everything from fluorescent lights to garage door openers to unlicensed radios, can reduce data rates and Quality of Service on 4G LTE networks. With many potential sources of interference on newly available and re-farmed spectrum, 5G networks could be impacted as well.

The 5G NR (New Radio) testing is available on both HBflex and IBflex scanning receivers.

PCTEL has a world respected RF engineering expertise providing the test tools, antennas, and embedded systems that efficiently manage interference. They offer PIM (Passive Inter-modulation) antennas and network equipment; MIMO antennas with strong port-to-port isolation; and Wi-Fi and GPS/GNSS antennas with advanced filtering technology to protect from nearby or co-located LTE transmitters.

The SeeWave® interference locating system utilises the SeeGull® *flex* scanning receivers to make hunting for external interference faster, easier, and more cost effective. These *flex* scanning receivers and SeeHawk® Touch software also provide crucial data used to minimize interference in all phases of heterogeneous network deployment.

The portable unit is an Ergonomic and lightweight design for one hand operation. It offers an Easy-to-hold grip with trigger for recording interfering signal location. The unit includes a digital compass and pre-amplifier for accurate direction finding. The software supplies simplified open street based mapping and triangulation functionality.



5G New Radio Network Testing



WIRELESS & M2M



PCTEL Scanner Product Overview

Scanning Receivers:

IBflex®, HBflex®, or MXflex™ scanner
Simultaneous testing on multiple
technologies and bands Analysis.



SeeWave Handheld Host Platform

contains a digital compass, pre-amplifier,
bearings trigger, and tablet mount.



Walk test kit to carry
scanner and hot swap
battery system.



Tablet for touchscreen
optimized software.



Antenna choices of a 690 MHz to 6 GHz Log Periodic,
440 MHz to 480 MHz Yagi antenna, or COTS Yagi antenna.

Adactus



ADACTUS, Sweden is an established designer of RF products for the Industrial wireless market. They developed their business in the early days with Antennas for data logging and have now expanded in to Satellite antenna and RF Cables.

Well known for their excellent quality, Adactus products are supplied with a guarantee. Their portfolio includes a wide range of Internal and external ISM Band products to support their established GSM/GPRS/3G & 4G portfolio.

ISM Band, 2G,3G,4G & GPS/Glonass Antenna's

ISM(Zigbee, Bluetooth, WiFi(2.4, 4.9-5.8GHz), TETRA + License Freebands)



Patch



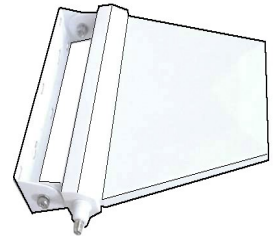
Pigtail



Stubbie



Puck



YAGI

2G + 3G (SMS, GPRS, PENTA Band) 4G/LTE



6 Band
LTE Blade



Stubbie



Stickable LTE



Outdoor



Puck

GNSS + Iridium (Hi Gains, Combination, Marine)



Puck



Waterproof



Pole Mount



MIMO



3G/GPS

Also Available



SIM Card Holders



Range of RF Cables

New Releases



ADA-9XYZ Screw Mount Combination Antenna

- GNSS/ LTE/ 5G NR WiFi Combination Antenna
- Versatile Combination with up to 3 Cables
- GPS/GLONASS/Beidou/Galileo/QZSS Supporting
- LTE/ 5G NRMIMO or Dual Band WiFi MIMO + Full GNSS
- IP67 Rated Waterproof and ESD Protection
- Machine to Machine Communication & IOT
- Vehicle Tracking & Telematics

ADA-0068-5G LTE/5G Dipole Antenna

- LTE/5G Dipole Antenna
- 2,0-5,0 dBi Gain
- Multi-band
- Adhesive tape mount
- Omni-radiant



ADA-0030 LTE/5G Antenna

- Supports 5G, 4G, 3G & 2G applications
- Permanent mounting and detachable design
- Flexibility to different cable options
- Low profile structure design
- IPX7 fully waterproof
- Detachable type with N Female connector is available
- Data communication & Wireless monitoring



ADA-125H High-Accuracy GNSS Active Antenna

- Supports GPS, GLONASS, BeiDou, Galileo and QZSS systems
- Substantial and environmental-resistance structure
- Proprietary antenna design provides the flexibility to reach a range of operational goals
- IP67 grade waterproof and ESD Protection



WIRELESS & M2M

Lantronix



Lantronix, USA recently acquired Maestro Wireless. This addition of Maestro's product portfolio and industry-leading cellular connectivity technology is the perfect complement to the Lantronix portfolio of IoT solutions .

