Chemito

# Universal Mobility Solution Provider

## TURNKEY SOLUTIONS

### Intelligent Transport System & Mobile Surveillance System

Intelligent Transport System forms the backbone for safe, efficient and smart use of Road Transport system which can integrate with other modes of transport for the benefit of commuters, authorities and operators.

### Vehicle Tracking System

Experience a whole new way to connect to your fleet through PANORA (CH-VTS-A1) and be part of a better connected world.

### Smart City Solutions

High intensity Parking display & Variable message sign Display (VMS) for outdoors.

### Ambulance Warning System

Chemito -Warning System for Ambulance solves collision problems on road between emergency vehicle & public road users.

### Passenger Information Display Systems

Chemito offers a range of products to the mass transit and infrastructure market, for Passenger Information Systems and Announcements

### Solutions for Railways, Metro & Monorail

Integrated Passenger Information System & Display System with Customised Platform, Concourse Displays with SMD technology

### Public Address System & Voice Alarm System

NEO All-in-one compact system, for guiding/alert public at places.

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# Bus Destination Board

CHEMITO Bus Destination Board specially designed to guide passengers throughout the journey by informing current stop, approaching stop & Next stop through In-Bus (interior) LED sign & audio announcement system.

Excellent legibility in all environments, products are robust, easy to install and maintain. The destination boards is driven by a dedicated CHEMITO display controller which also serves as the driver interface. Uploading of route information through USB as well over the air from ICCC.

- Front, Side/Rear & In Bus Display
- State-of-art Technology: SMD
- Displays Bus number & Destination
- Fixed, Scrolling and Flashing mode
- Multi-lingual support.
- Uploading of Route information via. USB/FOTA.
- ARAI Certified - UBS II, AIS052,BIS16833, BIS16490.
- International (CE) standard certified.

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## Bus Destination Board

DAIMLER



TATA



VOLVO



SOLARIS



Photon PMI

Olectra BYD

# Chemito
## ITS Presence in OEMs

VDL

EICHER

EKA MOBILITY

ASHOKA LEYLAND

SML

JBM

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## OBU
### On Board Unit - Display Controllers

**CHEMITO On Board Unit (Controller) is designed for providing passenger information with audio announcement to destination display boards it can provide various emergency alerts.**

**OBU 4.2**
Controller with graphical LCD & built in GPS module & supports MP3 file storage.

**OBU 4.1**
Controller with built in GPS voice, announcement & multi line LCD display.

**OBU 3.1**
Controllers with external GPS, support inbuilt voice announcement system & with single line alpha numeric.

**OBU2.1**
Controller with emergency alerts with built in amplifier.

**OBU1.1**
Controller with 16 key operation with ease of route selection.

**OBU1.1**
Compact controller with 4 key operation for route creation.

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# OBU
## On Board Unit - OBU 7 Series

Surveillance System

Two-Way Communication

Passenger Information System

Vehicle health Monitoring and Diagnosis

Vehicle Locating System

- ADAS DSM
- APC
- TPMS
- RPAS
- VTS
- PID-DTC
- CAN Parameters
- Scheduler
- Emergency Alert
- Unicast / Multicast

### OBU7.0

- UBS-II, IS16833 (Annex. C Amend II)
- Processor-32 bit
- 4 AHD & 4 IP CH for Camera
- H.264
- Plastic SIM, 3G/4G
- GPS- GLONASS
- 3 Axis G-Sensor
- CAN Port/ OBD2 Pulse
- Flash 8GB, RAM 1GB
- 2.5" SATA HDD-Up to 2TB
- Mirror Recording-SD card, 128GB

### OBU7.1

- UBS-II, IS16833 (Annex. C Amend II) & IS16490 (Amend. II)
- 4 AHD & 4 IP CH for Camera
- H.264 / H.265
- E-SIM- Dual profile, 3G/4G
- GPS-IRNSS
- 6 Axis G-Sensor
- Single CAN Port
- Flash 8GB, RAM 512MB
- 2.5" SATA HDD/SDD-Up to 2TB
- Mirror Recording – SD card, 128GB

