RAD STUDIO 10.4 PRODUCT FEATURE MATRIX

Each feature in the following table has an indication if it is available in Delphi **DX** and/or C++Builder **CX** . RAD Studio editions include both languages. Each column covers multiple, similar editions, with any difference specifically called out. Community edition[1] is available only for single personalities and has a limited license. Some of the features are only available for download from the IDE in the GetIt Package Manager, requiring an Internet connection.

	FEATURE	PROFESSIONAL / COMMUNITY[1]	ARCHITECT / ENTERPRISE
INTEGRATED COMPILERS AND TOOLCHAINS			
	Delphi 32-bit native code optimizing compiler (dcc32) and toolchain for Windows. Delphi 64-bit native compiler and toolchain for Windows (dcc64)	DX	DX
INTRODUCED IN 10.2 TOKYO!	Delphi 64-bit native compiler and toolchain for Linux (dcclinux64)		DX
INTRODUCED IN 10.3.2 RIO!	Delphi native compiler and toolchain for macOS 64-bit (dccosx64)	DX	DX
	Delphi compiler and toolchain for iOS 64 bit devices (dcciosarm64)	DX	DX
	Delphi ARM 32 bit compiler and toolchain for Android devices (dccaarm)	DX	DX
INTRODUCED IN 10.3.3 RIO!	Delphi 64-bit ARM compiler and toolchain for Android 64-bit platform (dccaarm64)	DX	DX
INTRODUCED IN 10.3 RIO!	C++ 17 Clang-enhanced compiler and toolchain for Win32 (bcc32x and bcc32c). Classic Embarcadero C++ compiler and toolchain for Win32 (bcc32)	CX	CX
INTRODUCED IN 10.3.2 RIO!	C++ 17 Clang-enhanced compiler and toolchain for Win64 (bcc64)	CX	CX
	C++Builder iOS 64 bit C++ compiler and toolchain	CX	CX
	C++Builder Android 32 bit ARM compiler and toolchain (bccaarm)	CX	CX
LICENSING			
INTRODUCED IN 10.2.3 TOKIO	Limited license based on revenue and usage and team size (see EULA for details)	CX DX COMMUNITY only	
	Licensing suitable for larger teams with no restriction on the number of licenses you can purchase or use and on revenue derived from the product (see EULA for details)	CX DX PROFESSIONAL only	CX DX

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[1] Community edition planned for a future 10.4.x release. Current available Community Edition version is 10.3.3.

	Feature		
	Network named or concurrent licenses available	CX DX PROFESSIONAL only	CX DX
ENHANCED IN 10.4 SYDNEY!	Earlier version licenses included in network licenses (Delphi 2007–10.3, C++ Builder 2007–10.3). Delphi 7 and C++Builder 6 available separately	CX DX PROFESSIONAL only	CX DX
ENHANCED IN 10.4 SYDNEY!	Access to licenses and downloads for earlier versions with purchase of standalone product licenses (Delphi 2007–10.3, C++Builder 2007–10.3, Delphi 7, and C++Builder 6)	CX DX PROFESSIONAL only	CX DX
APPLICATION PLATFORMS, INTEGRATED FRAMEWORKS, DESIGNERS AND SDKS			
INTRODUCED IN 10.2 TOKYO!	Support for Linux server-side and standalone applications for Ubuntu 18.04 LTS, Ubuntu 16.04 LTS, and RedHat Enterprise Linux (version 7)		DX
ENHANCED IN 10.4 SYDNEY!	Support for Linux client-side applications using the bundled FMX Linux library* *Available for download in the GetIt Package Manager*		DX
ENHANCED IN 10.4 SYDNEY!	FireMonkey Application Platform for creating 32-bit Windows applications and 64-bit Windows applications for Windows 10, Windows 8.x and Windows 7; Windows Server 2016 and 2012 R2	CX DX	CX DX
ENHANCED IN 10.4 SYDNEY!	FireMonkey Application Platform for creating 64-bit macOS applications that run on 10.15 Catalina, 10.14 Mojave, and 10.13 High Sierra	DX	DX
ENHANCED IN 10.4 SYDNEY!	FireMonkey Application Platform for creating native iOS applications for iOS 13, iOS 12, and iOS 11-for ARM 64-bit, with expanded support for iOS 13	CX DX	CX DX
ENHANCED IN 10.4 SYDNEY!	FireMonkey Application Platform for creating native Android ARMv7 applications for 10, Pie (9.0), Oreo (8.0), Nougat (7.x), and Marshmallow (6.x)	CX DX	CX DX
ENHANCED IN 10.4 SYDNEY!	FireMonkey Application Platform for creating native 64-bit Android ARMv7 applications for 10, Pie (9.0), Oreo (8.0), Nougat (7.x), and Marshmallow (6.x)	DX	DX
ENHANCED IN 10.4 SYDNEY!	VCL (Visual Component Library) for rapidly building 32-bit and 64-bit applications for Windows 10, Windows 8.x and Windows 7; Windows Server 2012 and 2016	CX DX	CX DX
	Windows Desktop Bridge .appx package format deployment (providing support for deploying to the Win 10 store), including the management of additional files, APPX packaging and code signing automatically invoking the platform SDK *(this feature requires running RAD Studio on Windows 10 Anniversary Update or above)*	CX DX	CX DX
ENHANCED IN 10.3 RIO!	Microsoft Windows SDK support for Windows 10, Windows 8 and Windows 7 APIs. Includes support for calling both classic Win32/Win64 APIs and enhanced support for WinRT APIs; required for the Windows Desktop Bridge	CX DX	CX DX
FMX APPLICATION PLATFORM (FIREMONKEY)			
	FireUI multi-device designer for visually building mobile and desktop applications and customize them at design time for different form factors and operating systems	CX DX	CX DX
	FireUI multi-device designer ability to make changes on the main user interface that are propagated to other device specific user interfaces and fine tune a device specific form factor without affecting other views; support for adding additional custom views to the designer	CX DX	CX DX
	FireUI App Previews lets you preview your FireMonkey application on iOS, Android, desktop targets as you are designing the app. Changes made in the FMX Designer are broadcasted in real time to connected devices using the appropriate Styles for the devices.	CX DX	CX DX
	Dozens of UI controls for building FMX applications, covering the most common UI guidelines and including also 3D support, for rapidly building multi-device applications	CX DX	CX DX
NEW IN 10.4 SYDNEY!	Metal Drivers GPU Support for macOS	DX	DX
NEW IN 10.4 SYDNEY!	Metal Drivers GPU Support for iOS	CX DX	CX DX
NEW IN 10.4 SYDNEY!	New Windows Styled Memo Implementation with enhanced IME support	CX DX	CX DX
NEW IN 10.4 SYDNEY!	TBufferedLayout Component for faster rendering of child controls	CX DX	CX DX
NEW IN 10.4 SYDNEY!	Support for iOS Launch Storyboard	CX DX	CX DX
NEW IN 10.4 SYDNEY!	iOS Theme check and theme change change notification	CX DX	CX DX
	Address Book component for iOS and Android, allowing access to and extensive modification of device contacts and groups and including monitoring of address book changes by other applications	CX DX	CX DX
INTRODUCED IN 10.3.2 RIO!	Google Firebase Push Notification support for the Android platform, with IDE-integrated configuration and updated Google Play services	CX DX	CX DX
INTRODUCED IN 10.2.2 TOKYO!	QuickEdit designers for FireMonkey, including a new pane for editing common control properties faster and several other additions to the IDE designer experience	CX DX	CX DX
	Extended clipboard service support, with new IFMXExtendedClipboardService interface, with support for querying and working with text, images, and custom formats	CX DX	CX DX