GPS/GNSS Receivers

A portfolio to address a wide area of location applications. These range from traditional telematics solutions to latest highly integrated consumer devices, all of them having their special requirements toward a GPS module. Based on SiRFstarIV and also SiRFstarV chip sets, the GNSS and GPS receiver solutions address different specific needs and combine high performance, low power consumption, and simplified integration effort.



A5100-A – SiRFStar V

Concurrent GPS/GLONASS GNSS solutions - BeiDou / Galileo ready.
Lowest tracking power consumption.
Ideal for battery powered applications.
Pin compatible with key A2200-A.
Simple integration for fast time to market.

A5135-H – SiRFStar V

Concurrent GPS/GLONASS GNSS solutions - BeiDou / Galileo ready.
Lowest tracking power consumption.
Ideal for battery powered applications.
Pin compatible with key A2135-H / A2235-H.
Simple integration for fast time to market.
Integrated Antenna.



A2200-A – SiRFStar IV

This small form-factor module fully addresses the demand for lowest power consumption with, amongst other features, SiRFaware technology. The removal of jammers does not only facilitate designs of new products, but guarantees operation even in hostile environments.

A2235-H – SiRFStar IV

Stack-up Antenna SiRFstarIV Integrated Solution.

The A2235-H is Maestro's next generation of active GPS module, integrating a cost effective GPS receiver with an on-board patch antenna judiciously assembled above the components for an optimally small 17.8 x 16.5 mm footprint.



WIRELESS & M2M

Daico Industries Inc.



DAICO Industries, Carston, USA offers both standard and full custom, leading edge IF / RF / Microwave Solutions, from basic Control Products to Multi-Function Assemblies through to rack-based Transmitters; with a focus on applications for Defense, Aerospace, and other High-Reliability customers.

Products

Control Products



Amplifiers



Transmitters &
Transceivers



Multifunction Assemblies



Build-to-Print /
Design Optimization Services

SEMICONDUCTORS

MegaChips Technology America Corporation

MegaChips

MegaChips Corporation was established in 1990 as the first innovative fabless LSI company in Japan dedicated to ASICs and SOCs with integrating LSIs and systems/applications knowledge. Its focus is on the development of cutting-edge SOCs incorporating original algorithms and architecture in the areas of imaging, audio, and telecommunications.

ASICs

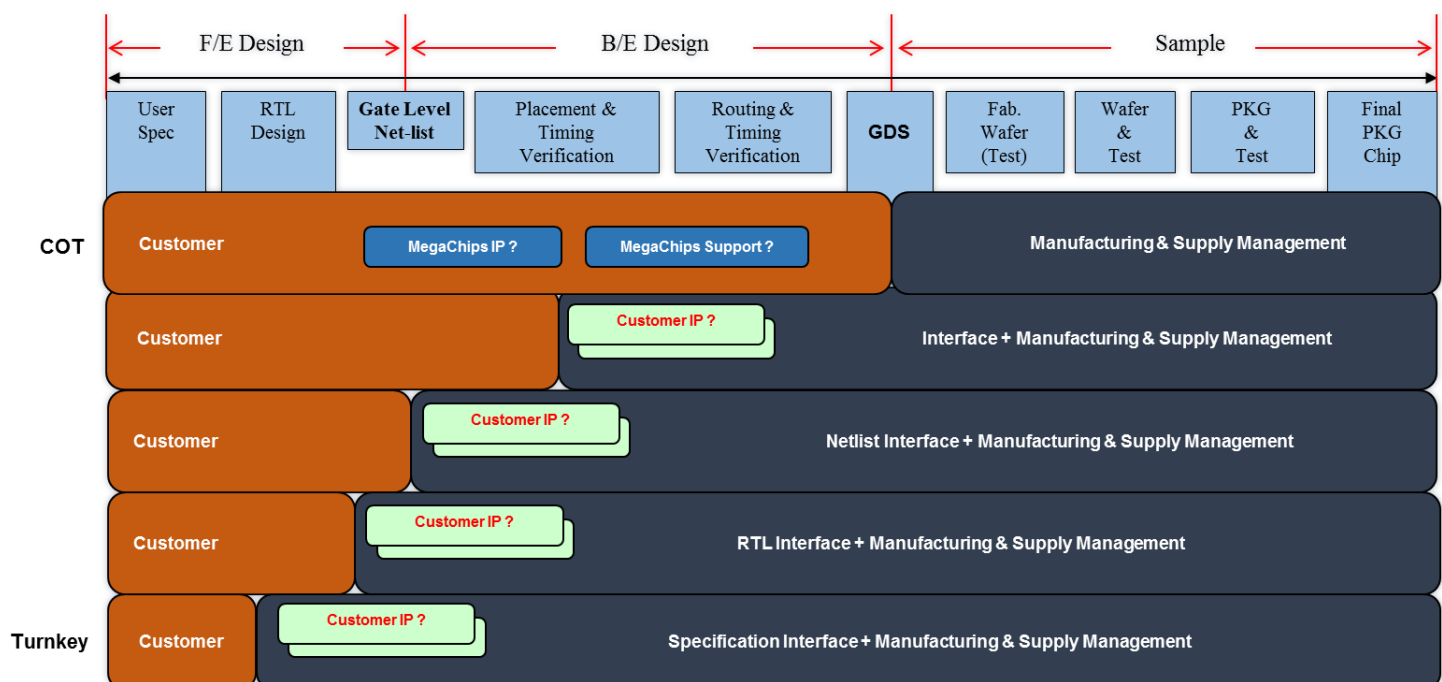
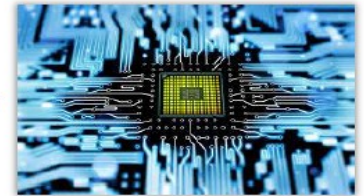
- Built on a solid 26 year experience in product development, manufacturing, and quality assurance.

