





ABOUT MICROTECH INDUSTRIES

Established in 1992, MicroTech Industries (MTI) is a multi-discipline technology company involved in the design, development & manufacturing of hi-tech products, providing comprehensive business solutions to valued customers both locally and internationally. With twenty-two years of innovation behind us, MTI continues to lead with the objective of indigenously developing and implementing specialized solutions at global standards. Our core strength has always been to transform ideas into reality through innovation in electronics, electrical and computer engineering. The R&D acts as a catalyst in converting technical solutions into successful commercial ventures by quickly assimilating the ever-changing needs of the customers, serving them with timely, cost effective and reliable solutions. The product line

of MTI includes Smart Metering Solutions, Smart & Static Energy Meters (Postpaid and Pre-paid), Payphones (Landlines and GSM), Vehicle Tracking Systems and GSM Call Routers. We believe in innovation, creativity, and resourcefulness par excellence going extra miles for our customers. The key strength of MicroTech is its committed and performance oriented workforce. To develop such maverick individuals, we encourage every individual initiative, promote team work, and believe in leadership at every tier. We have a pool of talented engineers and experienced business professionals together with a sophisticated manufacturing setup and testing facility that ensure the utmost quality of our products. We also provide customized solutions to local and international clients with cost effective, re-

liable and cutting-edge technology. Our work has been acknowledged by both government and private sectors earning us “The Best R&D Company” and number of other “Engineering Excellence” awards. These achievements are due to our commitment to innovation and the strength of our teams. Besides, we are also an ISO certified company in three different domains (ISO 9001, EN 14001 and OHSAS 18001). Presently, our Business Development teams are fully focused on introducing indigenously designed state-of-the-art smart metering & AMI network solutions in Pakistan. We are also ambitious in exploring foreign markets with our smart metering solutions and envision our presence in the global markets with leading-edge metering products in the near future. MTI has a dedicated Service Di-

vision for the implementation of complex AMI networks. Our experienced teams are fully capable of providing services for design, installation, verification and customer support from smart metering network maintenance right through to management and analysis of the metering data. Having the right mind set, a mature R&D team and

an already established service-oriented IT infrastructure, MTI also provides data center hosting, network operations and support services which are especially optimized for large scale metering and energy conservation projects. Moreover, we are a socially responsible company, and believe in the social well-being of our stakeholders.

Running of a medical trust and an NGO by MicroTech is an example of our claim. In case of any unexpected natural calamity in the country we always move ahead to stand the test of time. However, the most important part of these humanitarian enterprises is that all these are owned by none other than the employees of MicroTech.



Vision

To bring about a global technological revolution by uplifting living standards of the societies we serve, through innovative technological solutions by implementing business practices that are in line with our belief system.



Mission

Our mission is to become a global leader by developing a pool of expertise geared towards providing unsurpassed technology solutions and state of the art engineering products and services, focusing on the goal of never ending improvement in quality, service and productivity