	Feature				
	Better High DPI resolution support on Windows	CX DX		CX DX	
	Support for accelerator keys on Windows, compatible with other platforms and implemented using the new IFMXAcceleratorKeyRegistryService platform service. There is also a new FocusControl property for the Label control to specify the focus target for the label's accelerator	CX DX		CX DX	
	Grid controls improvements including support for ImageList, new AutoDisplacement and CancelEditingByDefault options, and StringGrid supports for glyph and currency columns	CX DX		CX DX	
	ListView item designer, providing an interactive way to work with ListView items; Touch animation support for TListView	CX DX		CX DX	
	Enhanced TFont and TFontStyle to support multi-weight, multi-style fonts	CX DX		CX DX	
	Improvements to MessageBox, ShowMessage and InputQuery now offering both synchronous (blocking) implementation and asynchronous (non-blocking) implementation	CX DX		CX DX	
	Mouse-over Hints support for FireMonkey visual controls on desktop	CX DX		CX DX	
	FireMonkey zOrder support for Windows and native style presentation for Windows for Edit and Memo platform controls	CX DX		CX DX	
INTRODUCED IN 10.3 RIO!	FireMonkey zOrder support for Android and native style presentation for Android for Edit, Calendar, Switch, and Multiview controls	CX DX		CX DX	
	Touch animation for Android platform	CX DX		CX DX	
	FireMonkey apps can receive Android intents, regardless of the source (email, web link, other app). A new sample demonstrates this ability	CX DX		CX DX	
	FireMonkey Behavior service for automatically adjusting UI properties to the target operating system standards	CX DX		CX DX	
ENHANCED IN 10.2.2 TOKYO!	MultiView component to create a UI that adapts to the form factor, from mobile to tablet, from portrait to landscape. Now with specific support for Windows 10 UI, new options to manage borders appearance, and new alignments for docked panel mode	CX DX		CX DX	
INTRODUCED IN 10.2 TOKYO!	Multi-Threading support for TBitmap, TCanvas and TContext3D	CX DX		CX DX	
INTRODUCED IN 10.2 TOKYO!	Unification of Delphi and Java threads on Android	CX DX		CX DX	
	Radiant Shapes controls collection * * Available for download in the GetIt Package Manager	CX DX		CX DX	
	Specific TSwitch behavior for Windows 10 UI	CX DX		CX DX	
	Edit and Calendar ability to dynamically render a platform native UI control on iOS; Memo platform controls for iOS for highest input fidelity	CX DX		CX DX	
	FireMonkey platform rendering TGrid for iOS	CX DX		CX DX	
	ListView, Calendar, Switch and ScrollBox platform controls for iOS	CX DX		CX DX	
	MapView component for mobile platforms (iOS and Android) supporting platform specific interactive mapping libraries (respectively, by Apple and Google)	CX DX		CX DX	
ENHANCED IN 10.2.2 TOKYO!	WebBrowser component for Windows	CX DX		CX DX	
NEW IN 10.4 SYDNEY!	WebBrowser component for macOS based on WKWebView platform API	DX		DX	
	Improved mixing of platform and styled components, with new platform styling options for iOS and controls Z-order improvements (with ControlType property for non-platform controls)	CX DX		CX DX	
	ImageList component for FireMonkey, for storing and manipulating multiple images and sub-images in a single component; several components can more pick their graphical elements from the ImageList, rather than a standalone image	CX DX		CX DX	
	Multi-monitor support for desktop platforms	CX DX		CX DX	
	Splash screen support for Android, with specific project options matching the iOS ones	CX DX		CX DX	
	Form-level multi-touch support for all platforms	CX DX		CX DX	
	Tint support for buttons and toolbars on iOS and Android (for control surface and controls icons)	CX DX		CX DX	
	In-app purchase component for iOS and Android, to help monetize your applications	CX DX		CX DX	
ENHANCED IN 10.2.3 TOKYO!	Advertising component for Android, including AdMob support based on the Google Mobile Ads SDK (updated to version 7.0 in RAD Studio 10.2.3), also to help you monetize your mobile applications	CX DX		CX DX	
ENHANCED IN 10.3.2 RIO!	Push notifications support for mobile platforms, to receive remote notifications even if the app is not running (updated to include Firebase Android support)	CX DX		CX DX	

Feature				
ENHANCED IN 10.2.2 TOKYO! FireMonkey support for AppTethering across desktop and mobile applications, including both Wifi and Bluetooth support, with protocol enhancements, including encryption hooks and events to handle when a profile is connected or disconnected	CX	DX	CX	DX
Native message alerts for iOS and Android	CX	DX	CX	DX
Custom Pickers for iOS and Android, including Date Picker (DateEdit component) and Time Picker, Time Picker for desktop platforms	CX	DX	CX	DX
Phone Dialer Support for iOS and Android	CX	DX	CX	DX
Built-in text editing mode for Edit and Memo controls on Android and iOS, including Cut/Copy/Paste/Zoom; Spell Check Support for text input controls on iOS and Android	CX	DX	CX	DX
Notification Center Component for using notifications in your iOS and Android applications, including notification sound and now supporting also Windows 10 Notifications	CX	DX	CX	DX
Gesture support for iOS and Android including swipe (pan), tap, tap and hold, double tap and pinch & zoom	CX	DX	CX	DX
FireMonkey Mobile Application Wizard with header/footer, tabbed, and master detail templates	CX	DX	CX	DX
Full set of native iOS and Android styling options for buttons, toolbars, list boxes, sliders, switch controls	CX	DX	CX	DX
Swipe-to-Delete and Pull-to-Refresh on iOS and Android with the ListView component; search filtering for ListView	CX	DX	CX	DX
WebBrowser component for loading and displaying web content in your iOS and Android applications (now with corresponding desktop component)	CX	DX	CX	DX
Extended ListBox capabilities for iOS and Android, including header/footer/grouped styling, embedded search and expanded LiveBindings support	CX[1]		CX	DX
Support for various keyboard types on iOS and Android	CX	DX	CX	DX
TMagnifier component for easily zooming in on images and text	CX	DX	CX	DX
TCameraComponent component for accessing the front and back camera, the flash, and more device camera features	CX	DX	CX	DX
TabControl with new settings for using tabs as views and a PlatformDefault tab position to automatically adapt tab layout to the current mobile platform, support for TabControl tab icons on Android, slide transition action for TTabControl	CX	DX	CX	DX
FireMonkey Frames for designing portions of the UI and repeating them on multiple forms	CX	DX	CX	DX
Toggle Device Skin to show/hide mobile device background in the multi-device designer	CX	DX	CX	DX
FireMonkey Save State feature for persisting the forms status between sessions (and when the program is stopped by the operating system)	CX	DX	CX	DX
macOS Full screen Mode		DX		DX
Use of IFMXDragDropService to drag data to another applications on macOS		DX		DX
Actions and ActionLists for FireMonkey for better separation of the application logic from the user interface	CX	DX	CX	DX
Ready-to-use action for accessing the camera application and for accessing images from the camera roll on iOS and Android	CX	DX	CX	DX
Share Sheet support on iOS and Android for sharing content via Messaging, Mail, Facebook, Twitter etc.	CX	DX	CX	DX
FireMonkey control anchors for flexible positioning and sizing of the visual controls; Layout Managers (Flow Layout, Grid Layout) for flexible child controls positioning and sizing	CX	DX	CX	DX
Location Services component for GPS or triangulation, including geocoding support	CX	DX	CX	DX
Orientation sensor (gyroscope/compass) on iOS, Android, and on Windows (requires compatible hardware)	CX	DX	CX	DX
Motion Sensor component for accelerometer access on iOS, Android, and on Windows (requires compatible hardware)	CX	DX	CX	DX
3D File Import Support	CX	DX	CX	DX
Non-Client Area Application Styling for Windows and Mac	CX	DX	CX	DX
Support for Windows gestures. On-screen keyboard support for Windows touch devices	CX	DX	CX	DX
Edit control with styleable glyph with built-in style support for search bar, password control and more	CX	DX	CX	DX

	Feature				
	Animated progress glyphs, including Windows ring	CX	DX	CX	DX
	StyleLookUp support with preview of available designs for the selected component	CX	DX	CX	DX
	Shared external redistributable bitmap style designer for VCL and FMX	CX	DX	CX	DX
INTRODUCED IN 10.3.1 RIO!!	5 new FireMonkey multi-device styles* with theming support for all supported platforms * Available for download in the GetIt Package Manager	CX	DX	CX	DX
	Bitmap Style Designer enhancement, including new templates for Windows, Mac OS and Android Lollipop styles, ability to create blank styles for different platforms, and to adjust objects for different graphic resolutions	CX	DX	CX	DX
	Significantly improved integrated FireMonkey Style Designer, and enhancement to the TStyleBook component to support a collection of styles for various platforms	CX	DX	CX	DX
	StyleViewer for Windows 10 Style in Bitmap Style Designer	CX	DX	CX	DX
	Bitmap Links editor, to modifying TBitmapLink properties directly inside the IDE	CX	DX	CX	DX
	Native UI and custom UI control styles	CX	DX	CX	DX
	FireMonkey Visual Form Inheritance	CX	DX	CX	DX
	Use one shader language for all rendering libraries (OpenGL or 3D)	CX	DX	CX	DX
VISUAL COMPONENT LIBRARY (VCL)					
	Object-oriented, fully extensible and reusable visual component library (VCL) and applications architecture	CX	DX	CX	DX
	VCL Form Designer to visually build native Windows applications, with live snap-to hints and layout guidelines	CX	DX	CX	DX
	Visual Form Inheritance and Form linking to reduce coding and simplify maintenance; Frames for building and reusing compound components	CX	DX	CX	DX
	Object Repository for storing and reusing forms, Data Modules, and experts	CX	DX	CX	DX
	Object Inspector to set component properties and events	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	VCL Styles support for High-DPI and 4K monitors, with support for multiple resolution of graphical elements, automatic scaling, and improved element sizing on different DPI configurations	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	A dozen of ready to use High-DPI optimized VCL styles	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	Per-control VCL styling support	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	Custom Title Bars and the TitleBarPanel Component	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	TVirtualImage component with support for images with multiple resolutions	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	TEdgeBrowser Component integrating Microsoft's Chromium-based Edge WebView2 component and changes to the TWebBrowser component to support both IE and Edge -- based on Microsoft pre-release version of Edge WebView2 component, might require updates upon release	CX	DX	CX	DX
ENHANCED IN 10.2.2 TOKYO!	QuickEdit designers for VCL, including additional items in the designer menu, a new pane for editing common control properties faster, and several other additions to the IDE designer experience	CX	DX	CX	DX
	Windows components fully integrated with the Windows API.	CX	DX	CX	DX
INTRODUCED IN 10.3 RIO!	New Windows API headers for areas like High-DPI and DPI-awareness, WM_POINTER pen input support, and more	CX	DX	CX	DX
	VCL library source code to help extending and debugging components	CX DX Limited in COMMUNITY		CX	DX
INTRODUCED IN 10.3 RIO!	New TImageCollection and DPI-aware TVirtualImageList components to manage multiple-resolution images and improve application support for high-DPI monitors and application form scaling. Includes design time support with a new Image Collection editor and a new Virtual Image List editor.	CX	DX	CX	DX
INTRODUCED IN 10.3 RIO!	Support for Windows 10 "Per Monitor V2" mode in application manifest and enhanced system metrics API support (requires Windows 10 Creator's Update, build 1703)	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	High-DPI Awareness and 4K monitor support, plus Windows 8.1/10 multi-monitor support for VCL applications, with dozens of new improvements	CX	DX	CX	DX