1
Broad IP & Process Technology

2
Outstanding Development Capabilities

3
Fast Response Time

4
Stable Business Model



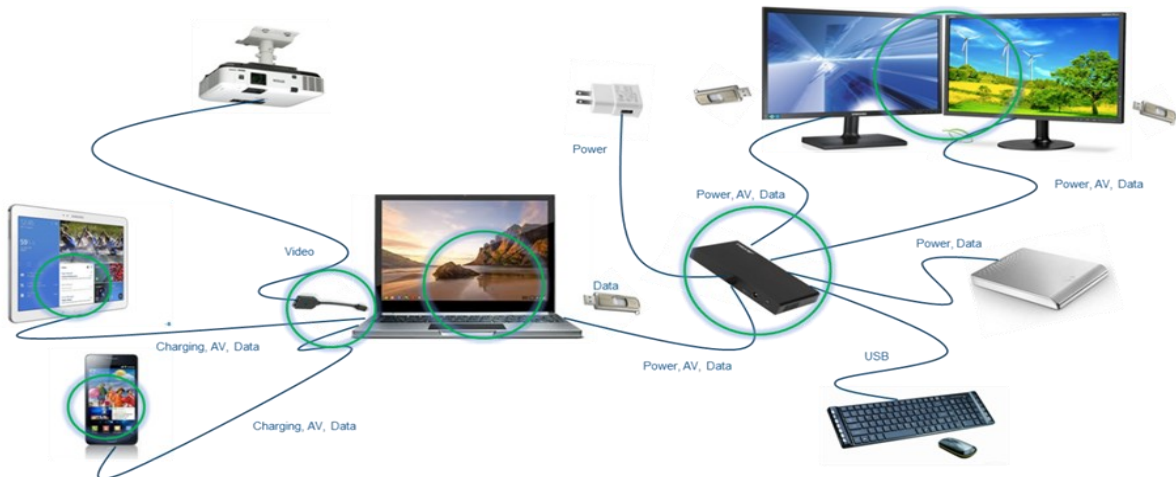
SEMICONDUCTORS

Kinetic Technologies Inc



Kinetic Technologies, USA designs, develops and markets proprietary high-performance analogue and mixed-signal semiconductors.