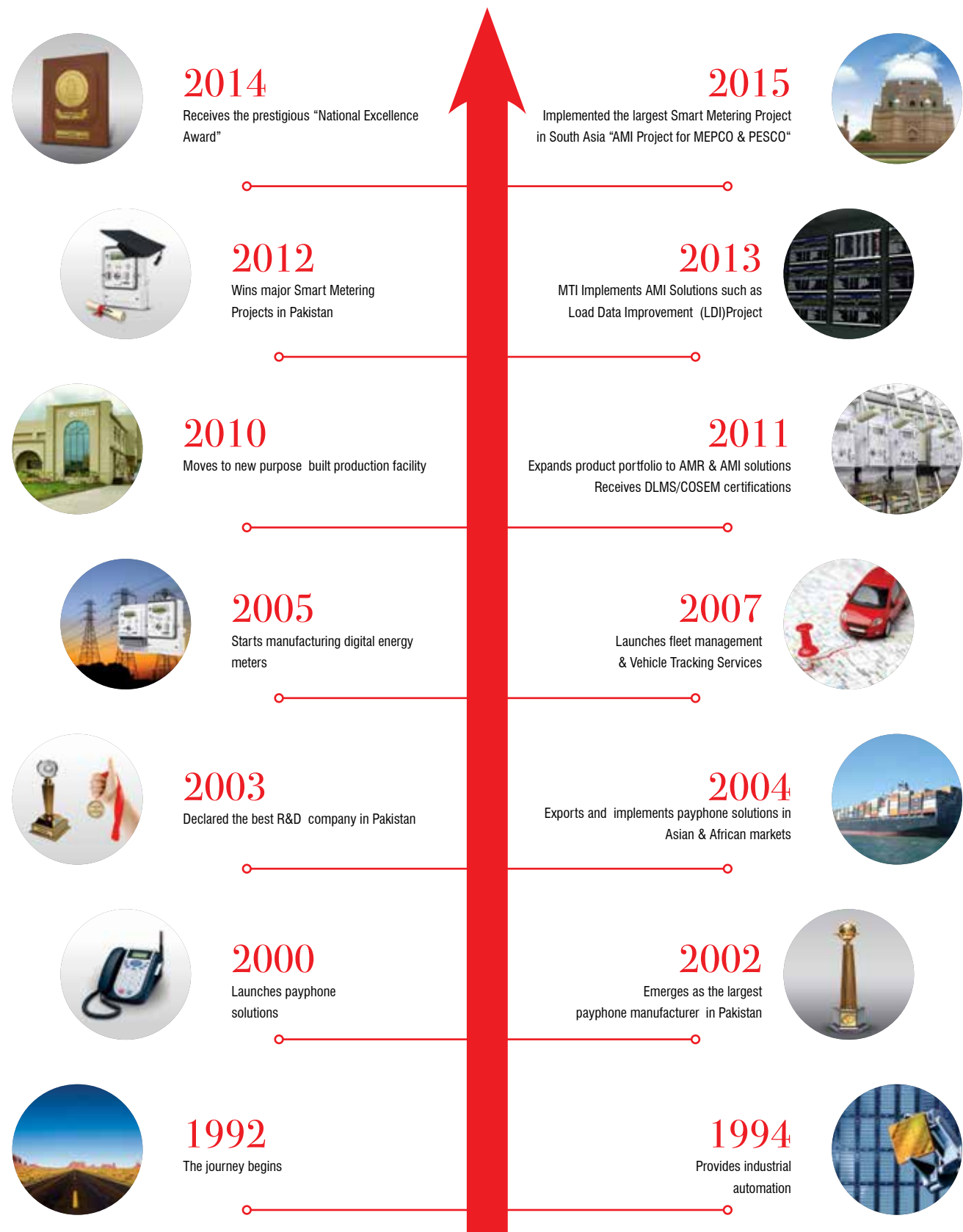


The MicroTech Way

“MicroTech Way” is a set of shared beliefs that drives us forward and binds us together as a cohesive unit. Ethics, not only profits, drive our passion for advanced technologies and innovative solutions.

IMPORTANT MILESTONES

We started MTI in 1992 as a small design house, since then we have been putting in all the efforts to provide customized hi-tech solutions to our customers as per their requirements. A graphical representation of the road travelled so far is shown below.



Culture and Environment

We believe in innovation, creativity, dynamism and going the extra mile not only for our direct customers but also end-consumers. We do not endorse the traditional concept of simply satisfying the customers, we delight our customers by providing more than their expectations.

To develop a nurturing and conducive environment we encourage initiatives, promote team-work, appreciate positive attitude, embrace diversity and believe in leadership at every tier.

The key strength of MicroTech is a committed and performance oriented workforce. We treat our employees as our best asset and strongly believe that our teams are the real source of our competitive advantage and differentiating element. At MTI, every employee strives to achieve performance excellence by working with highest level of professionalism and integrity. Our culture is deliberately formed in a manner that provides every employee an access to highest level of management.

OUR FACILITIES

MicroTech has a purpose-built facility with floor capacity exceeding 140,000 sq. ft. Every department ranging from R&D to Productions is equipped with latest and mod-

ern tools. In each department, we ensure best business practices and processes. We put great emphasis on achieving Strategic Fit across the company; each department's strat-

egies and processes are aligned with the other to achieve optimum productivity and utilization.

RESEARCH & DEVELOPMENT



Being a technology-driven company our business philosophy is to continuously look for untapped market segments where a difference can be made with innovative technological solutions. At MicroTech, business development professionals identify the unique needs of the target segment and discuss the innovative

solutions with R&D. Then teams of engineers come up with the appropriate technology for the proposed solution, cost and estimated timelines.

What distinguishes us from others is our strong in-house R&D that strives to ensure optimal quality and superiority of our products,

through extensive and rigorous testing criteria before a product is finalized for production. This process is undertaken to ensure the finest quality and durability of our products before they leave our premises and move towards the end users.

Our 24 years of innovation, research and development experience has resulted in more than 50 complex solutions in Energy Metering, Telecommunications and Vehicle Tracking & Fleet Management.

With rising power demand the world over, the future needs of the metering industry turns more and more towards AMI solutions. Currently, MTI offers a comprehensive portfolio of smart metering and AMI solutions, incorporated with complex and field-demonstrated single & poly-phase energy meters and data management systems designed and fabricated at the highest standards in compliance with various IEC measures. Our previous portfolio comprises Payphone Networks and Vehicle Tracking &



Fleet Management Solutions. MicroTech had not only led the local telecom industry with its payphones including landline, wireless and Network Management Systems, but had also exported numerous innovative payphone solutions to South Asian and African markets. Our vehicle tracking products & fleet management solutions are still serving the masses all across Pakistan.

We are a mature technology company that has not only developed solutions in diversified fields but also accumulated a wealth of technical expertise and knowledge base which has become an integral part of our business philosophy. Our business processes enable us to effectively integrate product development, project management and the engineering required to design a product. These integrated business processes empower our cross-functional teams from marketing, business development, engineering and manufacturing to deliver successful marketable solutions time and again.





