

# *MasterSystem Technologies Ltd*



*TrackMaster*

# Corporate Profile

“The difference between guessing and knowing”

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## MasterSystem Technologies PNG

MasterSystem Technologies is a PNG owned and based company established as a provider of Technology Solutions to the Fleet, Transport, oil & gas and Petroleum sectors since 2009. The focus is on bringing tried and tested technology systems into the local market with the emphasis on local support in terms of full system backup including development of local skills for sustained support. MST is headquartered in Lae with offices in Port Moresby and Mt Hagen. We have a highly committed staff base of over 85 people comprising 90% PNG national employees across disciplines of management, human resources, information technology, administration, technical, training, customer liaison and fleet controllers.

MST has focused on a technology platform (FM–Mix Telematics) which has been developed, tried and tested in extreme conditions as well as having wide flexibility in hardware and software systems, to cater for a broad range of needs from complex to simple in nature. The FM technology has a long established international market platform including a strong base in Australia, Asia and Africa. MST is focused on expanding its operations locally to cater for the demand in a growing number of vehicles travelling on the private and public roads across PNG with a focus on providing control over fleet operations, thereby reducing vehicle incidents, improving fleet operations and enhancing fleet security. MST now services the fleet; fuel and technology support requirements of some of the top Blue Chip Companies in the Transport; Retail and Commercial sectors with an overall fleet of more than 3000 vehicles tracked.

The business has enjoyed rapid growth since commencing operations in 2009 and forecasted a turnover in 2018 of K15m to K20m PA. At least 70% of overall revenue is based on reoccurring income from the ongoing provision of management services and technical support of the systems provided by the company. The directors of MST are cognizant of the opportunities that exist for the business and the need for its future board to be structured in a manner that will facilitate rapid growth and expansion whilst at the same time meeting all the required financial and corporate covenants. A board structure has been designed to meet the needs of shareholders, to deliver high standards of corporate governance whilst at the same time enhance the capability of the organisation to meet its goals and targets.

Although our target sectors have changed as the company has matured over the years, MST prides itself in keeping abreast with fleet, refuelling and lubricant technology as it continues to advance. MST is evolving with new technology as it becomes available but our core values remain unchanged. All our solution partners bring combined experience of many years in the fleet, fuel and lubricant industry, with patented technology. From this MST has a customer focused approach to provide simple to use, yet highly effective solutions.

## Products and Services

Our range of technologies incorporate the name “Master” to indicate that it is the ultimate and most superior in its range of products and services. Our range includes products and services grouped under a common name. The MasterSystem Technologies structure incorporates the following divisions:

*F*leet*M*aster

*F*uel*M*aster

*O*il*M*aster

*P*etro*M*aster

*T*ech*M*aster

*T*rack*M*aster

## Customer Base

With small, humble beginnings MST has developed its business base. The firm started originally focused on the Transport Sector and the Highlands Highway and ended up with coverage of 90% of the commercial fleet on this route.

From this point the focus has expanded to the retail and general commercial fleets and is now expanding regionally across PNG. The base of the expansion has been to ensure that clients fleets are used in accordance with customer safety and their operational policies and procedures at all times, as well as ensuring security of personnel, fleet assets, tools and equipment.

Expansion into the control and tracking of fuel has come about through the need to control operating costs of fleet with fuel being a principal area of cost excess through mismanagement and shrinkage. Savings of up to 35% of fuel costs has been realised in many fleets where fuel control has been implemented. Our customer base includes;



