

Total Solutions

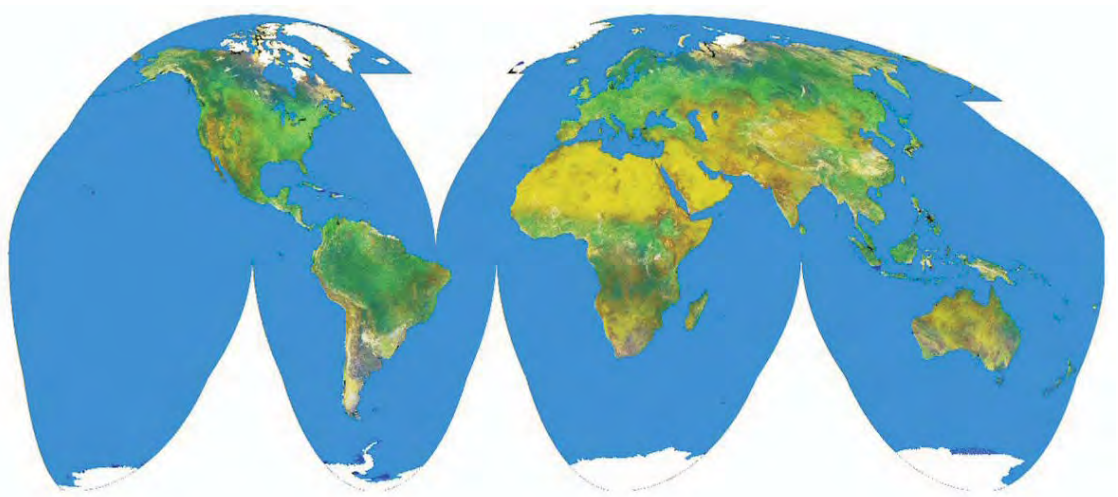
Product Overview



Global Power and Motion Solutions

Motion Control

Automation



Power Quality

Industrial Electronics

Design, Engineering &
Manufacturing
Services



AMTECH
DRIVES INC.

Corporate Capabilities



Innovation

AMTECH Drives is unlike the traditional leaders in the AC drives industry.

AMTECH manufactures one hardware platform for all low voltage AC drive applications.

From simple Variable Frequency to Closed Loop Vector Control, the applications are software selectable. A simple selection of the correct horsepower and specifying is complete!



Customers no longer need many models of drives from the same manufacturer to meet plant requirements.

That means fewer stocked spares, and the continuity of drive configuration makes training as well as program documentation simple and cost effective.

Our expertise is innovation. **AMTECH** develops rugged and reliable hardware platforms to utilize our customized software solutions. This allows AMTECH to provide a quick but better customized solution to your problems. When we develop a customized hardware platform, such as for Traction Drives or high voltage DC power supplies, we do so by employing familiar hardware and software components from our flexible but rugged platforms.

In the development of Green Power applications, **AMTECH** provides leading edge experience in wind and solar power, as well as mitigation of power robbing harmonics. In developing countries, remote locations, or modern industrial facilities, **AMTECH** provides power conservation through innovation every time our products are used.



Corporate Capabilities



Foundation:

AMTECH Drives Inc. - founded to develop non-stop, easily maintained, power, and drive solutions for developing countries that operate under severe power quality and environmental conditions. 1986

Background:

Amtech Drives recognizes the ever-decreasing quality of power in the industrialized world leading to the development, design, and manufacture of global intelligent non-stop hardware to solve motion and harmonic power problems. 1989

Amtech Drives developed the universal function, μ processor drive concept, to encompass all drive functions and universal configuration. 1993

AMTECH DRIVES is a recognized a leader in Green Technology applications by India's Department of Scientific and Industrial Research. Amtech manufacturing, panel fabrication, systems and design is ISO 9001:2000 certified and provides UL, CE and CSA certifications. 2000

AMTECH DRIVES moves to provide the same non-stop, ruggedized solutions worldwide as the global problem of power quality and cost become a reality. 2002

AMTECH DRIVES relocates Global Marketing, Sales and inventory to Stone Mountain, GA. The Stone Mountain Facility is also a UL certified Panel, Repair and Engineering services facility. 2003



Products

- Low Voltage AC Drives - ½ to 1000HP
- Medium Voltage AC Drives - to 13,200V
- Spindle Drives - to 250HP/3000HZ
- AC Soft starts 50 to 1000 HP
- Passive Harmonic filters
- Active Harmonic filters
- Voltage Reactors
- Dynamic voltage & sag compensators
- EMI/RFI / Sinus filters,
- ON-site harmonics evaluations
- Whole plant harmonic mitigation studies
- Systems integration & Industrial Networks
- Industrial Electronics design / build

Operations:

AMTECH DRIVES established a growing global engineering and manufacturing technology Center in Gandhinagar, India. Our vertically integrated operation produces the highest quality solutions at the lowest cost.

