Passive Surveillance

Integrated Systems

Solutions

SenSyTech Inc.
Our Mission

We are committed to creating value for our stakeholders:
• Our customers—who entrust us with their business
• Our employees—who create our value added process
• Our stockholders—who invest their dollars in us

Teamwork is the cornerstone for meeting our commitments to:
• Our customers—with quality products and services delivered on time
• Our employees—with challenging work and rewarding careers
• Our stockholders—with share value enhancement

Our Focus

• Passive integrated surveillance systems
• Expansion of a profitable global presence
• Product team ownership and frontline decision-making
• Simplified horizontal processes favoring product team organization
• Efficiency improvement through investment in technology

Our technical expertise allows us to offer the most capable and cost-effective products and services to our customers worldwide.

SenSyTech provides services and state-of-the-art total system solutions across the electromagnetic spectrum for electronic warfare applications, communications intercept and airborne imaging. Our systems engineering services provide concept studies and system definition and services to present and prospective customers to assist in the procurement of major integrated passive surveillance systems.

SenSyTech, Inc. is a technology leader in system design, software development, and hardware manufacture of electronic reconnaissance systems, satellite ground receiving systems, communications equipment, threat warning systems, multispectral IR scanners and digital imaging equipment to worldwide markets.

SenSyTech, a systems integrator, is comprised of system engineers, senior scientists, hardware and software engineers, computer analysts and engineering technicians. To ensure that we continue to maintain focus on our clients’ needs, SenSyTech is organized into three groups: Electronic Warfare, Imaging, and Communications.
Our Work Environment

SenSyTech, Inc. offers a stimulating work environment with career growth and opportunity based on performance. The organization is committed to the long-term development of its employees and strongly encourages and supports professional development. In addition to exceptional challenges, SenSyTech’s employees enjoy highly competitive salaries, incentive compensation, comprehensive benefits, casual dress and flexible work hours.

The Company’s objective is to nurture and maintain a viable and dynamic organization of qualified and dedicated personnel sharing a common goal of technical and operational excellence. SenSyTech offers a wide range of opportunities for talented and highly trained professionals. Our technical competencies include:

- Electronic Combat Systems Engineering
- C4ISR Systems Engineering and Technical Analysis
- RF Engineering
- Analog Design Engineering
- Digital Design Engineering
- Digital Signal Processing
- Software Engineering
- Control and Display
- System Integration
- Antenna Engineering

Systems and Equipment Development

SenSyTech has successfully transitioned its technologies into operational systems. These include:

Electronic Support Measures (ESM) Systems
- Wideband High Probability of Intercept
- Threat Warning Receivers
- Microwave Channelized Receivers
- Electronic Combat Systems

ELINT
- Integrated Wideband High Probability of Intercept / Narrowband Superheterodyne Analysis
- Multiple Operator Positions
- Fine Grain Signal Analysis
- Digital and Analog Recording

SIGINT
- Cellular Telecommunications
- INMARSAT Communications
- QRC Customized Electronics (Micropower, Microminiature Equipment)

Specialized Antennas
- Complete Antenna Design and Testing to 94 GHz
- Air Transportable Tracking Systems
- Broadband Spinning DF Antennas
- Communications Intercept Antennas

Imagery / Environmental Remote Sensing Systems
- Panchromatic and Multispectral Digital Cameras
- Multispectral and Hyperspectral Scanners
- Thermal Infrared Facility Inspection Services
- Image Processing and Analysis
Software Development

SenSyTech has in-house software development capabilities across multiple platforms, processors, operating systems and languages. Some of the typical environments include:

Operating Systems
- Microsoft Windows
- Unix (HP, SCO, Linux)

Real-time Operating Systems
- pSOS
- VxWorks

High Order Languages
- C
- C++

Firmware
- VHDL
- Texas Instruments Assembly for DSP

Interfaces
- Ethernet
- TCP/IP
- VXI/VME

Graphical User Interfaces
- MOTIF
- X-Windows
- Microsoft Windows API
- Microsoft Foundation Classes (MFC)
- Borland’s Object Windows Library (OWL)

Product Support Packages

Integrated Logistics Support (ILS)

SenSyTech provides complete product support packages which can be tailored to your initial and life cycle needs. Our support packages are developed under the true meaning of integrated logistics support and apply to:

