

## Microprocessor Technology With The Best Quality Manufacturing

We have been involved in the manufacturing of traffic control systems for more than 35 years with over 6000 traffic controllers operational all over Malaysia and globally. Our MATC 4100 controller combines microprocessor technology with the best quality manufacturing standards.

### Functional Features

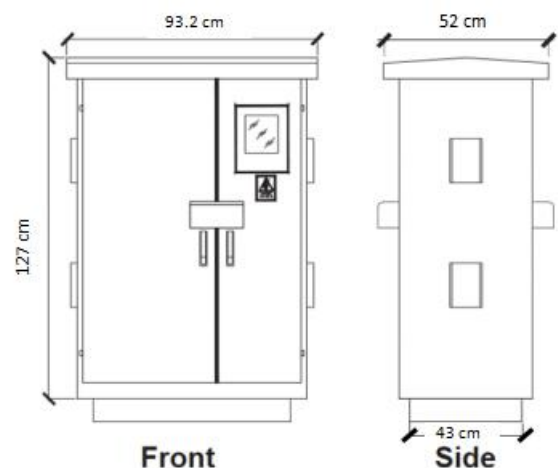
- Fully vehicle actuated (VA) and has a diverse range of programmable timing parameters
- Built-in efficient lamp failure and conflict monitoring system
- Each output circuit is monitored and configured to triggered amber flashing or shut down upon detection of faults such as green conflict, double lamp, lamp short circuit, red lamp missing or surge protection fuse blown

### Key Features

- Scalability and Adaptability- Highly modular format and easily scalable, multiple communication options support
- Coordination- can be connected to PINTAS/Optimes software via 4G LTE
- Fail-secure intermodule communication architecture Controller digital identification number
- Incorporates with Anti Theft Technology

### Optional Features

- PINTAS/OPTIMES traffic control management system
- Wireless sensors
- Uninterruptible Power Supply (UPS)



*PPK Technology SDN BHD*

*Committed to Provide Intelligent Solutions*



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## M&E Specifications

Cabinet Format	Front and rear accessible: 4 doors or 2 doors 4 door: 127 cm (H) x 93.2 cm (W) x 43 cm (D) 2 door: 127 cm (H) x 63.5 cm (W) x 43 cm (D)
Cabinet Material	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	80 kg-110 kg depending on signal groups
Main Cards Enclosure	19" front accessible rack
Incoming Voltage and Frequency	230 VAC $\pm$ 10 % at 50 Hz
Power Consumption	10 W (controller only)
UPS Compatibility	1.2, 2.0, 2.5, 3.0 kVA UPS with 2 maintenance free SLA batteries
Operating Temperature	-10 $^{\circ}$ C to 75 $^{\circ}$ C and UPS
Humidity Tolerance	Non-condensing
Degree of Protection	IP55 Compliant according to MS IEC 60529
Electromagnetic Compatibility	EN 50293
Environmental Standard	IEC 60068-2-14; IEC 60068-2-30

## Operational Specifications Cont.

Digital countdown counter compatibility*	Provides Vehicle Actuated data to control countdowns operating in: i)DASH ii)semi-VA iii)Skip phase iv)jump down mode
No of digital countdown	8 (max)
Countdown counter communication	Support both wireless or wired
Logging Data and Events	Logs and stores data for any event occurring affecting controller functions
Database backup/Event Log	Controller log data can be backed up to PPU from flash memory or SD card
Vehicle Priority/Pre-emption*	Prioritises and preempts green phase for VIP's emergency vehicle or public
Optimization Processing	Up to 30 min slot
Microprocessor	Advance Processing Unit (APU) containing 32 bit microprocessor chip
Compatibility	Hybrid backward compatible
On board and external memory	8MB with backup battery and provision for SD card slot (size depends on client requirements)
Logging capacity	Fault / event storage capacity:average 10 events / day Data storage capacity: 7 years (max)
PPU connection interface	USB/Bluetooth/WIFI
Lamp status monitoring	Fuse blown detection, green conflict detection, double lamp detection,lamp failure detection
Lamp conflict or lamp missing	Configurable to trigger amber or traffic system shutdown
LED traffic signal heads compatibility (brand and models)	Must be compatible with Intelligent Lamp Control (ILC 4101) to ensure lamp conflict and missing detection system is functional
Vehicle detection	Using inductive loop sensor or wireless detector (radar/infrared/laser/video)
Inductive loop sensor	Vehicle detector cards are 12 channel (per card) interface with MATC 4100 Controller. Each rack can accommodate 2 detector cards (24 channel loops)
Communication methods from controller to control centre	4G/LTE/WIFI
Communication and SMS module	MITAS/PINTAS connectivity, fault alert SMS to mobile device, MIMIC panel systems and Telegram messaging
RTC Backup Battery Power Consumption	Last for 10 years
Video Vehicle Countdown Compatibility*	8 (max)

\* Optional

## Operational Specifications

No of Signal	Up to 24 per cabinet
Lamp monitoring	Each lamp output
No. of Vehicle Detection Inputs	Up to 24 per cabinet and UPS
No. of Pedestrian Push Button	8 (max)
No. of Timing Plans	18 x 10 x 7 plans (max)
No. of traffic phases per timing	10 (max)
Time Synchronization (Greenwave Linking)	Wireless RF module (up to 1 km line of sight), GPS synchronisation or control center initiated synchronisation
Mode Switching	Changeable from full VA to semi-VA or multiplan modes
Programming/Configuration	Portable programming unit (PPU) i.e. laptop or Android/iOS device
Local Intelligence	Equipped with fixed time, flashing yellow and self checking capabilities
Vehicle detector mechanism	Individual fault- Automatically reverts to Multiplan for detector on affected phase only. Demand loop and anti-defect red facility available
Traffic management system	OPTIMES/REACT/TM STAR/PINTAS/MITS
Cloud compatibility	MIOT/4G LTE

*"IT IS OUR COMMITMENT TO PROVIDE THE SERVICE WITH THE HIGHEST STANDARD OF SAFETY, QUALITY AND RELIABILITY THAT MEET THE SPECIFIED REQUIREMENTS AND EXPECTATIONS"*



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