New custom VCL controls corresponding to some of the new Windows 10 UI controls, which can also be used on previous version of Windows	CX DX	CX DX	
INTRODUCED IN 10.2 TOKYO! DatePicker and TimePicker VCL controls; StackPanel and CardPanel VCL controls	CX DX	CX DX	
ActivityIndicator, SearchBox, RelativePanel, ToggleSwitch, SplitView VCL control; modern looking SelectDirectory function	CX DX	CX DX	
CalendarView and CalendarPicker VCL controls	CX DX	CX DX	
ENHANCED IN 10.3 RIO! VCL Font Scaling improvements for higher DPI and higher resolution monitors	CX DX	CX DX	
Konopka Signature VCL Controls (over 200 additional Windows UI controls)* * Available for download in the GetIt Package Manager	CX DX	CX DX	
VCL sensor components for Windows tablets	CX DX	CX DX	
VCL support for AppTethering across desktop and mobile applications, with Wifi and Bluetooth support with extensions and protocol enhancements, including encryption hooks, including events to handle when a profile is connected or disconnected	CX DX	CX DX	
Taskbar component with progress bars, overlay icons, custom buttons, and multiple previews; JumpList component for adding custom menus to taskbar buttons	CX DX	CX DX	
VCL Styles: Create VCL applications with enhanced GUI, with additional Windows 10 Styles for VCL and including Windows touch tablets optimized styles; support for styling of main menus, popup menus, and system menus	CX DX	CX DX	
Windows 10 specific VCL styles, to build applications matching Microsoft's Modern look and feel; Premium styles including TabletLight, Sky, and Glow VCL styles	CX DX	CX DX	
INTRODUCED IN 10.3.1 RIO! 10 new VCL Windows styles* that users can apply to their Windows applications * Available for download in the GetIt Package Manager	CX DX	CX DX	
Create your own custom styles with the VCL Style Designer	CX DX	CX DX	
VCL Styling improvements, including support for styling common dialogs and the TWebBrowser component	CX DX	CX DX	
Theming and styling support for TGrid descendants	CX DX	CX DX	
Integrated gesturing framework with multi-OS support for Windows 8. Gesture Designer enables full control of all gesture design and interaction; Gesture components (TGestureListView, TGesturePreview, TGestureRecorder) to build gesture creation and management into VCL based applications; Interactive multi-touch gestures for pan, zoom, rotate, tap, double tap, tap and hold (requires multi-touch enabled OS)	CX DX	CX DX	
TTouchKeyboard a virtual keyboard for enhanced non-keyboard interface interactions that support multiple locales and languages	CX DX	CX DX	
Modern VCL Components: TCategoryPanelGroup, TButtonedEdit, TLinkLabel, TBalloonHint	CX DX	CX DX	
Enhancements to existing controls: TButton, TEdit, TProgressBar, TListView, TTreeView, TRichEdit, TImageList	CX DX	CX DX	
Full support for PNG image format in TImage and TImageList	CX DX	CX DX	
INTRODUCED IN 10.2 TOKYO! TDBImage direct support for JPEG and PNG graphic formats	CX DX	CX DX	
Support for Windows Imaging Component (WIC) including JPEG, TIFF, GIF, PNG, BMP, and HD Photo image formats. RAW camera formats (such as NRW, NEF, CRW, CR2, RW2, ARW, SR2, SRF, ORF, PEF, and DNG) also supported with manufacturer supplied codecs	CX DX	CX DX	
Import Component wizard to import a type library, ActiveX control or .NET Assembly	CX DX	CX DX	
Component wizard to create the unit for a new component	CX DX	CX DX	
Standard components including frame, edit, menu, button, label, checkbox, list box, combo box, panel and action list	CX DX	CX DX	
Additional components including graphical buttons, image, shape, scroll box, splitter, buttoned edit, tabs, panels, action toolbar, and color map	CX DX	CX DX	
Windows common controls including page control, image list, rich edit, progress bar, date time, calendar, toolbar, tree view and list view	CX DX	CX DX	
System components including timer, paint box, media player, OLE container and DDE	CX DX	CX DX	
Dialog components including open, save, open/save picture, open/save text, font, color, print, printer setup, find, replace and page setup	CX DX	CX DX	
Data Access Controls via datasource and the use of data-aware controls	CX DX	CX DX	

		CX	DX	CX	DX
	Data Controls including DBGrid, navigator, text, edit, memo, image, listbox, combo box, checkbox, radiogroup, lookup and rich edit	CX	DX	CX	DX
	TWebBrowser support, wrapped on the Microsoft IE ActiveX component	CX	DX	CX	DX
	Task dialog component and enhanced Windows dialog components for file open and file save	CX	DX	CX	DX

COM/DCOM SUPPORT

		CX	DX	CX	DX
	Full COM/ActiveX support enabling transparent access to IDL and code, source control friendly, and allowing total control over implementation of COM and ActiveX objects; DCOM support	CX	DX	CX	DX
	Wizards support wrapping existing VCL components as ActiveX controls	CX	DX	CX	DX
	Import .NET assemblies as COM objects in Win32 VCL applications	CX	DX	CX	DX
	Legacy support for DataSnap/MIDAS COM/DCOM based multi-tier database application framework			CX	DX
	Advanced Type Library Editor that manages IDL, making COM development completely transparent; Support for Automation Object event handling	CX	DX	CX	DX
	Create reusable native 32-bit and 64-bit dynamically linked libraries (.DLL), COM controls (.OCX), and standalone COM executable	CX	DX	CX	DX
	COM Object Wizard; Microsoft ActiveX® Control Data binding; Import COM servers as components	CX	DX	CX	DX

INTERNET OF THINGS (IOT) SUPPORT

		CX	DX	CX	DX
	Native Bluetooth APIs (on platforms that fully support the technology) for FireMonkey and VCL applications	CX	DX	CX	DX
	Bluetooth framework improvements and new TBluetooth component for classic Bluetooth	CX	DX	CX	DX
	Bluetooth LE component (on platforms that fully support the technology)	CX	DX	CX	DX
	Proximity support based on the "beacons" technology (including the iBeacon and AltBeacon standards) for all supported platforms	CX	DX	CX	DX
	Beacon enhancements with support for EddyStone format, change of AdvertiseData parser to include all fields, improved Beacon scan performance, new Android scan modes, and WinRT Bluetooth API integration, StartScan method on Android	CX	DX	CX	DX
	New TBeaconDevice class for turning a device on one of the supported platforms into a "beacon"	CX	DX	CX	DX
	BeaconFence components* for detecting a device position relative to pre-determined zones based and based on triangulation of beacons positions *Available for download in the GetIt Package Manager*			CX	DX
	BeaconFence enhancements[SEP] for detecting zones, Windows support, customized calculation of the current position, access last calculated position	CX	DX	CX	DX
	New Bluetooth LE and Z-Wave compatible components* for Internet of Things devices, with demo projects for Delphi and C++. In order to use the component, you will need to have the physical IoT device. *Available for download in the GetIt Package Manager*	CX	DX	CX	DX
	Ready to use Bluetooth LE-based IoT components including heart rate monitors, blood pressure monitors, weight scales, thermometers, Environment sensors, speed and cadence fitness monitors, items trackers, light bulbs	CX	DX	CX	DX
	Ready to use Z-Wave compatible IoT components including environment monitors, home automation devices, light and temperature monitors, and more	CX	DX	CX	DX