DisplayPort ICs



| Part Number | Feature Differentiation | Application | Package |
|--------------------------|---------------------------------|---|------------------------|
| DP SST Converters | | | |
| STDP4020 | DP/eDP to QLVDS/TTL | Digital TV, LCD Monitor, Mobile Display, Projector etc. | 164LFBGA 12 x 12 mm |
| STDP4010 | DP/eDP to DLVDS/TTL | Digital TV, LCD Monitor, Mobile Display, Projector etc. | 164LFBGA 12 x 12 mm |
| STDP4028 | QLVDS/TTL to DP/eDP | Digital TV, Docking Station, STB, Game Console etc. | 164LFBGA 12 x 12 mm |
| STDP3100 | 10-bit Video DAC (DP to VGA) | Notebook, Desktop PC, Dongle, Desktop PC Motherboard etc. | 64LQFP 10 x 10 mm |
| STDP3150 | 10-bit Video DAC (DP to VGA) | Notebook, Desktop PC, Dongle, Desktop PC Motherboard etc. | 64QFN 6 x 6 mm |
| STDP3160 | 8-bit Video DAC (DP to VGA) | Notebook, Desktop PC, Dongle, Desktop PC Motherboard etc. | 81BGA 8 x 8 mm |
| STDP2600 | HDMI-DP++ | Audio-video accessory (dongle), Docking Station etc. | 81BGA 8 x 8 mm |
| STDP2650 | DP1.2 to HDMI1.4 | TV, Projector, Audio-video accessory (dongle), Desktop PC, Notebook, Tablet etc. | 81BGA 8 x 8 mm |
| STDP2690 | DP1.2 to DP++ | Audio-video accessory (dongle), Desktop PC, Notebook, Docking Station, Thunderbolt Source, Peripheral device etc. | 81BGA 8 x 8 mm |
| MCDP2800/2850 | DP1.2 to HDMI2.0 | Desktop PC, Notebook, Tablet motherboard, DP/USB Type-C Docking Station, Dongle etc. | 64LFBGA 7 x 7 mm |
| MyDP Converters | | | |
| STDP2500 | MyDP to DP | Audio-video accessory (dongle), Smartphone, Tablet etc. | 81BGA 5 x 5 mm |
| STDP2550 | MyDP to HDMI | Audio-video accessory (dongle), Smartphone, Tablet, TV front-end etc. | 81BGA 5 x 5 mm |
| STDP2530 | HDMI to MyDP | Smartphone, Tablet, Camera, Portable media device etc. | 81BGA 5 x 5 mm |
| DP MST Hub | | | |
| STDP4320 | Splitter | Audio-video router, docking station, hub, 4K2K TV, Daisy chain monitor, digital signage etc. | 172LFBGA 12 x 12 mm |
| STDP4328 | Concentrator | Audio-video router, docking station, 4K2K camera/recorder etc. | 172LFBGA 12 x 12 mm |

SEMICONDUCTORS

Mixed Signal Integration



Incorporated in 1997, Mixed Signal Integration, USA specializes in analogue and mixed-signal integrated circuits.

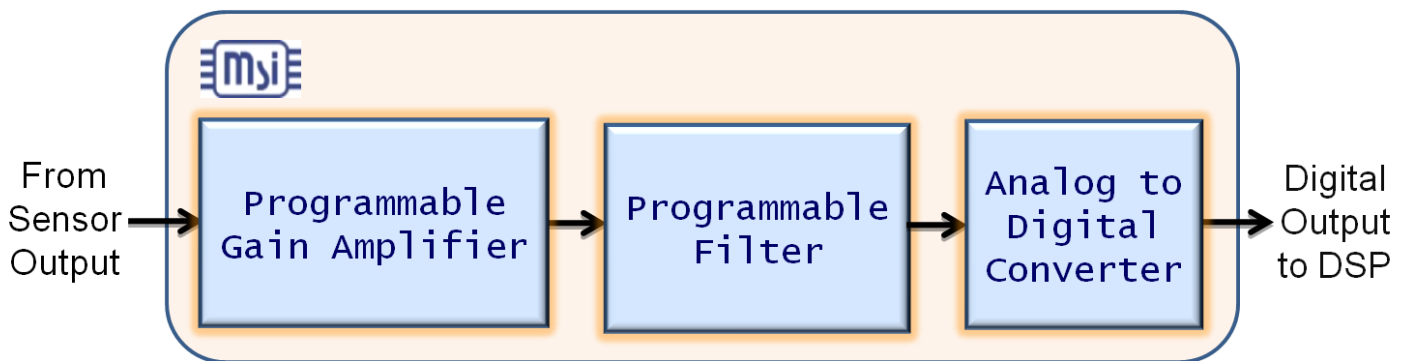
MSI offers both standard products and custom ASICs in CMOS technologies. Consumer audio and video, wireless personal communications, automatic test equipment and medical are some of the markets where MSI enjoys excellent customer relationships.

A corporate commitment to continued research and development has allowed MSI to innovate in the areas of low noise, low distortion audio; high frequency filtering and low voltage operation. These breakthroughs are featured in the company's standard products and are available for implementation into custom designs. MSI is particularly strong in integrated circuit filter design, both switched capacitor and integrated RC active filters. MSI works in conjunction with select wafer foundries and assembly vendors to offer its customers a broad choice of processes and packages.