### OBU7.2

- UBS-II, IS16833 (Annex. C Amend. II) & IS16490 (Amend. II)
- 8 AHD and 8 IPC for camera.
- H.264 / H.265
- E-SIM- Dual profile, 3G/4G/5G
- 6 Axis G-Sensor
- Dual CAN Port
- Flash 16GB, RAM 2GB
- 3.5" HDD, Up to 10TB
- Optional SDD, 512GB
- Mirror Recording – SD card, 256GB

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# Chemito

## ITS
### Intelligent Transport System

**ALL IN ONE SOLUTION**

- Single box solution
- Universal Controller-can drive any make of displays.
- Robust and accurate location via GPS receiver.
- Door open/closed signals, odometer readings, gyroscope and accelerometer signals to control centre.
- Driver registration, service assignment, departure from stop all events are transferred to control centre.
- Service starting and ending alerts to control center.
- Bus bunching indication on BDC.
- Automatic and continuous Information of transport service status (on time, delayed, advanced) and indicating to its relative position.
- Monitoring of emergency alarms status, through foot pedal switch
- Vehicle service assignments visible on BDC to driver.
- Sends VHMD parameters to control centre.
- Detailed Scheduler – Trip – Route management of 10 trips can be downloaded and processed simultaneously.
- Up to 5 separate back-end IP addresses accessibility
- Authentication mechanism to establish connection with Control Centre.
- Sending and reception of pre-defined text messages as well as instantly constructed messages from Control Centre.
- Reception of call requests done by drivers from buses, in two modes: normal and emergency.
- Sends following information to Internal boards: route and destination, next and current stop, estimated time to destination, Ad-hoc Messages, time/date information based on GPS clock.
- ARAI/ICAT certified.
- UBS-II/ IS16833(Annex. C) (Amend.II), IS16490 (Amend II)

***SUPPLIED MORE THAN 2000+ ITS KITS IN ALL OVER INDIA.***

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# MDVR
## Mobile Digital Video Recorder

1080 P

2TB HDD/SSD
2*128GB SD Card

G-Sensor

3G/4G/5G
Wifi

GPS
Tracking

Anti Vibration

- Supports up to 8 channels AHD + 8 channels IPC.
- Built-in GPS, Wifi & 3G/4G module.
- Dual streams for local recording & wireless transmission.
- Station announcement function Ideal for public transportation.
- Built-in power loss protection to avoid video loss.
- Back-end server communication.
- Live streaming & time stamp.
- Supports USB 2.0 high speed backup.
- Supports data recovery technology.
- Synchronized video & audio recording & playback.
- Supports up to 256 GB SD card & 2TB HDD.
- Excellent shock absorption design.
- Supports 360 degree anti-vibration.

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# Chemito

## MDVR
### Mobile Digital Video Recorder

ECONOMY MODEL

- 4 Channel 720P Video Recording.
- Live Streaming Facility.
- 4 Channel Independent Alert Inputs.
- USB 2.0 in Front Panel for Backup.
- Support 256 Gb SD Card Storage.
- Wide Operating Range: 9V – 32V.
- AIS004 - Part 3 Compliant.

ECONOMY MODEL - RFID READER

- 4 Channel 720P Video Recording.
- Live Streaming Facility.
- 4 Channel Independent Alert Inputs.
- USB2.0 in Front Panel for Backup.
- Support 256Gb SD Card Storage.
- RFID Reader for Attendance.
- Wide Operating Range: 9V – 32V.
- AIS004 - Part 3 Compliant.

TYPICAL LAYOUT IN BUS

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# Chemito

## Camera (Analog)

**Chemito cameras are designed to survive in rugged and vandal-prone environment with thermal & vibration tests, ensures an excellent choice for various mobile environments. By using CMOS image sensor technology provides image quality in both day & night conditions.**

SMALL DOME CAMERA
BSV-FVC-1MP

- 1.3M pixel CMOS.
- Sensor 1280H*720V Resolution.
- IR Range: 10 m lockable angle and anti-vibration design.