VISUAL LIVEBINDINGS

		CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	Optimized Visual Live Bindings RTTI integration for better performance	CX	DX	CX	DX
NEW IN 10.4 SYDNEY!	VCL and FMX controls bound to a TDataSet and TField now respect some of the TField properties like Alignment, EditMask, DisplayWidth	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	Visual Live Bindings Designer, to visually connect component properties and data	CX	DX	CX	DX
	Easily replace prototype data with real ClientDataSet data with one click	CX	DX	CX	DX
	Context sensitive LiveBindings Wizard supporting both dbExpress and FireDAC	CX	DX	CX	DX
	Support for QuickBinding components, ability to visually add and bind to additional component properties	CX	DX	CX	DX
	Color coded component properties easily identify bindable members	CX	DX	CX	DX
	Zoom control for Visual LiveBindings Designer and ability to save image of current LiveBindings Designer layout; Hide visual elements on right-click	CX	DX	CX	DX

Feature				
Integrated Layers Management system for LiveBindings Designer with Photoshop® like layers, allowing you to visually organize and hide set of elements in the LiveBindings Designer	CX DX		CX DX	
Tools Options support for LiveBindings Designer to show/hide certain components from the visual LiveBindings Designer view and enable/disable Wizard option in right-click menu	CX DX		CX DX	

INTEGRATED BUILD TOOLS AND PROJECT SUPPORT

	Feature	CX	DX	CX	DX
	IDE support for building and managing projects for 32-bit and 64-bit Windows	CX	DX	CX	DX
INTRODUCED IN 10.2 TOKYO!	IDE support for building and managing projects for 64-bit Linux				DX
INTRODUCED IN 10.3.2 RIO!	IDE support for building and managing projects for 64-bit macOS (including macOS App Store support and integrated Apple Notarization support)		DX		DX
	Use MSBuild externally from the IDE to compile very large projects with the stand-alone Delphi and C++ compilers.	CX	DX	CX	DX
INTRODUCED IN 10.2.2 TOKYO!	The stand-alone Delphi compilers can now use the large memory address space.		DX		DX
	The IDE shows Header Dependencies when building with bcc32c	CX		CX	
	Define Android application settings, including supported orientations, and use the new Entitlement lists to include advertising and notifications support in an app	CX	DX	CX	DX
INTRODUCED IN 10.3.3 RIO!	IDE support for creating Android App Bundle (AAB) including both 32-bit and 64-bit binaries for store submission		DX		DX
NEW IN 10.4 SYDNEY!	Integrated installation of AdoptOpenJDK, required by Android SDK tools				
	IDE support for adding Java classes to an Android app classes.dex library and customizing it	CX	DX	CX	DX
	Support for Android Services in the IDE, including wizards to create Android Services and to add them to an existing Android app		DX		DX
	Java2OP (Java to Object Pascal bridge) API headers translation tool (for Android), improved to reduce dependency between units		DX		DX
	SdkTransform tool to convert Objective-C / C++ headers to Object Pascal headers		DX		DX
	Define info.plist application settings including supported orientations in the IDE	CX	DX	CX	DX
	Deploy apps to the iOS Device (Debug/Ad Hoc/ App Store), now with several iOS device provisioning improvements to simplify the deployment process – including Auto Bundle identifier and support for executing an application from the IDE using the AdHoc target	CX	DX	CX	DX
	Define iOS application splash screens and mobile app icons in the IDE	CX	DX	CX	DX
	Deploy apps to Android devices (Debug/App Store)	CX	DX	CX	DX
ENHANCED IN 10.3.2 RIO!	Platform Assistant for deploying and debugging across platforms	CX	DX	CX	DX
INTRODUCED IN 10.2 TOKYO!	Platform Assistant (PAServer) for Linux; Deployment Manager: Deploy to Linux				DX
	Platform Assistant Manager Mac macOS tray app that helps managing multiple versions of Platform Assistant (PAServer)	CX	DX	CX	DX
	Deployment Manager: Deploy to iOS, Android, Windows	CX	DX	CX	DX
	Deployment Manager: Deploy to macOS		DX		DX
	Automatic inclusion of project files (like media files and resource files) to the Deployment Manager	CX	DX	CX	DX
	Project Manager view menu for directory (nested), directory (flat) and list view of files in a project and with an enhanced status bar for more file information.	CX	DX	CX	DX
	File manipulation and creation through the Project Manager facilities	CX	DX	CX	DX
	Flexible build system leveraging MSBuild with identical build process from the IDE or command line	CX	DX	CX	DX
ENHANCED IN 10.2 TOKYO!	Delphi 1 through 10.2 project import and C++Builder 3 through 10.2 project import	CX	DX	CX	DX
	Build Configurations provide flexibility to organize multiple build settings for all compiler, linker options, and platform support	CX	DX	CX	DX
	Named option sets to save and apply build configurations to any project; Share option-sets between build configurations and between projects	CX	DX	CX	DX
	Multi-select files in the Project Manager	CX	DX	CX	DX
	Build Events for pre-build and post-build on project and file levels	CX	DX	CX	DX

	Project dependency checking, Project level build ordering, Build/Make from here – Make or build current project and all later projects	CX DX	CX DX
	IDE Studio personality indicator – shows which is active when multiple languages are available	CX DX	CX DX
	Additional command line tools include Microsoft Resource Compiler, TDump utility to structurally analyze EXE, OJB, and LIB files, GREP tool, and MAKE tool	CX DX	CX DX
RECENT C++ LANGUAGE AND CORE RTL FEATURES			
INTRODUCED IN 10.3 RIO!	Win32 C++ Clang-enhanced compiler (with C++ 17 language support)	CX	CX
INTRODUCED IN 10.3.2 RIO!	Win64 C++ Clang-enhanced compiler (with C++ 17 language support)	CX	CX
ENHANCED IN 10.3.2 RIO!	C++ runtime library (RTL) built with the updated Clang-enhanced compiler for Win32 and Win64, including 2018 edition of Dinkumware STL	CX	CX
INTRODUCED IN 10.3 RIO!	Improved C++ and Delphi ABI and header compatibility	CX DX	CX DX
INTRODUCED IN 10.2.3 TOKYO!	Support for using our C++Builder compilers to build CMake projects on the command line for Win32, Win64, iOS32, iOS64, and Android, including deployment support	CX	CX
ENHANCED IN 10.2 TOKYO!	Improved optimizations for C++ Clang-enhanced compilers code generation (–O1 and –O2 and now also –O3 optimizations)	CX	CX
	Simplified array initialization and construction for C++ Clang-enhanced compilers	CX	CX
	Android and iOS32 compilers updated to Clang version 3.3	CX	CX
	The Clang-enhanced compilers are now large-address aware and can take advantage of additional memory	CX	CX
	Additional iterator wrappers over common Delphi RTL containers for all Clang-enhanced compilers for use with C++11 range-for loops and non-member std::begin() and std::end()	CX	CX
	C++ functions for TPoint, TPointF, TRect, TRectF core types	CX	CX
	ANSI/ISO C++11 and 99 Standard language conformance support for 64-bit	CX	CX
	#pragma once support that allows for better compatibility with MSVC and also acts as a header guard	CX	CX
	[[deprecated]] attribute to flag constructs as deprecated	CX	CX
	Secure C library functions	CX	CX
	Custom evaluators for C++ Strings types	CX	CX
	C++ RTTI compatibility with Delphi	CX	CX
ENHANCED IN 10.3.3 RIO!	Updated 2019 edition of the Dinkumware STL with C++17 headers for Win32 and Win64	CX	CX
	ANSI/ISO standard library Technical Report 1	CX	CX
	Improved standard C++ heap manager	CX	CX
	Optimized string/memory handling functions	CX	CX
	UnicodeString class and Unicode character types char16_t and char32_t	CX	CX
	Move semantics with rvalue references	CX	CX
	Explicit conversion operators	CX	CX
	Static assertions	CX	CX
	Full type trait support	CX	CX
	Extern templates	CX	CX
	[[final]] and [[noreturn]] attributes	CX	CX
	Decltype keyword	CX	CX
	Linker error handling to improve memory management flexibility and resolution	CX	CX