The Standard IC Product Range

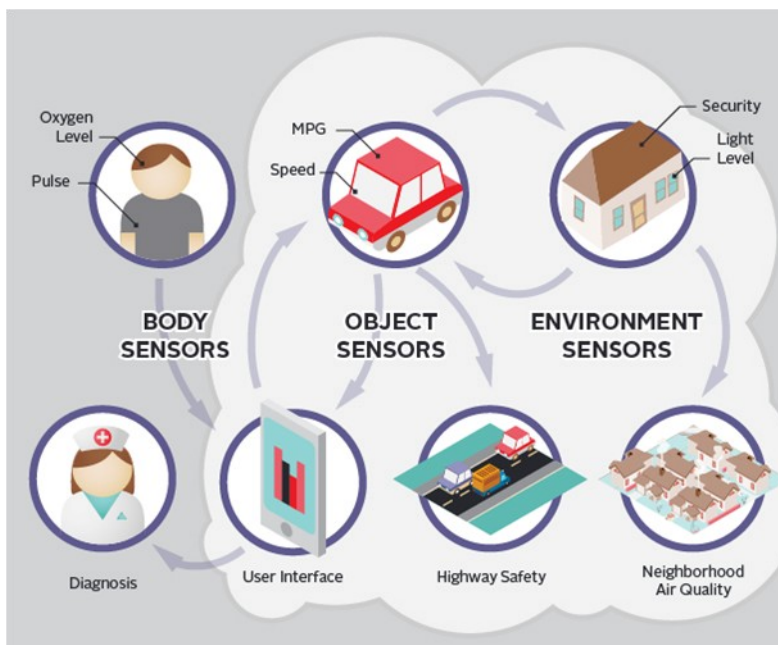
| IC Part Number | Description | Application |
|--------------------|---|---------------------------------------|
| MSFIPS | FIPS-140 Level 4+ Security Supervisor - 4 physical tamper switch inputs, temperature sensor | POS, Storage security, Cryptography |
| MSLSA | Low Power Spectrum Analyzer - 2mA @ 5V, 1/6th octave-wide 6 band - can be cascaded | Vibration, Audio, Ultrasonic Analysis |
| MSSCSA | Single Chip Spectrum Analyzer - 6mA @ 5V, 1/6th octave-wide 6 band - can be cascaded | Vibration, Audio, Ultrasonic Analysis |
| MSTHDA | Total Harmonic Distortion Analyzer - 1/6th octave-wide, five 6 pole BP filters | RFID Readers, ultrasonic analysis |
| MSCBT | Communications Baseband Transceiver - 50 x CTCSS Squelch tones filtered, BW 3kHz | LMR, FRS, GMRS, LPRS, Intercom |
| MSCPSI | Controller Programmable Sensor Interface - CMOS Hybrid processing sensor or MEMs | MEMS, Accelerometer, Pressure |
| MSSPSI | Smart Programmable Sensor Interface - offset adjust, low power and temperature sensor | MEMS, Accelerometer, Pressure |
| MSRFIF | RF Interface Front End (RFID) - 50Hz to 7MHz - Powered by RF energy from the reader | Access Cards/ Inventory control |
| MSVL14 | 14 MHz Video Lowpass Filter - 4th-order video LP Butterworth response filter | Video filter, Radar |
| MSLOSC | 15 Hz to 64 kHz All Silicon Sine Source - low distortion (0.1%), sine wave (0dB to -63dB) | Test Equipment |
| MSLFS | Selectable Low Voltage Lowpass/Bandpass Filter - six filter types in one package, variable gain | Spectrum Analyser, Telecom/ Datacom |
| MSEPAF | Electrically Programmable Active Filter - 500kHz to 18 MHz with one external component | Instrumentation filtering |
| MSHN1-6 | Selectable Highpass/Notch Filter - 6 filter types in one package, adjustable gain | Tracking filters, Datacom/telecom |
| MS2LFS | Dual Selectable Low Voltage Lowpass/Bandpass Filter - 6 filter types in one package | Spectrum Analyser, Telecom/ Datacom |
| MSRAAF | Resistor Programmable Active Audio Filter - LP, BP, HP, allpass or notch filter - up to 20kHz | Spectrum Analyser, Telecom/ Datacom |
| MSNBLP | Switched Capacitor Butterworth Lowpass Filter - Max corner frequency of 20 kHz | Two way radio, Datacom/ Telecom |
| MSCAHF | Selectable High Frequency Active LP/BP Filter - 4 pole RC active filter, center freq of 1MHz to 5MHz | Two way radio, HDTV, Cellular Phone |
| MSGEQ5A | Five Band Graphic Equalizer Display Filter - 100Hz, 330 Hz, 1kHz, 3.3kHz and 10kHz | Spectrum Analyser, Audio Stereos |
| MSGEQ7 | Seven Band Graphic Equalizer Display Filter - 63Hz, 160Hz, 400Hz, 1kHz, 2.5kHz, 6.25kHz & 16kHz | Spectrum Analyser, Audio Stereos |
| MSDET | Tone Detector - Center Freq of 1Hz to 100kHz, 2mW @ 2.7V | Satellite radio, Caller ID, FSK demod |
| MSHFS1-6 | Selectable High Frequency LP/BP Filter - six filter types in one package, adjustable gain | Tracking filters, Datacom/telecom |
| MSFS1-6 | Selectable Lowpass/Bandpass Filter - six filter types in one package, adjustable gain | Tracking filters, Datacom/telecom |
| MSU1F1-4, MSU2F1 | Resistor Programmable Universal Active Filter - LP, HP, Elliptic, allpass or notch filter using ext resistors | Instrumentation filtering |
| MSU1HF1-4, MSU2HF1 | High Frequency Resistor Programmable Universal Active Filter - Switched Capacitor Technology | Instrumentation filtering |
| MSELP | Switched Capacitor Elliptic Lowpass Filter - Max corner Freq is 20kHz | Two way Radio, Telecoms/ Datacoms |
| MSLE/B/C5L/M | Switched Capacitor General Purpose Lowpass Filter - Elliptic, Butterworth or Chabyshev | MEMS, Accelerometer, Pressure |

