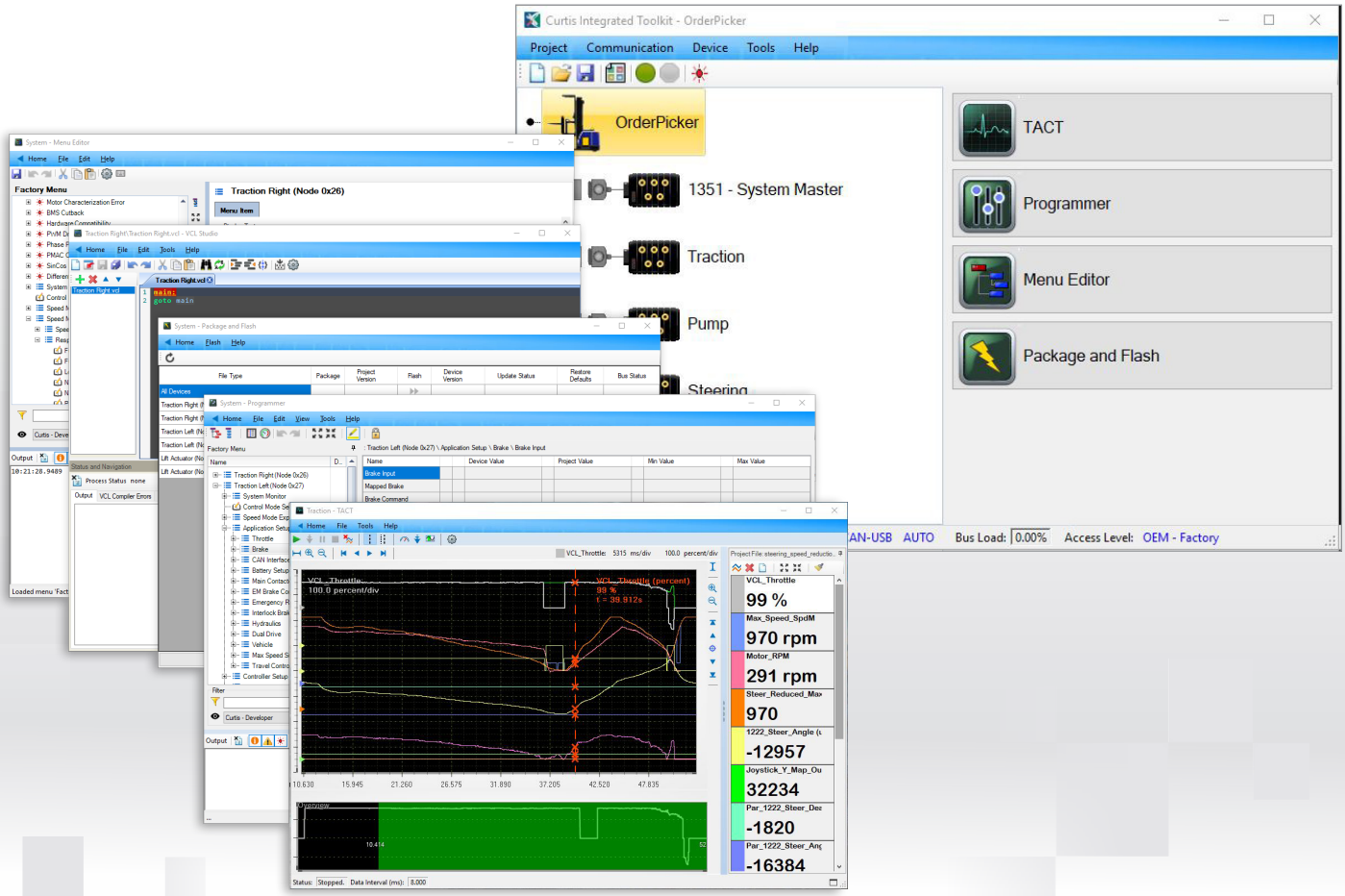
CURTIS

Accessories

Windows Software Suite for the Design, Configuration and Diagnostics of CAN Control Systems