	Feature				
INTRODUCED IN 10.2 TOKYO!	Large-memory space support for C++ linker and improved resource handling to address heap errors		CX		CX
RECENT DELPHI LANGUAGE AND CORE RTL FEATURES					
NEW IN 10.4 SYDNEY!	Custom managed records with the ability to define custom Initialize, Finalize and Assign operations, executed when a record is allocated, de-allocated, and copied		DX		DX
NEW IN 10.4 SYDNEY!	New standard functions for low-level bit processing operations: CountLeadingZeros, CountTrailingZeros, CountPopulation		DX		DX
INTRODUCED IN 10.3 RIO!	Inline variables declaration, supporting local scope, direct initialization, and type inference; inline constants declaration		DX		DX
INTRODUCED IN 10.3 RIO!	Type inference for inline variable declarations (the type is inferred from the value assigned to the variable)		DX		DX
ENHANCED IN 10.3 RIO!	Support for calling WinRT APIs, with now over 50 specific Object Pascal interface units		DX		DX
	[Weak] and [Unsafe] support for interface references		DX		DX
	[Volatile] attribute can be attached to a method parameters and local variables		DX		DX
	Delphi compiler and linker performance improvements to improve compilation speed for generic methods and generic methods in standard classes		DX		DX
	Improved initialization for dynamic arrays, support for mixing and matching constant and dynamic arrays		DX		DX
	New string-like operations on dynamic arrays including + operator concatenation, Insert and Delete		DX		DX
	Class, record, and intrinsic types helpers		DX		DX
	Predefined helpers for core types such as string, char, integer, other ordinal types, and floating point types		DX		DX
	RTTI for indexed properties and RTL support		DX		DX
	Reflection support for exposure of Methods, Fields, and Properties to support dynamic invocations and other meta-programming approaches (Enhanced RTTI)		DX		DX
	Custom attribute support for most code elements – types, fields, properties, methods, and parameters		DX		DX
	Generics with full RTL list and collection support		DX		DX
	UnicodeString type as the default string type and support for Unicode char manipulation		DX		DX
	Anonymous methods (or closures)		DX		DX
	Compiler option to treat warnings as errors		DX		DX
SHARED RUNTIME LIBRARY FEATURES					
NEW IN 10.4 SYDNEY!	Unified memory management across all Delphi compilers and platforms, using classic Delphi memory management also for mobile (and Linux, since RAD Studio 10.3)		DX		DX
INTRODUCED IN 10.2 TOKYO!	Delphi RTL for 64-bit Linux				DX
	Delphi and C++ RTL for 32-bit Windows and 64-bit Windows	CX	DX	CX	DX
	Delphi and C++ packages support for 32-bit applications and 64-bit Windows	CX	DX	CX	DX
	Support for Windows 10 Notifications using the NotificationCenter component	CX	DX	CX	DX
INTRODUCED IN 10.3 RIO!	Support for Windows Store interaction via TWindowsStore component, with support for paid applications, paid add-ons, and trial mode	CX	DX	CX	DX
	Support for contracts, the system mechanism for sharing information with other Windows 10 applications (apps can behave like *contract sources*) using the new SharingContract component – C++ supported in the GetIt Package Manager	CX	DX	CX	DX
	Parallel Programming library for easy development of asynchronous code and faster multi-core applications, without coding threads manually	CX	DX	CX	DX
	System.Threading unit supporting parallel for loops, tasks scheduling and futures	CX	DX	CX	DX
	Optimized Unicode strings handling in iOS and Android ARM compilers	CX	DX	CX	DX
ENHANCED IN 10.4 SYDNEY!	Support for all classic string types (including UTF8String, ANSIString, and RawByteString) on iOS and Android	CX	DX	CX	DX
INTRODUCED IN 10.3.2 RIO!	Delphi RTL for macOS 64-bit		DX		DX

	Delphi and C++ RTL for iOS, iOS 64-bit API headers and RTL integration	CX	DX	CX	DX
INTRODUCED IN 10.3.3 RIO!	Delphi RTL for 64-bit Android		DX		DX
ENHANCED IN 10.3 RIO!	Delphi and C++ RTL for Android, with support for Android API level 26	CX	DX	CX	DX
	DirectX 12 support on Windows	CX	DX	CX	DX
	OpenGL 4.3 support	CX	DX	CX	DX
	Enhanced compiler switches for XML representation of source code	CX	DX	CX	DX
	Extensible, cross platform, framework agnostic login credentials service	CX	DX	CX	DX
	Native zip file support. TZipFile class now has a callback to use during the extraction process to know the current progress, support added to extract ZIP files with passwords	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	Regular Expressions (Regex) library, now supporting PCRE UTF-16 on Windows	CX	DX	CX	DX
	Object-oriented path, file and directory I/O classes	CX	DX	CX	DX
	Buffered file read and write support, based on the TBufferedFileStream class, a high performance TFileStream descendant based on an internal configurable buffer	CX	DX	CX	DX
	TMemIniFile and TIniFile have new Modified and AutoSave properties	CX	DX	CX	DX
	TStrings enhancements including new properties IsUpdating, TrailingLineBreak, UseLocale, Options, plus overloaded TStringList constructors and AddPair fluent method	CX	DX	CX	DX
	StringReplace and Pos speed optimization	CX	DX	CX	DX
	Box2D physics engine, for manipulating on-screen objects according to the physics rules	CX	DX	CX	DX
	Object Pascal interfaces for the Box2D physics engine		DX		DX
ENHANCED IN 10.3 RIO!	TStringBuilder for easier and faster string concatenation, optimized and with flexible growth strategy	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	JSON (JavaScript Object Notation) processing using a JSON.NET implementation for JSON streaming with new readers and writers (including base TJsonReader and TJsonWriter classes)	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	Specialized JSON readers and writers, including the TJsonTextReader and TJsonTextWriter classes, the new TAsciiStreamWriter class, support for Extended JSON, better exception handling when reading not-well-defined JSON	CX	DX	CX	DX
	Binary JSON (BSON) readers and writers support, as part of the same JSON.NET architecture (including the new TBsonReader and TBsonWriter classes)	CX	DX	CX	DX
	JSON and BSON fluent method builders, including the TJSONArrayBuilder and TJSONObjectBuilder classes	CX	DX	CX	DX
	JSON and BSON fast forward-only iterator (TJSONIterator)	CX	DX	CX	DX
	System.NetEncoding RTL unit for Web encoding and decoding (Base64, HTML, URL)	CX	DX	CX	DX
ENHANCED IN 10.2 TOKYO!	System.Hash RTL unit, with hash functions to support the HTTP framework, now including also method for files hashing	CX	DX	CX	DX
ENHANCED IN 10.2 TOKYO!	HTTP client framework, mapped to platforms libraries on all supported platforms, including also platform HTTPS support (with no need to deploy the OpenSLL library), with improved asynchronous support	CX	DX	CX	DX
	NetHTTPClient and NetHTTPRequest components, offering easy access to the HTTP client framework	CX	DX	CX	DX
	Support for native HTTP(S) client libraries on Windows, macOS (Delphi only), iOS and Android	CX	DX	CX	DX
INTRODUCED IN 10.2 TOKYO!	Support for native HTTP(S) client libraries on Linux				DX
	HTTP client library improvements including support for asynchronous HTTP requests, time-outs, and automatic decompression of gzip content	CX	DX	CX	DX
	Support for localized resources	CX	DX	CX	DX
	Expression evaluation in compiler directives	CX	DX	CX	DX
	Custom variants with support of your own data types, complex numbers, safe arrays, and passing variants through data sets; Variant support for Int64, unsigned types and Unicode strings	CX	DX	CX	DX

