DATASHEET

PD5500000

Product : PROTOTYPE TLC 2.1
Model No. :
Sl. No. :

TOLL LANE CONTROLLER (Ver. 2.1)

MAKE	VaaaN
MODEL	TLC 2.1
DIMENSIONS	555mm (H) x 550mm (W) x 214mm (D)
WEIGHT	30 Kg
INSTALLATION AND FIXING DETAILS	Wall and Floor Mount Options
CABLES	**POWER CABLES** : 0.75 sq. mm Power cable **DATA CABLES** : 3 core, 6 core & 10 core cables will be used to control lane equipment (i.e. Traffic Signal, OHLS, Barrier Gate, Violation Alarm) All cables with well termination and identification (Refer to the Cable-Sheet)
MATERIAL	Mild steel with powder coating / Stainless steel
COLOUR	Gray
POWER SUPPLY REQUIREMENTS	220-270VAC /50-60Hz
ACCESS FOR MAINTENANCE	Front side door Access for maintenance
DESIGN SPECIFICATION	**HCU** : Microchip PIC 32 Based Controller **I/O** : 20 Opto-isolated Input Terminals **RELAY OUTPUT** : 8 Relay Output Terminals **MOTHERBOARD** : 6th Generation Intel® Core™ LGA1151 – 6500 Processor, DDR4 DRAM Support, 2400MHz, Max. 32GB **INSTALLED MEMORY** : 8 GB **LAN I/O** :RJ-45 x 2 **SERIAL PORT** :RS-422/485 x 1 (DB-9) RS-232 x 5 **STORAGE** : 1TB (SATA 6.0Gb/s) **USB** : USB 3.2 Gen 1 Port x 4, USB 2.0 Port x 6 **PROTECTION LEVEL** : Surge Protection, Circuit breaker, Fuse Protection for over current & over voltage protection, Short Circuit Protection
ENVIRONMENT CONDITIONS	**IP RATING** : 54 **OPERATING TEMP.** : 0°C to 60°C **HUMIDITY** : 0% to 90%

Toll Lane Controller (TLC+iAVC+PLC)

Technical Datasheet

VaaaN

STANDARD EQUIPMENT

Stainless Steel Electronic Enclosure with **NATURAL STEEL COLOR** finishing with leak-proof weld joints.