SIDE ANALOG CAMERA
BSV-SVC-2MP

- 1.3M pixel CMOS Sensor.
- 1080P Resolution.
- IR Range 10M.
- Ultralow illumination.
- IP66 Compliant vibration & Shock Proof.

OUTDOOR ANALOG
CAMERA BSV-RVC-2MP

- 1/3 CMOS Sensor
- 1080P Resolution.
- IR Range 10M.
- Ultralow illumination.
- IP66 Compliant vibra tion & shock proof.

BLIND SPOT DETECTION
CH-BSDC

- 1/2.8" CMOS Sensor.
- 1080P Resolution Auto day/night switch.
- Support auto.
- Exposure response algorithm.
- IR Range: 20m.
- IP 66 Compliant.

REAR VIEW CAMERA
BSV-RVC-XM

- 1.3M pixel CMOS Sensor.
- 720P/1080P Resolution.
- High speed real-time transmission.
- Dust proof design anti-vibration & vandal resistant.

OUTDOOR ANALOG
CAMERA BSV-RVC-2MP

- 1/3" 2MP CMOS image Sensor.
- 1080P Resolution with HDVAI technology.
- IR Range 10-20m.
- True day/night with IR cut filter (ICR).
- IP66 Compliant.

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# Chemito

## Camera (IP)

**Chemito cameras are designed to survive in rugged and vandal-prone environment with thermal & vibration tests, ensures an excellent choice for various mobile environments. By using CMOS image sensor technology provides image quality in both day & night conditions.**

VEHICLE IP CAMERA
CH-IPC25

- 1080P Resolution.
- Built-in power loss protection.
- IR Range: 10m.
- Anti-vibration.
- Support 3 streams.
- IP66 compliant.

INDOOR IP CAMERA
CH-IPDC-2MP

- 1/2.9"CMOS" Image sensor.
- Dual mode Streaming.
- IR Range: 10 m.
- Support WDR.
- ONVIF support.
- IP66 Compliant.

OUTDOOR IP CAMERA
CH-IPVC-2MP

- 1/2.8" CMOS Image sensor
- 1080P Resolution.
- ONVIF 2.0 support.
- IR Range: 30m Vandal Proof.
- IP66 compliant.

REVERSE IP CAMERA
CH-IPC24M

- 1/2.8" Back illuminated.
- 2M pixels CMOS 1080P Resolution.
- ONVIF support.
- CBR/VBR support.
- IR Range: 20m IP67, IK08.

IP SIDE CAMERA
CH-IPSC-1MP

- 1/4 "CMOS Image Sensor.
- IR Range 10~20 M Support.
- IK10 ONVIF support.
- Dual ICR auto color/night.
- IP67 Compliant

REAR VIEW IP CAMERA
BSV-RVC-2MP

- 1/2.8"CMOS Image Sensor
- 720P Resolution IR Range
  10 meter Support.
- D-WDR Dual ICR auto color/night.
- IP66 Compliant.

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# ADAS & DSM

## Advance Driver Assistance System & Driver Status Monitoring

ADAS is an Active Safety Technology that uses AI algorithm to conduct Intelligent image analysis. ADAS collects first- hand data Inside & outside the vehicle, Identifies dynamic & static objects & is able to detect & track objects with the help of sensors.
DSM is an Driving Auxiliary warning system to detect & alarm conditions including fatigue, distraction, Smoking & Making a phone while driving. Real-time analysis & alert from R-watch creates an active safety system for the driver.

- No Driver Warning
- Fatigue Driver Warning
- Headphone Warning
- Driver Smoking Warning
- Driver's Distraction Warning
- Headway Monitoring Warning
- Lane Departure Warning
- Forward Collision Warning

ADAS CAMERA

R-WATCH

DRIVER STATUS MONITOR (DSM)

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## APC
### Automated Passenger Counting System

### MASTER & SLAVE CONFIRGURATION

- AI algorithm based vehicle mounted passenger counter
- Accurately judge the moving direction of passenger.
- Counts passenger boarding & alighting in crowded conditions.
- Counts passenger boarding & alighting simultaneously.
- Counts passengers boarding & alighting side by side.
- Counts passengers boarding & alighting with luggage.
- Collect count data of passengers & transfer data to AI unit for further processing.