INTEGRATED DEVELOPMENT ENVIRONMENT AND DEVELOPER PRODUCTIVITY

Status	Feature	Col A	Col B
NEW IN 10.4 SYDNEY!	New Delphi Code Insight implementation (based on the Language Server Protocol architecture) for including Code Completion, Parameter Completion, Error Insight, Find Declaration, and Tooltip/Help Insight. The classic engine remains optionally available.	DX	DX
INTRODUCED IN 10.3.3 RIO!	New C++ Code Insight implementation (based on the Language Server Protocol architecture)	CX	CX
NEW IN 10.4 SYDNEY!	Customizable LSP configuration per language and file extension in the IDE (including the ability to use external engines)	CX DX	CX DX
NEW IN 10.4 SYDNEY!	Code editor status bar font zooming, syntax highlighter and file encoding selections	CX DX	CX DX
NEW IN 10.4 SYDNEY!	Welcome page extensions with check for Patches and removal of Events feed	CX DX	CX DX
NEW IN 10.4 SYDNEY!	New implementation of the IDe Title bar (using the new matching VCL control)	CX DX	CX DX
INTRODUCED IN 10.3.1 RIO!	New IDE productivity tool: Bookmarks*, which extends the IDE's previous marking of locations in the code editor. *Available for download in the GetIt Package Manager	CX DX	CX DX
INTRODUCED IN 10.3.1 RIO!	New IDE productivity tool: Navigator*, which allows you to quickly jump to any location in your unit through intelligent search (for Delphi), and adds a minimap to the code editor. *Available for download in the GetIt Package Manager	CX DX	CX DX
INTRODUCED IN 10.3 RIO!	IDE main window UX extensively improved, with a clean and modern look and feel designed for long-term use and productivity	CX DX	CX DX
INTRODUCED IN 10.3 RIO!	Commonly used dialogs (Project Options, IDE Options, New Items dialog, GetIt Package Manager dialog, Compiler progress dialog) have been redesigned and improved, for productivity and clarity	CX DX	CX DX
INTRODUCED IN 10.3 RIO!	Search added to the Project Options and IDE Options dialogs, allowing you to search for a setting inside each dialog	CX DX	CX DX
ENHANCED IN 10.3 RIO!	Styled IDE UI, including ability to toggle and disable IDE styling and support for a dark style. In 10.3 the IDE has a new Light theme based around the blue color and an updated Dark theme	CX DX	CX DX
INTRODUCED IN 10.2.2 TOKYO!	IDE UX improvements including a new Welcome page with sample projects, upcoming webinars, YouTube videos feed; updated component icons; and more	CX DX	CX DX
ENHANCED IN 10.3 RIO!	Additional IDE Startup Layout for the Welcome Page, with the ability for users to change and set the layout they want to use for each layout, including Startup	CX DX	CX DX
	The VCL and FireMonkey Designers can be separated from the code editor window, making it possible to have the designer on one monitor, while coding on another monitor, and to work on multiple forms at the same time	CX DX	CX DX
	Delphi project option "Show general messages" to show info messages when building a project	DX	DX
	The C++ Structure Parser has been rewritten and includes support for modern C++	CX	CX
	Method Toxicity Metrics; Bookmarks stack, Selection Expansion	DX	DX
INTRODUCED IN 10.2 TOKYO!	New modular View menu, re-arranged with subsections	CX DX	CX DX
	IDE built with large memory address model, to provide significantly more memory to the embedded compilers, integrated debuggers, and various tools executed in the IDE process	CX DX	CX DX
	Redesigned compiler unit caching mechanism, to free older units in case the available memory is being filled up, when compiling project groups with multiple projects	CX DX	CX DX
	Improved multi-monitor support in the IDE, with the ability to place most forms and panes on different secondary monitors	CX DX	CX DX
	Form designer option to hide/show non-visual controls icon (reducing form design potential clutter)	CX DX	CX DX
	Structure View Icons representing the corresponding component	CX DX	CX DX
	Unsaved file auto-recovery – unsaved work is periodically saved to a temporary location. If the IDE closes ungracefully (because of a system crash) the IDE will attempt to recover the user's unsaved work	CX DX	CX DX
ENHANCED IN 10.2 TOKYO!	Enhanced IDE Project Options to easily enable High-DPI Awareness in your applications, now supporting also several execution levels affecting the project manifest file on Windows	CX DX	CX DX
ENHANCED IN 10.2 TOKYO!	Full customization of the Object Inspector layout, with the ability of hiding the description panel, the quick actions, and the new filter panel	CX DX	CX DX
	Object Inspector contents can be filtered to display specific elements	CX DX	CX DX
	Shortcuts to increase/decrease the size of the font in the code editor	CX DX	CX DX
	GetIt Library Manager for easy discovery, download and update of source code libraries, components, and other features from Embarcadero GetIt servers*. Extended with Categories, UI improvements, and new actions. *Use of GetIt requires Internet connectivity. The feature is not available to off-line developers.	CX DX	CX DX

		Column 1		Column 2	
NEW IN 10.4 SYDNEY!	GetIt Library Manager enhancements with support for updates, sort by date, subscription only packages	CX	DX	CX	DX
	Configuration settings migration tool to migrate configurations of older versions of the product to a newer version, or between different installations of the same version	CX	DX	CX	DX
	Welcome page with a list of favorite and recent projects	CX	DX	CX	DX
ENHANCED IN 10.3.2 RIO!	Project statistics information for activity tracking and to better understand team productivity (now optional and disabled by default)	CX	DX	CX	DX
	Multi-paste support to let you perform the same paste operation on multiple source code lines at once	CX	DX	CX	DX
	Structural highlighting ; Flow control highlighting, to visually see the flow jumps in your code directly in the editor; Code navigation toolbar with classes and methods combo boxes at the top of the editor, with an additional option to hide it		DX		DX
	Project Manager enhancements, with the support for adding database files and simplifying their deployment	CX	DX	CX	DX
ENHANCED IN 10.2 TOKYO!	New install experience based on the GetIt architecture; with the ability to select the platforms to install and add more platforms later form the IDE (which has a Platforms Manager option in the Tools menu). Additional installation features are now available in the regular GetIt form. Now supporting parallel downloads to reduce installation time.	CX	DX	CX	DX
	A set of examples and demos to help new and existing developers get the most out of the environment	CX	DX	CX	DX
	Designer snapshots – copy form images to the clipboard	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	IDE Insight, the fastest way to find and execute commands in the IDE with 1-button click also with object inspector property support	CX	DX	CX	DX
	Code Formatter and beautification for source code including block formatting	CX	DX	CX	DX
	Command-line Code Formatter for integration with automated build processes	CX	DX	CX	DX
	Code Formatter profiles allow users to create / save / load custom formatter options sets	CX	DX	CX	DX
	Audits and metrics		DX		DX
	Search for Usages command now available from the code editor and Delphi Class Explorer context menus		DX		DX
	Compilation can be done in a background thread	CX	DX	CX	DX
	Support for C++ parallel compilation	CX		CX	
	Checkbox for Boolean types in the Object Inspector greatly enhancing readability	CX	DX	CX	DX
	Property Editors for Date properties now use Calendar controls	CX	DX	CX	DX
	Use Unit interaction capabilities increased		DX		DX
	Class Explorer gives configurable hierarchical view of class libraries throughout project. Also enables fast navigation to declarations and implementations, as well as easy addition of fields and methods.	CX	DX	CX	DX
	Resource Manager greatly simplifies the addition of resources to projects	CX	DX	CX	DX
	Live Code Templates – dynamic scriptable templates streamlines coding complex and common structures and operations. Create or customize code templates and control the behavior, code generation, and user experience of your templates. Surround Templates that can wrap around selected code or text.	CX	DX	CX	DX
	Editor "Change Bar" indicates modified lines and saved modified lines	CX	DX	CX	DX
	"Smart" Block completion – anticipates and gracefully adds block closures as you type	CX	DX	CX	DX
	Virtual form positioner for VCL designer and FireMonkey designer	CX	DX	CX	DX
	Main toolbar with the addition of Run without Debug option	CX	DX	CX	DX
	Project Manager now has the ability to run selected applications with either Run or Run without Debug from the context menu.	CX	DX	CX	DX
	Hot-key Tool Palette w/ Incremental search – find any component quickly	CX	DX	CX	DX

		CX	DX	CX	DX
	Gallery in Tool Palette – find gallery wizards when you need them	CX	DX	CX	DX
	SyncEdit – block-edit multiple instances of a symbol simultaneously	CX	DX	CX	DX
	History Manager with automatic multi-level file backups, file differencing and restore	CX	DX	CX	DX
	Structure Pane that displays hierarchical view of source code and provides a VCL Object Treeview for quick navigation and manipulation of objects in the VCL designer	CX	DX	CX	DX
	Syntax Highlighting Open Tools API extension with built in support for JavaScript, PHP, and INI files	CX	DX	CX	DX
	Ability to individually customize editor options for particular file types	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	Full-featured Open Tools API allows for customization of the IDE through wizards and experts, operate on projects and their various modules, access to the editor and designers, with improved style and theme support	CX	DX	CX	DX
	Symbol Insight – click to navigate to declarations and implementations	CX	DX	CX	DX
	Code Folding configuration and properties	CX	DX	CX	DX
	Editor Gutter – easier to read with less clutter	CX	DX	CX	DX
	Code Completion for Object Pascal		DX		DX
ENHANCED IN 10.3.2 RIO!	Updated support for Code Completion for the C++ language, with asynchronous invocation support, based on the Language Server Protocol architecture	CX		CX	
	Custom IDE desktop layout profiles with enhanced support for docked windows	CX	DX	CX	DX
	To-do lists keep your development on track	CX	DX	CX	DX
	Help Insight – convenient tooltips provide help snippets as you develop	CX	DX	CX	DX

SOURCE CODE MANAGEMENT					
	Version Insight – Integrated framework for supporting source code management tooling inside the IDE	CX	DX	CX	DX
	Subversion integration into the IDE, including change list labels, SVN merge dialog, branches switching and more	CX	DX	CX	DX
	Subversion/History integration	CX	DX	CX	DX
	A full default Diff viewer	CX	DX	CX	DX
	Git version control integration into the IDE, now including authentication, Push and Pull changes to and from remote repositories	CX	DX	CX	DX
	Mercurial version control integration into the IDE (supports cloning your remote repository, commit changes locally, show log data)	CX	DX	CX	DX
	Version Insight also available as an open source project	CX	DX	CX	DX