Fanless embedded box PC with 6th generation Intel® Core i5^{TM} processor desktop processor and PCI expansion used with extreme computing power & graphic display capability with on board digital I/O ports configurable serial ports. For both iAVC and TLC similar fanless computers will be used.
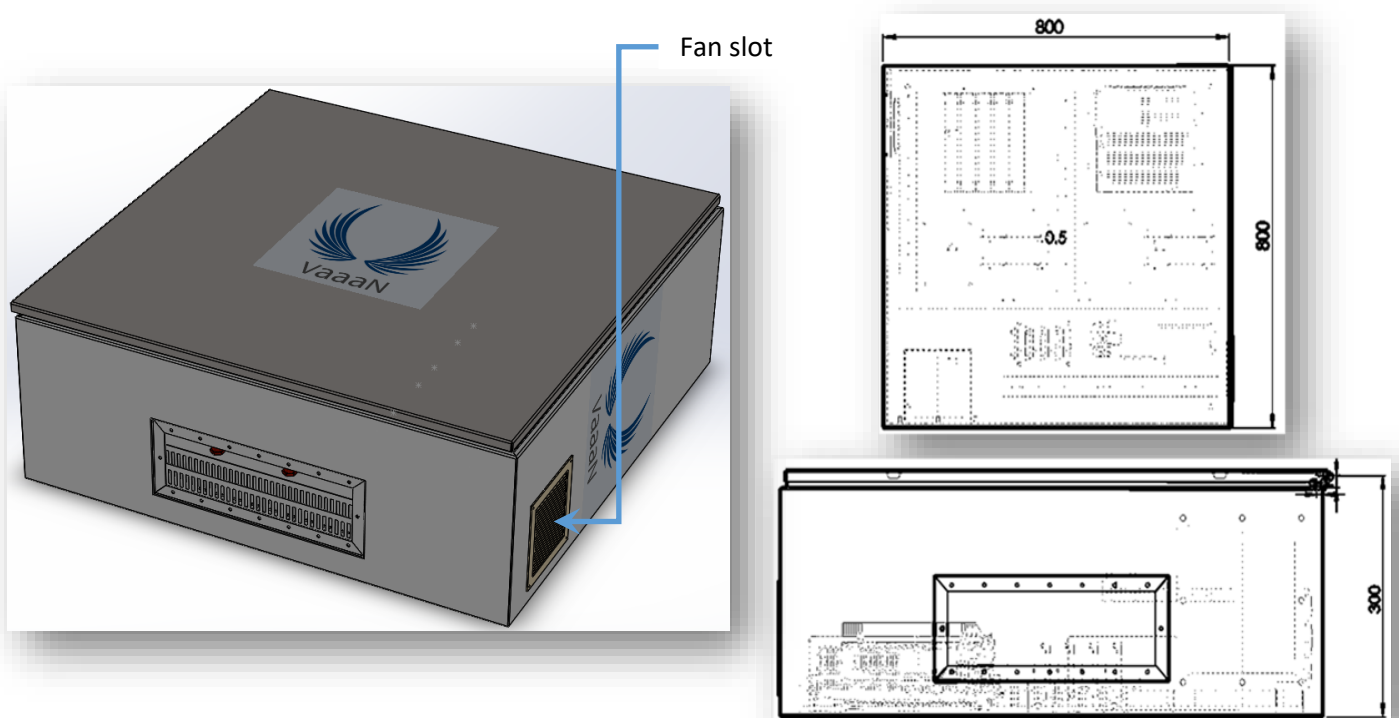