## SOLUTIONS

## FleetMaster

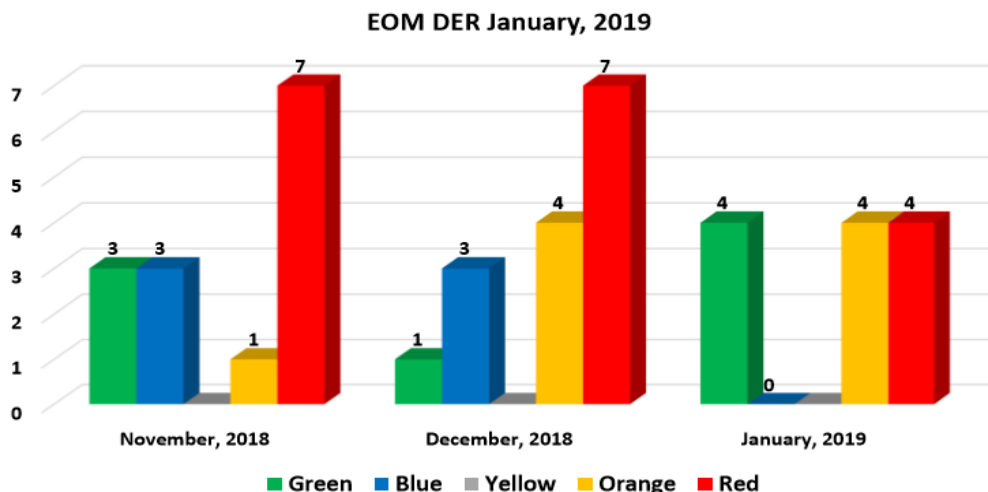
MasterSystem Technologies offers a full fleet and asset management solution, that is robust and fully customisable to suit any organisational needs. With productivity and efficiency in mind we holistically manage your vehicles and drivers to ensure you get the best out of your assets at the lowest possible running cost. The system capabilities include;

- Track and Trace
- Web Server Access & full Mapping
- Historic Tracking
- Supports mobile applications
- Trip downloads
- Driver and vehicle reporting
- Duress Button & Notification
- Speed Alerts
- Service and Maintenance Alerts
- Full Monitoring and Reporting
- Journey Management Planning
- Start Isolation for authorised drivers
- Speed Alert by Location
- SMS & Email Alerts on critical events
- Critical event – Harsh Cornering
- Critical event – Harsh Braking
- Critical event – Harsh Medium impact
- Critical event – Harsh Possible Accident
- Hands free voice communication
- On board camera (MVR)
- Genset Monitoring
- Fuel tank & or Pump Monitoring
- Remote shut down & lock down
- Fatigue Management and detection

### DATA COLLECTION & REPORTING

Allocated Fleet Controllers and Client Liaison Officers collect, analyse and compile detailed management reports covering all aspects of driver and fleet management. Reports are sent hourly, daily, weekly and monthly depending on client's requirements and we also customize reports for specific needs. The reports cover the full fleet and driver performance in any given time frame.

### TOTAL DRIVER PERFORMANCE INDEX





The system's goal is to provide management with asset protection through direct performance data on the fleet including vehicle and driver operation and performance as well as exceptions and key performance indicators.

Web based data interaction in real time provides the fleet operator with current tracking data for live control as well as a dynamic reporting facility covering all retrospective and real time events. The FleetMaster system provides the platform for security and wellbeing of the driver and transport asset as well as optimum performance leading to maximised security and return on investment in the fleet. FleetMaster service provides the fleet owner with assurance of true consistent value being added by this service.






## FATIGUE MANAGEMENT SYSTEM

The AlertMaster system is designed and developed to identify fatigued and distracted driving. It runs on a pupil identification technology that focuses on the driver's behaviour. The system can understand the state of the driver and alert fleet managers in real time for quick intervention.





-  ***Fatigue or substance induced impairment.***
-  ***Distraction or attention diversion.***
-  ***Driver out of camera view.***