Curtis Integrated Toolkit V1.6



CURTIS™
INTEGRATED TOOLKIT

Curtis Integrated Toolkit – CIT V1.6

Windows Software Suite for the Design, Configuration and Diagnostics of CAN Control Systems

The Curtis Integrated Toolkit (CIT) is a powerful, fully integrated suite of development and diagnostic tools for use on control systems utilizing Curtis CAN-based products. CIT allows system design engineers to develop, configure, optimise and debug vehicle/equipment control systems that utilize Curtis CAN-based motor controllers, system controllers and I/O modules.

CIT provides a 'whole system' viewpoint, allowing communication with all compatible CAN devices present on the CANbus, thus enabling live information from multiple CAN devices to be viewed at the same time. Conversely, CIT can also target any one individual device on the CANbus.

Primarily intended for use by OEM design and development engineers, CIT is also available in reduced-feature editions that provide a subset of the available functionality. Restricted permission levels are also available, making CIT suitable for use by equipment dealers and maintenance engineers as a service tool.

FEATURES

The full-feature CIT-V edition provides the following applications that run in a shared environment:

- **Launchpad**
  Launchpad is the primary application that runs when the Curtis Integrated Toolkit is started. Launchpad is responsible for managing CIT projects, and for sharing project information and communications resources between the other CIT applications.
- **Programmer**
  Programmer provides access to the CAN device's adjustable parameters, fault status, internal settings, and monitor variables. It allows users to set up and monitor each device present on the CANbus individually or the entire vehicle/system at once.
- **Dashboard**
  Programmer also provides a dashboard view where users can create custom panels of 'gauges' to provide a visual representation of parameter values, and provide customized views to access specific variables and objects within the device or system.
- **Pack & Flash**
  The Pack and Flash tool creates application packages from the various files in each CIT project and allows users to download (flash) the resulting software package into the targeted CAN device. Pack and Flash is also used to 'read' the software versions already installed in the connected CAN devices, so users can select which devices are to be updated.
- **Flash Download**
  The Flash Download tool enables production line technicians to download (flash) software packages into targeted CAN devices. Flash Download makes it efficient to update CAN devices on the production line.
- **TACT**
  CIT integrates an improved version of the Curtis TACT (Test, Analysis and Calibration Tool). This is a powerful virtual oscilloscope, collecting time-based plots of system parameter values for debugging, event capture and system diagnostic analysis. Parameters from multiple CAN devices can be traced simultaneously, and it features fully configurable Chart, Trace, Trigger, Cursor and Warning functions.
- **VCL Studio**
  The VCL Studio application is a full-featured code editor and compiler for Curtis Instruments' Vehicle Control Language (VCL). It provides an environment to add, remove, and edit VCL code in a project. It contains all the expected features of a code editor, including syntax highlighting, search and replace functions, column-mode editing, multiple-file project management, bookmarking, new file templates, and code compilation with error reporting to the file and line. With this tool, users can update, debug, and compile VCL code which can later be packaged and flashed to the connected CAN device.
- **Menu Editor**
  The Menu Editor application allows system designers to create and modify customized menus and sub-menus as required to correctly organize parameters, VCL parameters and monitor variables for their application when viewed by the CIT programmer or other Curtis programming tools. Menus can be structured for individual devices on the CANbus, or they can be created for the entire vehicle at the system level. Read and write access levels can be set on parameters and menu items, allowing the system designer to control what information is presented to or hidden from other users viewing the system with programming tools at lower access levels.

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FEATURES cont'd

- **CANbus Connectivity**
  To connect the Windows device to the CANbus system, a USB>CAN interface dongle is required. CIT is compatible with USB>CAN interface dongles from PEAK, Kvaser, Sontheim and others. Please contact your local Curtis Sales office for further information.

