(1210197-D)

KAF Idea Tech Sdn. Bhd.
"Your Easy Solution"

COMPANY PROFILE

KAF IDEA TECH SDN. BHD.

Establish since 2015

Edition 2025

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(1210197-D)

"Your Easy Solution"

Attention:

Contents

Contents

KAF Idea Tech Sdn. Bhd.
"Your Easy Solution"

Message from Managing Director

We Lead the Future! It has been my pleasure to serve as a managing director of KAF IDEA TECH Sdn. Bhd. for the current and past years. Looking back to 13 years ago before this company were established, my goal is to ensure that all issues for the profession are dealt with fairly and responsibly, accountably and transparent primarily through proper governance and management. Healthy discussions and decision-making processes allow us to effectively serve the organizations, our members, and by extension, the KAF Idea Tech Sdn. Bhd. My belief is that we accomplished this and then we hope for the future. We are clear in our minds that we did not intend to build Traffic lighting/ Construction Company. We wanted to be different. The 'We make it happen" tag was certainly not for us. Looking back, I can say, at the risk of sounding immodest, that we not only dreamed big, we dreamed to be different.

Being proud of our achievements, we will continue to further enhance our commitment and capabilities in the Traffic Lighting and Construction Industry with integrity and strive for business excellence.

We understand fully the objectives of the assignments, and the challenges facing the implementation of projects in Malaysia. Simply put, our Clients wish to implement projects that will positively impact the lives of the people of Kuantan Pahang, and they will look to KAF to ensure that this objective is met. Project Management is something that KAF team has experienced hundreds of times throughout Malaysia. Quality is our life; we have full standards for work quality, time management and as well as for personal and site safety.

Without our people, KAF would not be what it is today; I cannot give enough credit to the many great colleagues that have been part of the KAF past and present. We have a great team of professional who are talent, smart, and the most honest and accountable; 'pay attention to details and love their people and communities. We strive to build and maintain strong long term relationships with our staff, clients, and communities, based on integrity and respect.

The result in following pages belong to key contributors, so I would like to to take this opportunity to recognize the exceptional collaboration with our Clients, Government, International Organizations and local partners. We deeply value these partnerships, without which these results would not have been possible. I am confident that these partnerships and our regional KAF development knowledge will lead to more improvements in the lives of the Pahang people and communities in the years ahead.

We work to build Kuantan Pahang, by gathering and implementing international practices to help guide the development of Pahang. 'We understand that all successful projects are founded on the honest people responsible for the project.

MR. ANWARUL ALAM
MANAGING DIRECTOR
KAF IDEA TECH SDN. BHD.

Welcome to Our Company

KAF Idea Tech Sdn. Bhd. is one of the rising Malaysian-owned companies which specialized in developing traffic technology. and has been registered in with SSM (Suruhanjaya Syarikat Malaysia), leading, fast growing, multi-disciplinary organization head quartered in Kuantan Pahang, Malaysia dedicated to improving the quality of life for Pahang citizens. All products (hardware and software) are developed and produced in-house.

KAF product lines cover a wide range of road traffic technologies. They include traffic control products, traffic detection, AI technologies , intelligent transportation system, traffic light maintenance support, traffic violation systems. KAF also working in field of construction, such as building construction, electrical & electronic engineering, drainage cleaning and gross cutting etc.

The services offered represent years of comprehensive project experience in equipment to check the traffic light control system so that they can send warning signal to the system supervisor and the control centre when the equipment is out of order so that the person responsible for them will be well informed and can solve the problem right away. Lighting equipment on roads, solid waste management, sewage, drainage, ditch cleaning and repairing, construction of small public infrastructure learning by doing projects such as construction supervision, rehabilitation of roads, greenery and parks, women parks, sidewalks, procurement assistance and associated areas for government and private sector clients.

With years of practice working with different government departments, Kuantan local governments, KAF is committed to bridging that gap, working with Pahang government's, subcontractors and stakeholders to ensure that promises made are promises kept.

KAF Team has consistently and continuously provided the highest quality staffing support to Government and Local Pahang through our company. Our in-house management team collectively represents 2 years' staffing traffic lighting and construction experience and specializes in successfully delivering projects and service delivery, light industrial and professional personnel to contractors, and local government and non-government agencies.

This work provided the team more than two years of working with Pahang Majlis Daerah Rompin, Majlis Perbandaran Kuantan. In traffic lights and constructing projects, facilities and public works prior to establishing KAF.

KAF team, traffic lights technician, supervisors, quality Inspectors, Surveyors, technicians, foremen, subcontractors and suppliers work together for the transparent and highest quality of services and projects delivery. KAF existing team maintains a strong foundation of trust and mutual respect generated through positive relationships with our voluble clients.

The traffic sign board to warn drivers on many locations by the LED technology which is the continued policy to save energy, KAF Traditionally traffic control companies have been engaged to supply many Traffic Management services. We are different; we are not a traffic control company. We are an independent traffic management company - this means we can offer you impartial and professional start to finish solutions for your traffic management requirements. Our aim is to do things differently.

Train and qualify your people to do some, or all of your own traffic management. Purchase your own equipment through KAF and save money outsourcing. At Traffic Management People (KAF) we have few business sections all focussed on delivering first class responsive customer service with no surprises.

We pride ourselves on our 'smart' approach to delivering projects. In everything we do, we work to ensure our clients obtain the optimal outcome possible.

We invite you to visit our web site www.kaf2u.com and request that you consider KAF Idea Tech as a traffic lights and construction work partner for any planned infrastructure projects.

Company Information

DETAILS

NAME OF THE COMPANY	:	KAF IDEA TECH SDN. BHD.
TYPE OF BUSINESS	:	TRAFFIC LIGHT AND CONSTRUCTION FEILD
TYPE OF COMPANY	:	PRIVATE
ADDRESS	:	NO. 102, GROUND FLOOR & LEVEL 1, JALAN BUKIT UBI, 25200 KUANTAN, PAHANG DARUL MAKMUR
EMAIL	:	info@kaf2u.com
MANAGEMENT EMAIL	:	yan@kaf2u.com /anwar@kaf2u.com
WEBSITE	:	www.kaf2u.com
CONTACT N0	:	09-5315333/ 019-2589137
REGISTRATION NO.	:	(1210197-D)
COMPANY SIZE	:	MEDIUM
SUMMARY OF MAIN BUSINESS	:	TRAFFIC LIGHT SPECIALIST, MANUFACTURING AND CONSTRUCTION: TRAFFIC LIGHTS SYSTEM MANUFACTURING, TRAFFIC LIGHT MAINTENANCE SUPPORT, CONSTRUCTION, ELECTRICAL AND ELECTRONIC ENGINEERING.
CHAIRPERSON NAME	:	IRIYANTI BINTI KUSAIRI
DIRECTOR NAME	:	ANWARUL ALAM
BANK ACCOUNT DETAILS	:	ACC NAME - KAF IDEA TECH SDN. BHD. : ACC NO # **04900830486** HONG LEONG BANK, JALAN TUN ISMAIL, KUANTAN PAHANG
WORKING LANGUAGE	:	MALAY, ENGLISH, URDU
NUMBER OF EMPLOYEES	:	40 EMPLOYEES (PERMANENT WORKERS INCLUDED OFFICE PERSON, OPERATIONAL SUPPORT, TECHNICAL SUPPORT, GENARAL WORKERS AND CONTRACT WORKERS)
CONLICT OF INTEREST	:	KAF severely avoid conflicts of interest in the work that we do for our clients or even the appearance of conflicts of interest. Conflicts of interest present legal risks, particularly where we have assumed contractual obligations to identify and prevent such conflicts. Preventing conflicts of interest also is critical to maintaining the integrity of our business, because all of our clients are entitled to feel confident that our work on their behalf will not be compromised by other competing interests.

Mission, Vision and Core Value

OUR MISSION

To procure projects at competitive pricing. Provide safe working conditions and deliver quality work within responsible time frame. To build strong relationships and provide cost effective Engineering and structural solutions. We provide our clients with the highest quality engineering and scientific solutions to meet their technical needs. To provide efficient designs and project management in Traffic lights and Construction projects to achieve the Clients expectations in accordance with the set international standards and the local regulations.

We are a highly qualified, experienced and dedicated team, having multidisciplinary professional, technical and field service capabilities. To fulfil our mission, we perpetuate a legacy of individual and collective accomplishments by effectively applying our talents and resources, fostering and supporting a high quality of work life and a caring environment which extends beyond the work place, and collectively practicing a "can-do" approach.

OUR VISION

To be a respectable traffic lights and building contractor delivering beyond expectation, always. To be a quality technical organization through research and utilization of technology. To be regarded as an organization that seeks and offers excellence in traffic light software planning, construction and project management. Our vision is to be the best technical traffic light and Construction Company in Pahang--in the our customers and clients, shareholders, communities and people. We expect and demand the best we have to offer by always keeping KAF's values top of mind.

OUR VALUE

To maintain excellent interpersonal relationships with our clients and always strive hard to transform their dreams and aspirations into reality. Our core values ensure our clients expectations are met or exceeded on all projects delivered.

Client Satisfaction: We provide quality services in a proactive manner, with responsive communication and a "can do" and "smart" attitude. We Listen: We listen to all project parties to ensure we understand the issues at hand & all project participants' needs.

We Communicate: We invest in the continued training and development of our staff on both a behavioural and technical level. This ensures the successful resolution of project issues through conversation. Our systems and procedures allow us to communicate clearly and efficiently to provide proactive solutions to project issues.

We take Responsibility: We take responsibility for our communication. That is, we do what we said we were going to do, by the time we said we would do it. Ingenuity. We utilize our experience, embracing research and technology, to develop practical alternatives and advances.

Integrity: We adhere to the highest standards of business ethics and professional conduct Teamwork: Our team is our most valuable resource and the main reason for our success. When you hire us, our goal is to make sure you are satisfied every step of the way. We give to you our loyalty, enthusiasm, knowledge and personal commitment to excellence in a caring individualized manner. We work together to achieve common goals with dedication and accountability,

Experience, Confidence, and Trust. Community: We love our people and support our community through volunteer efforts, corporate giving, educational programs & participation in project selection, planning and designing.
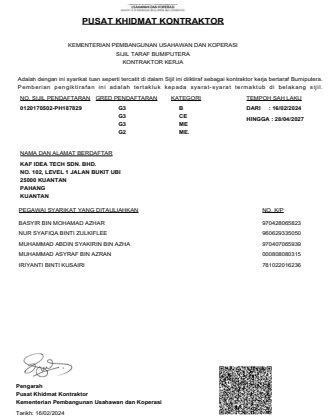
Company Certificate

A testament of our satifcation via recognition from various governmental, quasi-governmental and other authorites bodies.
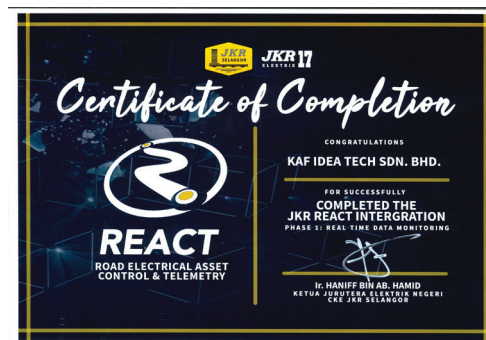