AMTECH DRIVES is in a complete design-manufacturing center providing:

- >150 Engineers
- CAD/CAM
- Systems Integration
- Panel Manufacturing
- Advanced SMD board production
- Design, Production and Testing
- World certification services
- Global air, rail, truck shipping

AMTECH DRIVES recruits highly trained engineers, panelsmiths, and technology employees and provides a holistic worker friendly environment designed to foster innovation and maintain a less than 1% employee turnover.

Today:

Engineering Flexibility is our strength and allows **AMTECH DRIVES** to develop customized hardware and software solutions in small or large quantities to meet an individual customer's needs. Our advanced circuit designs, production facilities, and stable work force allow us to produce the quantities needed to meet the global end-user or OEM demand.

AMTECH DRIVES maintains a commitment to continuous technological development. Our continuing goal is the technological innovation and design of motion control and harmonics mitigation products using standard components in hardened configurations.

Near Future:

AMTECH DRIVES will continue to develop and embrace new technologies centered on the needs of tomorrow's industry. **AMTECH DRIVES** also continues its global commitment to countries with developing industries.

The **AMTECH DRIVES** extended customer commitment includes:

- Free web-based technical training
- 24/7 world-wide live customer support
- OEM product design / build
- World Communication protocols support
- Wireless communication support via, GSM, Satellite, RF and WEB
- System integration Services

AMTECH DRIVES also continues to innovate our:

- Low and medium voltage AC drives
- High voltage power supplies
- Traction drives for trains, elevators
- Harmonic and Voltage correction solutions for low and medium voltage
- Marine drives
- Wind, solar, geo-thermal and wave power



Milestones

- 1986 - Founded
- 1987 - Incorporation Amtech Electronics
- 1989
- 1991
- 1993
- 1995
- 1997
- 1999
- 2000
- 2002
- 2004
- 2006

AMTECH DRIVES designs high-efficiency cost-effective energy and motion products to work where others do not, this is our heritage, and as the world continues to place ever-increasing demands on global power – this heritage is our strength and our foundation for the future.



Corporate Capabilities



Amtech Support Q & A

Q: How will Amtech support their products in the United States, Canada, South America, and throughout Europe?

A: Amtech Drives has established its Corporate Office in Stone Mountain, Georgia, with regional sales and service offices across the US. In other areas, Amtech uses agencies and representatives. Amtech is forming an international service agreement with K+S Services for warranty, field service, and startup. Wherever the need arises, Amtech can provide the support and services required to meet our customers' expectations.

Free 24/7 technical support is provided by telephone. All product manuals and technical documents will be available for download in a PDF format from our new web site, www.amtechdrives.com. Complete technical training for operators, engineers, and technicians will also be available on our website, free of charge.

Q: What about energy and harmonics audits?

A: Amtech engineers based in the US and in strategic locations around the world are available to assist in assessing plant needs for energy conservation and harmonics mitigation. These audits can provide valuable energy savings and equipment protection, all of which is reflected in profit for the customers' bottom line.

Q: Suppose we have a special design project, can Amtech assist us?

A: Amtech engineers can assist in specialized applications for AC drives and develop a proprietary firmware for our standard **AXPERT** product lines, and such specialized applications can be protected to prevent unauthorized use.

One of Amtech's many strengths is the ability to design specialized IGBT driver platforms and develop custom high voltage, high amperage power supply applications. We are a leader in the design of industrial wind and solar power conversions. Railroad power, high power welding, and aircraft ground power are also a part Amtech's engineering capabilities and experience.

Q: Can Amtech provide references for its products and expertise?

A: Yes, Amtech has been providing drives and custom applications for 20 years throughout the near east. We can provide quality references from all major industries and would be pleased to arrange contacts and discussions concerning similar applications to any customer's needs.

