

# TM 500

Rugged Android On-Bus Terminal

## More Than Just a Ticket Machine



### TM 500 - Overview

- The TM500 is an all-in-one ticket machine using Android operating system.
- The TM500 has built-in components making it more reliable for transport use.
- The TM500 features 4G connectivity, A-GPS for accurate tracking and high memory capacity.
- The TM500 offers an integrated powerful NFC reader for quick Contactless transactions.
- The TM500 has an integral high speed thermal printer and a QR code scanner for validation.
- The TM500 system comes with Web based back-office system and TransMach Cloud Mobile App.

### TM 500 - Benefits

- User friendly interface suitable for all generations.
- Real time data for ticketing, tracking, logs and performance.
- Fares update over the air through our easy to use fares management system.
- Contactless payments support with all cEMV models such as Known fare and Tap In Tap Out.
- Dual smartcards support for ITSO based and Operator branded commercial cards.
- Bus Open Data Service (BODS) compliant system.
- Scan barcodes on board to reduce fraud by validating Web or Mobile bookings.
- Customer friendly service with quick turn around times.

# TM Cloud

## Back-office Features

### User friendly and comprehensive back-office system

The TM Cloud is a secure web based easy to use back-office system features personalised Dash board, real time ticketing & bus tracking, fares management, asset management, vehicle walk around checks, standard day to day reports, performance and stats reports.

### Widely accessible system with continuous development

The TM Cloud is a SaaS (Software as a Service) application and it is supported on all web browsers including mobile phones via TransMach Cloud mobile App. The other key benefit is that there is no cost applicable for regular system updates such as adding new features on the system.



### Feature-rich and efficient system

The TM Cloud is a fully BODS compliant system and It also supports multiple SIRI feeds, 2 way driver messaging service, various easy to use entry forms for fares management, ticket layouts, shifts allocation, vehicle management, hot spots & driver alerts, Configuration testing and Go-live scheduling and many more.

### Modular and scalable all-in-one system

The TM Cloud is developed in-house using modern but mature technologies with an open architecture and modular structure which allows seamless third party system integrations and other system add-ons such as online booking engine, mobile Apps, smartcard portals, POS and B2B portals under one system.

# TM 500 & Cloud

## Software Add-ons

### Bus Tracker



Bus Tracker improves convenience and journey planning. It is a website 'plug-in' that is branded for each operator allows passengers to track their buses in real-time and showing expected arrival times at each stop. As a result, telephone and social media enquiries are reduced, thereby saving operators time and resources.

It utilises on-board 4G Android ticket machines to pin-point a bus's precise location via cutting-edge GPS software, making it the most accurate in the industry. Our 'Bus Tracker' module is unique to the UK market and its capability saves operators considerable time and resources, allowing them to focus on delivering the most efficient service.

### Smartcard Portal



A Smartcard Portal is a fully automated system allowing bus operators to run the smartcard system seamlessly. The portal can be setup for School use, Cooperate use or General use. The online portal offers customised registration, various products purchase, usage reports and profile management pages.

The portal is integrated with the on-board ticketing system for top-up, validation and hotlisting cards. The back-office offers bespoke smartcard reports for revenue and performance analysis.

### Journey planner and Online bookings



Online Booking Engine is a bespoke platform for passengers to plan their journey and purchase tickets online. The booking engine will be accessible from operator's main website and will be customised to match the branding and look & feel as the main website.

Passengers will receive e-tickets with QR codes which will be scanned and validated on-board by the ticket machines. The back-office provides all the configuration tools and reports needed for customer services, revenue and performance analysis.

### Mobile Apps



Mobile App is convenient for passengers as it helps them managing their travel all in one place. The App features finding out nearest bus stops in Maps, live buses with ETAs, journey planner, timetables, ticket bookings, tickets wallet and notifications.

The App will be customised to the operator with their specific design and ticketing requirements. The on-board ticket machines will be integrated with the App for ticket validation in real time & offline. The back-office provides all the configuration tools and reports needed for customer services, revenue and performance analysis.