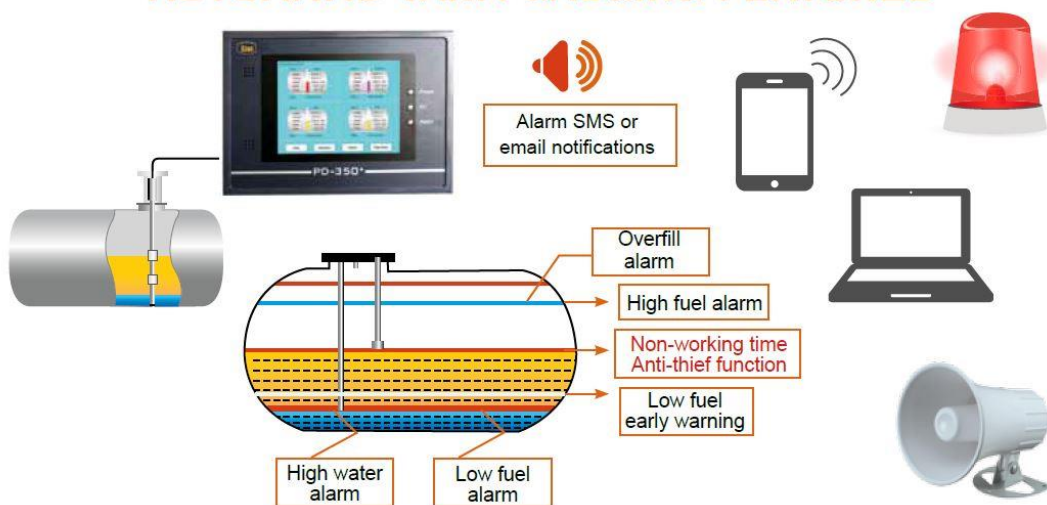
## FuelMaster

MasterSystem Technologies have developed and tested a full fuel management system that covers all parameters of fuel usage and consumption, from when the fuel is delivered to how much is actually burned in a vehicle or plant. We provide the necessary tools to manage and bridge the gap between fuel suppliers and consumers. Our system is designed with flexibility and scalability in mind to ensure that we are equipped to cater for different companies and different operations.

### AUTOMATIC TANK GAUGING

- Automated volume, water, temperature and mm readings. Providing real time levels via the MST Interface.
- Ideal for retail service stations as well as commercial bulk fuel consumers.
- ATG limits human intervention and irregular readings.
- When combining ATG with ST500 dispensing control, complete site reconciliations are produced for a comprehensive reporting structure.

### AUTOMATIC TANK GAUGING FEATURES



## FUEL CONSUMPTION ANALYSIS



- MST has expanded to provide Clients with detailed consumption viewing of fuel
- Clients can monitor on board fuel consuming equipment and on board fuel tanks by use of independent probes inside HDV or equipment fuel tanks.
- Generator levels and consumption can be monitored separately and effectively.
- Combining it with our fleet management technology enables a geolocation of the vehicle / equipment at the time of consumption as well as driver information.

## ST 500 PUMP CONTROLLER



- The ST500 pump will automate recording of transactional data by authorising vehicles / drivers / attendants / operators to dispense fuel.
- The ST500 pump controllers post the recorded data to the website for reporting via website.

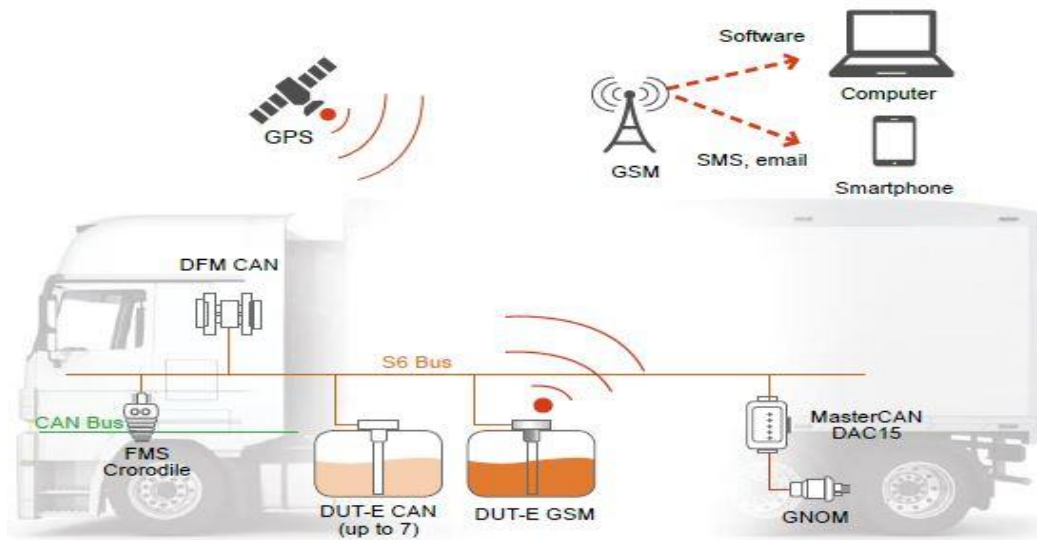
## ONLINE INTERFACE



- Smaller entities can use the MST interface to manually capture transactional data, fuel deliveries, opening and closing dips etc. MST's interface will produce reports without having hardware (capital outlay) upfront.
- A firm operational input is required for the desired reporting output.