MAJLIS BANDARAYA KUANTAN

CKE JKR NEGERI KELANTAN

PUSAT KHIDMAT KONTRAKTOR

CKE JKR NEGERI PAHANG

CKE JKR SELANGOR (REACT)
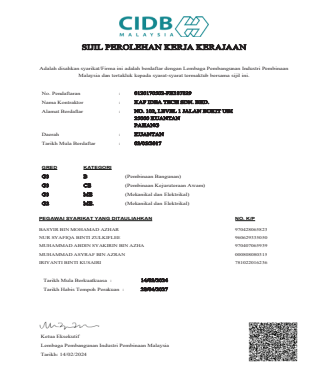

CKE JKR NEGERI PAHANG

INTERNATIONAL CONTRIBUTION

CKE JKR NEGERI PAHANG

SURUHANJAYA TENAGA

CIDB CERTIFICATE

MAJLIS DAERAH JERANTUT
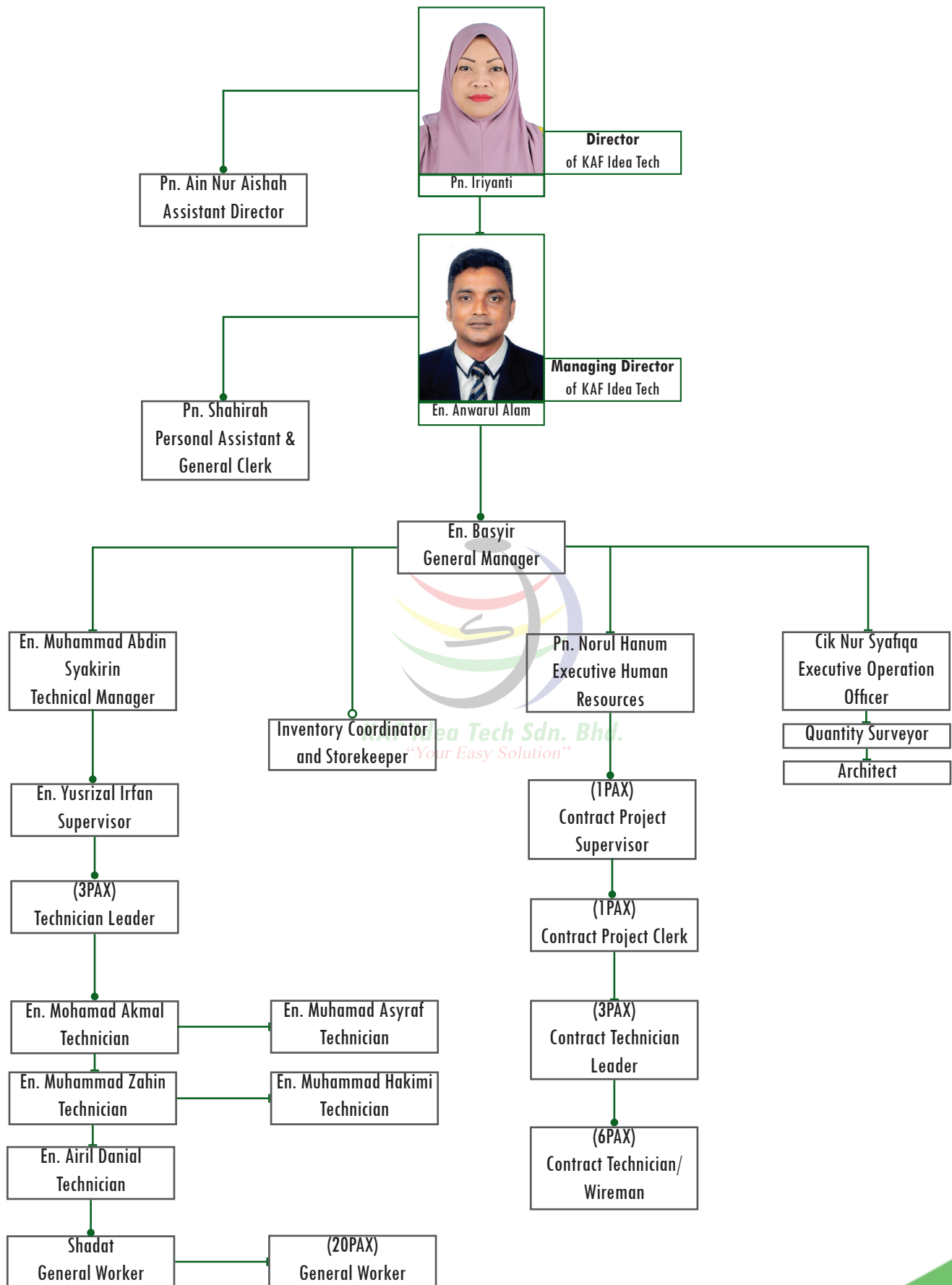

SURUHANJAYA SYARIKAT MALAYISIA

KEMENTERIAN KEWANGAN MALAYSIA

MAJLIS PERBANDARAN KUANTAN

Company Structure

Director
of KAF Idea Tech
Pn. Iriyanti

Pn. Ain Nur Aishah
Assistant Director

Managing Director
of KAF Idea Tech
En. Anwarul Alam

Pn. Shahirah
Personal Assistant &
General Clerk

En. Basyir
General Manager

En. Muhammad Abdin
Syakirin
Technical Manager

Inventory Coordinator
and Storekeeper

Pn. Norul Hanum
Executive Human
Resources

Cik Nur Syafiqa
Executive Operation
Officer

Quantity Surveyor

Architect

En. Yusrizal Irfan
Supervisor

(1PAX)
Contract Project
Supervisor

(3PAX)
Technician Leader

(1PAX)
Contract Project Clerk

En. Mohamad Akmal
Technician

En. Muhamad Asyraf
Technician

(3PAX)
Contract Technician
Leader

En. Muhammad Zahin
Technician

En. Muhammad Hakimi
Technician

(6PAX)
Contract Technician/
Wireman

En. Airil Danial
Technician

Shadat
General Worker

(20PAX)
General Worker

Our Clients

We has served government agencies, educational institutions, and corporate private sectors in supplying and services. Below are some of the lists of our client that we have served or currently in serving nationally.

Sister Company:-

TECHNOLOGY

Exclusive Distributor:-

DSE
DYNAMIC SIGNAL ENTERPRISE

Partner:-

MNE
MNE TECHNOLOGY

KAF'S Products and Services

Our product category consist our own product manufacture and our service provider for new development system

1

KAF Intelligent Traffic Adaptive Control (iTAC) System

We design, supply and Install for signalized Traffic Light Control System product & also provide others Traffic Light Accessories product.

2

KAF XIM Adaptive Intelligent Transportation System (KAF XAITS)

Expertise ties in tailored-design supply, maintenance and deployment product.
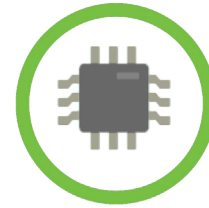
3

SCADA & Control System Design Solution

Providing comprehensive SCADA solutions services for Infrastructure Monitoring and Control, Waste Water Treatment Plant, Industrial Equipment Monitoring, Telemetry Control and Management.

4

Embedded System Design & Development

Offer Product Prototyping, Testing JIG, Schematic level designing, PCB Layout designing and PCB assembly services.

5

Embedded Software Development

Firmware development for microcontroller applications and Ladder writing for PLC application services.

6

Software Development Solution

Window desktop application, Web Application, Mobile Application and HMI/MHI Development services.

KAF'S Product Category

KAF Intelligent Traffic Adaptive Control (iTAC) System

These product categories include some major product of our company such as below:-

- KAF iTAC Intelligent Traffic Controller
- KAF iTAC Auxiliary Traffic Signal Controller
- KAF iTAC Wireless Traffic Signal Controller
- KAF iTAC Programmer

Intelligent Transportation System

These product categories include some major products of our company such as below:-

- KAF XAITS - (Traffic monitoring, controlling, directing, planning, recommending and central data hub solution)
- iTraffiCam - (Ai Camera: Collect data, analysis data and provide detector)
- KAF Go-Green Link - (An establish Synchronization/Linking in a close coupled locality or using IOT)
- Traffic Light System Alert - (SMS, Whatsapp and other related apps)

Traffic Light Accessories

These product categories include some products related to our traffic light job scope, the product are listed below:-

- Vehicle digital Countdown Timer - (Re-Branding , distributor, supply and Install)
- Wireless Vehicle Detector(WVD) - (Re-Branding, distributor, supply and Install)
- Video Vehicle Detector(VVD) - (Re-Branding, distributor, supply and Install)
- Loop Sensor. (Supply and Install)
- Aspect (Signal Head) - (Re-Branding , distributor, supply and Install)
- Uninterruptible Power Supply (UPS) - (Supply and Install)

Traffic Light Control System
KAF iTAC Intelligent Traffic Controller

KAF iTAC PRO Traffic Signal Controller

Key Features :-

Remote configuration & setting

Low maintenance cost

Flexible system design

Lower carbon emissions

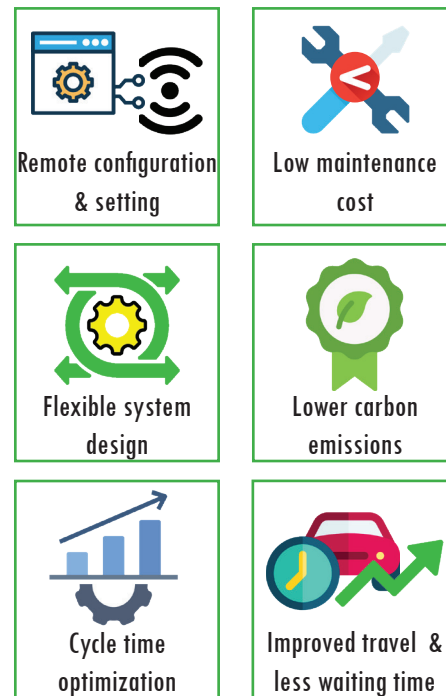Cycle time optimization

Improved travel & less waiting time

KAF i-TAC is microprocessor based intelligent traffic signal controller design to control from small size intersection to large size intersections with the maximum throughput and efficiency. KAF i-TAC Traffic Controller is incorporated with Fixed time mode, Multiplan mode, Vehicle Actuated mode, Multiplan Vehicle Actuated mode, Police Control mode, UTC-link mode, Pelican mode, Integrated Pelican mode, Grid Connected mode, Flashing Amber mode, Active Green Link mode, KAF XAITS Link mode of operations, can integrated with the latest JKR system (React), (STL) and various mode of digital countdown operations.

Operational Specifications

MICROPROCESSOR	Microprocessor based 32 bit
SIGNAL GROUP	Available in 4,8, 12,16,20 signal group configurations
PEDESTRIAN OR VEHICLE PHASE	Flow control up to 10 phase pedestrian or vehicle
VEHICLE DETECTION INPUTS	Vehicle detection inputs up to 16 inputs
DIGITAL COUNTDOWN COUNTER COMPATIBILITY*	Provide Non-Va, Semi VA and Full VA data to control countdown operating in: i) Dash ii) Skip Phase Jump Down
COUNTDOWN COMMUNICATION	Support wireless or wired
DIGITAL INPUTS	48 digital inputs
PELICAN DEMAND	Pelican demand up to 12 inputs
UPS OR SOLAR POWER BACKUP SYSTEM MODULE	Compatible (Depends on client requirement)
DATA LOG CAPACITY	Capacity up to 3 years
ON BOARD AND EXTERNAL MEMORY	8MB with backup battery onboard and provision SD Card Slot
FAULT LOG CAPACITY	Capacity up to 10 years

|	
ONBOARD TOGGLE SWITCH	Switch for forcing amber flashing and reset detection available onboard
CONFLICT AND MONITORING COMPATIBALITY	(Green on Green Conflict Monitoring), (Green - Yellow Conflict Monitoring), (Green - Red Conflict Monitoring), (Red - Yellow Conflict Monitoring), (Conflicting red/amber/green absence monitoring), (Safety action backup plan to flashing amber and blanking traffic light signal lamps), (Signal Lamp Fuse Blown)
AUTOMATIC REVERT	Automatic revert to multiplan time mode for any detection failure such as loop sensor detection, WVD detection and etc.
PROGRAMMING SOFTWARE	i-TAC Programming Software (Windows/Android/IOS)
PPU CONNECTION INTERFACE	USB/ RS-485/ RS-232
TRAFFIC LIGHT MANAGEMENT SYSTEM	KAF XAITS/REACT/STL
VEHICLE DETECTION	Using inductive Loops sensor (Magnetic wave), Wireless vehicle detection (Motion sensor), CCTV (Image processing detection).
COMUNICATION METHODS TO CONTROL CENTRE	LTE/4G/5G/WIFI
COMUNICATION AND SMS MODULE	KAF XAITS connectivity, fault alert messages to mobile device, and Whatsapp/Telegram Massaging