AREAS OF EXPERTISE

Having the potential to translate ideas into reality with high technical competencies has driven MTI to pursue new horizons. Over the years our teams have developed expertise in different technological domains. Some of the salient fields are listed in the table below:

SR. #	EXPERTISE
1	Metering systems
2	Power electronics
3	Embedded/microcontroller programming
4	PCB designing
5	EMC testing
6	Analogue & digital hardware designing
7	Desktop applications
8	Security systems
9	GPS based equipment
10	Network management solutions
11	Smart card based solutions
12	Database applications
13	Web based applications
14	Analog and digital signal processing

SR. #	EXPERTISE
15	Testing and calibration equipment
16	Wired and wireless telecommunication systems
17	PC based systems
18	Control systems
19	VOIP systems
20	Consumer electronics
21	Biometrics
22	Biomedical electronics
23	CAD/CAM designing
24	System integration
25	IT infrastructure design
26	Production system design
27	Real time dashboards

PRODUCTION

We have modern and sophisticated manufacturing setup. It's a blend of automated processes which are supervised by a highly skilled workforce ensuring best quality of products for the optimum field performance, cost effectiveness and reliability.



Our production line is segregated into different section. These sections are listed below in chronological order.

SR. #	EXPERTISE
1	Surface Mount Technology (SMT)
2	In-Circuit Test (ICT) Bench
3	Assembly Lines
4	Calibration & Accuracy Testing
5	Ultrasonic Welding
6	Final Product Testing



SURFACE MOUNT TECHNOLOGY (SMT)

With our In-house SMT production facility, MicroTech is not only designing and manufacturing its own products, but is acting as a subcontractor for our business partners as well. We have the privilege to be among the first corporations in Pakistan to use this technology, having SMT machines from ESSEMTEC, Switzerland and Samsung Techwin, Korea with printer and re-flow oven for Printed Circuit Boards (PCBs). The SMT machines have the capacity to pick and place 60,000 components per hour.

TESTING FACILITY

MicroTech has the modern testing facility wherein a comprehensive range of tests can be performed as per standards of International Electro-Technical Commission (IEC). Details of a few leading tests are as under:

SR. #	TESTS	SR. #	TESTS
1	EMC Tests:	3	Mechanical Tests:
	<ul style="list-style-type: none"> IEC 61000-4-4 IEC 61000-4-2 IEC 61000-4-5 IEC 61000-4-12 CISPR22 		<ul style="list-style-type: none"> IEC 60068-2-6 IEC 60068-2-27 IEC 60068-2-75 IEC 60529 IEC 60695-2-11
2	Environmental Tests:	4	Electrical Tests:
	<ul style="list-style-type: none"> IEC 60068-2-2 IEC 60068-2-1 IEC 60068-2-30 IEC 60068-2-5 		<ul style="list-style-type: none"> IEC 62053-21 IEC 62053-2 IEC 62053-11

ACCOLADES & AWARDS



MicroTech Industries has received a number of recognitions and awards from various ministries, institutes and forums over the years. These awards highlight our commitment towards continuous innovation, creativity and dynamism.

- Best R&D Company
- Business Excellence Award
- Excellence in Engineering
- Award of Pioneering R&D work
- National Excellence Award

QUALITY CERTIFICATIONS

We are an environmentally friendly company and the health & safety of our workers is our top priority. We are accredited in three disciplines by International Organization of Standardization (ISO) such as:

- Quality Management System (ISO 9001: 2008)
- Environmental Management System (ISO 14001: 2004)
- Occupational Health & Safety Management Systems (OHSAS 18001: 2007)





SMART METERING SOLUTIONS

MTI smart metering solutions deliver a range of applications and equipment using an infrastructure comprising networked meters, communication networks and data collection and management systems.

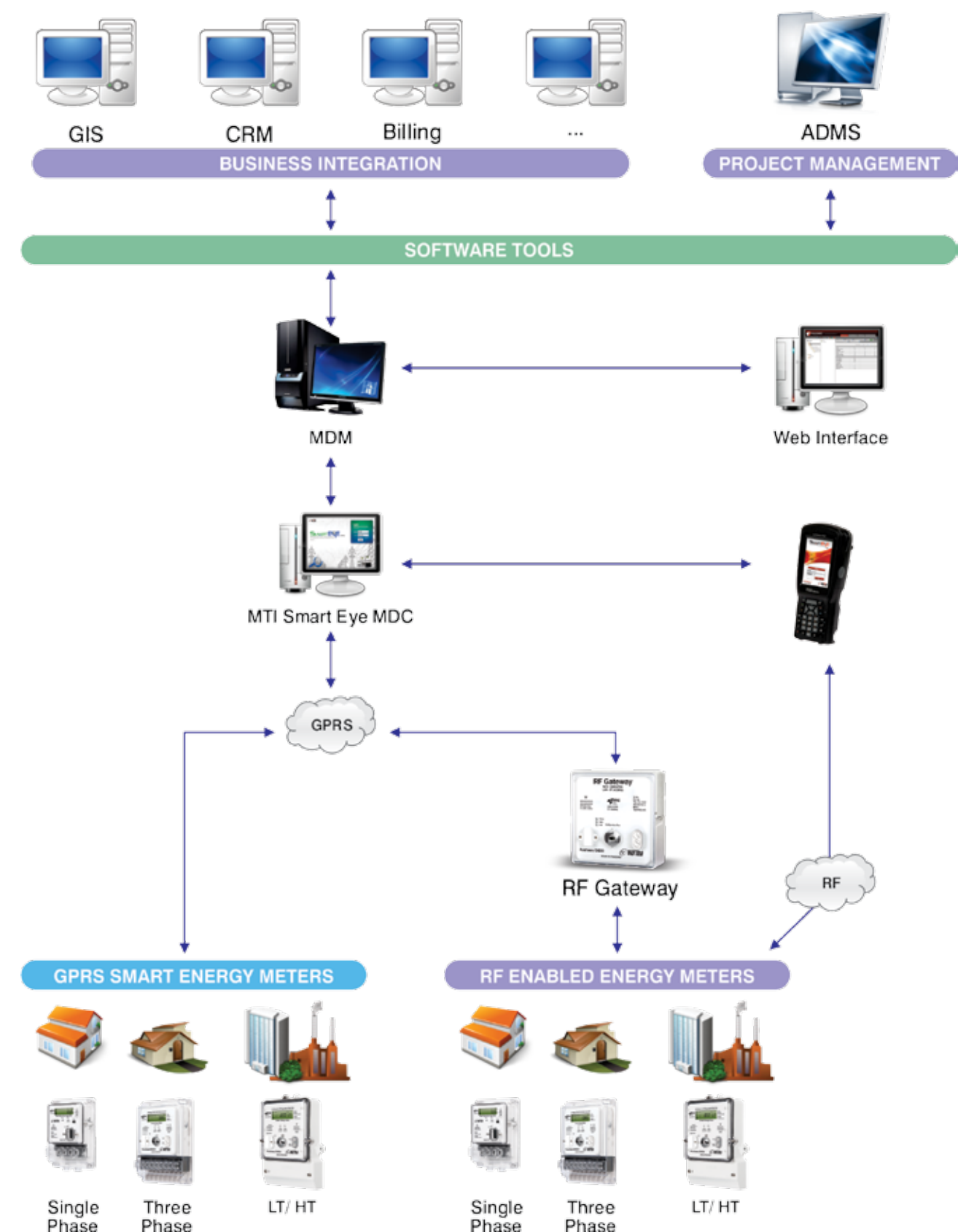
Key focus area of MicroTech Industries is to offer the skills and experience that can help utilities frame their vision of a smart grid contributing towards the overall efficiency of the system.