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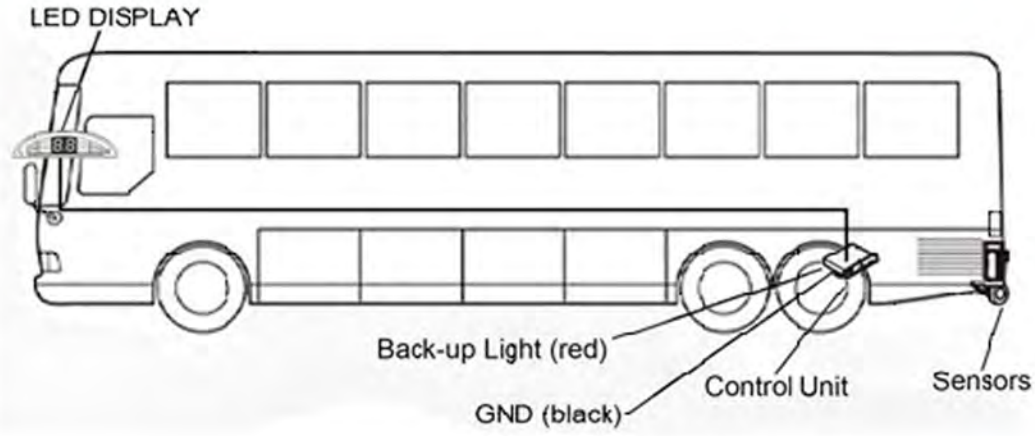
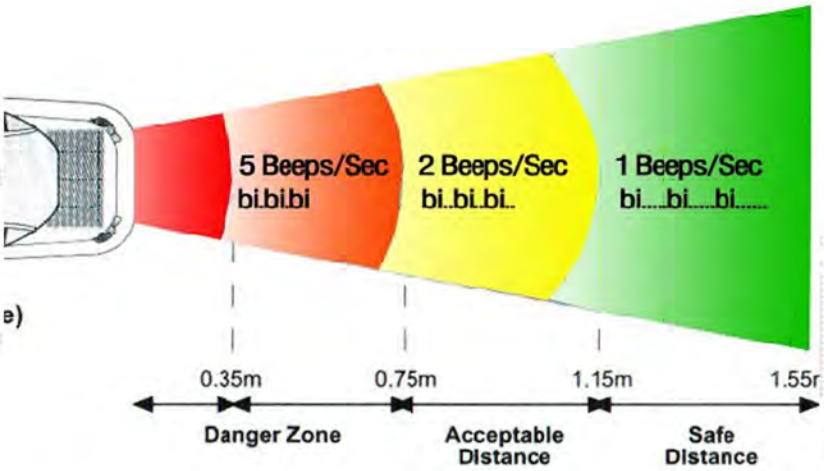
# RPS
## Reverse Parking System

DISPLAY

CONTROL UNIT

SENSORS




- Digital sensor with high stability.
- Dual angle sensor with reduced Blind zone LED.
- Display with self-test function sensor type: Flush mount sensors with plastic brackets, clipped to inner bumper.
- Sensor is with 18mm & stable two-angle for detection, horizontal of 110° & vertical of 70° anti-false alert technology.

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## VTS
### Vehicle Tracking System (AIS140)

Experience a whole new way to connect your fleet through CHVTS-A1 and be part of better connected world. The device once connected helps you stay in touch with your fleet & keeps informed through simple smart phone app and server. Device is built on three pillar of SAFETY, SECURITY & PERFORMANCE.
AIS140 IRNSS certified vehicle Tracking & Emergency Alarm solution with Embedded SIM having dual operator support which ensures that the SIM is never removed & tampered where the auto switching of network maintains connectivity by either one of the SIM at all times.