INTERNATIONAL DEVELOPMENT					
	UnicodeString type ; Unicode-enabled development environment; Unicode-enabled VCL and FMX frameworks	CX	DX	CX	DX
	English, German, French, and Japanese translations available for IDE menus and dialogs, compiled units, resources, and source code	CX	DX	CX	DX
	Easy switching between the available languages for the IDE menus, dialogs, and more	CX	DX	CX	DX

REFACTORINGS					
	Prototype synchronization – as you change the prototype for a function, you can use this feature to synchronize the interface and implementation sections to match (Object Pascal language only)		DX		DX
	Extract method and change parameters refactoring, including support for generic types		DX		DX
	Rename refactoring for Delphi		DX		DX
	Refactor driven Find References		DX		DX
	Other refactorings include: Introduce Variable, Introduce Field, Inline Variable, Safe Delete, Push Members Up / Down, Pull Members Up, Extract Superclass, Extract Interface, Move Members, Declare variable, Declare field, Find unit/import namespace, Extract to resource string		DX		DX
	Refactor driven "Find in Files"		DX		DX

UML MODELING		
UML Code Visualization – at any time, get a UML model view of your source code	DX	DX
Object Pascal code generation from class diagram	DX	DX
Object Ancestry; show an object full hierarchy	DX	DX
Automatic Sequence diagrams generation support	DX	DX
Ability to load an image into the diagram for annotations and advanced documentation	DX	DX
Sequence diagrams		DX
Collaboration diagrams		DX
State charts		DX
Deployment diagrams		DX
Use case diagrams		DX
Activity diagrams		DX
Component diagrams		DX
Documentation generation		DX
Run Documentation generation from the command-line		DX
80+ Static Code Metrics that allow for deep understanding and analysis of the health of the object domain		DX
Kiviat graph enhancements for interactive reporting		DX
10+ introductory level static code Metrics for understanding the health of the object diagram	DX	
Run static Metrics from the command-line		DX
10 introductory level static code audits for better code understanding	DX	
200+ Static Code Audits for deep code analysis to better understand the coding style and approach		DX
Pointer Analysis for Audits. Run static Audits from the command-line		DX
Import model from Rational® Rose (mdl import)		DX
Language neutral UML 1.5 and 2.0 modeling		DX
Transformation from language neutral UML 1.5 and UML 2.0 projects to source code projects		DX
Design Patterns support, including GOF patterns		DX
Diagram printing	DX	DX
XMI 1.1 Import/Export		DX
Full two-way class diagrams with synchronization between code and diagrams		DX
OCL 2.0 support	DX	DX
"UML in Color" profile	DX	DX
Diagram hyper-linking and annotations	DX	DX
INTEGRATED DEBUGGING		
Full-featured debugger with color syntax highlighting	CX DX	CX DX
Debug remote and local 64-bit Windows applications	CX DX	CX DX

	Feature				
NEW IN 10.4 SYDNEY!	New debugger for C++ for Win64, based on LLDB 9, including formatters to evaluate common complex types like UnicodeString and AnsiString, C++ strings, vectors, deques, and more	CX		CX	
INTRODUCED IN 10.3.2 RIO!	Debug remote macOS 64-bit applications	DX		DX	
	Remote iOS device debugging and remote iOS 64-bit device debugging	CX	DX	CX	DX
	Android device debugging	CX	DX	CX	DX
INTRODUCED IN 10.3.3 RIO!	Debug Android 64-bit apps on device	DX		DX	
INTRODUCED IN 10.2 TOKYO!	Remote Linux 64-bit debugging			DX	
ENHANCED IN 10.2 TOKYO!	Improved debugging support for Clang-enhanced C++ compilers for Win32	CX		CX	
	Support for Delphi Unicode string evaluation, for evaluating properties and variants and function call support when debugging iOS64 applications	CX	DX	CX	DX
	CPU View support for iOS and Android application debugging along with support for Delphi Dynamic Arrays	CX	DX	CX	DX
ENHANCED IN 10.2.1 TOKIO!	Debugging visualizers to enable extended views of debugging data, enhanced with support for Delphi generics and C++ templates	CX	DX	CX	DX
	Build debugger visualizers for your own custom data types	CX	DX	CX	DX
	Debug visualizer for TStrings, TDateTime, TDate, and TTime types	CX	DX	CX	DX
	Detach from "Debug session in progress. Terminate?" dialog	CX	DX	CX	DX
	Multi-threaded-debugging the ability to selectively "Freeze" and "Thaw" threads	CX	DX	CX	DX
	Multi-threaded-debugging the ability to set a breakpoint for a selected thread	CX	DX	CX	DX
	Support for Wait Chain Traversal on Windows	CX	DX	CX	DX
	Disassembly pane has "Show Opcodes" and "Show Addresses" local menu items	CX	DX	CX	DX
	Debugger Options: "Scroll new events into view" and "Ignore non-user breakpoints"	CX	DX	CX	DX
	Call Stack View shows a glyph indicating if the frame has debug info	CX	DX	CX	DX
	CPU view panes can be opened individually outside of an editor tab	CX	DX	CX	DX
	Integration between debugger views and panes making it easier to find and understand information	CX	DX	CX	DX
	Call Stack view now automatically syncs the Locals view when you double click an item	CX	DX	CX	DX
	Evaluator tooltip hints go transparent when the CTRL key is pressed, allowing you to see through them to the editor	CX	DX	CX	DX
	Expandable tooltip expression evaluation	CX	DX	CX	DX
	Expandable watches and local variables view	CX	DX	CX	DX
	Selective symbol table loading	CX	DX	CX	DX
	Close implicitly opened files after debugging	CX	DX	CX	DX
	Multi-select and copy to clipboard support in CPU view	CX	DX	CX	DX
	Ctrl-Click in editor gutter to enable/disable breakpoints	CX	DX	CX	DX
	Sort by load order in Modules view	CX	DX	CX	DX
	Set Next Statement local menu item in editor	CX	DX	CX	DX
	Exception notification dialog: Break/Continue buttons, "Ignore exception type" checkbox	CX	DX	CX	DX
	Modules View sorting	CX	DX	CX	DX
	Thread view displays status on all processes and threads under debugger control	CX	DX	CX	DX

	Feature		
	CPU view for low-level debugging	CX DX	CX DX
	Multi-Process debugging for easy tracing through complex applications	CX DX	CX DX
	Breakpoint view with toolbar, in-place editing, and enable/disable checkbox	CX DX	CX DX
	Watch view supporting in place editing, checkbox enable/disabling, and the watch names separated from the values with columns	CX DX	CX DX
	Multi-tab watch view for logically grouping variables	CX DX	CX DX
	Attach to and debug any process, detach from any process	CX DX	CX DX
	Run until return	CX DX	CX DX
	Advanced breakpoints with Tooltips, actions, and groups for complete debugging control	CX DX	CX DX
	Breakpoint Data Aware Triggers	CX DX	CX DX
	Debug spawned processes	CX DX	CX DX
	Debug Inspector for easily monitoring properties while debugging	CX DX	CX DX
	Event log view	CX DX	CX DX

INTEGRATED UNIT TESTING

	Feature		
ENHANCED IN 10.3 RIO!	Integrated unit testing with the DUnitX testing framework	DX	DX
ENHANCED IN 10.3 RIO!	DUnitX unit testing support for mobile platforms (iOS and Android)	DX	DX
INTRODUCED IN 10.2 TOKYO!	DUnitX unit testing support for Linux		DX
	Runtime support for the DUnit testing framework	CX DX	CX DX
	Unit test wizards for quick and easy unit test and unit test project creation	CX DX	CX DX
	Execute unit tests from project manager	CX DX	CX DX

INTEGRATED HELP

	Feature		
	Support for CHM help engine and updated IDE help structure	CX DX	CX DX
	Continually updated help system with diagrams showing class hierarchy and declared members pages	CX DX	CX DX

DATABASE APPLICATION DEVELOPMENT AND CONNECTIVITY

	Feature		
	Powerful cross-platform and multi-database DB access architecture, based on TDataSet class, field definitions, fields and parameters managements	CX DX	CX DX
	Support for multiple TDataSet descendant classes shipping with the product or available form third-party vendors	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Support for display options for BlobFields	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Direct GUID access for TField classes	CX DX	CX DX
	Control of the automatic and persistent fields of a data set using the FieldOptions and FieldLifeCycle features.	CX DX	CX DX

FIREDAC MULTI-DEVICE DATA ACCESS LIBRARY [2]

	Feature		
ENHANCED IN 10.2 TOKYO!	Desktop platforms enterprise database support, including MySQL, MariaDB, Microsoft SQL Server, Oracle Database, InterBase, PostgreSQL, Informix, Sybase SQL Anywhere, Microsoft Access, IBM DB2 Server, Firebird, Advantage Database, generic ODBC driver		CX DX
ENHANCED IN 10.2 TOKYO!	Support for local databases, including Microsoft Access database, SQLite and MariaDB database, IBToGo / IBLite, InterBase on localhost, MySQL Embedded, MySQL Server on localhost, Advantage Database local engine, PostgreSQL on localhost, Firebird Embedded, Firebird on localhost *Some features in this table marked as [1] are limited to local connections in Professional editions*	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Linux enterprise database support, including MySQL, MariaDB, Microsoft SQL Server, Oracle Database, InterBase, PostgreSQL, Sybase SQL Anywhere, IBM DB2 Server, Firebird, Advantage Database, MongoDB, generic ODBC driver. Includes also support for local databases like SQLite database and IBToGo / IBLite.		DX