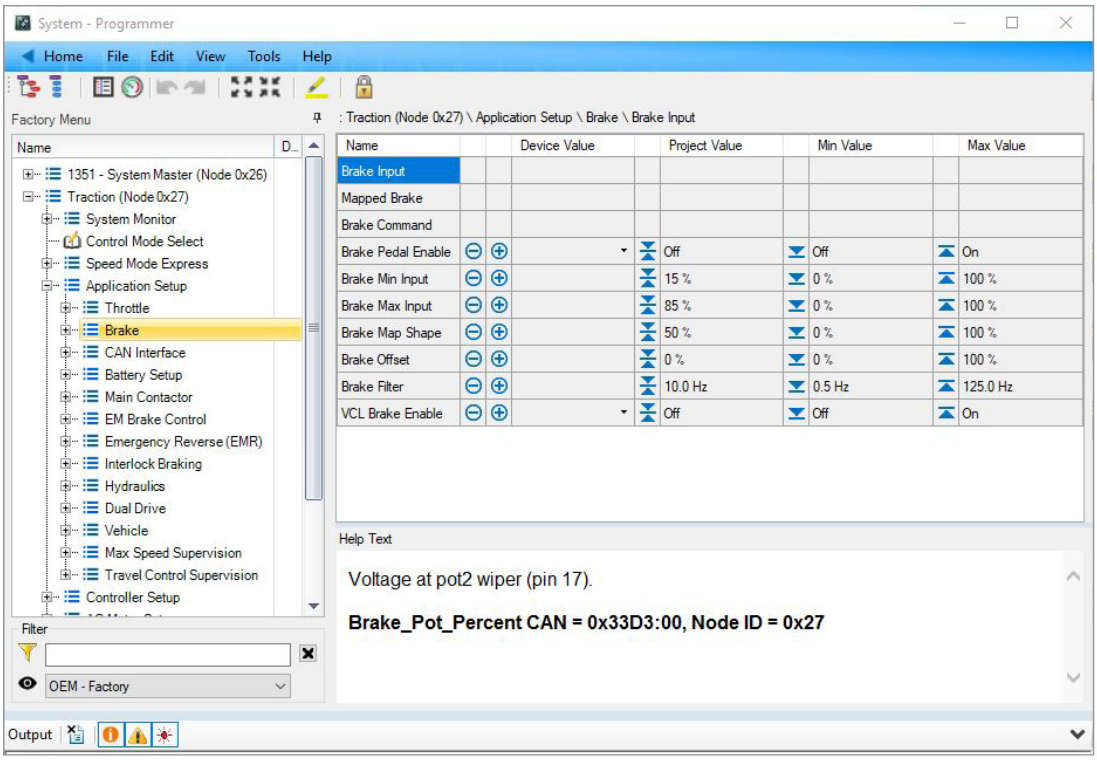
- **Web Connectivity and Automatic Updates**
  Once installed, CIT can operate fully without a web connection. However, CIT features an automatic update utility, where users are prompted to update to newer versions (if available) when they launch CIT while connected to the internet.

SYSTEM REQUIREMENTS

The minimum requirements for correct installation/operation are:

- Microsoft Windows 10 X64 (in-service versions).
- 64 bit processor.
- 4GB minimum available memory, 8GB recommended.
- USB 2.0 port.
- Internet connection for initial installation and licence key authentication.