Fan slot

` **Fig.1: TLC Enclosure Dimensions (mm)**

Toll Lane Controller (TLC+ iAVC + PLC)
Technical Datasheet

VaaaN

TECHNICAL SPECIFICATION OF TLC and iAVC

| CPU (TLC and iAVC)	Intel® Core™ i5-6500TE
Clock speed	2.3 GHz
RAM	8 GB, DDR4, up to 32 GB Expandable
Storage Device	1TB 7.2K SATA 6Gb/s 2.5inch HDD
Display	Display Port (2*HDMI, 1*VGA)
PC I/O	RS-232/422/485 x 6, USB Type A x 6 for USB 3.0, USB Type A x 2 for USB 2.0, Mini PCIe expansion for communication module i.e. HSDPA, WLAN, 1*DB-44 for 34-bit Digital I/O(5V)
Ethernet LAN Port	RJ-45 x 3 for GbE LAN
Operating Voltage	24VDC
Operating Temperature	-20 ºC to 60 ºC
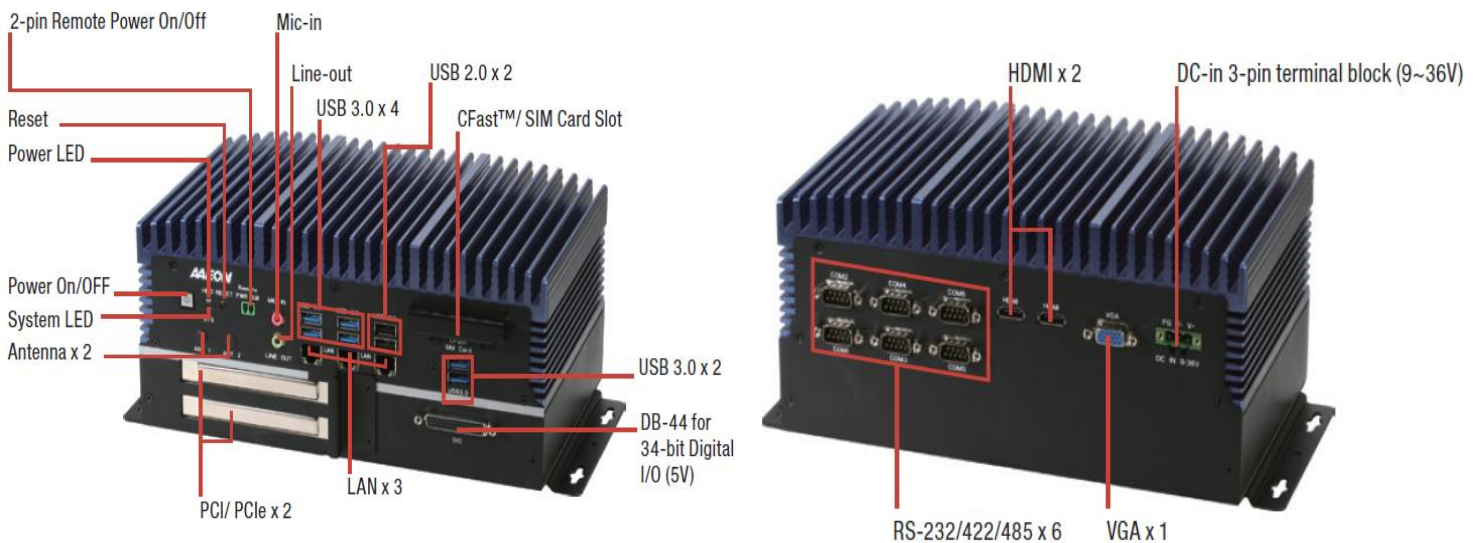
Fig.2: TLC + AVC - Embedded PC

PLC FOR AVC

PLC	OMRON CP1E-E20SDR-A
Number of I/O	20 nos. (12 digital input and 8 relay Output)
Communication	Rs-232
Induction	Power Status LED
Operating Voltage	24VDC

Fig.4: AVC- Embedded PLC

PLC FOR TLC

| PLC	32 bits microprocessor
Number of I/O	20 nos. (16 digital input and 12 relay Output)
Communication	Ethernet
Maximum program memory	400 blocks
Induction	Power Status LED
Operating Voltage	24VDC
Short-circuit protection	External fuse required
Cycle time	< 0.1 ms /function

Fig.4: TLC - Embedded PLC

SALIENT FEATURES

- Modular fan less box
- Redundant power supply, separate supplies/SMPS for lane computer and independent AVC (iAVC) computer
- Battery charger to charge the batteries (2 Battery with 18 AH each)
- Uninterrupted power backup up to 4 hrs to the iAVC computer and AVC lane components
- Easy installation & Maintenance