Amtech equipment is used by all industries:

| | | |
|--|--|---|
| Cement Textile Plastic Automobile | Pharmaceutical Chemical Steel Aviation - Ground Power | Pulp & Paper HVAC Transportation Utilities |
|--|--|---|

Corporate Capabilities



Example Applications:

AMTECH global power products are in use on ten's of thousands of fans, pumps, conveyors, and speed controls. **AMTECH** designs products to be operated by unskilled labor under extremes of power quality and environment. Factories in India and the Third World require ruggedized construction, simple operation, optimum efficiency and still be cost effective. **Amtech** meets these criteria.

AMTECH drives thrive where others fail

Amtech Military and Civilian Experience includes:

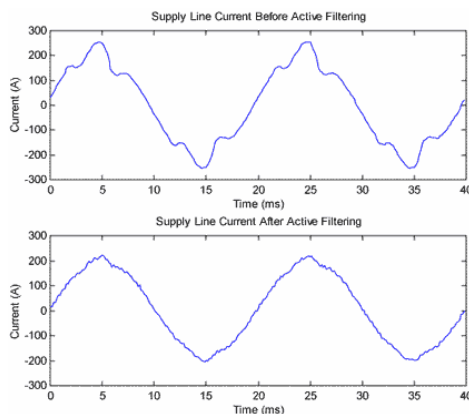
Ultra-speed IGBT Drivers
4-Quadrant Wind Mill Inverter
Accelerator Neural Beam Injector
Inverters with Trench Gate IGBTs

Static Harmonic Converter
Economical Electronic Soft Starters
Medium voltage diesel electric
Combines Elevator Drives/Controller

Amtech standard products include these extended examples:

Traction Drive

PWM DC Drives for railway applications -
575 volt AC 120 Hz requirements
Switching frequency of 1-2 kHz
Output voltage 0-800 VDC, output current to
1050 Amp - **Amtech** Traction Drives can be
modified for rapid transit third rail DC power
supply applications, and for aircraft ground
power supply applications.



650HP Fermentation Application - An Amtech Static Harmonic Converter reduced Current Harmonic Distortion from 78% to 7.2%, reduced Voltage Harmonic Distortion from 3.4% to 1.8% and overall plant Power Factor increased from 0.79 to 0.97. The Amtech solution provided a corresponding increase in the component life of fuses, contactors, and the motor and a reduction in heat losses through cables, transformer, and motor.

Corporate Capabilities



Low Voltage AC Drives- from ½ HP to 1000 HP in 240 and 460 volt three phase configurations. Both **AXPERT VT 240s** and **AXPERT EASY** AC drives can be mounted in **NEMA** enclosures with disconnects, fusing, circuit breakers and other electrical and electronic components to meet the needs of individual customers.



Axpert MVD (Medium Voltage Drives) - from 150 KW to 2000 KW in 2300 to 13,200 volt 3 phase configurations - **AXPERT MVD** drives serve high torque applications, large mixers, pumps, and fans. Each drive contains a sinus filter for harmonic mitigation, which can increase motor life.

AXPERT EAZY HF DRIVE Power rating from 1.5kw to 37kw are available. Our drives are suited for very wide range of AC motors (induction or permanent magnet AC), from low speed (rated 50 or 60 Hz) through very high speed (rated upto 1800 Hz).



Axpert-Opti-Torque - from 50 to 1000 HP, 460 volt three phase. Advanced features from the AC drive product line are incorporated into the Amtech's Axpert-Opti-Torque (Softstart) line, and these features can provide energy savings and motor protection for constant speed applications.

Corporate Capabilities



Power Quality Solutions- with a complete line of Active and Passive Harmonic filters, reactors, EMI/RFI filters, dynamic voltage and sag compensators, and Sinus filters, Amtech provides applications specific and whole plant harmonics mitigation and **Power Quality Management**. Amtech performs on-site **PQM** surveys and engineers the solution necessary.



Industrial Electronics- Amtech provides applications specific power solutions for industry, including Traction Drives, large DC power supplies, critical power battery backup systems, wind power converters, and "smart" IGBT drivers. Amtech custom designs these systems to meet our customers' exacting requirements.

Total Automation Solutions for Process Control - **Amtech** can integrate motion, plc, or vision applications to meet specific customer requirements. A complete design package including CAD drawings and onsite startup is available.



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Service and Warranty Facilities in:

- Southgate, MI - USA
- Atlanta, GA - USA
- Kokomo, IN - USA
- Lawton, OK - USA
- Rocky Hill, CT – USA
- Fremont, CA - USA
- Oakville, Ontario - Canada
- Monterrey, Nuevo Leon - Mexico
- Tamworth, Staffordshire - UK
- Tienen - Belgium
- Gandhinagar, Gujarat - India

Distributor Area