TYPICAL PROGRAMMING SCREENS



Programmer

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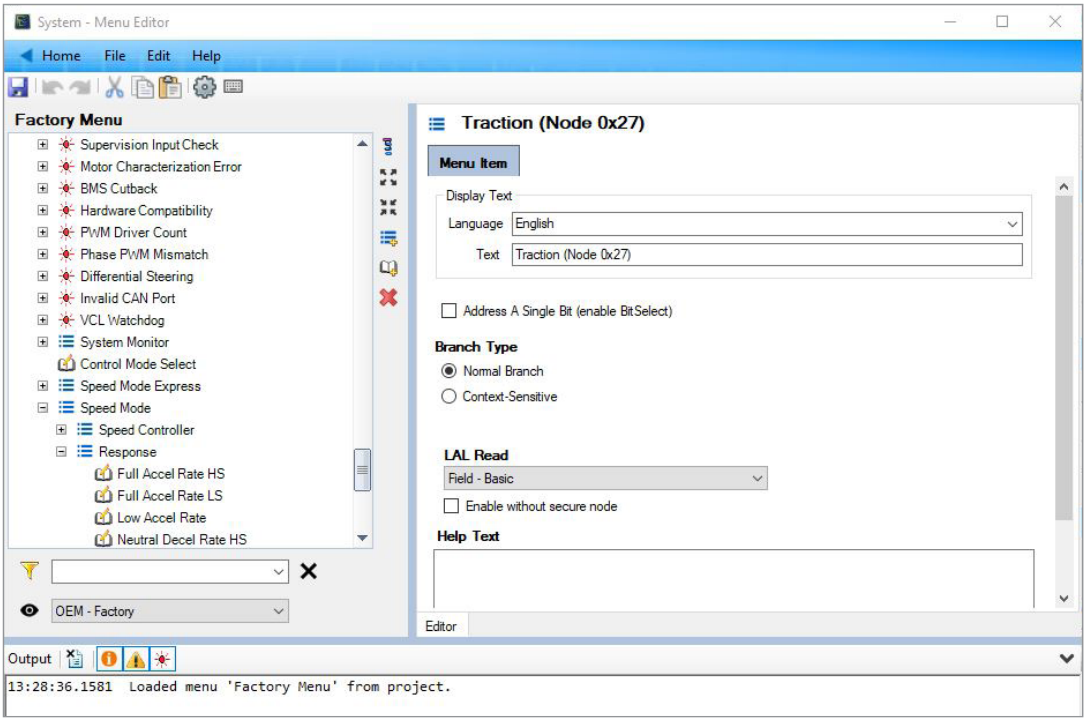
TYPICAL PROGRAMMING SCREENS cont'd