## IN VEHICLE FUEL MONITORING

In Vehicle Fuel Monitoring is done through fuel probes/sensors that are installed in the vehicle's fuel tanks. The probes are calibrated and linked through a summater which balances and feeds fuel information to our tracking unit/OBC. This information is uploaded in real-time onto our interface for viewing. MST offers a 24/7 control room that monitors and reports on fuel usage and discrepancies in fuel issued, fuel received and fuel transferred.

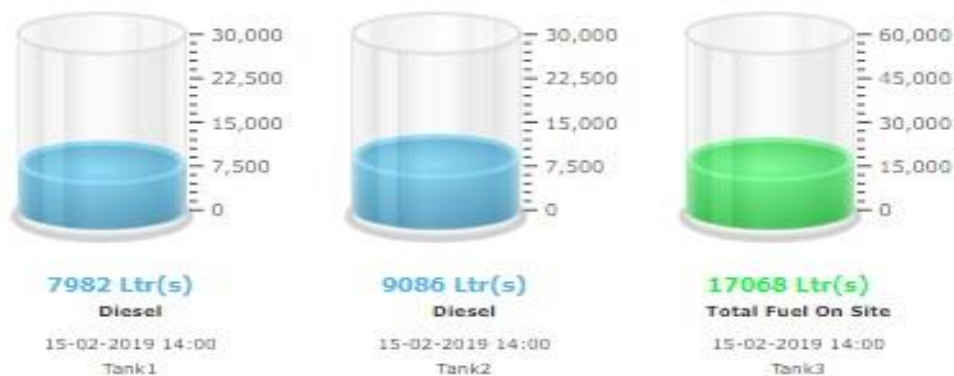


## FUEL MONITORING & REPORTING

### REPORTING

- Site reconciliation
- Multiple site reconciliation
- Current tank levels
- Historical levels
- Vehicle summary
- Vehicle efficiencies
- Vehicle efficiencies
- All sites refuelling combined for total efficiencies
- Client can instantly activate/deactivate or load new drivers/vehicles online
- Clients receive an unlimited amount of website users with or without restrictions