Traffic Light Control System
KAF iTAC Intelligent Traffic Controller

KAF iTAC PRO Traffic Signal Controller

Electro-mechanical Specifications

DIMENSION IN MM	CONSIST OF 2 DIFFERENT DIMENSION - 4 Door Cabinet: 1300H x 900W x 430D - 2 Door Cabinet: 1130H x 850W x 300D
CABINET MATERIAL	Available in 4,8, 12,16,20 signal group configurations 1.5 mm thick epoxy coated oven-baked (grey) stainless steel (ss304), galvanized iron (GI), or electrogalvanized (EG) plate
ACCESS	Push key handle and key
VENTILATION	Roof and 4 meshed air vents
WEIGHT	80kg - 110kg depending on signal groups
MAIN CONTROLLER FACEPLATE	19"
INCOMING VOLTAGE AND FREQUENCY	230 VAC $\pm$ 10% at 50 Hz
OPERATING TEMPERATURE	10 ºC to 75 ºC
HUMIDITY TOLERANCE	Non-condensing
DEGREE OF PROTECTION	IP55 Protection Standard
ELECTROMAGNETIC COMPATIBILITY	EN 50293 Compliant
ENVIRONMENTAL STANDARD	IEC 60068-2-14; IEC 60068-2-30 Compliant

FEEDER PILLAR ITAC PRO

INTERNAL VIEW   EXTERNAL VIEW   SIDE VIEW
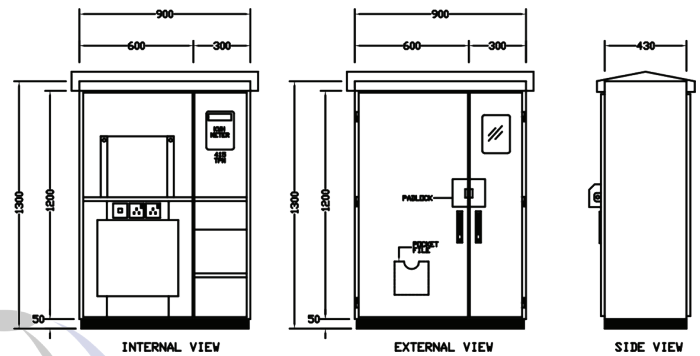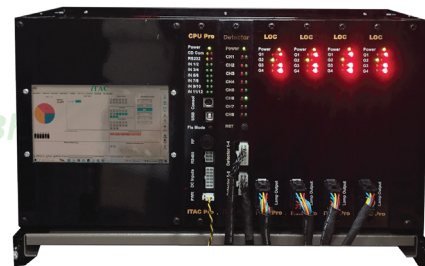
ITAC PRO CONTROLLER

1

SAMPLE

CPU CARD PRO

- Contain Microprocessor based **32 bit**
- Provide PPU connection with USB/ RS-485/ RS-232
- Provide Amber Flashing Button
- Self revert to multiplan time mode for any detection failure such as loop sensor detection, WVD detection and etc.
- Provide 8MB with backup battery
- Advance GPIO build in CPU Card

2

SAMPLE

LOC CARD PRO

- Provide 4 Signal Groups
- Support voltage detection
- Provide fuse for every lamp output
- Provide protection filter
- Provide LED light power
- Provide 3 different LED light groups
- Provide input and output connection

3

SAMPLE

DETECTOR CARD PRO

- Provide 8 vehicle detection
- Provide LED light power
- Provide input and output connection
- Provide detection reset button
- High quality detection with advance technology configuration
- Provide LED light for Red (Fault detection) and Green (Detection not fault)

Traffic Light Control System
## KAF iTAC Auxiliary Traffic Signal Controller

KAF i-TAC Auxiliary Traffic Controller system is designed to fill the need for temporary control solution in situations of critical\breakdown where immediate fixing and repairs are not possible. It consists of microprocessor dedicated control card housed in ultra-compact housing which can also fit into existing controller cabinet or can be extended to portable new cabinet. System comes standard with preset 4/6/8 phase, 4/6/8 signal group output configuration and pre-programmed time setting for various size junctions. This incorporates both vehicle actuated mode as well as comprehensive multiplan.
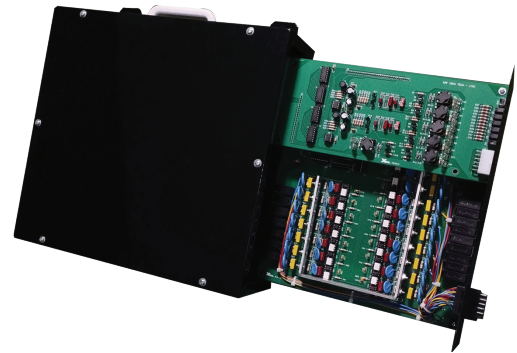
Standard type for Auxiliary Traffic Controller:-

8G Controller
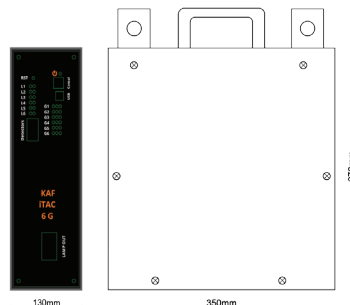
6G Controller
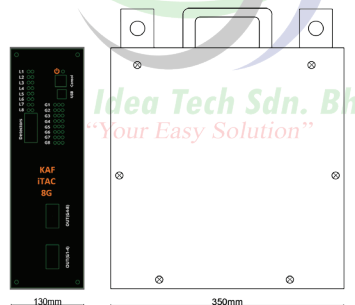
4G Controller
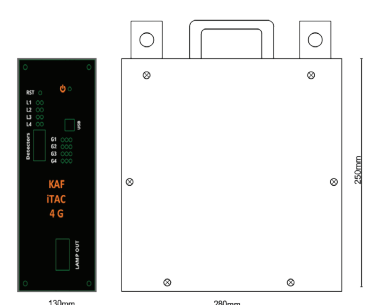
Operational Specifications

- Vehicle Actuated Mode
- MP Vehicle Actuated Mode
- Fixed Time Mode
- Multiplan Mode
- Pelican (Pedestrian) Mode
- Integrated Pelican Mode
- Flashing Amber Mode
- Digital Countdown Timer
- Available 4/6/8 signal group
- Flow control up to 4/6/8 phase pedestrian or vehicle
- Vehicle detection inputs up to 4/6/8 inductive or 2 digital inputs
- Pelican demand up to 2 inputs
- Fault log capacity to 2 years
- Data log capacity to 1 years
- RF wireless interface

- Voltage monitoring per signal output
- Fuse blown detection per signal output
- Green-on-Green conflict monitoring
- Green-Yellow conflict monitoring
- Green—Red conflict monitoring
- Yellow-Yellow conflict monitoring
- Red-Red conflict monitoring
- Safety action backup plan to flashing amber and blanking traffic signal lamps
- Green time record
- Force phase mode (Can return to the previous phase according to vehicle demands)
- Operating Temperature compliance to industrial grade standards
- Operating voltage 220/110 Vac
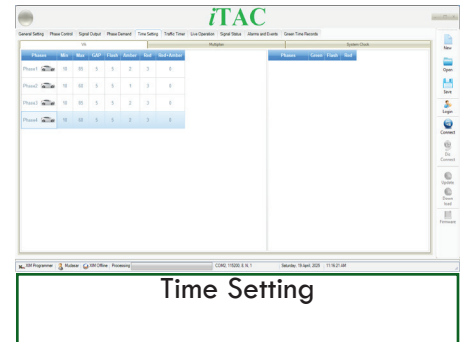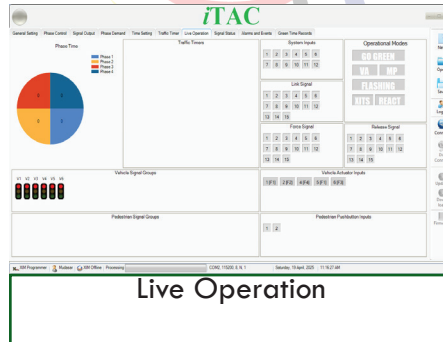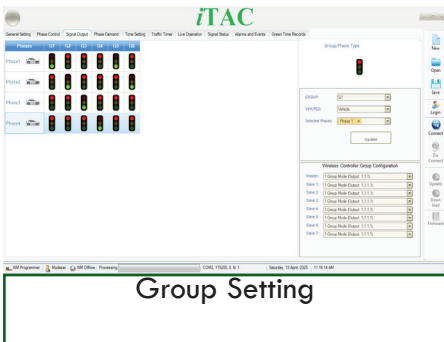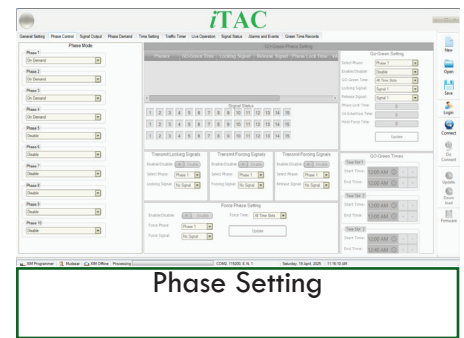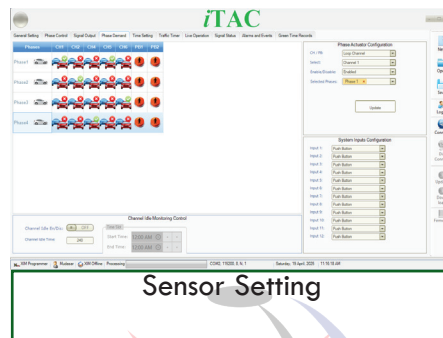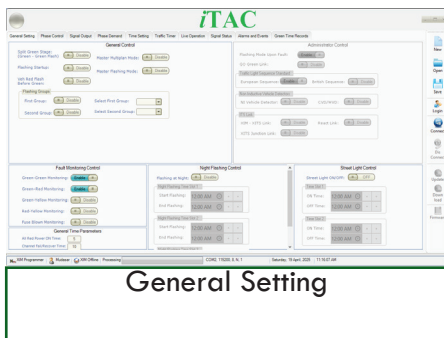- Operating Voltage Frequency 50/60 Hz

Traffic Light Control System
KAF iTAC Programmer

iTAC Programmer is a unique software interface designed for traffic operating personnel. It allows communication with the traffic controller via a laptop or netbook. iTAC Programmer is also expandable to Android and iOS-based systems for mobile control. The iTAC controller features Bluetooth and Wi-Fi interface slots, enabling wireless connectivity. The system provides a user-friendly yet advanced platform for maintenance and troubleshooting.

PROGRAMMER

Intelligent Traffic Adaptive Control Programmer

Screenshots:-

General Setting

Sensor Setting

Phase Setting

Group Setting

Live Operation

Time Setting

Configuration Parameters

The configuration Parameters of iTAC Controller can be accessed viewed or modify by clicking on the list of different tabs situated at the top side of iTAC software window.

Following parameters are included in this list:-

* General Setting
* Phase Control
* Signal Output
* Phase Control
* Time Setting
* Traffic Timer
* Live Operation
* Signal Status
* Alarms and Events

Platform:-

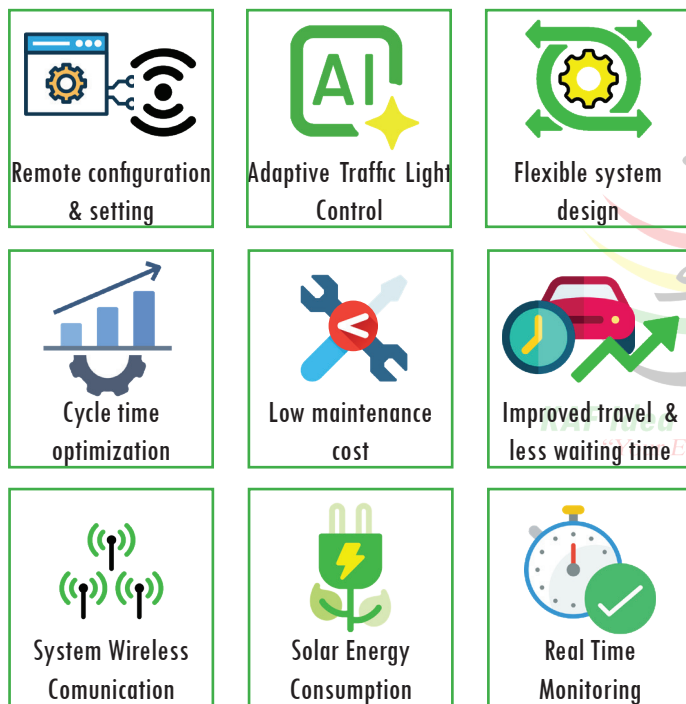XAITS can be intsalled on those platform.