- Complete logistics / supportability analyses (MIL-1388-1A and MIL)
- Certified Joint Services Logistics / Supportability Analysis Record (MIL-1388-2B and MIL)
- Reliability modeling, analysis and FRACAS
- Maintainability analysis
- System safety analysis
- Training program analysis and data
- Technical documentation (hard or interactive)
- Configuration management (MIL-973, MIL-498 and ISO-9001)
- Contractor logistics support services
- Depot services
- Warranty services
- Training / instructor support services

Complete professional engineering services can also be provided through our GSA Multiple Award Schedule (GS-23F-0391K). Professional engineering services provided through the GSA Schedule include:

- Concept development and requirements analysis
- System design, engineering and integration
- Test and evaluation
- Integrated logistics support
- Acquisition and life cycle management
Facilities and Manufacturing

SenSyTech, Inc. provides the best value systems and products to its customers based on optimized processes and in-house rapid prototyping, critical testing and assembly facilities. These include:

- ISO-9001 Quality Systems
- IPC-610 and J-STD-001 Qualified Assembly and Test Personnel
- Full CAD, Circuit Simulation, Schematic Capture, Finite Element Analysis Capabilities
- Complete CM / ILS / RAM system in place
- RF Testing from 500 MHz-94 GHz
- Automated Testing Capabilities
- Anechoic Chambers
- Machine Shop Capabilities: CNC Milling / Turning, Bending, Stamping, Finishing / Painting, Injection Molding
- Assembly and Integration Facilities
- Environmental Chambers: Thermal Cycling, Vibration, Rain / Immersion, Noise, Altitude
The Electronic Warfare Group provides ESM / ELINT threat warning and intercept receiving systems using DFD, channelized and superheterodyne technologies. These systems cover sea, air and land with installations on submarines, surface ships, aircraft and land-based platforms. The Electronic Warfare Group also provides Integrated Logistics Support—complete product support packages tailored to your initial and life cycle needs.

SenSyTech provides robust, high probability of intercept radar systems that support critical mission functions such as threat warning, ESM and ELINT. These systems are essential in the modern electronic battle environment. Integration into these networked architecture systems demands full and accurate parametric signal descriptions for accurate reporting of intercepts and correlation with other data. The radar intercept systems by SenSyTech provide these capabilities in an affordable product.
SenSyTech has been producing and fielding signal intercept systems for the DOD for 30 years. The result of this long-standing relationship has been the design, development and manufacture of a wide variety of leading edge, state-of-the-art systems for the U.S. Navy and Air Force. SenSyTech is the selected contractor to provide ESM threat warning capability for the next generation submarine for the U.S. Navy, and is a principal team member with Lockheed Martin for AIEWS, which is the replacement for the AN/SLQ-32 on surface ships.

The SenSyTech High Probability of Intercept (HPI) family of threat warning and ESM systems are now deployed on all U.S. submarines and are being installed on the MK-V 70-foot fast patrol boats and the 170-foot patrol coastal boats. Other variants of the HPI system have been deployed in ground transportable vehicles and are presently being designed for airborne applications.

The broad base of experience of the Company includes complete system installation, overhaul, field change kit development, integration with companion sensors and the verification and validation of system performance.

SenSyTech maintains secure electronic warfare laboratories that are capable of full system testing of radar warning and ELINT receivers. The laboratories contain radar signal simulation equipment capable of generating multiple emitter scenarios with standard and exotic radar signals.
Imaging Group

The Imaging Group manufactures airborne multispectral, thermal infrared and hyperspectral scanners, digital camera systems and laser search and rescue systems. Our domestic services operation provides a turnkey capability to include airborne data collection, remote sensor image processing, interpretation and analysis. Our systems are used for a wide variety of environmental monitoring applications such as detection and analysis of plant and forest disease/stress; mineralization and geothermal activity; oil spills and thermal water pollution and real-time disaster assessment. Civil engineering applications include commercial, industrial and residential facility inspection, and surface groundwater and spring mapping. Domestic and international clients have used our systems for a variety of coastal patrol applications such as vessel tracking and are in significant use for firefighting management efforts for forest fires to diverse toxic chemical fires.