**VEHICLE TRACKING**
Live Vehicle Tracking
Geo Fence Navigation
Location Tracking

**EMERGENCY**
Emergency Alert
Non Live Vehicle Status
Passenger Safety

**DRIVING BEHAVIOR ANALYSIS**
Vehicle Speed
Fuel Monitoring
Driving Behavior
Trip Details

**LIVE VEHICLE STATUS**
Over speeding Alert
Vehicle Status
Daily Trip Reports
Trip ON/OFF

- AIS140 Certified Device
- Internal GRSS IRNSS + GPS + GSM Antenna
- Backend Streaming via-Server & Mobile App
- 6 Axis Accelerometer + Gyroscope
- Multiple Input/Output Ports
- Emergency Button
- Device Tampering Alert
- Real Time Tracking
- IP65 Dust & Waterproof
- Embedded SIm (Dual Operator Support)

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# GPS Clocks
## Autograde

- 2 Inch digit height.
- Time format 12 hours/ 24 hours time.
- Setting buttons
- In-Built temperature & humidity sensor Auto.
- Brightness adjustment.
- 20M viewing distance.
- Input voltage: 10~32V DC.
- Automotive grade power supply ABS.
- Plastic cabinet.
- Wall mount / Roof mount AIS004
- Part-3 Compliant.
- Optional GPS receiver can hook up-to automatic update time from satellite.

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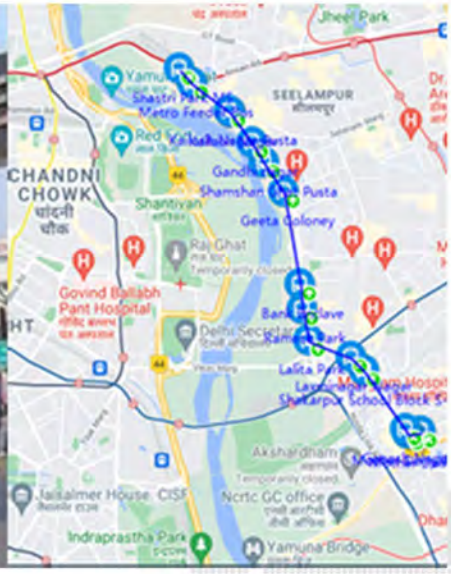
# Route Creation

Value Added Services for seamless operation.
Our service includes creation of routes in following steps, for ITS system - Bus application.

- Collection of latitude & longitude of stops manually.
- Audio file recording for stops.
- Creation of routes & stops.
- Mapping of routes & stops.



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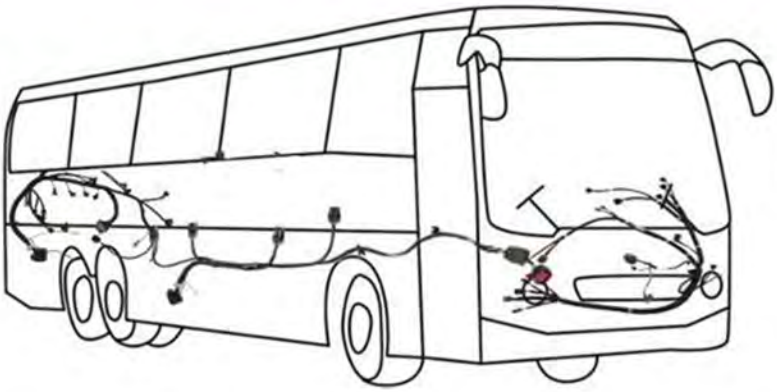
# Wiring Harness
## AutoGrade



- Customized to your Design
- Make In India
- 15,000+ Harness Delivered
- Experience 10 Years

### Our Esteemed Clients

TATA

ASHOK LEYLAND

PMI Driving a greener tomorrow

Marcopolo

Olectra

JBM Group

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# Chemito

## Software Development Services

Services Offered –

- Bespoke applications development.
- Maintenance of previously developed source code.
- Third party Integration services.
- Domains-transportation & manufacturing.
- Applications-windows/web-based.

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Chemito

# Expertise
# Experience
# Excellence


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