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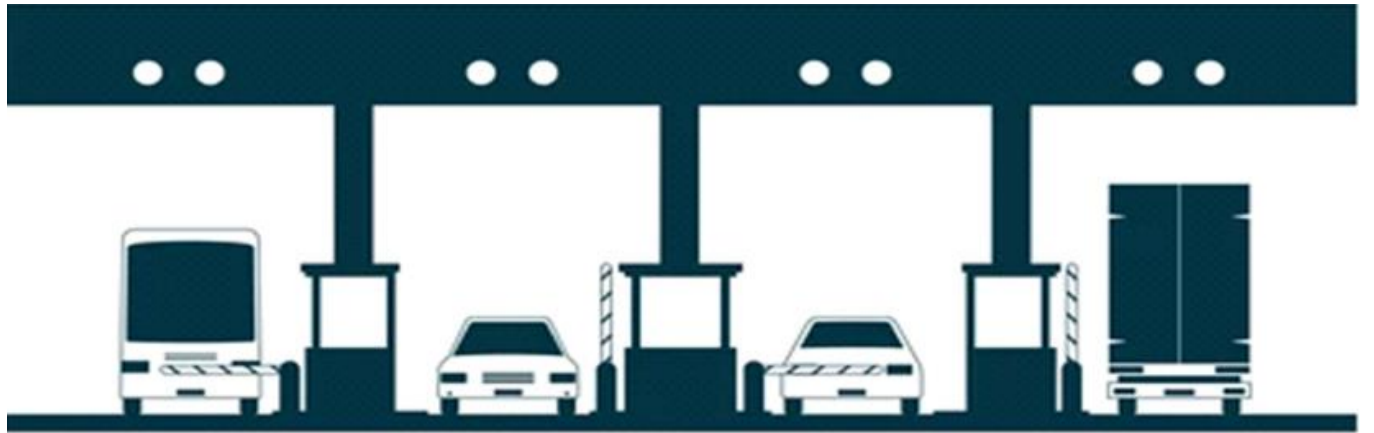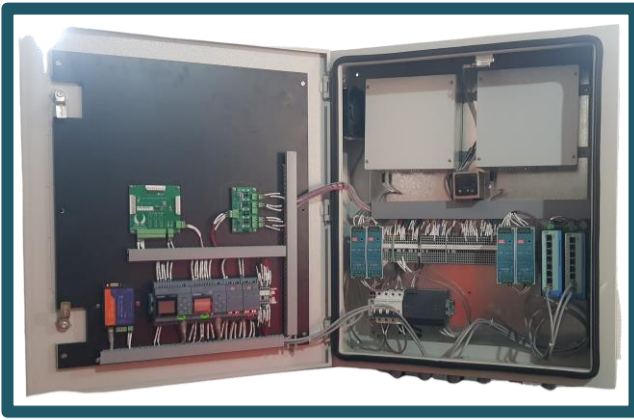
TLC controls all the hardware (E.g.; Traffic Signal, OHLS, Barrier Gate, Violation Alarm, Vehicle Detector (Metal Detector), UFD and Receipt Printer) Whereas the AVC system is classifies the vehicles and provides vehicle class data and this version of the TLC is equipped with the AVC system.

MAKE	VaaaN
MODEL	TLC 4.0 (TLC+AVC)
DIMENSIONS	650mm (H) x 750mm (W) x 200mm (D)
WEIGHT	40 Kg
INSTALLATION AND FIXING DETAILS	Wall and Floor Mount Options
CABLES	POWER CABLES : 1.0 mm² for AC & 0.5 mm² for DC Power cable DATA CABLES : 3 core, 6 core & 10 core cables will be used to control lane equipment (i.e. Traffic Signal, OHLS, Barrier Gate, Violation Alarm) All cables with well termination and identification (Refer to the Cable-Sheet)
MATERIAL	Mild steel with powder coating / Stainless steel
COLOUR	Gray
POWER SUPPLY REQUIREMENTS	220-270VAC /50-60Hz
ACCESS FOR MAINTENANCE	Front side door Access for maintenance
MOTHERBOARD SPECIFICATION & I/O	PLC : LOGO! 12/24RCE X 2, DM8-12-24R X 2 DIGITAL INPUTS : 20 Digital Inputs RELAY OUTPUT : 12 Relay (10A) Output Terminals MOTHERBOARD : 6th Generation Intel® Core™ LGA1151 - 6500 Processor, DDR4 2133/1867 MHz SODIMM Up to 32GB INSTALLED MEMORY : 8 GB LAN I/O :RJ-45 x 2 SERIAL PORT :RS-422/485 x 1 (DB-9) RS-232 x 2 STORAGE : 1TB (SATA 6.0Gb/s) USB : USB 3.2 Gen 1 Port x 4 PROTECTION LEVEL : Surge Protection, Circuit breaker, Over current & over voltage protection, Short Circuit Protection
ENVIRONMENT CONDITIONS	IP RATING : 54 OPERATING TEMP. : 0°C to 60°C HUMIDITY : 0% to 90%