* Support Android based
* Support Windows based

Traffic Light Control System
KAF iTAC Wireless Traffic Signal Controller

Wireless Traffic Light Control System is built with state-of-art modern wireless technologies to eliminate obstacles faced in existing conventional wired traffic light control sytems. KAF XIM Wireless Traffic Light Controller is completely wireless communicating over radio data being transmitted between Master controller and Slave signal group controller. It is completely solar-powered and environment friendly solution incorporated with all world modern traffic light systems. provide solution that utilizes solar energy to power traffic lights and associated signaling equipment. This system is designed to enhance road safety and reduce energy consumption.
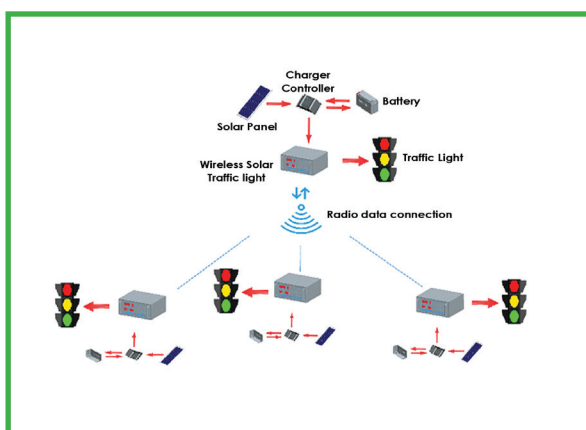
Key Features :-

Remote configuration & setting	Adaptive Traffic Light Control	Flexible system design
Cycle time optimization	Low maintenance cost	Improved travel & less waiting time
System Wireless Comunication	Solar Energy Consumption	Real Time Monitoring

System Operational Drawing for Wireless Traffic Light Controller:-

KAF iTAC WIRELESS SOLAR TRAFFIC LIGHT SPECIFICATIONS
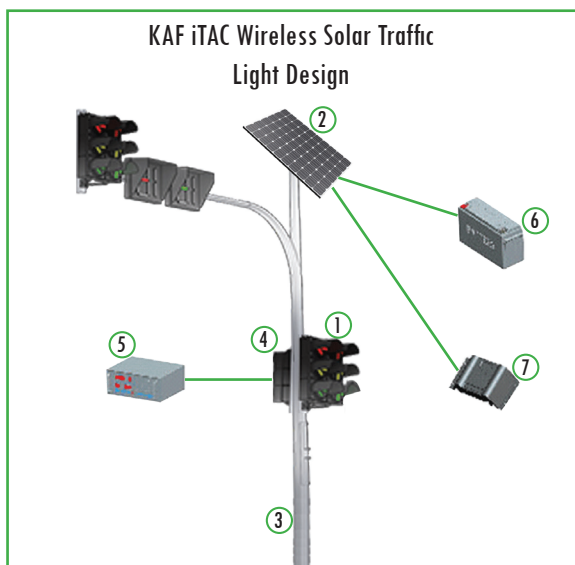
BACKUP SUPPLY	Provides 5-8 days back up supply in rainy/cloudy days, and average 7-8 hour sun light in sunny days.
SYSTEM EXPANSION	Controller caters flexible system expansion, with 4 vehicle signal groups per pole (expandable upto 12 poles and 48 vehicle signal groups), 2 WVD channel per pole (expandable upto 12 poles and 24 WVD channel), 2 pedestrian inputs per pole.
COUNTDOWN COMPATIBALITY	Compatible to 4 individual or 4 redundant wireless countdown.
WIRELESS COMMUNICATION COMPATIBILITY	Compatible with Wireless Communication Interface (WIWVD).
SAFETY AND SMART FEATURES CONFIGURATION	Provide Dynamic Go-Green link traffic controllers, Conflict monitoring, double lights and opposite green detection.
CONFIGURATION	iTAC Windows and iTAC Mobile (Android/IoS), Software, compatible with XAITS and Star intelligent transportation systems, compatible with REACT system.
MECHANICAL FEATURES	Traffic signal controller complete with, Earthing system, 15 KA surge protection device, can be easily connected and interfaced to UTC existing devices.

Traffic Light Control System
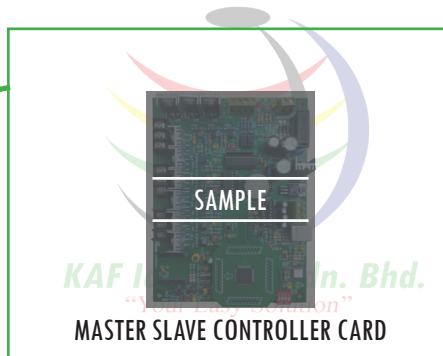## KAF iTAC Wireless Traffic Signal Controller
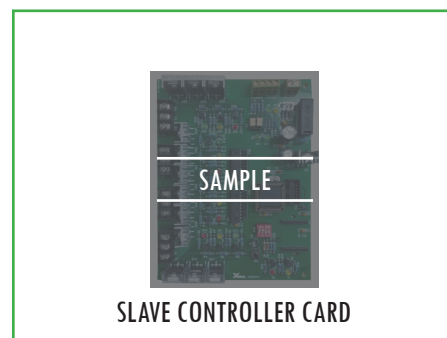

KAF iTAC Wireless Solar Traffic Light Design

1. (Traffic lights) 12V and 24V DC LED traffic lights (vehicle and pedestrian lights).

2. (Solar Panel) High efficiency PV solar panel to collect sunshine energy.

3. (Light Pole) Rugged steel light pole specially designed for traffic.

4. (Cabinet) Steel container for Battery, traffic light controllers and charge controller.

5. (Wireless Solar Traffic Light Controllers) 1 pole CPU/Host controller and others Lamp output/Receiver controllers.

6. (Battery) Power up traffic lights and traffic light controllers with storage energy in the daytime.

7. (Charge Controller) Transfer solar energy to traffic lights, traffic light controllers and battery.

KAF iTAC Wireless Solar Traffic Light Controller

MASTER SLAVE CONTROLLER CARD

SLAVE CONTROLLER CARD

MASTER SLAVE CONTROLLER SPECIFICATIONS

MICROPROCESSOR	Microprocessor based 32 bit
WIRELESS CPU FEATURES	Wireless traffic light controller with embedded 3 vehicle signal groups, 2 WVD channel, 2 pedestrian inputs.
VEHICLE ACTUATED	Support VA Multiplan i.e. VA Min, VA Max, VA Gap optimized for (48x10x7) discrete time windows, compatible with fixed time and dynamic timing Wireless Countdown System i.e Dash Countdown, Full display countdown, Jump countdown, Pedestrian system with Exclusive VA Allocation, Integrated Pedestrian Control.
AMBER FLASHING	Compatible.
LOG MEMORY	Supports up to 3-4 years (fault logs & data).
COMMUNICATION	Bluetooth, USB Port, RS232, RF Wireless Communication.
POWER CONSUMPTION	150 Watt, Half Cut mono perc, mono crystalline solar panel.
CAPACITY	Deep Cycle 150AH tall tubular, sealed Lead acid battery.
CHARGER RATE	30A solar charge controller.

SLAVE CONTROLLER SPECIFICATIONS

MICROPROCESSOR	Microprocessor based 8 bit
WIRELESS CPU FEATURES	Wireless traffic light controller with embedded configurable 1-4 vehicle signal groups, 2 WVD channel, 2 pedestrian inputs, intelligent CPU heartbeat detection.
AMBER FLASHING	Compatible.
COMMUNICATION	RF Wireless Communication.
POWER CONSUMPTION	150 Watt, Half Cut mono perc, mono crystalline solar panel.
CAPACITY	Deep Cycle 150AH tall tubular, sealed Lead acid battery.
CHARGER RATE	30A solar charge controller.

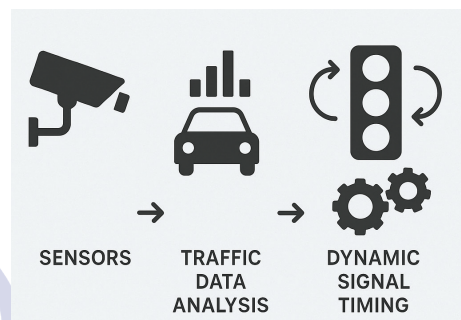# Intelligent Transportation System
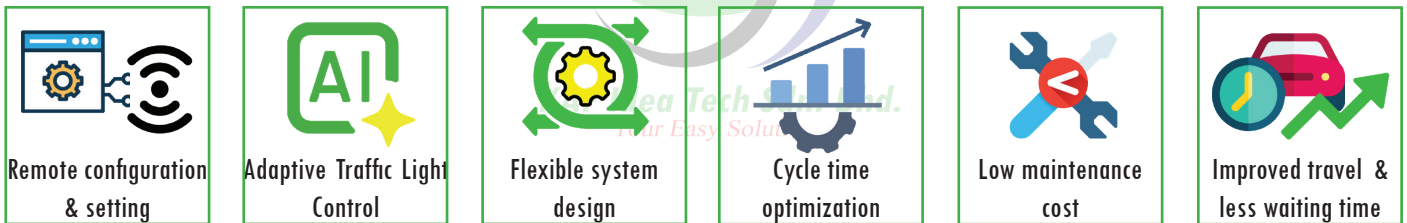## KAF iTAC XIM Adaptive Intelligent Transportation System

XIM Intelligent Transportation System

XIM Intelligent Transportation System is a traffic monitoring, controlling, directing, planning, recommending and central data hub solution for useful data transmitted by site installed traffic signal controllers. It can analyze traffic volumes and hence can predict upcoming congestions. It has very power route flow link tool that provides you to plan your route flow by per second connection of traffic signal controller with XIM Intelligent Transportation System. Real time monitoring is one of most promising feature it is powered with plus with the complete history of alarms and events to attract the attention of operators to minimize breakdown time hence increased efficiency.

Differences from other Urban Traffic Light Control (UTC) systems that use Fixed-Time and Semi-Responsive Systems:

XAITS offers road users an advanced technology called the Dynamic Responsive Adaptive System (DRAS). It allows the controller to respond automatically when traffic occurs throughout the junctions. Sensors capture and collect traffic data for analysis. This data is then transferred to the controller, enabling it to allocate more green time to lanes experiencing heavy traffic.

SENSORS → TRAFFIC DATA ANALYSIS → DYNAMIC SIGNAL TIMING

Key Features :-

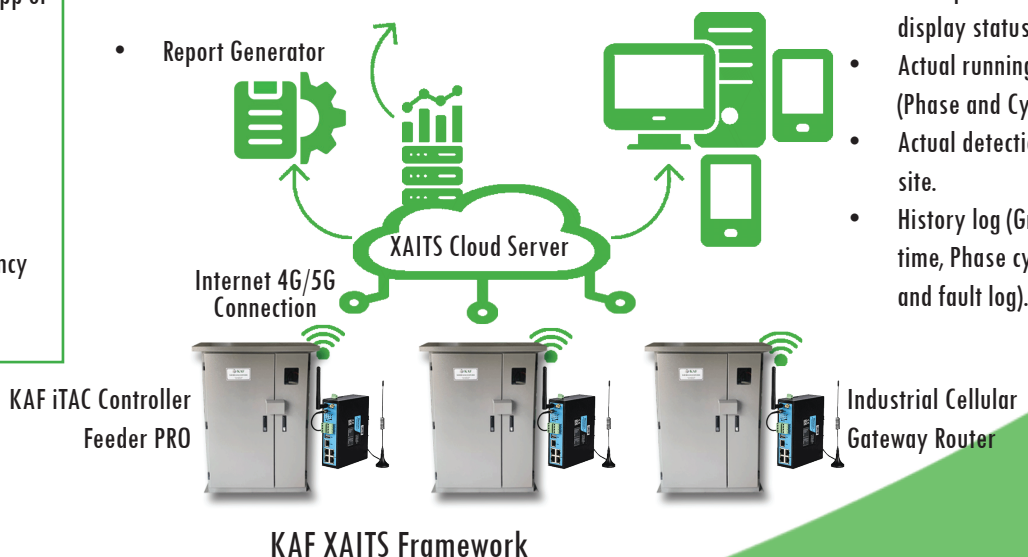|					
Remote configuration & setting	Adaptive Traffic Light Control	Flexible system design	Cycle time optimization	Low maintenance cost	Improved travel & less waiting time

Report Generator
- Alarm status display
- Conflict / double Lamp
- Alert System via Whatsapp or SMS application
- Amber flashing
- ELCB tripped
- Communication failure
- Fuse blow
- Power supply shutdown
- Traffic throughput efficiency graph and study report
- Current and Historical

- Data Collection and Analysis
- Traffic Count
- Support Video Vehicle Detector, AI Camera and CCTV

- Remote real time monitoring and control.
- Live operation display status.
- Actual running time (Phase and Cycle).
- Actual detection on site.
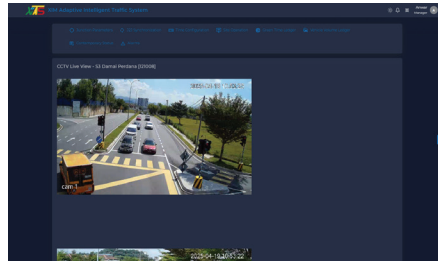- History log (Green time, Phase cycle and fault log).

