TRL Software

Specification Table

The following table is a summary of the primary features and capabilities of TRANSYT 16.1:

Feature	TRANSYT 16.1
Types of intersection that can be modelled	Signalled intersections Roundabouts – Fully signalled Roundabouts – Mixed signalled & unsignalled Roundabouts – At-grade and grade-separated
Multiple intersections / networks	Small networks – Mixed signalled & unsignalled, including: • Roundabouts • Mini-roundabouts • Grade-separated roundabouts • Priority intersections Arterials Large networks – Signalled & mixed

Model types	Macroscopic:
	    Platoon Dispersion
	    Cell-Transmission
	    Congested Platoon Dispersion
	Simulation

Pedestrian crossings	Signalled (and unsignalled using simulation)
Other scenarios modelled	CLF Complex signalling arrangements Continuous flow junctions Bypass lanes Flares modelling of cyclists within dedicated cycle lanes, such as at CYCLOPS junctions
Scenarios modelled exclusively by Simulation model	Intermittent stages (i.e. non-cyclic behaviour) Inherent modelling of blocking back effects Explicit modelling of complex flares (short bays) Modelling of entire modelled period Unsignalled (Zebra) crossings Controller streams running on different cycle times Adaptive signal control, e.g. demand-dependent behaviour, such as at temporary roadworks
Automatic determination of optimum stage sequence and phase delays for single signalled junctions	✓
Run all stage sequence combinations	✓
ARCADY / PICADY give-way coefficients derived within TRANSYT* (subject to ARCADY/PICADY module licences)	✓
Lane design capability	Using 'Lane Flow' network diagram
International appropriateness	✓
International Localisation features	✓
Units	Customisable for input data and for results
Modelled time period	Any
Choice of link structure (for speed) or lane structure (for ease of use)	✓

Feature	TRANSYT 16.1
Time-varying traffic flow conditions	✓
Easy traffic allocation (with various user options)	✓
Traffic assignment (User Equilibrium Model)	✓ Applied Locally or over wide-area
Traffic profile types	FLAT GAUSSIAN DIRECT
Choice of link structure (for speed) or lane structure (for ease of use)	✓
Signal Optimisers (Macroscopic models)	Hill-climb Simulated Annealing Shotgun Hill-climb Link-by-link hill-climb (faster optimisation)
Optimiser constraints and influencers	Weighting factors for each part of network Queue length penalties Degree of Saturation limit penalties Signal timing penalties (e.g. phase maximums) Locked controller times (per controller) Offset only optimisation (per controller) Locking of stages between controllers (CLF)
Timings to favour Buses/Trams	✓
Timings to favour Cyclists	✓
Turn-on-red calibration	✓
Dutch TxC calculation	✓
Alternative Chilean (TRANSYT 8S) platoon dispersion	✓
Pedestrian Delay (Including walk-on-red behaviour)	✓
Multiple Analysis sets (Signal Plans)	✓
Multiple Demand sets	✓ Including combining of sets
Demand Set growth factors	✓
Optimise specific Demand Set	✓ Optimisation based on one particular demand set, and other sets evaluated using these timings.
Classified count data-entry	✓
Data sharing (between sets) system	✓
O-D flow sharing over multiple junctions	✓
Multiple easy data-entry methods to suit circumstance	✓ Via tabbed screens, data grids or tree structure
Easy simultaneous editing of multiple data items	✓
Fully Customisable HTML Reports	✓
Report export to Word and to PDF	✓
Phase and stage Sequence Diagrams	✓

Feature	TRANSYT 16.1
Automatic calculation of phase conflicts* (*from scaled diagram)	✓
Automatic calculation of intergreens*	✓
Automatic calculation of RR67 saturation flows	✓
Effective green time adjustments	✓ Either traffic stream or phase-based
Help System	✓ Including: Comprehensive User Guide Context-sensitive Glossary Data 'field finder' Data item 'Tooltips'
In-depth analysis of traffic signal controller behaviour	✓ Via simulation model's Signal Log
Network/Intersection diagram	✓ Extensive display options Network background images In-diagram editing of timings via timing wheels Extensive diagram overlay selection 3-D representation of network diagram Network animations (2D or 3D) Import of 3-D (Collada format) models Saveable 3-D fly-through of network
Network/Intersection diagram (Simulation Only)	✓ Animations showing individual vehicle movements Queue percentiles displayed Average queues Vehicles tagged with Path IDs Various filtering options, e.g. by source location Various colour coding, e.g. by time in queue
Multiple graph types	✓ Cyclic flow profile graphs Traffic graphs Time-distance diagram Analyser (x-y) graphs
Import from all previous TRANSYT versions	✓
Various other import options	✓
Dynamic link to Excel	✓ For easier import of traffic flows
Automatic renaming of network items to speed up network construction	✓ Based on closest controller stream, Node or 8-point compass direction
Compare files	✓
Compare sets (within same file)	✓
Command Line Interface	✓ Please enquire
Cloud-based TRL Software Portal	✓ Allocate licences to users (Local Admins only) Access latest Product installer Collaborative cloud storage area for user files Ability to restrict files within organisation, or share them with anyone Optional two-factor authentication

Technical	
Cloud-based 'follow me' user licensing	✓ Install desktop product on multiple devices
Discounted Student licence / Educational licence	✓
Opt-in for TRL Customer Experience program	✓
Temporarily run product off-line (without internet)	✓ Up to 7 days at a time
64-bit	✓
Desktop application for Windows 10 and Windows 11	✓

Services	
Support	✓ Telephone / email / website Website Knowledge Base Webinars 'How to' product videos
Product updates	✓ New releases (minor updates / modifications / substantial improvements) accessible by subscription users immediately
Training courses (at additional cost)	✓ Public or private On-line or face-to-face TRL venue or customer site UK and international