Digital Geographic Information Systems (GIS) are rapidly becoming the basic tool for the cost-effective management, maintenance, and safety inspection of distributed facilities such as power networks, pipelines, railroads and highway systems on an international level. In addition, integrating Global Positioning Systems (GPS) satellite data has provided an economical solution to the problem of accurately locating earth surface features or distributed assets anywhere on the planet.

GIS and GPS technologies are now being combined to create a superb capability to compile, correlate, analyze and display geographic information for almost any purpose. Floods, forest fires, severe storms and oil spills require real-time or near real-time information to assess damage and manage resources for mitigation efforts. Management of agriculture and forest resources requires weekly or monthly data to monitor changes, predict yields and to plan activities to maximize harvests.

For 30 years the Imaging Group of SenSyTech, formerly Daedalus Enterprises, Inc., has offered standard and tailored systems solutions and services to meet client needs reliably and economically from an aerial platform. There are over 100 of our systems operating in approximately 24 countries around the world.

These new technologies have created a mechanism to meet the ever increasing demand for cost-effective, accurate, timely and continuous spatial data monitoring of earth surface features and changing attributes that can only be met by imaging systems operating from aircraft or space platforms.
ABS (Airborne Bispectral Scanner) — A dual port system typically coupling a long wave (thermal) infrared channel with either an ultraviolet, visible / near infrared or short wave infrared channel—at the user's option.

MIVIS (Multispectral Infrared and Visible Imaging Spectrometer) — A hyperspectral system with up to 128 spectral bands for advanced remote sensing research. Applications include mineral exploration and environmental studies.

AHS (Airborne Hyperspectral Scanner) — This system offers 48 spectral bands of data spatially co-registered and simultaneously recorded on computer compatible cartridge tape.

ATM & ATMX (Enhanced Airborne Thematic Mapper) — The world’s most widely used airborne multispectral systems.

TIMS (Thermal Infrared Multispectral Scanner) — Unique thermal infrared spectral bands provide specialized data for rock type discrimination, geological mapping and oil / mineral surveys.

AOCI (Airborne Ocean Color Imager) — A prime tool in oceanographic research for the study of biomass, chlorophyll, fisheries or pollution.

ADC (Airborne Digital Black & White, Color and Multispectral Cameras) — Digital framing cameras with 2k x 2k arrays and fast frame timers for high resolution surveys of corridor assets.

AMS (Airborne Multispectral Scanner) — A dual port system which records up to six spectral channels simultaneously directly onto digital tape. The standard configuration offers a dual element thermal infrared detector and an 8-channel visible / near-infrared spectrometer for choice from 10 spectral bands.

LSAR — A day / night search system that detects specially developed retroreflector markers when illuminated by the laser search beam. The markers can be placed on aircraft, boats, life jackets or clothing. The markers are uniquely coded to enhance the ability of the system to distinguish them while rejecting false targets including glint from the sun.
The Communications Group provides rapid, cost-effective solutions to customer requirements. In so doing, we have developed a family of COTS satellite communications intercept equipment, custom microminiature electronic hardware, RF transmitters and receivers, antennas, tracking and location systems, an in-house graphic arts capability and a variety of custom DSP and GUI software applications. We also provide QRC engineering support to a variety of U.S. customers, as well as maintenance and training on all of our systems.
A SYSTEMS INTEGRATOR—PROVIDING A VARIETY OF COMMUNICATIONS MONITORING OPERATIONS...

Custom Solutions

Communications Signal Intercept
• Complete Turnkey Installations
• Portable and Global Systems
• Multi-standard Software Demodulation
• Windows 95 / 98 / NT Graphical User Interface

Digital Signal Processing
• High Speed 3-Channel A / D
• Ethernet Control and Data Distribution
• Digital Tuning and Demodulation
• Standard 70 MHz IF Input
• Expandable, Small, Light Weight

Software Development
• Windows Based Graphical User Interfaces
• Real-time Operating Systems
• Embedded Processor Software
• FPGA Firmware Development

Miniature Transceivers
• Ultra Low Power Consumption
• Surface Mount / Fine Pitch Technology
• Patch Antenna Design and Development
• Quick, Low Cost Development Cycles

QRC Engineering
• Analog and Digital Circuit Design
• System Engineering and Design
• Internet and Network Expertise
• Machine Shop, Plastic Injection Molding and Electronics Assembly