Report Generator

XAITS Cloud Server

Internet 4G/5G Connection

KAF iTAC Controller Feeder PRO

Industrial Cellular Gateway Router

KAF XAITS Framework

Intelligent Transportation System
KAF iTAC XIM Adaptive Intelligent Transportation System
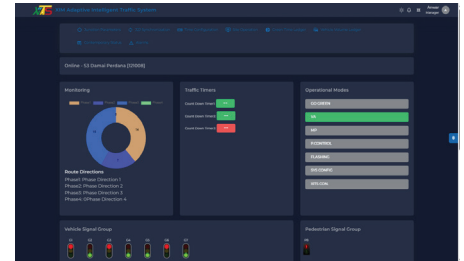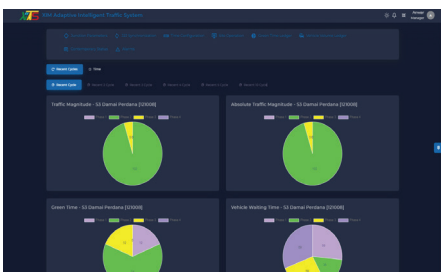
Screenshots:-
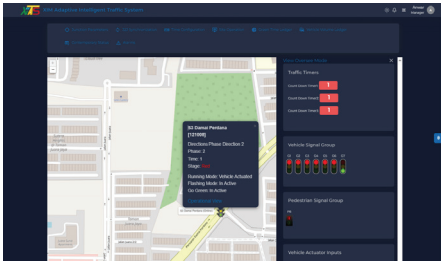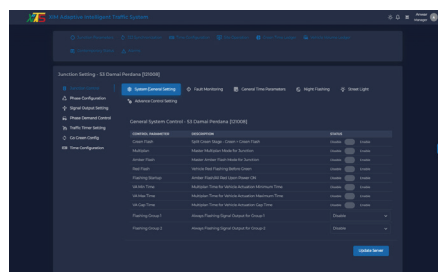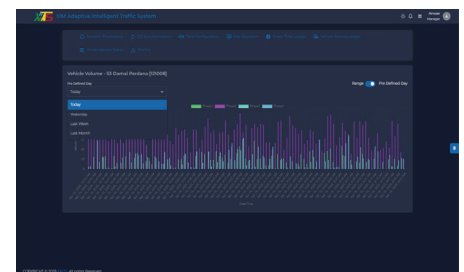

Home Page

CCTV & AI Camera View Page

Site Operation Dynamic Mode Page

Contemporary Status Phase Aggregation Page

Junction Control Page

Green Time History Log Page

KAF XAITS Go-Green functions.

XAITS Go-Green functions can synchronizes traffic light signals to optimize traffic flow. It's beyond the just a way of linking traffic light for road management coordination, KAF XAITS is a sophisticated solution that allows for the traffic management strategies.
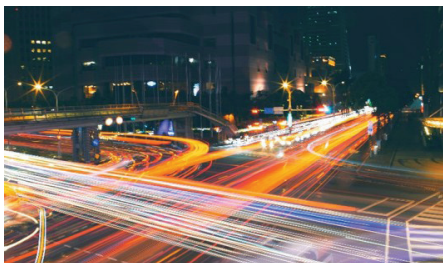

Central Data Management (Control Central).

Central Data management center performs controlling, directing, planning, optimizing, central data hub solution for useful data transmitted by site installed traffic light controllers. It can analyze traffic volumes and hence can predict upcoming congestions, It has very power route flow by per second connection of traffic light controller with KAF XIM Adaptive Intelligent Transportation System

KAF XAITS for MALAYSIA.

XAITS is a step for us to support government programs in Malaysia such as React and STL. It helps in developing, providing information, and offering solutions to problems encountered at intersections or traffic congestion issues that can be resolved through this advanced traffic light system. Therefore, we collaborate by contributing ideas to the government to drive new technologies towards AI technology and the future of Malaysia Traffic System Management.
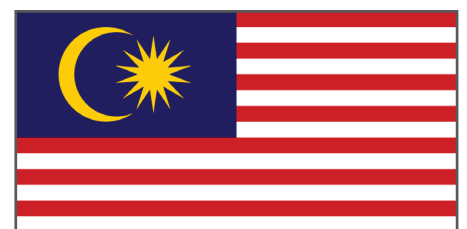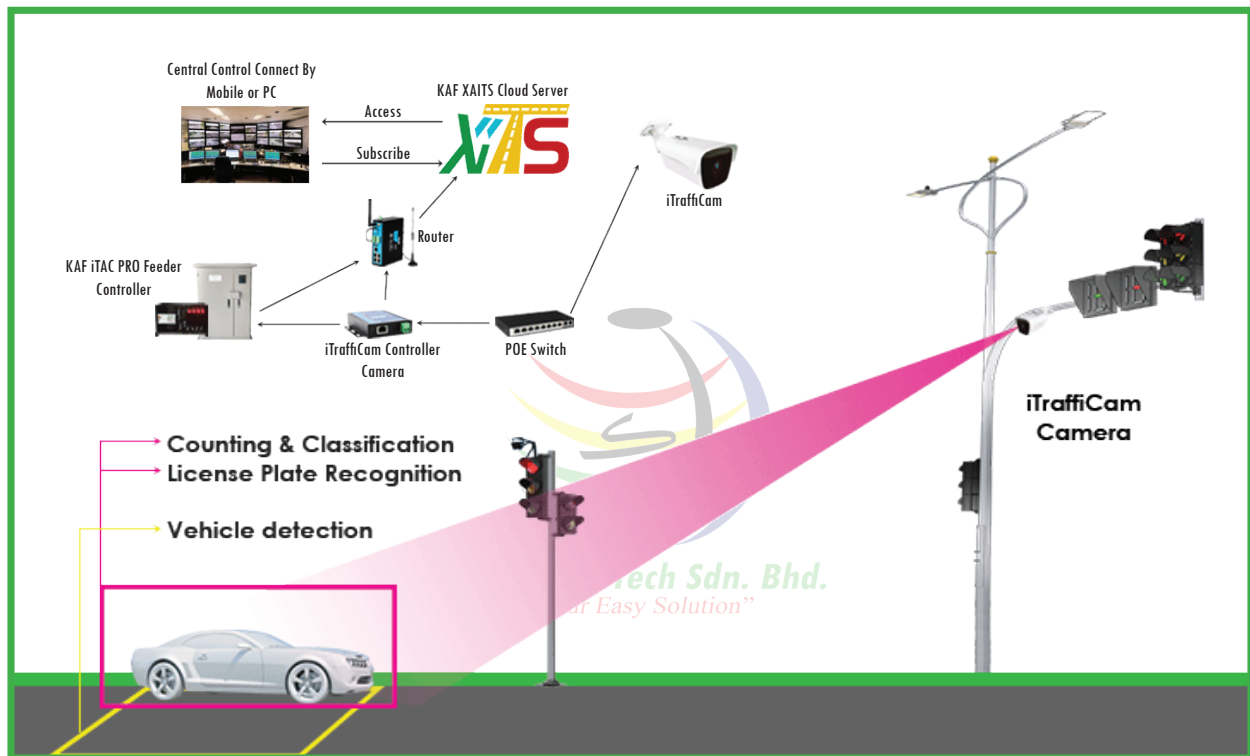
Intelligent Transportation System
KAF iTAC AI Camera

iTraffiCam

KAF Intelligent Camera (iTraffiCAM) is an integrated video traffic information collection device suitable for outdoor environments. It collects traffic data, including detects traffic vehicles and pedestrian, classify vehicle as well as count no of vehicle over specific time period, recognize license plate and estimate travel time to optimizes traffic signal control systems in urban intersections and highways.
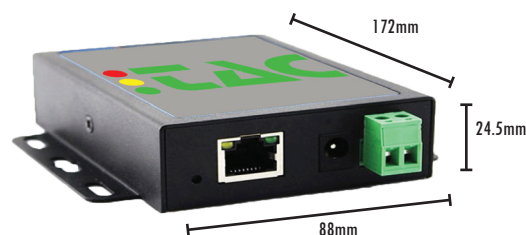

iTraffiCam System Architecture

Key Functional:

- **Road Vehicle Detection**
- **Vehicle Counting & Classification**

- **License Plate Registration (LPR)**
- **Travelling Time & Optimizes Traffic**

- **Passenger Car Unit (PCU)**
- **Adaptive Traffic Light Control**
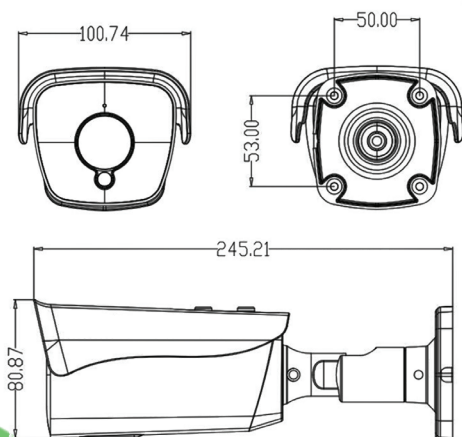
Intelligent Transportation System
KAF iTAC AI Camera

172mm
24.5mm
88mm

iTraffiCam - Camera Specifications

DETECTION FUNCTIONALIST	Vehicle presences + data + video
DETECTION ZONES	8
DETECTION OUTPUTS	8
RESOLUTION	1920x1080 30fps
FRAME RATE	20 FPS
MOUNTING HEIGHT	3,5 - 12M
COMPRESSION	MJEP, H.265
DETECTION DISTANCE	Wide Angle 2.8mm 0-30m. Narrow Angle 6.00mm 15-75
COMMUNICATION PC - SENSOR	Interface & Via Ethernet
PC TOOL FOR SETUP	Traffic Configuration Tool
EMC	Electromagnetic Compatibility 2004/108/EG
PROTECTION GRADE	Housing IP66
DIMENSION	80Hx100Wx245D
OPERATING VOLTAGE	12 - 42

iTraffiCam - Controller Specifications

Flash	Flash 8GB, SD Card
MEMERY	DDR3 1GB
IMAGE SENSOR	8MP
NIGHT VISION	Yes
RESET	H/W, Software Reset
VIDEO INPUT	1 Channel IP Camera
CONNECTORS	10/100 Fast Ethernet
POWER	DC12V 1A, Max 12W
ADAPTOR	DC12V 2A
POE	Yes
DIMENSION	172 x 88 x 24.5mm (WDH)
WEIGHT	530g
OPERATING CONDITION	Temp.: 0 ~ 60°C Humidity.: 5~95% RH non-condensing
CERTIFICATION	CE/FCC
SUPPORT RESOLUTION	VGA ~ Full HD (1080p)