MTI smart metering solutions aim to improve energy efficiency, allow optimum generation, increase customers' awareness of energy consumption, provide effective customer support, reduce operational costs and prevent non-technical losses. Moreover, our solutions allow utilities to accurately collect billing data and vital health statistics, enabling reliability by providing a risk-free choice to modernize their smart grid initiatives.

The smart metering solution drivers vary from country to country. Inferring the local market requirements, MTI solutions comprise 'Device Level Technology' and the 'Backend Tools'.

On the device level, we offer a complete range of future proof metering products that comply with a variety of national and international standards. These products are DLMS/ COSEM certified and use GPRS or RF as a communication channel. To offer highest level of flexibility, these meters have been carefully designed to function as a standalone product or be integrated with various data collection and energy management tools. They are fully capable of providing energy related value added services & reducing administrative costs. Furthermore, not only do they enable load management and demand forecasting, but also help consumers in demand side management and adjusting their consumption behavior. What makes a smart metering solution unique is the backend data collection and energy management software that are inter-connected with the smart meters.

In addition, MicroTech Industries offers wide-range of tools to enable utilities to collect, manage and visualize the data in a much efficient and effective manner. To offer proficiency and flexibility, utilities are provided a user-friendly web interface with the core software placed in a centralized data center. The web interface allows the utilities to perform user management, data management, data visualization, data validation & estimation and energy auditing functions.



PRODUCT PORTFOLIO

We have a complete range of static, GPRS and RF enabled energy meters. MTI has indigenously designed and developed the head-end management systems for these energy meters that collects the metering data, decrypts it and saves into the Data Base Management System (DBMS). Moreover, our end user Graphical User Interfaces (GUIs) allows the customers/ users with different reporting options and management functions. A pictorial presentation of our current portfolio is provided below.

ENERGY METERS (GPRS, RF & Static)



Single Phase Meters



3-Phase Whole Current Meters



3-Phase LT/HT Meters

SOFTWARE



Smart Eye Control



Smart Eye MDC



Smart Eye Desk



MTI Galaxy



PDC Live Monitor



ADMS



Smart Eye Mobile



ENERGY METERS

- Single Phase Energy Meters
 - » Static Single Phase Energy Meter
 - » Static Single Phase Smart Energy Meter with Internally Mounted GSM/GPRS Communication Module
 - » Static Single Phase Energy Meter with Internally Mounted RF Communication Module (HHU)
- 3-Phase Whole Current Energy Meters
 - » Static 3 - Phase Whole Current Energy Meter
 - » Static 3 - Phase Whole Current Smart Energy Meter with Internally Mounted GSM/GPRS Communication Module
 - » Static 3 - Phase Whole Current Energy Meter with Internally Mounted RF Communication Module (HHU)
- LT TOU Energy Meters
 - » LT type TOU CT Operated Energy Meter
 - » LT type TOU CT Operated Smart Energy Meter with Internally Mounted GSM/GPRS Communication Module
- HT TOU Energy Meters
 - » HT type TOU CT & PT Operated Energy Meter
 - » HT type TOU CT & PT Operated Smart Energy Meter with Internally Mounted GSM/GPRS Communication Module
- RF Gateway
 - » LAN communication with meters on RF
 - » WAN communication with MTI Smart Eye MDC on GPRS
 - » Field replaceable SIM card



SOFTWARE

We have wide range of software in our portfolio. The details of each with its specific functionality is provided in the section below.