MSI Sensor Interface Solutions



Typical Signal Conditioning IC Block Diagram

Typical Applications



- Low voltage operation
- Ultra low power and low noise
- Small package size

Custom ASICs

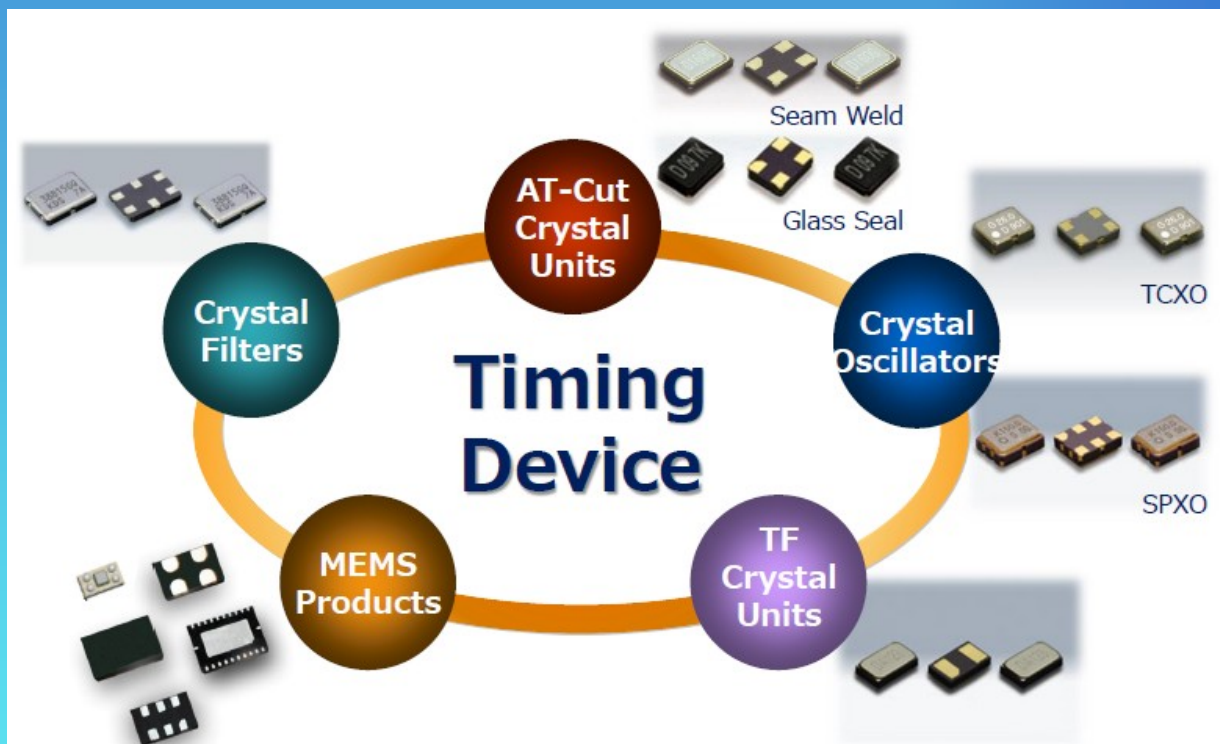
Mixed Signal Integration provides a turn-key ASIC solution. In addition to design and development of the ASIC, MSI manufactures the production volume parts for its customers. This includes foundry, packaging and testing of the ASICs prior to shipment.