100.74
50.00
53.00
245.21
80.87

CAMERA EXTERNAL VIEW

Intelligent Transportation System
KAF iTAC CCTV

This KAF iTAC CCTV system comes in a set which consists of CCTV camera, Network Video recorder (NVR), POE Switch, XAITS Server, Router and KAF XAITS Technology. Installed over 3G/4G, broadband with both Dynamic IP and Fixed IP, and private wireless Local Area Network. Integrated with XAITS.
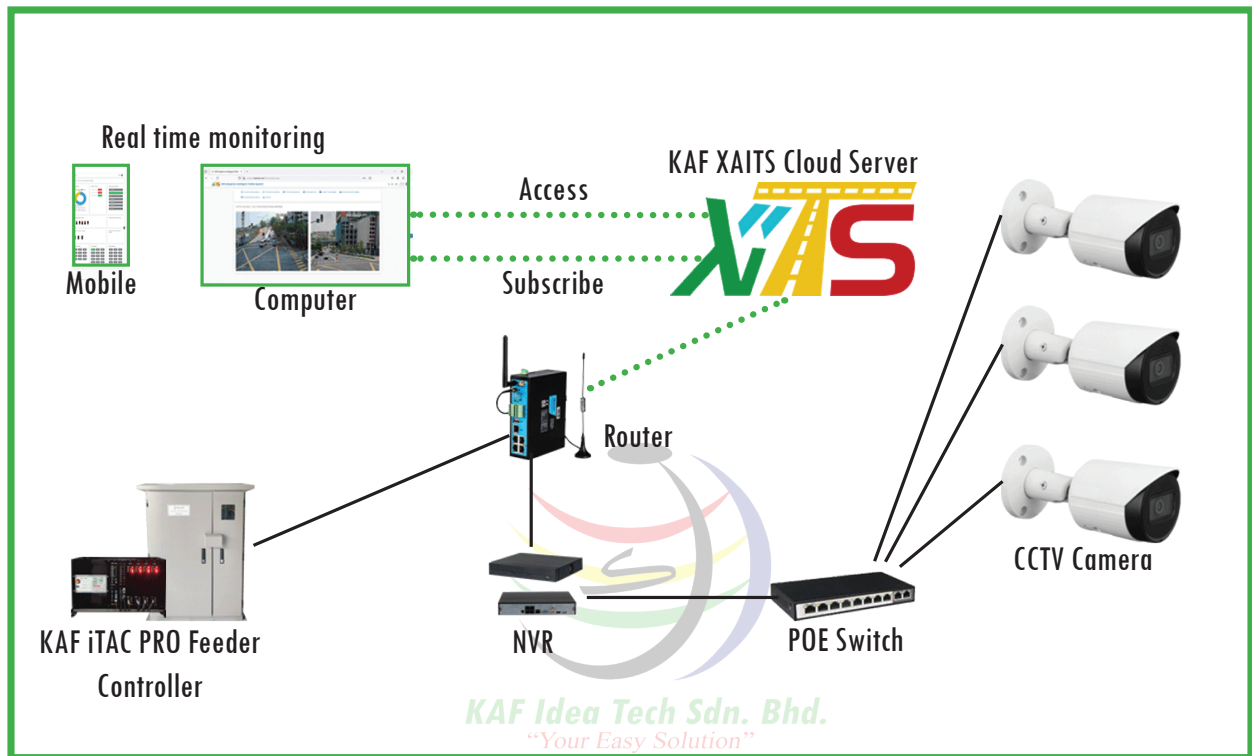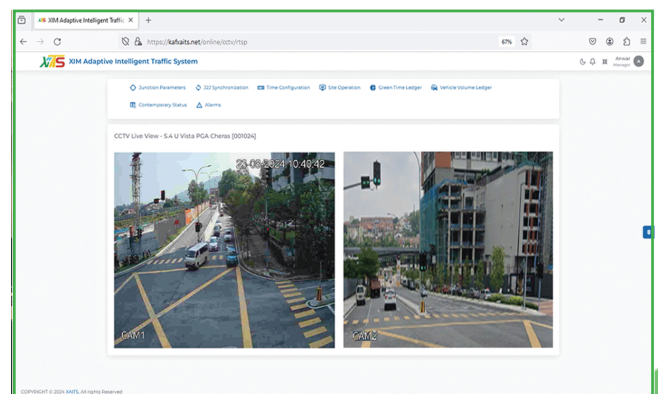

iTAC CCTV System Architecture

Key Functional:

Adapted to day and Night, Real Time monitoring, Real-time Traffic view, One-Click to open the video, support 7/24 hours all-weather non-stop recording, control center can watch intersection

- **Central Control Room**

- **Real Time Monitoring Integrated with XAITS**

Intelligent Transportation System
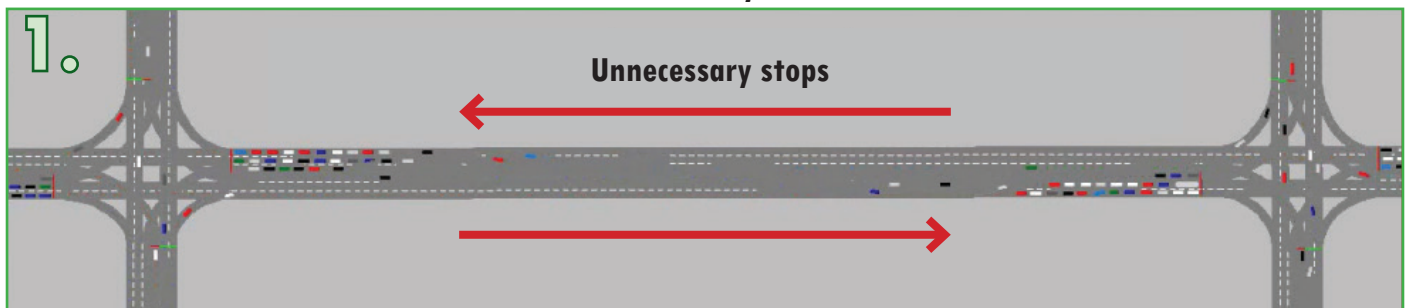## KAF GO-Green Synchronization

Multiple iTAC traffic controller can establish Go-Green Synchronization/ Linking in a close coupled locality.

Key Fuctional:-

* Avoids unnecessary stops in nearby situated intersections.
* Increases Intersection throughput and efficiency and Reduces Travel Time.
* Go Green pathway accomplished by KAF XAITS advance algorithm.
* No line of sight is necessary as compared to conventional Go-Green System.
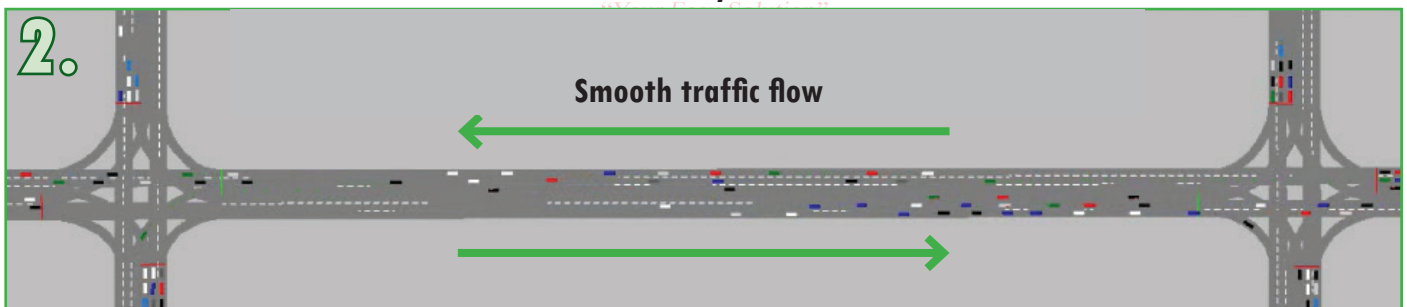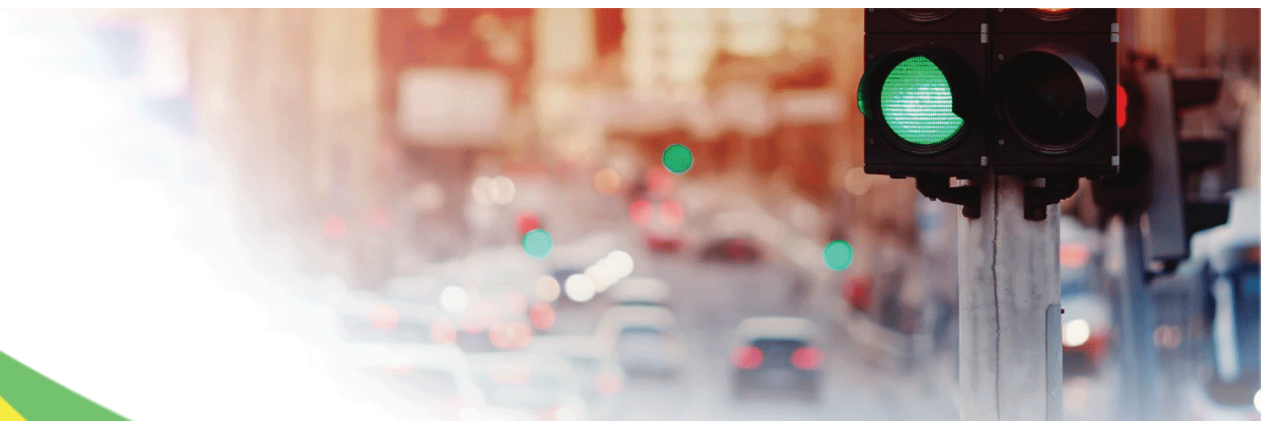
Without Go-Green Synchronization

1.

Unnecessary stops

The car platoon will encounter red light.

With Go-Green Synchronization

2.

Smooth traffic flow

The car platoon will encounter meet the green light

Traffic Light Accessories
Vehicle Digital Countdown Timers

We have various digital countdown timers tailored to cater the need for different traffic light systems of all kind. We have both countdown timers slave mode enabled countdown timers to use with vehicle actuated mode of operations as well as intelligent independent countdown timers can be used with fixed times and multiplane mode of operations. Communication options supported are RS485, RF and LAN and Wi-Fi.

Operational Modes

1. Adaptive countdown Time (Compatible with iTAC Traffic Signal Controller)

- Semi VA Countdown Mode
- '- -' Dash Display Countdown Mode
- VA Live Countdown Mode (Skip Phase, Jump Down)

2. Multiplane Countdown Mode (Compatible to any Traffic Signal Controller)

3. Fixed Time Countdown Mode (Compatible to any Traffic Signal Controller)

Operational Specifications

- Long range viewing distance for mast arm type countdown up-to 200 meters
- Software and hardware interlocking for relative lamp and countdown timer
- RS485, RF Wireless Communication
- 4-bit countdown addressing up to 16 countdown per controller
- Operating voltage 220/110 Vac
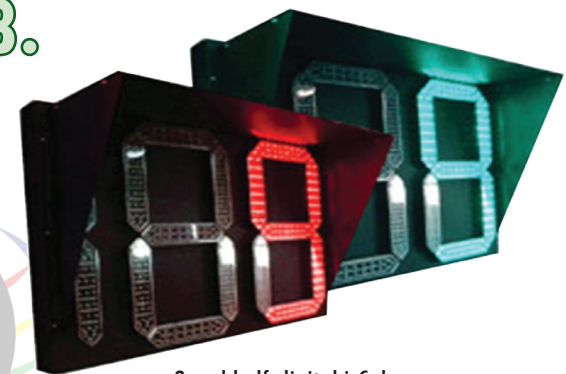- Operating Voltage Frequency 50/60 Hz

Countdown Timer Types:-

1.

2 digit, bi-Color

2.

2 digit, Tri-Color

3.

2 and half digit, bi-Colar

4.

2 and half digit, Tri-Colar

5.