MTI GALAXY

A Smart Tool for Energy Management

It is a versatile user application that provides a web enabled user friendly interface including the following:

- A GUI (Graphical User Interface) which is accessible from the web.
- A multi-hierarchical user management system with different administrative rights.
- Provides functions like remote disconnection/reconnection of meters and billing data export for integration with the DISCOs' (Distribution Company/ Utility) existing billing systems
- Different reports to perform data analysis

Ultimately this application of the MDC can enable the utility to monitor load profiles and other metering data through any web enabled device. At a single point in time, several users can access the application using authorized user IDs.

Furthermore, this application allows the users to generate various types of graphical and tabular reports.



It also allows the customer to perform various operations and functions. Some of these operations are shown below along with the relevant screenshots from the Interface Application.

- Management
 - » Customer
 - » Meter
 - » Connection
 - » User Account
- Remote disconnection/ reconnection
- Data Export in CSV (Excel) format

MTI Galaxy keeps the users informed about the meter communication and status. A pop up of the critical alarms and events is displayed immediately on MTI Galaxy interface when that event/alarms is triggered. Not only a pop up is displayed but the system can also be configured to optionally send an SMS or Email to the relevant personnel to look into the problem and timely rectify it.

REPORTING

MTI Galaxy facilitates the end user with different reporting options. Some are as under.

- Maximum demand report over a user defined range on a single device as well as average MDI on a set of devices
- KWH report over a user defined range on a single device as well as on a set of devices
- Average PF report on a single device as well as average PF on a set of devices
- Report for critical alarms and events over a user defined range
- Daily data collection and performance reports
 - » successful devices
 - » non-successful devices
 - » missing values
 - » time taken to read all devices
- Report of meters exceeding a pre-defined maximum demand
- Report of meters having a total consumption that is lower or higher than a user defined percentage over the prior total consumption read
- Report of synchronized and non-synchronized meters
- Report for service continuity, voltage interruptions, and outages



LOAD CONTROL & LOAD MANAGEMENT

This is a full featured comprehensive interface that lets the DISCO personnel to remotely connect or disconnect any meter using MTI Galaxy. Using the Load Management feature gives full flexibility to either remotely connect/disconnect the

load of a consumer or set a programmable limit on a consumer's 3 Phase Whole Current meter. The meter will automatically disconnect the consumer load in case the limit exceeds. To provide maximum convenience, the Load Control and Load Manage-

ment feature allows programming of different threshold limits (with configurable retry time) against different time slots (Peak/ Off-Peak). This feature can be configured locally via the optical port or remotely using MTI Galaxy web user interface.

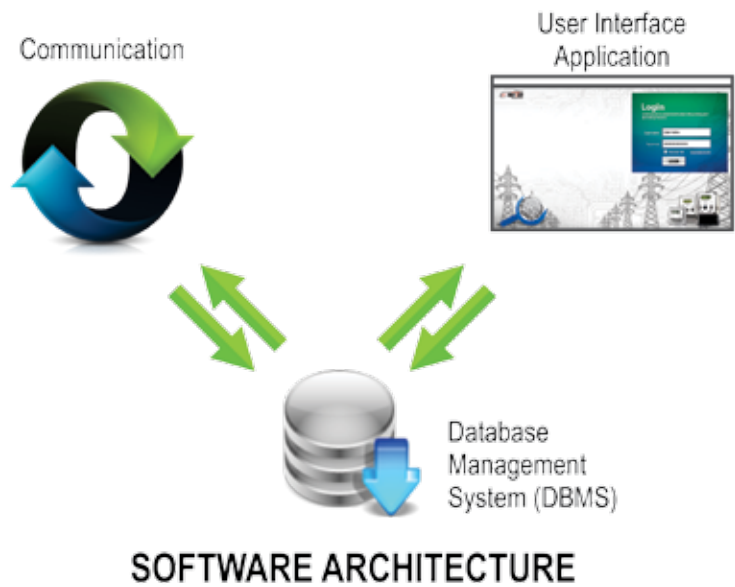
MTI SMART EYE MDC

MTI Smart Eye MDC tool is especially designed keeping in view the latest and up-coming technological trends in the metering industry. The system has been developed according to the best industry standards and practices in vogue. This is an important and useful tool that help utilities to have near real time monitoring of metering data and improvement in overall efficiency of the system. It can easily be scaled up by improving the base system with more capable and powerful hardware; and scaled out by integration and expansion of the base

system with addition of multiple parallel systems for increasing its capacity and capability. It collects metering data from the DLMS/COSEM and NTDC specifications compliant energy meters and stores into a database. The international as well as local standards and protocols fully enable this tool to be integrated with any other application or system that operates on same standards and protocols. This functionality



allows inter-operability and in turn enables multi-vendor solutions that have growing demand from the utilities all across the world.



COMMUNICATOR



The communicator is responsible for all communication with meters using different communication mediums. Not only it communicates but also stores the data in a central repository (database management system). It uses international standards based communication protocol "DLMS/COSEM". This protocol helps interoperability

by making it easier to incorporate energy meters and devices of other vendors. Moreover, it offers different modes of communication that are in line with the specialized local requirements. The data type(s) received using these modes are user-configurable. The features of each mode of communication are mentioned below.