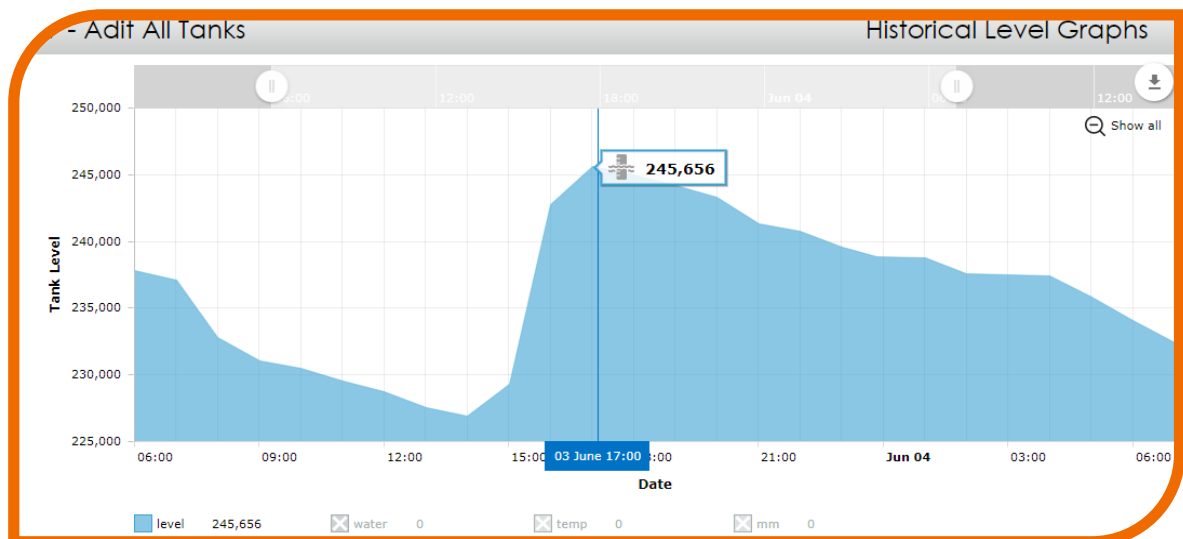
### AUTOMATIC TANK GAUGING



### SITE RECONCILIATIONS

Date	Previous Day Closing Dip	Deliveries	Dispensing Pump 2	Theoretical Closing Bal	Dip Reading Tank 1	Daily Variance	Percentage Variance	Cumulative Variance
2019-05-27	65,466.48		3,939.72	61,526.76	61,500.00	-26.76	0.0%	-26.76
2019-05-28	61,500.00		3,009.06	58,490.94	58,500.00	9.06	0.0%	-17.70
2019-05-29	58,500.00		3,753.25	54,746.75	54,800.00	53.25	0.1%	35.55
2019-05-30	54,800.00		2,580.44	52,219.56	52,200.00	-19.56	0.0%	15.99
2019-05-31	52,200.00		3,068.24	49,131.76	49,200.00	68.24	0.1%	84.23
2019-06-01	49,200.00		885.86	48,314.14	48,300.00	-14.14	0.0%	70.09
2019-06-02	48,300.00	20,000.00		68,300.00	68,300.00	0.00	0.0%	70.09
2019-06-03	68,300.00		3,969.87	64,330.13	64,300.00	-30.13	0.0%	39.96
Total	65,466.48	20,000.00	21,206.44	64,260.04	64,300.00	39.96	0.1%	70.09

### HISTORICAL VIEWING



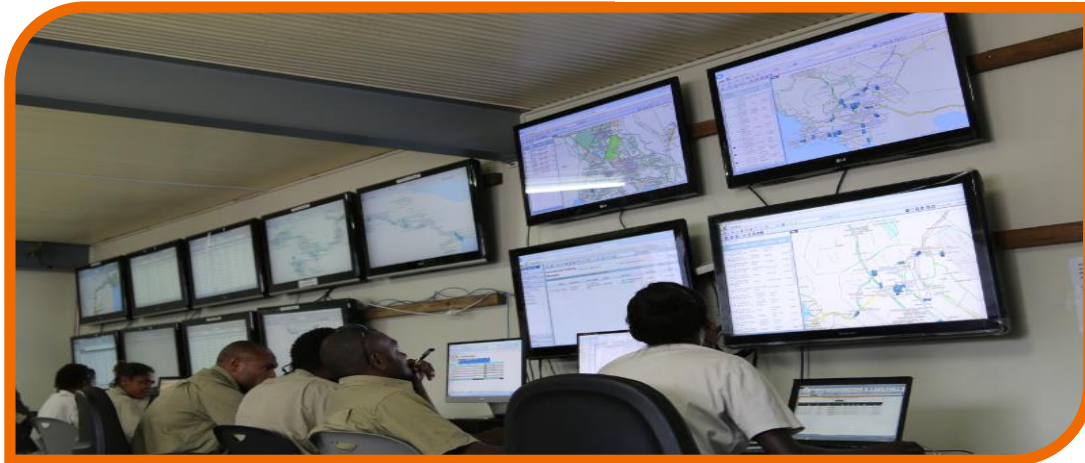
### IN VEHICLE FUEL MONITORING





## MONITORING

- 24/7 Monitoring of fuel transactions
- Live tank level viewing
- Syphoning
- Refuelling
- Bulk Transfers
- Data matching and reconciliation
- Fuel Leakage
- Water present in fuel
- Fuel demand planning
- Multiple tank monitoring



MasterSystem Technologies offers an oil cleaning and rejuvenation solution that is focused on the recycling and re-use of Crank, Hydraulic and Transmission oils. The focus is on the environment with the emphasis on minimising improper disposal and spillage of oil. We specialize in On and Offsite Oil Purification, Recycling, Condition Monitoring, Customized Preventative Maintenance Schemes and Oil Analysis as well as supplying an Extensive Range of premium Quality Lubricants and Equipment to ensure Optimal Performance for customer's vehicles and machines.