2 Digit, Bi-Color Integrated with 300mm Full Yellow Lamp

Traffic Light Accessories
Wireless Vehicle Detector (WVD)

The presence area is defined to detect every vehicle. The sensor stands for an alternative solution to induction loops with a faster installation and service. Using Real Time Detection

WVD Specifications

Supply voltage	12V to 24V AC ± 10 %, 12V to 24V DC +10 % / -3%
Mains frequency	50 to 60 Hz
Power consumption	< 3.5 W/ VA
Output Max. contact voltage Max. contact current Max. switching power	2 relays (free of potential change-over contact) 42V AC/DC 1A resistive 30W (DC)/ 48VA (AC)
Output hold time	0.5 s
Temperature range	From -30°C to +60°C
Cable length	10 m
Mounting height	3.5 m - 6 m (depending on size and nature of the target)
Dimensions	127 mm (L) × 102 mm (H) × 96 mm (W)
Degree of protection	IP65
Humidity	0-95 % non-condensing
Materials	ABS/Polycarbonate (Color: black/smoked purple)
Norm conformity	EMC: 2004/108/EC R&TTE: 1999/5/EC

The sensor has a microwave motion detector and an active infrared presence sensor built in the same housing. The microwave FALCON-type planar antenna stands for a comfortable activation quality. The signal treatment results in an accurate precision to filter out pedestrians, cross-traffic and possible interferences. The active infrared technology offers a presence area where every vehicle and object standing will be detected
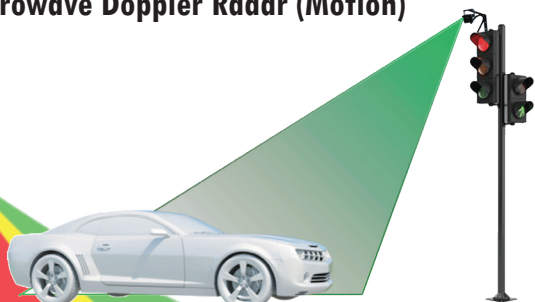
Active Infrared
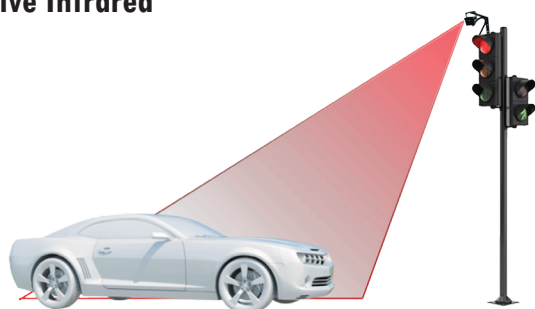
Detection mode	Presence
Transmitter frequency / /wavelength	875 nm
Transmitter power density	< 250 mW/m2
Detection field	4 m x 4 m
Reaction time	250 ms
Min. detection speed	5 cm/s to active detection
Tilt angle	15° - 45°
LED signals	Red

Microwave Doppler Radar (Motion)

Detection mode	Motion
Transmitter frequency / /wavelength	24.150 GHz
Transmitter power density	< 5 mW/m2
Detection field	4 m x 5 m
Reaction time	100 ms
Min. detection speed	5 cm/s
Tilt angle	8° - 22° (relative to sensor front face)
LED signals	Green

KAF IDEA TECH SDN. BHD |

Traffic Light Accessories
Video Vehicle Detector (VVD)

In the evolving landscape of intelligent traffic systems, the Video Vehicle Detector (VVD) stands out as a cutting-edge solution for real-time vehicle detection and analysis. Powered by the robust KAF XAITS system, VVD brings advanced capabilities in the detection, counting, and classification of vehicles through a live video feed.

Trained with a focus on urban and highway traffic, VVD is currently capable of classifying vehicles into four key categories: motorcycles, cars/multi-purpose vehicles (MPVs), trucks/lorries, and buses. This functionality enables traffic authorities to gain precise, real-time insights into vehicle types and traffic flow patterns.

A notable feature of VVD is its seamless integration with the ALL KAF iTAC Controller, functioning efficiently in full Vehicle Actuated (VA) mode. This allows the system to dynamically respond to actual traffic conditions, optimizing signal control and reducing congestion.

The system is built with a user-friendly interface that empowers users to easily draw and modify virtual detection loops, streamlining the setup process for different traffic scenarios. All collected data—covering detection, classification, and vehicle counts—is automatically logged and transmitted to the XAITS Control Centre via the internet, ensuring centralized monitoring and data-driven traffic management.

By combining intelligent detection algorithms with a responsive and intuitive interface, VVD represents a significant leap forward in smart traffic technology—enhancing road safety, reducing delays, and paving the way for smarter cities.

VVD Step by Step processing flow:-

Step 1: VVD captures real time crossroad situation.

Step 2: VVD process the video and analyzes video and find wheter the car is waiting/presence.

Step 3: VVD then send the detection result to KAF iTAC Traffic Light Controller.

Step 4: The KAF iTAC Traffic Light Controller can adjust red lighting time to free the traffic jam and reduce waiting time by the real situation.
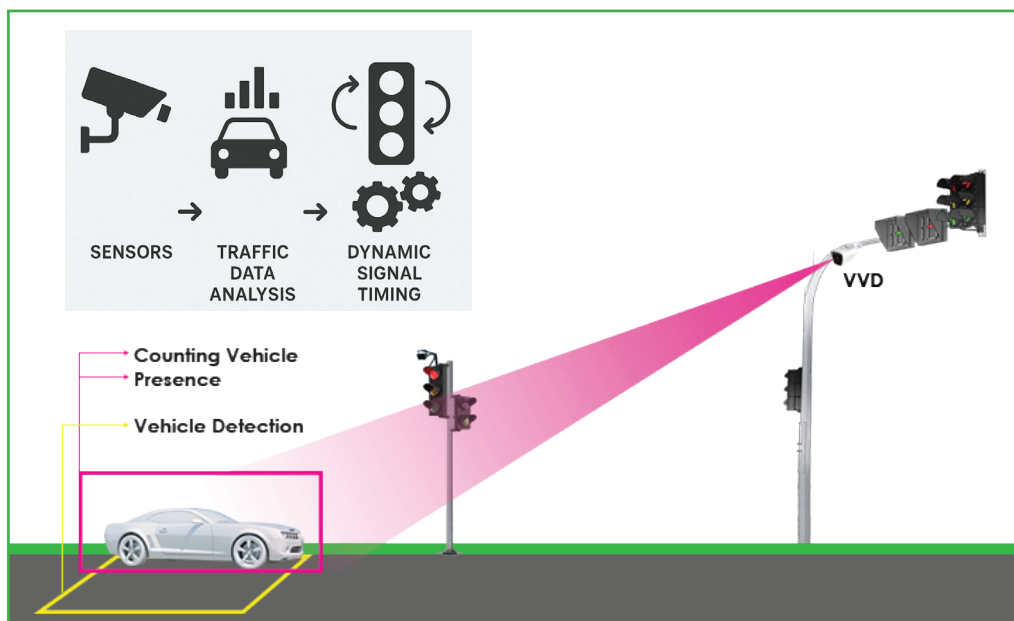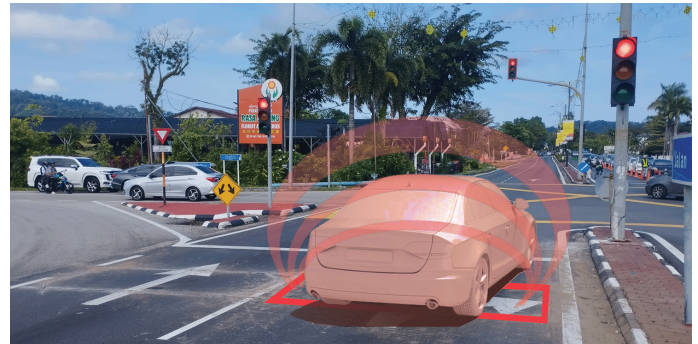
VVD System Architecture

Traffic Light Accessories
Loop Sensor

Uses inductive loop sensor to generate magnetic field by coil. High accuracy of detection and classification of vehicles. Provides accurate triggering data to iTAC controller for vehicle presence

Types of Loop Sensors:

- Loop sensor Single Lane
- Loop sensor Double Lane
- Loop sensor Triple Lane

Loop Sensor installation

Loop sensor Intsallation Process

Finish product

Loop sensor Intsallation Process

Setting loop sensor

Loop sensor Intsallation Process

Wiring and termination for loop sensor

Traffic Light Accessories
Aspect (Signal Head)

Types of Aspect:-

- Latest Hi-Flux Technology.
- Meets EN12368 Standards.
- Uniform light output.
- No dark spot even if individual LED failure.
- LED light last up to 100,000 lights hours.
- Minimum maintenance cost.
- PC UV treated lenses for abrasion resistance.
- Dual lenses system for lighting efficiency.
- Energy saving up to 90% vs incandescent bulb.
- 100% retrofit to the present incandescent bulb.
- Transient suppressor for the line and load protection.

Types of Aspect:-

- 3x300mm Aspect
- 6x300mm Aspect
- 2x300mm Green man animated c/w countdown Aspect
- 2x300mm 'Tunggu Lintas'/ 'Redman & Greenman' Aspect
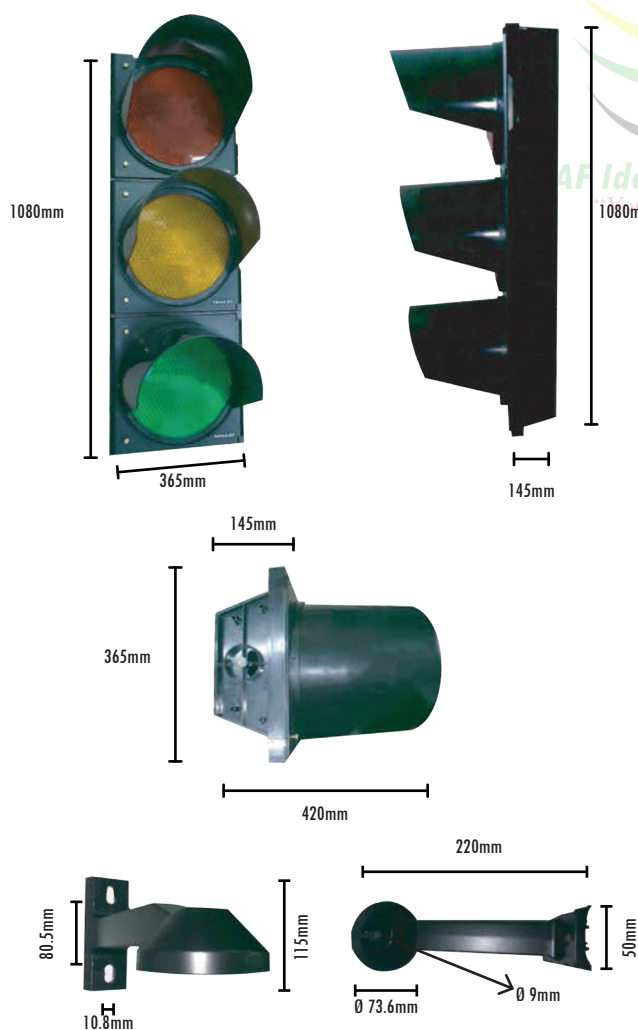
LED Specification:-

LED	110V / 230V AC
Diameter	Ø 300mm
Luminous intensity acc. to EN12368	Red > 400cd Amber > 400cd Green > 400cd
Optical performance acc to EN12368	B1/1,Type W
Phantom light class	Comply
Ambient Temperature range: acc. to EN12368	Class A, B
Color acc. to EN12368	Red 616 - 624mm Amber 586 - 592mm Green 499 - 507mm
LED type	High Power
EMC	acc. EN50293
Operating Voltage	80V - 135V AC (for 110V) 195V - 265V AC (for 230V)
Frequency	50Hz - 60Hz
Power Factor	> 0.90
Total harmonic distortion (THD)	< 20%
Power Consumption	Red 8W Amber 12W Green 12W
Materials of lens/ housing	UV-Stabilized Polycarbonate
Tightness	IP65 acc. to EN 60598
Impact Resistance	Class IR3; acc. to IEC60598
Cable	2 x (14/.26), 1m
Weight	< 1.5kg
Dimension (Inc. front lens)	Ø 300 x 155mm

SCADA & Control System Design Solution

Providing comprehensive SCADA solutions for Infrastructure Monitoring and Control, Waste Water Treatment Plant, Industrial Equipment Monitoring, Telemetry Control, and Management

Kaf Idea Tech Sdn. Bhd. designs, develop, test, and deploy complete supervisory control and data acquisition (SCADA) systems to monitor and control your infrastructures, systems, or processes. With impressive built-in capabilities, our solutions increase reliability, safety, and security. We ensure reduced operational downtime and optimized infrastructure efficiency and it helps you keep personnel out of potentially dangerous situations — maximizing the productivity, safety, and profitability of your business.
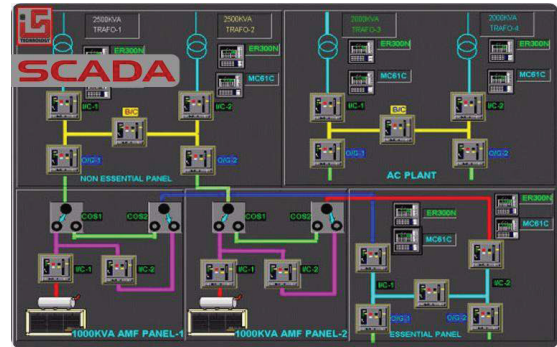
INFRASTRUCTURE MONITORING AND CONTROL

Kaf Idea Tech Sdn. Bhd. specializes in restoring infrastructure integrity through the integration of all communications and SCADA systems. Our design solution provides complete monitoring and control over infrastructure and building maintenance hence reducing expense and increasing reliability.