- **On Schedule**
It has the following characteristics:
 - ♦ Minimum server load
 - ♦ Ideal for billing purposes
- **On Event and Alarm**
This communication mode has the following characteristics:
 - ♦ Suitable to track the overall performance of the system with minimum server load
 - ♦ Various alarms and events for different types of meters can be configured
- **Always Alive**
This mode has the following characteristics:
 - ♦ Ideal when frequent data updates are required (near real time communication)
 - ♦ Meters are always connected with the server
 - ♦ Ideal for Asset Health Management and Protection

MTI SMART EYE DESK (SED)

MTI Smart Eye Desk is a software that interfaces and processes data between MTI Galaxy and Smart Eye Mobile Software. It is located at the appointed sub-division office of the Distribution Company (LESCO) and offers a Graphical User Interface that intuitively guides the users to carry out day to day activities. This application not only downloads/ uploads data into HHU (Smart Eye Mobile) via USB, but also transfers and receives data to/from MTI Galaxy over a secure internet link. All the Sub-Division level tasks and reports can be generated/ performed using Smart Eye Desk.





DATA MANAGEMENT FOR SMART EYE DESK

Data collected from different locations can be managed in a more meaningful way through various types of desired operations. Users can easily import the raw data from Smart Eye Desk and retrieve it as and when required. Additionally, the users will have 24/7 access to the validated and estimated data with an option to export it to the billing system. Importing data is a unique feature of MTI Galaxy which can be performed using various communication channels e.g., Internet or Ethernet. For convenience the data can be automatically imported using FTP or it can be manually imported by selecting a data file and its path from the browser data list.

MTI SMART EYE MOBILE (SEM)

Smart Eye Mobile is a software especially designed for meter reading using HHU through RF and Photo capturing. Smart Eye Mobile gives users the convenience to view distinguished list of “read” and “unread” meters. The readings can be taken by either Meter Reference Number or Meter Serial Number (MSN). Using the lists, meter reader can easily take billing data and keep track of the work completed in each batch visit. Upon successful collection of the meter reading, MTI Smart Eye Mobile displays a list of billing data on the HHU screen. Once the data is captured, Smart Eye Mobile offers a list of standard discrepancies that a meter reader observes while taking the readings