Menu Editor

TACT

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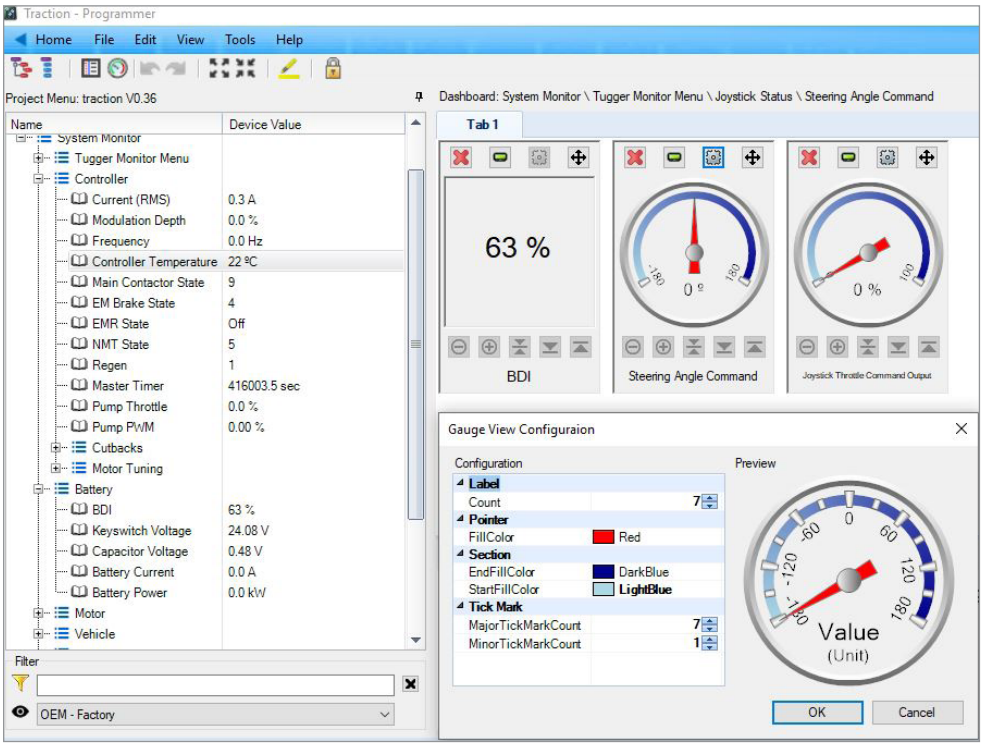
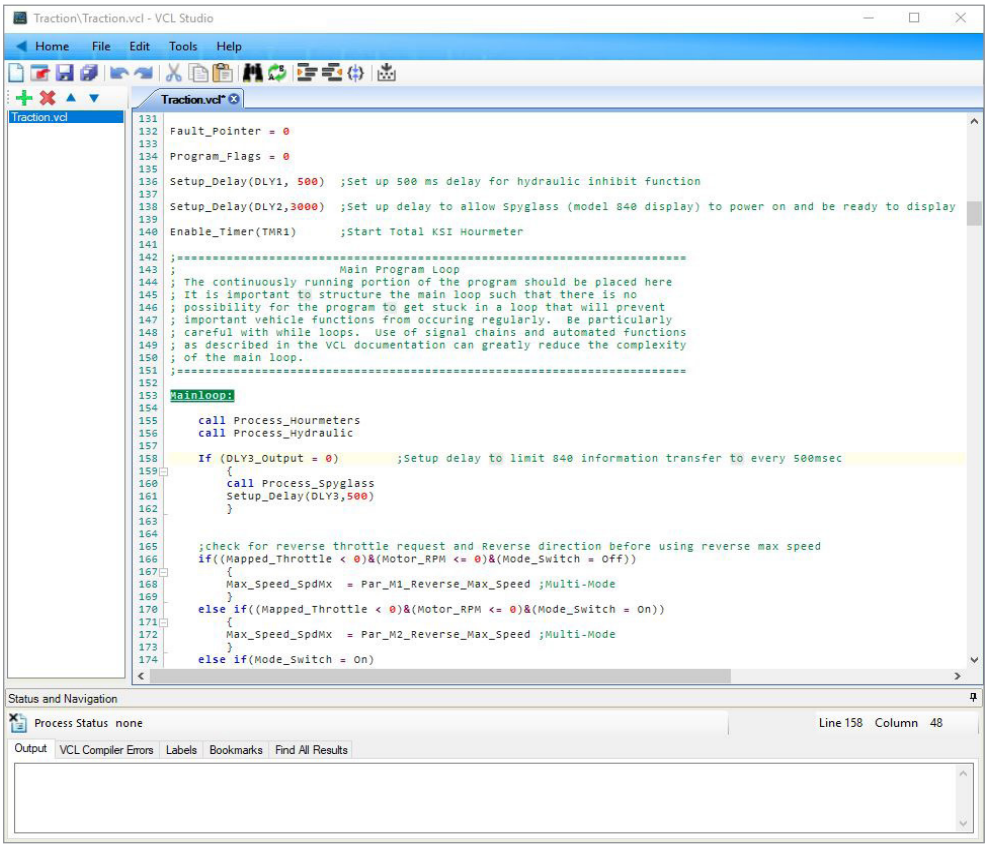
TYPICAL PROGRAMMING SCREENS cont'd