## OIL SAMPLING & ANALYSIS

External filtration systems are installed on machinery and equipment as an added oil filtration system. It traps metals and other contaminants targeting particles of 5 microns and over. These particles cause the most damage to machine and equipment elements. The core purpose of the external filtration system is to prolong oil life hence prolonging the machinery/equipment life. Because it is externally installed it is easy to access and analyse for sampling and testing purposes.

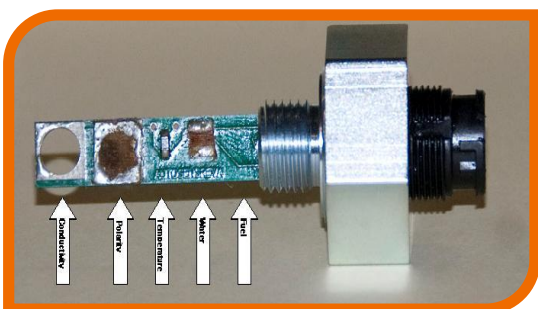


## Analysing Oil

We take oil samples and then analyse the contaminants in order to process, recycle and rejuvenate used oil, back to usable oil. The analysing process is done through microscopic cameras that are used on the filters to see what contaminants are present in the oil. Pictures are captured and tests are conducted.



We are also capable of remotely sampling oil to provide detailed reports on the life of the oil. When it needs to be changed, what contaminants are in the oil and the life of the oil. Manual sampling can be time consuming and by the time the data gets to the client it is already historical data. Remote sampling eliminates this process by outputting real time information.



## SPILL KITS AND BUNDINGS

As part of the OilMaster Solution, we provide bundings and spill kits that help in the process of keeping a safe and clean working environment as well as controlling spillage.





## TechMaster

MasterSystem Technologies provides under its TechMaster Solution, Closed Circuit Television Surveillance (CCTV), Door Access Systems and Fire Alarms. Designed as a modular package the CCTV/Surveillance System incorporates a number of modern technologies. Combined with our commercial access control system, both give high end results to users.

### CLOSED CIRCUIT TELEVISION

We have a wide range of cameras to cater for basic to complex monitoring and surveillance with options for wireless and wired systems. Some of the cameras that we have on offer include;