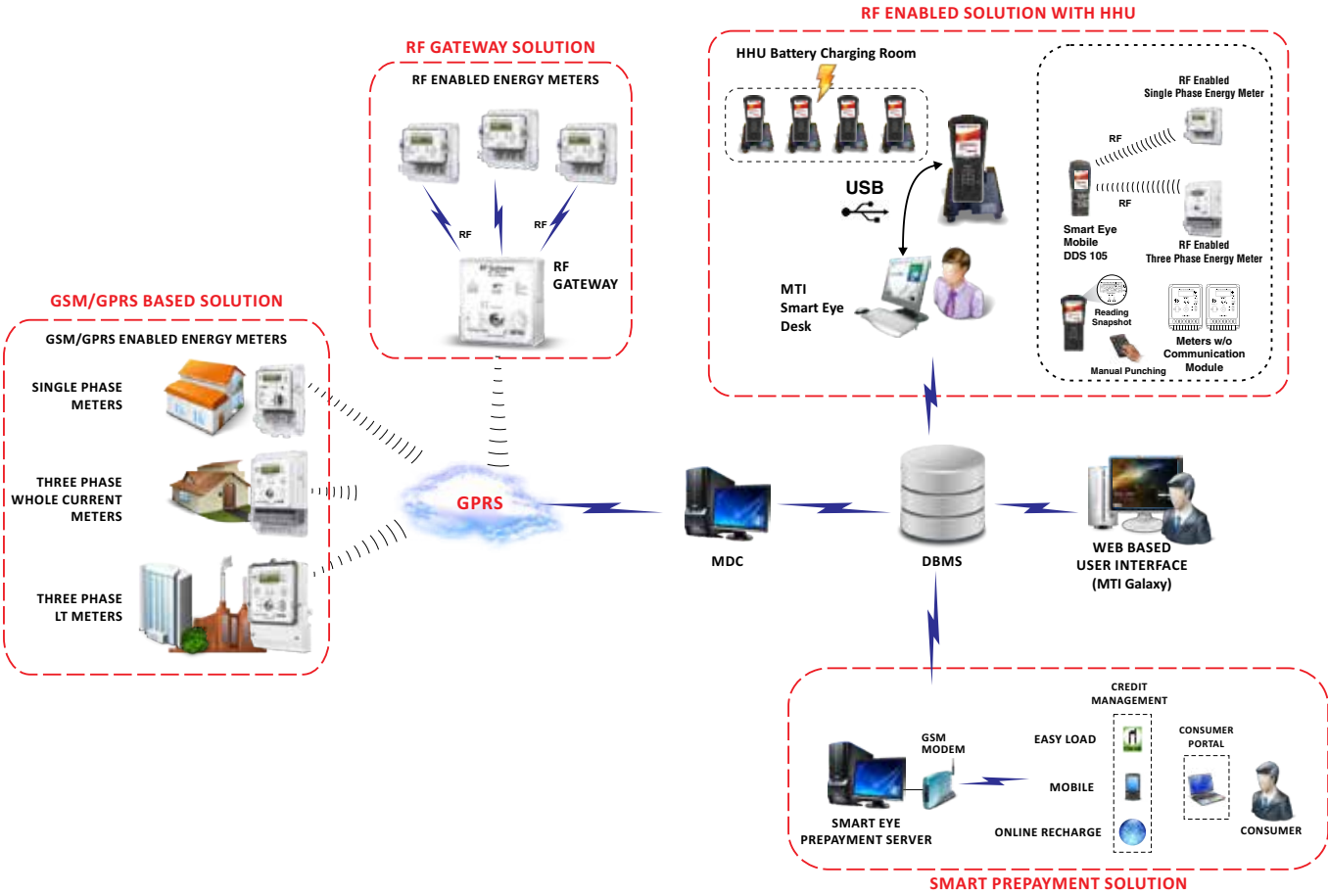
KEY FEATURE & FUNCTIONS

- Secure Login
- Upload/ Download of Data
- “Read” and “Unread” List of Meters
- RF/Photo/Manual Reading
- Provision to add New Meter in the field
- Data Display upon Collection
- Marking of Discrepancies



ADVANCED METERING INFRASTRUCTURE (AMI) SOLUTIONS

We have different solutions in our portfolio catering to different needs of the customer. Our current solutions are provided in the diagram below in the form of Hybrid architecture.



GSM/ GPRS BASED SOLUTION

The GPRS based energy meters transmit the metering data over GPRS cloud using GSM cellular network. This metering data is received by MTI Smart Eye MDC at a central datacenter. The data is saved in a database for later retrieval and analysis using MTI Galaxy. MTI Galaxy provides a web enabled graphical user interface to the end users. The users through a secure username and password can access the metering data using MTI Galaxy through internet preferably over VPN for different reporting options. Also, the data can be utilized for analysis purpose as per the user requirements. To ensure smooth operation of the system, MTI provides continues remote support. Moreover, through the remote support feature different patches and updates can also be applied to the system.

RF ENABLED SOLUTION WITH HHU

The meter readers are provided with Hand Held Units (HHUs) equipped with RF. The HHUs have a special meter reading software installed on them called Smart Eye Mobile, which enables the HHUs to communicate with the RF meters. The meter readers take the reading of meters through these Hand Held

Units and bring back the HHUs to the Sub-Division office. Here, the HHUs are attached through USB cable to a desktop application namely Smart Eye Desk. The readings are downloaded using Smart Eye Desk and then transferred to the database at the datacenter.



RF GATEWAY SOLUTION

The RF Gateway solution provides fully automatic meter reading without meter readers, Handhelds or expensive wiring. It allows to economically read large sub metering installations in high rises and congested locations. The RF Gateway collects meter readings using RF and then transmits those readings to the MDC over GPRS cloud using the cellular network.

SMART PRE-PAYMENT SOLUTION

MTI's Smart Prepayment Solution facilitates pay-as-you-go metering and billing system to the consumer allowing them to manage their payment for utility services in advance. Our prepayment solution is an amalgamation of server software and prepayment meters, which conforms to various local and international standards. Our state-of-the-art solution allows the utilities to collect money from the end consumers in advance which in turn improves cash flow and eliminates chances of bad debt. On the basis of number of units sold, the utilities can easily manage and plan the generation accordingly.

The meters installed at the designated location communicate and transmit the metering data over GPRS cloud. MTI Smart Eye MDC located at the central database saves the metering data in the database which can be used for later retrieval and analysis using MTI Galaxy.

In our solution, a prepayment server integrates with MDC, the main task of which is to collect data from the deployed meter. Installed prepayment server trans-

lates available pool of information into services as prepaid account maintenance of consumers; facilitating smooth functioning of recharging mechanism, and managing load connection/ disconnection at consumer end, etc.

The consumer can easily recharge its account through easy load, mobile and online recharge etc.



OUR SERVICES

The scope of our products is not limited to tangibles only. We offer complete end-to-end business solutions with all the associated services including, but not limited to, identifying customer needs, defining customized business & technical solutions, offering assistance in the implementation, providing comprehensive trainings and complete after sales support.

- AMI Implementation Services
- Design & Hosting Services

AMI IMPLEMENTATION SERVICES

Service Division



MTI has a dedicated Service Division for the implementation of complex AMI networks. With the help of our competent field staff, backed

by an in-house team of engineers and subject matter experts our aim is to set the standard for offering reliable services to our valued cus-

tomers. Our experienced teams are fully capable to provide services for designing, installation, verification/ validation, stabilization and cus-

customer support from meter maintenance right through to management and analysis of the metering data. MTI Service Division has the resources to provide AMI network and backend solution implementation services and offers outstanding customer support to achieve winning results.

Field Installations

Supplementing our state-of-the-art metering technology, MTI offers efficient meter installation services. Our dedicated and experienced field teams are professionally trained to provide field installations in the most challenging environments. Moreover, our dedicated regional offices back our installation



AMI Field Implementation Cell



An AMI project implementation involves much more than selecting a vendor and waiting for the technology to be deployed. It requires a scientifically proven implementation methodology based upon experience, expertise, right implementation tools and insight of market dynamics for successful execution and deployments. MTI has established a fully operational AMI field implementation cell facilitating installation, connection, communication/ configuration and signal strength verifications. Moreover, it also facilitates back-end network support, troubleshooting and handling of customer queries following a robust and mature methodology. Our qualified customer care specialists provide full

front line support to the customers for prompt solutions. Moreover, customer support request can be escalated to the second line support for detailed analysis and resolution by Product Development Unit (PDU). MTI's unparalleled implementation services is one of the major factor towards successful AMI implementations.