Gauge Dashboard



VCL Editor

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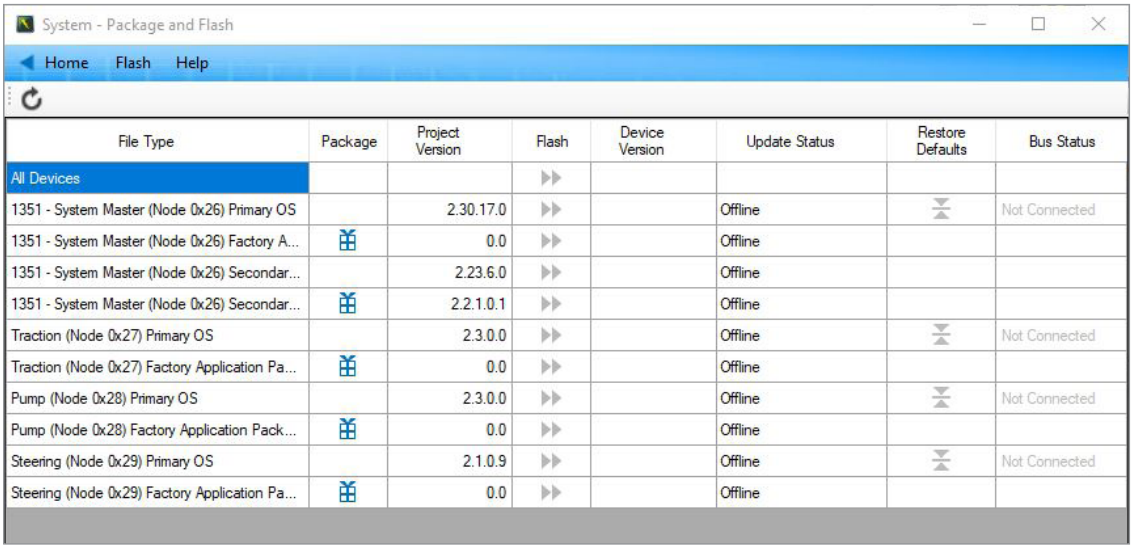
TYPICAL PROGRAMMING SCREENS cont'd



File Type	Package	Project Version	Flash	Device Version	Update Status	Restore Defaults	Bus Status
All Devices							
1351 - System Master (Node 0x26) Primary OS		2.30.17.0			Offline		Not Connected
1351 - System Master (Node 0x26) Factory A...		0.0			Offline		
1351 - System Master (Node 0x26) Secondar...		2.23.6.0			Offline		
1351 - System Master (Node 0x26) Secondar...		2.2.1.0.1			Offline		
Traction (Node 0x27) Primary OS		2.3.0.0			Offline		Not Connected
Traction (Node 0x27) Factory Application Pa...		0.0			Offline		
Pump (Node 0x28) Primary OS		2.3.0.0			Offline		Not Connected
Pump (Node 0x28) Factory Application Pack...		0.0			Offline		
Steering (Node 0x29) Primary OS		2.1.0.9			Offline		Not Connected
Steering (Node 0x29) Factory Application Pa...		0.0			Offline		

Pack & Flash

CIT EDITIONS

There are four editions of CIT available:

Tools Included	CIT-F	CIT-P	CIT-D	CIT-V
Flash Download	X			
Launchpad		X	X	X
Programmer		X	X	X
Dashboard		X	X	X
Pack & Flash		X	X	X
TACT			X	X
VCL Studio				X
Menu Editor				X

MODEL CHART & ACCESS LEVELS

Each edition of CIT is available at the access levels shown below. Lower access levels have progressively restricted permissions than higher access level versions. Note that the required access level for each system parameter can be set using the Menu Editor tool for each CIT project file.

Part Number	Edition	Model No.	Access Level	Suitable For
393691001	CIT-F Flash Download Edition	CIT-F-1001	*N/A*	Production Line Technician
393681001	CIT-P Programming Edition	CIT-P-1001	Field – Basic	Basic User
393682101		CIT-P-2101	Field – Intermediate	Service Technician
393683201		CIT-P-3201	Field – Advanced	Service Engineer
393684301		CIT-P-4301	OEM – Dealer	OEM Dealer
393693201	CIT-D Diagnostics Edition	CIT-D-3201	Field – Advanced	Service Engineer
393694301		CIT-D-4301	OEM – Dealer	OEM Dealer
393694401		CIT-D-4401	OEM – Factory	OEM Factory Development Engineer
393714401	CIT-V Full Edition	CIT-V-4401	OEM – Factory	OEM Factory Development Engineer