INDUSTRIAL EQUIPMENT MONITORING

We are experienced in designing supervisory and control systems for monitoring from small industry to large scale industry electrical/electronic equipment and components inputs and outputs monitoring, alerting, and logging. Kaf Idea Tech Sdn. Bhd. provides PLC based as well as customized microcontroller-based system design for monitoring of industrial equipment status and health.

WASTE WATER TREATMENT PLANT

Sewage/wastewater treatment plant SCADA involves Monitoring a complete Sewage Water treatment plant. It monitors Sewage Pumps, Float Screens, Clarifier Scrapers, RAS/WAS Pumps, Gravity Thickener Pumps, SHT Pumps, Alarms, Air Blowers, Anoxic Mixers, Grease chambers, and Float Meters. Sewage Plant SCADA monitors plant equipment 24 hours and logs the event happening with the date and time stamp the data is being collected every second and stored for future trends and analysis either in form of a chart or tabulated form.

TELEMETRY CONTROL AND MONITORING

To gain control and monitoring over the distributed systems in field operation has always been a challenge to manage and be well informed about the status of installations on remote site. We deal in providing telemetry control and monitoring system design to meet the challenges of efficiently managing your remote operations and equipment, ensuring optimum return on your investment.

Embedded System Design and Development

Our comprehensive hardware design and development services provide optimized solutions to the customers' increasing demands for improved functionality, reduced size, and lower prices. We are both specialists and innovators with extensive knowledge in Hardware Development, enabling us to deliver Reduced Product Development Cycle Time. In an environment where there is a constant need for improved time-to-market and technology convergence, we provide end-to-end Electronic Product Development solutions ranging from simple to complex integrated peripherals designs based on MCU, System-on-Chip (SoC), Programmable Logic Controller (PLC), among many others.

PCB ASSEMBLY

Kaf Idea Tech Sdn. Bhd. is capable of providing full turn-key and partial turn-key printed circuit board assembly services. For full turn-key, we take care of the entire process, including preparation of Printed Circuit Boards, and procurement of components, whereas for partial turn-key, the customer can provide the PCBs and certain components, and the remaining parts will be handled by us.

PCB DESIGN

With a highly experienced team at Kaf Idea Tech Sdn. Bhd. is able to handle PCB boards of various complexities, ranging from multi-layer designs to simple 2-layer boards. Our team also has in-depth knowledge of PCB and electronics manufacturing processes, enabling them to keep DFM and DFT considerations in mind while taking up new designs.

TEST JIG DESIGN

Testing is one of the most essential part for ensuring high yields and maintaining excellent levels of quality assurance in the manufacture of any product. Our experience in embedded product design gives us an edge in understating our customer's needs for testing electronic systems and hence enables us to provide a wholesome testing solution in the form of our Test Jigs, including test software, as required. Custom firmware is designed along with the test jigs, which enables our customers to perform a variety of tests in the order or preference of their choice.


SCHEMATIC LEVEL DESIGN

Our flexible engagement models help us work with clients' in-house hardware development teams to provide support in their prototype design with schematic design.

PRODUCT PROTOTYPING

We help businesses, inventors, and entrepreneurs to design and develop their products, inventions, and ideas practically realized in the domain of embedded electronic design and Internet of Things (IoT).

Embedded Software Development
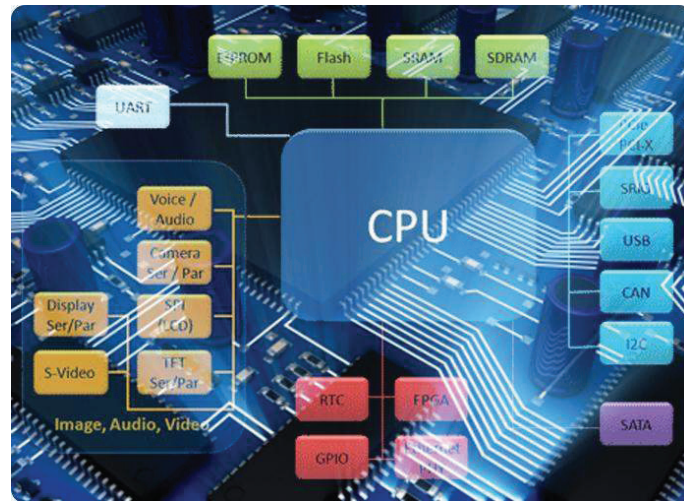
We have a solid team of skilled embedded software engineers who are capable of developing embedded software for your industrial and home control, monitoring, and automation, Internet of Things (IoT), and digital signal processing applications.
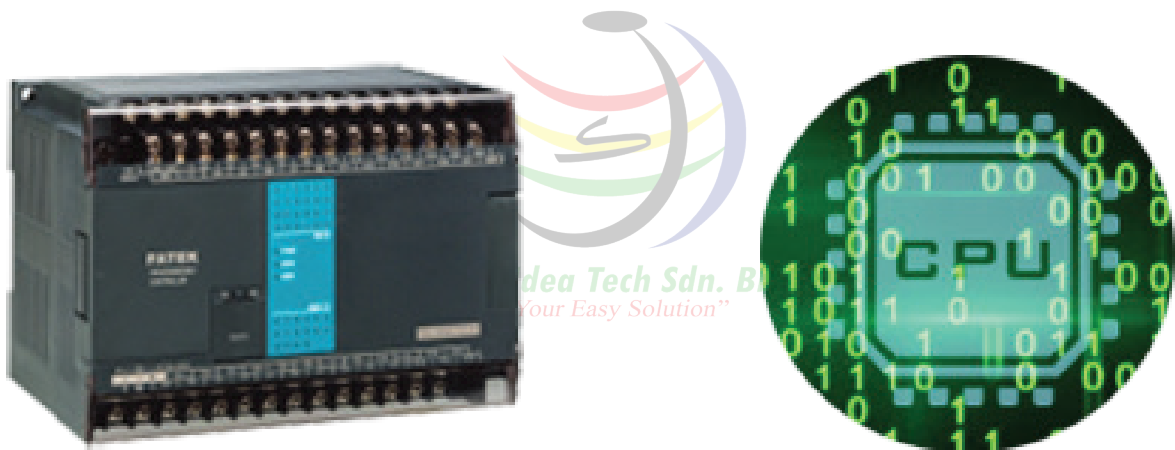

LADDER LOGIC FOR PLC APPLICATIONS

Kaf Idea Tech Sdn. Bhd. is capable of trouble shooting ladder logic diagrams, and installing and writing custom programs to fit your industrial needs. We develop your custom logic using ladder logic, function block diagrams, structured text, and instructional lists and have adopted the international standard for PLC programming — which is intended to reduce the complexity of programming different PLC models.

FIRMWARE DEVELOPMENT

We have command in writing firmware for various brands and architectures of microcontrollers and PIC ranging from 8051, 16-bit, and 32-bit ARM to advance Cortex. Depending on the size and demands of the project we can provide embedded firmware development solutions based on high-level languages like C/C++ or low-level languages like Assembler.
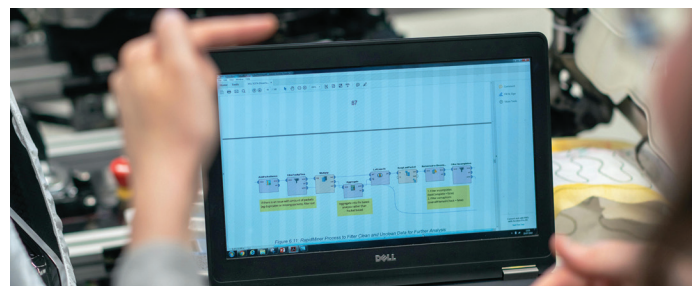
Software Development Solution

We at Kaf Idea Tech Sdn. Bhd. delivers versatile software design and development services for diverse applications and solutions up to the level of customization which can be tailored to cater to your respective requirements and provide a competitive advantage. As different businesses have specific and unique requirements, our custom-developed desktop applications help businesses to fulfill these requirements and achieve success. We deal in providing Asset Inventory Control and Management System, Smart Office Management — digital quotes, invoicing, purchase orders generation, digital record keeping and filling system, Detailed Statistics and Reporting, and many more.

HMI/MMI DEVELOPMENT

We have experience in developing efficient, intelligent, reliable, non-distractive, rich, and user-friendly HMIs/MMIs for interfacing with industrial programmable controllers. We focus on screen design, HMI/MMIs concepts, product design, usability, and psychology, and cover the full range of human and machine factors in HMI design.

DESKTOP APPLICATION DEVELOPMENT

Our desktop application development services provide you with an efficient, user-friendly, and customized desktop application that can run offline and independent of web browsers. Kaf Idea Tech Sdn. Bhd. desktop application development scope is not just limited to a single technology but we offer application development services in .NET, VB6, and C# among others.

ANDROID APPLICATION DEVELOPMENT

We offer hybrid and native app development services, including Android app development. Your Android app can be a Business, Utilities, or Productivity. We develop Android apps that are exciting and offer a great UI/UX experience to the users. Our team of professional Android developers, and programmers creates innovative and engaging Android apps.

WEB APPLICATION DEVELOPMENT

Kaf Idea Tech Sdn. Bhd. design and develop Web Apps using the latest technologies in the World Wide Web which include PHP, HTML5, WordPress, MySQL, and Microsoft SQL server. Our approach is highly modular and helps to integrate with other applications and future enhancements.

Successful Project Highlight In Malaysia:-
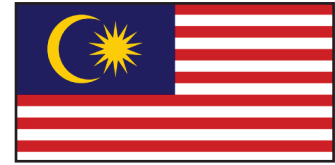
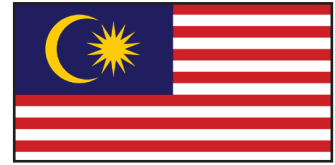**Pedestrian Project, Maran, Pahang**
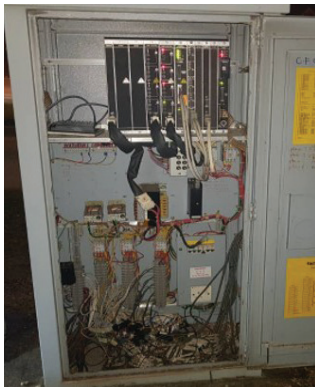
Upgrade old traffic light system to KAF iTAC Controller

Project Traffic Light at Hillpark Junction, Puncak Alam Selangor (XAITS)

Successful Project Highlight In Malaysia:-

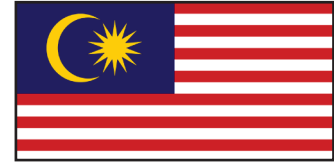**Project Traffic Light at UITM Junction, Puncak Alam Selangor (XAITS)**

Project Traffic Light at DMMC Junction, Kuantan Pahang (XAITS)

Project Pedestrian Traffic Light at Jerantut and Cameron Higland

Other Programs in Malaysia:-

Exhibition KeCek 2.0 Kelantan

Production of KAF Idea Tech Controller

'React' meeting and Completion Award

Successful Project Highlight In Pakistan:-

Pakistan Wireless Solar Traffic Light

Pakistan Traffic Light Project

Pakistan Traffic Light Project

KAF Idea Tech Sdn. Bhd.
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