



# iQx-100™

## MEASURE VELOCITY, PRESSURE, TEMPERATURE AND HUMIDITY WITH ONE SYSTEM

- » The iQx-100™ allows users to measure velocity, pressure, temperature and humidity with one system.
- » The iQx-100™ is equipped with 8 velocity sensor ports, 2 differential air pressure sensors, 4 J-type thermocouples and a humidity sensor.
- » The iQx-100™ eliminates the need for multiple systems or additional software to synchronize data collection of different parameters.
- » The iQx-100™ comes with the iSTAGE-X™, the unique LabVIEW™ based operating software. iSTAGE-X™ eliminates data collection errors induced because of measurement time lapses or transience associated with the use of multiple systems.
- » The iQx-100™ provides a compact, portable and versatile system to minimize lab clutter and go where measurement is required.
- » The iQx-100™ is capable of measuring pressure drop across circuit cards and assemblies, pitot tubes, orifice plates, Venturi tubes, filters, etc.
- » The iQx-100™ connects to a PC via a USB socket for data communication. It has an external power supply with input power with 115 or 240 VAC.



### APPLICATION DOMAIN

The iQx-100™ is designed to be used wherever velocity, pressure, temperature and humidity measurements are required.

#### Some examples where iQx-100™ is used:

- » Heat sink design and selection
- » PCB characterization
- » Card rack characterization (ATCA, PICMG, 1U, etc.)
- » Qualification testing in an environmental chamber, e.g., NEBS, MIL-SPEC, etc.

#### OVERALL DIMENSIONS (D x W x H)

33.9 cm x 43.2 cm x 12.6 cm  
(13.3" x 17" x 5")

#### NUMBER OF VELOCITY CHANNELS

8

#### FLOW RANGE

Standard: 0 to 6 m/s (0 to 1,200 ft/min)  
High Velocity: 0 to 50 m/s (0 to 10,000 ft/min)

#### NUMBER OF THERMOCOUPLES

4 (J type)

#### NUMBER OF PRESSURE SENSORS

2 (Differential)

#### PRESSURE RANGE

0 to 1.03 kPa (0 to 0.15 psi)

#### SOFTWARE

iSTAGE-X™

#### VOLTAGE INPUT

115V or 240V

#### WEIGHT

3.2 lbs



Back Panel



iSTAGE-X™

### TEMPERATURE

- » Four J-type thermocouples for measuring surface temperature from -40°C to 750°C (-40°F to 1382°F) with +/- 1°C accuracy

### VELOCITY

- » Eight hot wire anemometer ports supporting ATS single sensor air temperature and velocity measurement technology (sensors not included; please see page 2 of this data sheet to choose the sensors)
- » Compatible with all ATS sensors (not included). See sensor comparison on next page.
- » Standard range for velocity measurement is natural convection from 0-6 m/s (0-1,200 ft/min). With custom calibration, the range is 0-50 m/s (0-10,000 ft/min) both with +/- 3% accuracy

### PRESSURE

- » Two differential pressure sensors measuring up to 1.03 kPa (0.15 psi) accuracy of full scale

### HUMIDITY

- » One humidity sensor to measure relative humidity with +/- 2% at 55% RH

### DATA ACQUISITION

#### SOFTWARE - iSTAGE-X™

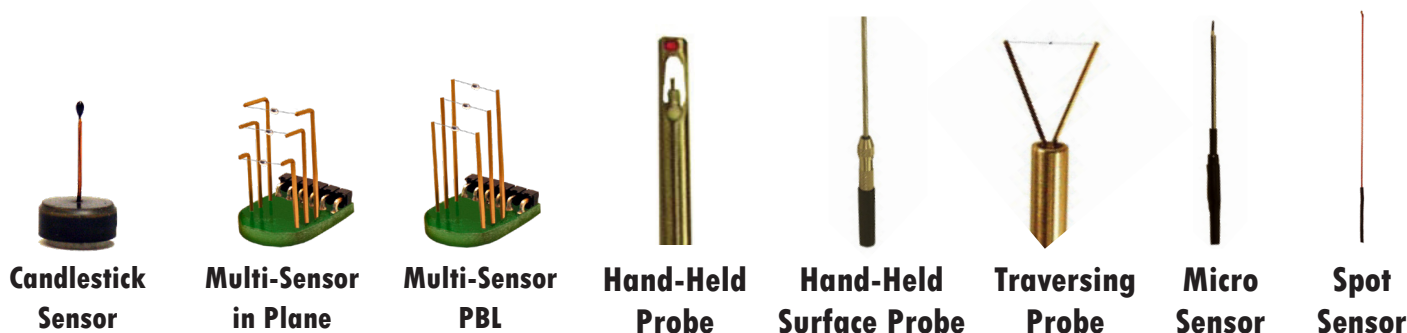
- » iSTAGE-X™ manages incoming data from various sensors and provides a rich graphical presentation of the results; included with the system

**For further technical information, please contact Advanced Thermal Solutions, Inc. at 1-781-769-2800 or ats-hq@qats.com.**

# SENSORS

## ATS-Patented Single-Sensor Technology

Advanced Thermal Solutions revolutionized the industry in the late 1990s with the introduction of its patented, single-sensor technology, which measures temperature and velocity with a single sensor and eliminates errors attributable to non-isothermal air flow. It broke a second paradigm when it followed years later with the production of its Candlestick sensor, a 360° reading sensor, offering the least invasive profile in the test domain, thus insuring the highest accuracy. Altogether, ATS presents eight different profiles and over a hundred variations in customization for its very selective and loyal instrumentation customers.



## Technical Comparison

Product	Base Diameter	Height/Length	Temperature Range	Velocity Range
Candlestick Sensor	0.4" (9.5 mm)	0.4", 0.5", 0.8" (9 mm, 12 mm, 20 mm)	-10°C to 120°C	0 to 50 m/s (10,000 ft/min)
Multi Sensor In Plane MS 1000-IP-20	0.60" (15.2 mm)	0.5", 0.7", 0.9" (13 mm, 18 mm, 23 mm)	-10°C to 120°C	0 to 50 m/s (10,000 ft/min)
Multi Sensor PBL MS 1000-PBL-20	0.6" (15.2 mm)	0.5", 0.7", 0.9" (13 mm, 18 mm, 23 mm)	-10°C to 120°C	0 to 50 m/s (10,000 ft/min)
Hand Held Probe HHP-A	N/A	24" (609.6 mm)	-10°C to 120°C	0 to 50 m/s (10,000 ft/min)
Hand Held Surface Probe HP 1000-SP	N/A	6" (150 mm)	-10°C to 120°C	N/A
Traversing Probe TP 1000-20	N/A	6" (150 mm)	-10°C to 120°C	0 to 50 m/s (10,000 ft/min)
Micro Sensor MIC 1000-20	N/A	1.5" (38.1 mm)	-10°C to 120°C	0 to 50 m/s (10,000 ft/min)
Spot Sensor SP 1000-20R1	N/A	Custom	-20°C to 150°C	N/A