Our more than fifteen years of system implementation expertise and experience has allowed us to develop a technologically advanced real time project tracking tool for monitoring meter deployments and facilitating quality assurance in a timely manner.



Asset Deployment & Management Suit (ADMS)

To handle and manage complex AMI implementations in challenging environments, MTI utilizes an integrated Asset Deployment & Management Suit (ADMS) that provides live tracking, feedback and project status updates. It is a multi-faceted tool, developed by MTI, which facilitates multiple management tiers to deploy and gauge the progress of assets. It helps planning, moni-

toring and managing field network deployments by using a GIS based automatic mechanism for progress tracking utilizing dashboard views and progress graphs. This tool enables us to handle project implementations of varying scales ranging from few thousands to hundreds of thousands. The advantages of ADMS are that it provides efficient and streamlined processes,

savings in time and financial cost, live project updates and automated team management, deployment & verification functions. This capability is unique in Pakistan and MTI is the only company utilizing this scientific approach for AMI project implementations.

Design & Hosting Services

MicroTech Industries, with twenty two years of extensive research, development & innovation, offers AMI solutions that are designed to evolve as needs change and compatible with any standard & customized solution. Sketching the theoretical requirements from our customers, we comprehend them as a defined techni-

cal scope, where capacity building and operational efficiency are taken into major considerations. These prerequisites lead to the calculation of communication frequency and bandwidth requirement from network operators.

Design Services

Our experienced design engineers and subject matter experts have competence to model a robust and scalable architecture to support complex and large volume of smart

metering & adaptive communication network. MTI's AMI solution is well designed to handle future growth possibility & network expandability by rightly measuring

load, functional and environmental scalability. Also, our design experts cater virtualization to provide unmatched flexibility, performance, and utilization based on proven



standards and specifications. This eventually simplifies IT infrastructure, minimize costs, and improve system reliability. Nonetheless, it enhances adaptability of solution with regular design mentoring for new technologies leading to dynamic & secure market approach

with system integrity.

A solid disaster recovery and business continuity strategy is crucially planned to protect our data centers in the event of a natural disaster or other emergency that causes downtime. We have ability to manage completely separate set-up for

replicating the data to another independent geographical location, and keeping standby systems ready to take the role of the original systems when an outage or other failure occurs.

Pre-Production Environment

Following best practices towards implementation, MTI is equipped with Pre-production environment in its premises to give the solution team a procedural and tactical vision. This fulfills the design's need, planning, execution, and analysis of the different stages on the road to a successful deployment. This pre-production environment is where application units (software modules, servers, network managers, data schemas, and data content) are first assembled and then tested as an integrated suite. Based on Technical Architecture Design, operating systems and applications are configured & tested live to ensure actual network topology. The objective here is to assume relative stability of the integrated application and test its correctness and performance before moving it into customer production environment.



Customer Production Environment (In-house & Remote Hosting)

We offer comprehensive data center services including system analysis & management along with hosting & colocation services. These are directed towards transformation, coordination and establishing a secure and energy efficient infrastructure environments. We contribute to re-engineer and organize customer's data center infrastructure and align its capacity with their functional & business goals. In addition to address technical con-

straints & costing challenges, we understand and ensure data center infrastructure investments to their best potential.

Here we have capability for both In-house as well as remote support operations. These defined hosting services play an important role in consolidation and optimization of overall IT framework. This includes software updates from critical to routine and customized updates addressing bugs fixing, performance

optimization and feature addition respectively. We focus on centralization by developing the infrastructure footprint in our data center to reduce cost and any technical dependencies and complications. In addition, we implement optimum reusability and innovation utilization over different specialties by encouraging transparency, open sharing competence and "on-request" environment.



Business Operations

MTI's managed data center services augment our client's business operations by simplifying technology management, reducing CAPEX and optimizing OPEX by providing pay as you grow model. Having dedicated and skilled development teams, we make it easy to evolve new service plans according to customer's business requirements. This reduces time to market and enable them to beat the competition and reap first mover's advantage. Our intelligent support teams efficiently resolve technical issues

and ensure uninterrupted delivery of services, which reduces downtime and gives peace of mind to our clients that their IT infrastructure is being taken care by reliable teams. Staying competitive, we believe in vendor-neutral approach towards our customers which enables us to recommend the finest solutions that fit in their needs, with the most beneficial commercial proposition. Our strategic alignment with other vendors enables us to develop, test and prove the adaptability & operational efficiency by ensuring the

appropriate use of information, resources and reusable assets. Information Technology has the potential to contribute significantly in the power reforms process, particularly in the areas of distribution system, Aggregated Technical and commercial loss reduction & business process automation. In the present business environment, the power distribution utilities in Pakistan are initiating major reforms using IT as the key enabler for their sustainable growth and survival.



Plot # 2, Street # 2 Attari Industrial Estate, 18 KM. Ferozepur Road, Lahore, Pakistan.
PABX: +92-42-35990015, Tel: +92-42-35924781-4, Fax: +92-42-35924780
Email: marketing.info@mtlimited.com,
Web: www.mtlimited.com