**Indoor Bullets**



**Outdoor Bullets**



**Ceiling Domes**



**Outdoor Domes**



**Panoramic Fisheye**



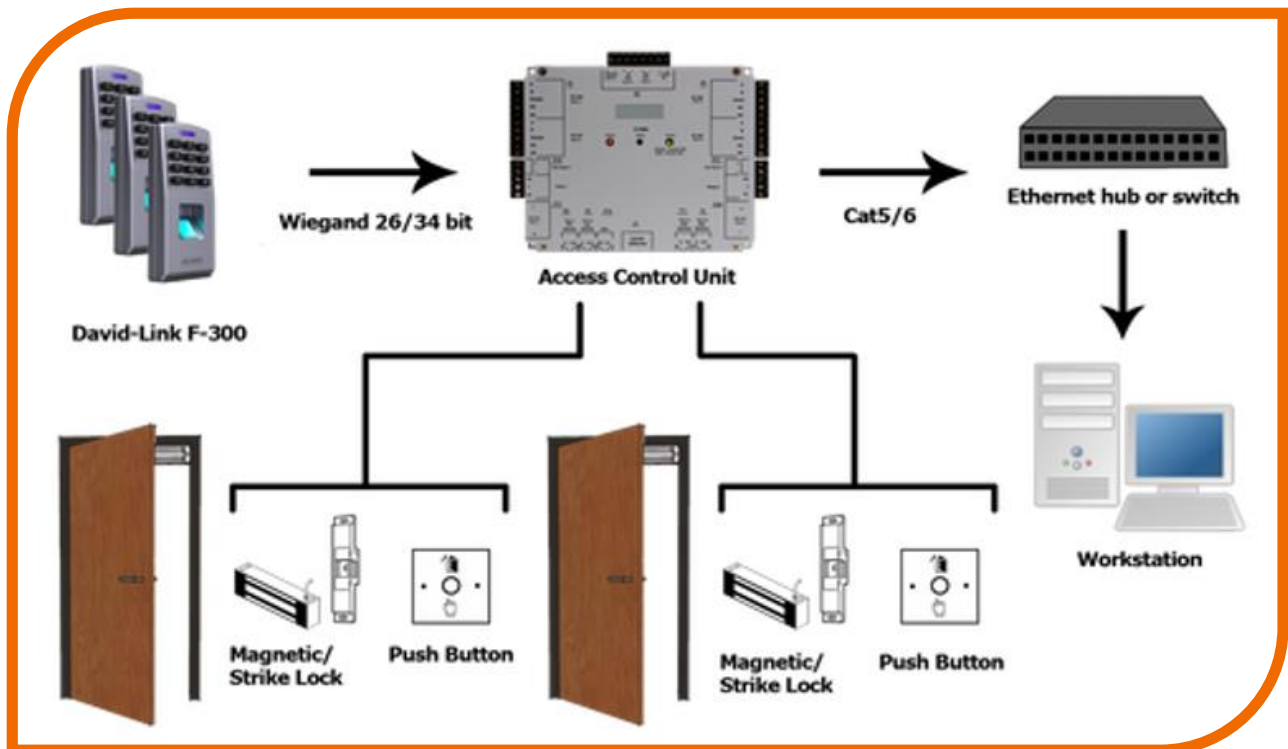
**Pan, Tilt & Zoom/ PTZ**



## DOOR ACCESS SYSTEM

The door access control is used to control the authorization of personnel that are entering and exiting a premises. It is installed with a controller that stores information for all users, only granting access to users that are recognized and accepted in the system. This works with a card reader or fingerprint scanning device that registers individual user information which is received by the controller and processed for access grant. The MST Access Control System involves identity and access management systems. These systems provide,

- access control software,
- user database
- management tools for access control policies,
- auditing and enforcement.
- Log Reports



## TrackMaster

We have a range of systems under our TrackMaster Solution that complement our other solutions and we continue to research technological developments that excels and supports our current systems. Some of these include, Self or Remote tracking of vehicles, plant, personnel, assets, stock in transit, containers and trailers.

### ASSET TRACKING

Plug and Play, GSM, Container and Trailer trackers. These trackers are durable and easy to disguise, with a battery life of 1800 days. We also have container locks which are container trackers, programmed to notify clients of any possible tampering and opening of containers outside the predefined location.



### TEMPERATURE MONITORING

Our temperature monitoring system works with critical temperature warning alerts for reefer and freezer containers. It is critical to monitor goods that are perishable, especially the ones that are going back and forth on the National highway. Our development of the temperature monitoring system is aimed at giving control back to our clients enabling them to manage their goods.



## PERSONNEL TRACKING

We offer, GPS & GSM personnel trackers for recreational, personal and professional use. Safety of workers, especially the ones out in the fields is the primary focus for our trackers. Our trackers can also be used for professional and personal tracking needs.



## PetroMaster

MasterSystem Technologies offers, Fuel handling equipment, supply and installation of fuel tanks and fuel farms, diesel fuel polishing and treatment and contaminated fuel cleaning.

We have an engineering department that specialises in the fabrication of fuel tanks, safety railings and all other fuel fabrication needs.





We also filter and clean contaminated fuel tanks with added diesel treatment and polishing.



## Future Growth

The integration of the fuel and fleet system to provide control in one holistic platform provides a new market base that sets MST apart from the conventional GPS and or Fuel Management System markets.

With the opening and setup of MasterSystems in Port Moresby region we are now able to compete with companies that have been dominant in the region. With MST's operation of 350 connections in the area, we are now extremely competitive in Port Moresby. We project growth in excess of 100% in existing and new clients in Port Moresby with the opening of our 24/7 call centre and fleet control room.

## Growth Summary

The key to achieving this growth is not as much market acceptance as MST capacity in structure manpower and capital. The projected grown capacity represents a potential 100% per year for the next two years if

- Capacity exists in MST
- Margins are acceptable
- Overheads are managed
- Quality is maintained

Market could grow further with the development of strategic partnerships with key players in our structure including:

- All Cellular and Telecommunications Locally and Globally
- Pure Oil Australia
- Fuel Management Africa
- Mix Telematics

We currently have a business development and technology development arm focused on keeping MST Competitive and most importantly to grow the company.