### Third party system integration



TransMach has years of experience integrating on-board ticket machines and/or TM Cloud back-office systems with third party systems to achieve a complete end to end solution. It allows operators to share their data with various systems via a secure and reliable connection.

TransMach offers standard or customised APIs using the widely common format such as JSON or XML. The integration can be configured for real time or off-line data sharing in various data formats as per operator's requirements.

# TM 500

## Sample Tickets & Technical Specification

### Sample Tickets

**TRANSMACH**  
Leave ticketing to us

Adult Single  
£1.30

06-MAR-2017 16:27 St: 2  
TSn: 0249 OP: 3868 M:0203  
Duty: 1 Rt: 34 J:145

London  
To  
Birmingham

Thanks for travelling  
TransMach Systems Limited  
www.transmach.co.uk  
Tel: 020 8861 1946

**TRANSMACH**  
Leave ticketing to us

Adult Week  
£11.00

06-MAR-2017 16:32 St: 2  
TSn: 0250 OP: 3868 M:0203  
Duty: 1 Rt: 34 J:145

**EXPIRES: 12-MAR-2017**

Thanks for travelling  
TransMach Systems Limited  
www.transmach.co.uk  
Tel: 020 8861 1946

**TRANSMACH**  
Leave ticketing to us

Adult 10J  
£11.50

06-MAR-2017 16:35 St: 2  
TSn: 0251 OP: 3868 M:0203  
Duty: 1 Rt: 34 J:145



Thanks for travelling  
TransMach Systems Limited  
www.transmach.co.uk  
Tel: 020 8861 1946

### Operator Waybill

Operator: 3868

BookOn: 06/03/2017 09:25

BookOff: 06/03/2017 17:35

FTK: 0240 LTTk: 0287

MCsn: 0203 Duty: 1

Product	Qty	Total
Adult sgl	10	£15.50
Adult Week	5	£55.50

Final Summary

Gross: 15 £71.00

Void: 0 £0.00

Nett: 15 £71.00

### Technical Specification

Operating System	Android
Certification	ITSO 2.1.4, PCI PTS 4.x SRED, EMV 4.3, EMV CTLS L1, MasterCard PayPass, Visa payWave, Express Pay, UPI qUICS/qPBOC, Discover D-PAS
Memory	8 GB EMMC Flash + 1 GB DDR3 RAM
Display	8" all Perspective-IPS Screen, 1280 x 800 Pixels HD Display Capacitive Touch Screen
Communication	WiFi: 802.11 b/g/n, 2.4G, Supports Hot Spot and WiFi probe Bluetooth: BLE 4.0, 3G & 4G
GPS	GPS, G-Sensor
Audio	2 Stereo Speakers - 4Ω / 2W
Physical	Unit: L x W x H (mm) : 268.2 x 200 x 267.97   Weight (kg): 3.6
Processor	Quad-Core Cortex A53, 1.2GHZ
Battery	Li-Ion Battery, 2600mAh, 3.7V
Printer	3" Thermal Printer Head   Automatic Paper Receipt Cutter   Paper Width: 80mm   Diameter: 80mm   75 lines/sec
Keypad	1 x ON/OFF Key 1 x Printer Paper Button   1 x Volume +/- Key 1 x Custom Shortcuts
Camera	5 Megapixel Rear Auto Zoom Camera for 1D & 2D Code Scanning 2 Megapixel Front Fixed Focal Camera
Port	1 SIM Card Slot   1 Micro SD Card Slot, Supports up to 32GB   1 x Cash Box RJ11 (24V)   2 x RS232   2 x USB HOST2.0   1 x Micro USB OTG2.0   1 x HDMI1.4 Type A   1 x Audio Jack   2 x LAN
Voltage	Input: 100 - 240V AC, 50Hz / 60Hz Output: 24V / 2.7A
Environmental	0°C ~ 50°C (32°F ~ 122°F) Operating Temperature -20°C ~ 70°C (-4°F ~ 158°F) Storage Temperature 5% ~ 96% Relative Humidity, Non-Condensing
Indicator	Printer Power Indicator (green)   Printer Paper Out Indicator (yellow)   Printer Error Indicator (red)   Charge Indicator (red) Information Indicators (blue)