SEMICONDUCTORS

KDS Daishinku Corporation



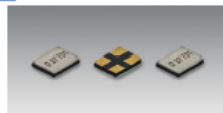
Daishinku Corporation (KDS), based in Japan, specialises in high quality miniature crystal oscillators and resonators. They have gained a global reputation for undisputed technology and quality control in the field of crystal oscillators and resonators due to innovative processes from growing synthetic quartz crystal to manufacturing the finished product.



Small Module DSX1210A



DSX1210A



- Ultra small, thin Height
- 1210 size
- Low Height 0.35mm Max.

Wearable Healthcare



Si-MEM Oscillator MO Series

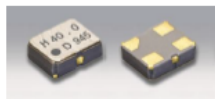


- Ultra Small size MEMS Oscillators
- 1508 size CSP/ 2012 QFN
- µPower kHz/ MHz MEMS Oscillators

HiFi Audio



DSO211AH

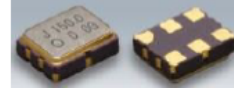


- Low Phase Noise SPXO
- Improve Sound Quality
- 2016 size

Network Equipment



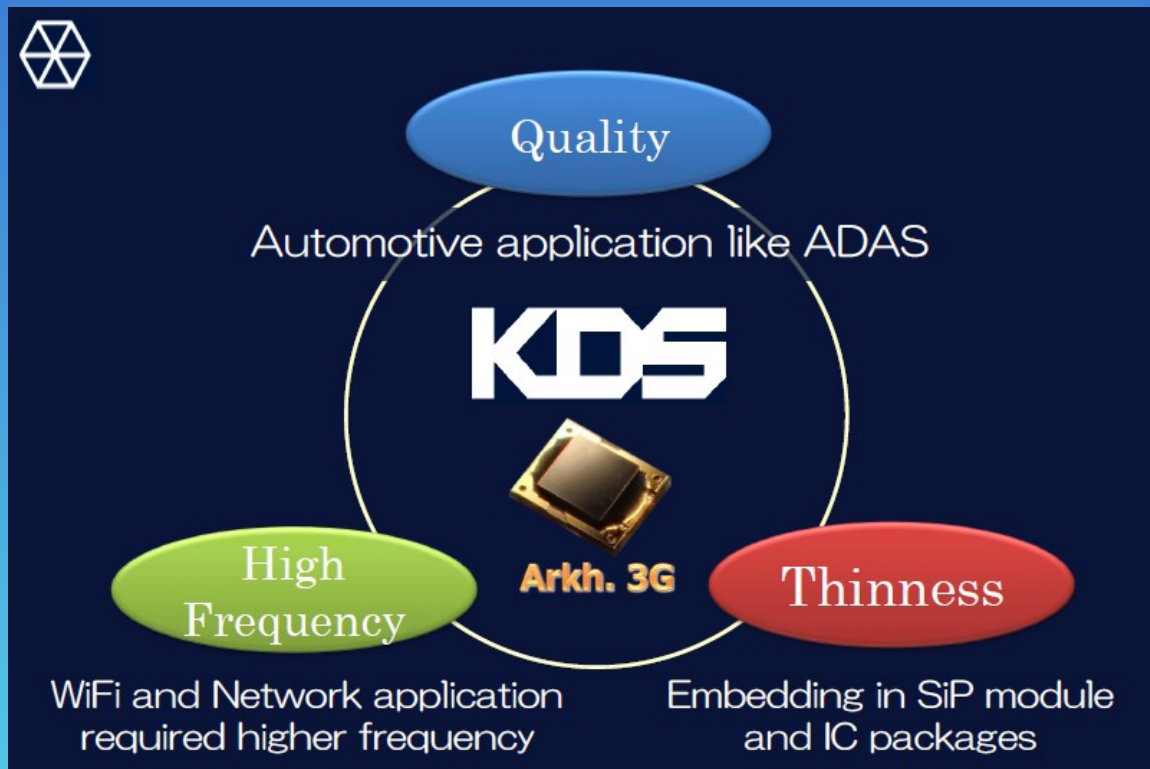
DSO323SK/ SJ/ SD



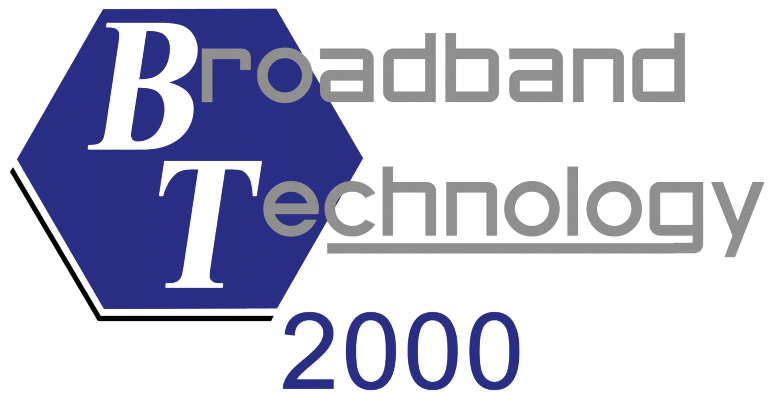
- Small Differential Oscillator
- Fundamental up to 212.5MHz
- LV-PECL, LVDS, HCSL
- 3225size

SEMICONDUCTORS

KDS Daishinku Corporation



| | | | |
|--|--|---|--|
| <p>Timekeeping DSK324SR</p> <ul style="list-style-type: none"> •High Stability RTC Module •Low Current Consumption •I²C BUS interface (400kHz) •3225 size | <p>Metering Unit DST1610A</p> <ul style="list-style-type: none"> •32.768kHz crystal unit •1610 size | <p>PLC, Driver, HMI</p> <div> <p>DSX321G</p> <ul style="list-style-type: none"> •3225 size •Glass seal Xtal •7.9-64MHz •MP since 2002 </div> <div> <p>DSO221SHF</p> <ul style="list-style-type: none"> •2520 size •1.5-80MHz •100ppm/+125degC •1.8/2.5/2.8/3/3.3/5V </div> | <p>LoRa/Sigfox/Zigbee</p> <div> <p>DSX211SH</p> <ul style="list-style-type: none"> •2016 size •Metal Lid Xtal •24-50MHz •Low EMI </div> <div> <p>DSB211SDN</p> <ul style="list-style-type: none"> •2016 size •TCXO •12.288-52MHz •0.5ppm/+85degC </div> |
| <p>PM DST1610A</p> <ul style="list-style-type: none"> •Ultra small, thin 32.768kHz •1610 size •0.45mm Max. Height | <p>Wireless Data Transfer DSB535SG</p> <ul style="list-style-type: none"> •Ultra High Stability TCXO •Stratum 3 Server •5032 size | <p>Ethernet</p> <div> <p>DSO211SX</p> <ul style="list-style-type: none"> •2016 size •20-125MHz •50ppm/+125degC •Low Phase Noise </div> <div> <p>DSO323SK/SJ</p> <ul style="list-style-type: none"> •3225 size •Differential Output •LV-PECL, LVDS •13.5-212.5MHz </div> | <p>RKE/TPMS DSX221SH</p> <ul style="list-style-type: none"> •High shock durability •AEC-Q200 |
| <p>3G/4G DSR1612ATH</p> <ul style="list-style-type: none"> •XTAL with built in Temp. Sensor •1612 size | <p>GPS/GNSS DSB1612SDN</p> <ul style="list-style-type: none"> •High Stability TCXO •Low Phase Noise •1612 Size | <p>ECU DSX320GE DSX210GE</p> <ul style="list-style-type: none"> •Heat cycling 3000 cycles durable •Low frequency 8MHz available (DSX320GE) 16MHz available (DSX210GE) •AEC-Q200 | <p>ITS</p> <div> <p>DSB211SDN</p> <ul style="list-style-type: none"> •TCXO •2016 size •AEC-Q100 </div> <div> <p>DSK321STD</p> <ul style="list-style-type: none"> •32.768kHz TCXO •±13Sec/ Month •AEC-Q100 </div> |



If you have any questions, or require additional information, please contact a member of the Sales Team

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Rev. 09.02.2020



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Email: sales@bt2000.co.uk