[2] *Some features are limited to local connections in Professional and Community editions*

	iOS and Android mobile database support, including SQLite, IBToGo and IBLite	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	Updated FireDAC Microsoft SQL Server driver, supporting MS SQL 2017			CX	DX
ENHANCED IN 10.3 RIO!	Updated FireDAC MySQL driver, supporting MySQL v 8.0 and MariaDB v 10.3, MySQL Prepared Statements API, internal BLOB streaming	CX[1]	DX[1]	CX	DX
ENHANCED IN 10.2 TOKYO!	Updated FireDAC ODBC driver 13, with support for data type mapping by data type name			CX	DX
ENHANCED IN 10.4 SYDNEY!	Updated FireDAC SQLite driver with support for both static and dynamic linkage of SQLite engine	CX	DX	CX	DX
ENHANCED IN 10.3 RIO!	Updated FireDAC InterBase with new support for TRUNCATE command, transaction wait time and little/big endian configuration in connection parameters, which adds to the support for querying the database service manager, real BLOB streaming and array data type	CX[1]	DX[1]	CX	DX
	Updated FireDAC Oracle driver to support v 11g and 12c APIs, including among many other new features support for VARCHAR2, NVARCHAR2, and RAW data types up to 32K, native BOOLEAN in PL/SQL, 64-bit integers and unsigned INTs, identity / auto-increment columns, query change notifications, implicit ROWID fetching, implicit results, additional connection modes, network timeouts, and transaction state detection and synchronization.			CX	DX
	TFDOracleAdmin service component			CX	DX
	Updated FireDAC Advantage driver with support for version 12 features like GUID data type, backup archive, default values phrase; improved support for encrypted tables, improved TFDADSUtility component	CX[1]	DX[1]	CX	DX
	Updated FireDAC DB2 driver, with support for DB2 on AS/400, IDENTITY columns, and a connection definition parameter			CX	DX
ENHANCED IN 10.3.1 RIO!	Updated FireDAC Firebird driver with support for version 3.0.4 and Firebird embedded, including local connection protocol, FB$OUT package, support for long statements, little/big endian configuration in connection parameters, and more.	CX[1]	DX[1]	CX	DX
ENHANCED IN 10.3 RIO!	FireDAC PostgreSQL driver enhancements for version 10 including identity columns, macaddr8, password encryption and little/big endian configuration in connection parameters	CX[1]	DX[1]	CX	DX
ENHANCED IN 10.3 RIO!	FireDAC SQL Anywhere driver, now with support for ToolHome property and FDEventAlerter			CX	DX
	Updated FireDAC Informix driver with support for retaining update locks and pessimistic locking, plus ISAM error codes			CX	DX
ENHANCED IN 10.3 RIO!	Complete FireDAC support for the NoSQL MongoDB database, including a FireDAC MongoDB driver, now with TimeZone connection parameter			CX	DX
	MongoDB API wrapping classes, including TMongoConnection, TMongoDatabase, TMongoCollection and more			CX	DX
	MongoDB query, pipeline, update commands, with fluent methods builders			CX	DX
	MongoDB specific datasets, including TFDMongoDataSet (which allows to attach dataset to MongoDB cursor), TFDMongoQuery (which allows to execute queries to MongoDB collection) and TFDMongoPipeline (which allows to execute pipelines to MongoDB collection), and TMongoDocument Iterate method to iterate through document items			CX	DX
	FireDAC Teradata database support, based on the Teradata database ODBC driver			CX	DX
	FireDAC support for InterBase Change Views	CX[1]	DX[1]	CX	DX
	FireDAC support for change notifications, now with additional support for Oracle and MongoDB databases	CX[1]	DX[1]	CX	DX
	Improved FireDAC updates management	CX	DX	CX	DX
	Tools and scripts to help migration of dbExpress code to FireDAC	CX	DX	CX	DX
	FireDAC streaming support for blob fields and support for MSSQL file streams	CX[1]	DX[1]	CX	DX
	Support for DBMS API command native timeouts	CX[1]	DX[1]	CX	DX
	FireDAC connection parameters are now displayed in the Object Inspector as a record	CX	DX	CX	DX
	IBLite specific driver for desktop and mobile	CX	DX	CX	DX
	InterBase encryption connection options	CX[1]	DX[1]	CX	DX
	Windows/Mac native driver for Informix database			CX	DX

	Feature	CX	DX	CX	DX
	Source code of the included database drivers			CX	DX
	Comprehensive support for SQLite v3.+ database, including "smart" data type recognition, supporting both dynamic and static linking	CX	DX	CX	DX
ENHANCED IN 10.2 TOKYO!	FireDAC ETL support (Batch move) with optimization and extension of the TFDBatchMoveSQLWriter component, with support for MERGE / INSERT OR REPLACE commands and for dmAppend, dmUpdate, dmAppendUpdate modes. Features new JSON Writer support added in 10.2.2.	CX	DX	CX	DX
	Easy to use TDataSet descendant classes	CX	DX	CX	DX
	Unified Data Access API	CX	DX	CX	DX
	Improvements of FireDAC cached updates mode, including UpdateOptions.AutoCommitUpdates property and improved compatibility with ClientDataSet	CX	DX	CX	DX
	FireDAC clients for DataSnap			CX	DX
	High-performance in-memory dataset	CX	DX	CX	DX
	FireDAC complete source code, including drivers source code			CX	DX
	Live Data Window mode enabling fast bi-directional navigation through large datasets	CX	DX	CX	DX
	Array Data Manipulation Language (DML) command execution and Command Batches for batch applications and for minimizing network traffic	CX[1]	DX[1]	CX	DX
	Direct support for asynchronous command execution, command execution timeout, and command execution canceling	CX	DX	CX	DX
	Cached updates mode with ability to track correlated changes for several datasets with cascading updates	CX	DX	CX	DX
	Full support for auto-incrementing fields, including those based on generators and table triggers	CX	DX	CX	DX
	SQL dialect abstraction through FireDAC escape sequences, conditional statements and macros	CX[1]	DX[1]	CX	DX
	Data type unification with flexible and adjustable data type mapping	CX	DX	CX	DX
UPDATED IN 10.2 TOKYO!	Easy to use TFDMemTable - in-memory dataset, highly compatible with TClientDataSet, now including optimized JSON serialization and the ability to edit the dataset data at design time	CX	DX	CX	DX
	DataSnap client support for HTTP, HTTPS and TCP/IP protocols and authentication			CX	DX
	Local SQL with heterogeneous SQL commands to TDataSets, full SQLite SQL dialect support, add-hoc TDataSet lookup	CX	DX	CX	DX

	DBEXPRESS AND IBX				
	dbExpress™ 4 database connectivity framework with connection pooling, tracing, and delegate drivers	CX	DX	CX	DX
	dbExpress local connectivity to InterBase, MySQL, SQLite	CX	DX	CX	DX
	Included dbExpress drivers available for 64-bit Windows – InterBase local, MySQL local, and SQLite local	CX	DX	CX	DX
	Included dbExpress drivers available for 64-bit Windows – InterBase, Firebird, Oracle, MySQL, SQL Anywhere, and Informix			CX	DX
	TSQLMonitor support			CX	DX
	InterBase ToGo dbExpress driver for Windows, iOS and Android	CX	DX	CX	DX
	dbExpress Server connectivity to InterBase® XE7 and XE3, Firebird 2.5, 2.1 and1.5, Oracle® 11g and 10g, Microsoft SQL Server® 2008, 2005, and 2000, Informix® 9x (not Unicode-enabled), IBM DB2® 9.x (not Unicode-enabled), SQL Anywhere™ 12 and 11 (Unicode-enabled); and SQL Anywhere 9 (not Unicode-enabled), Sybase® 12.5 (not Unicode-enabled), MySQL 5.1 and 5.0 (Unicode enabled) and 4.1			CX	DX
	dbExpress ODBC Driver			CX	DX
	TClientDataset for managing and manipulating datasets in-memory (with support for all platforms)	CX	DX	CX	DX
INTRODUCED IN 10.2 TOKYO!	ClientDataSet support for 64-bit Linux				DX
INTRODUCED IN 10.3.2 RIO!	ClientDataSet support for 64-bit macOS				DX

		CX DX	CX DX
	LiveBindings connect any type of data to any UI or graphical element in VCL and FMX	CX DX	CX DX
	dbGO™ for ADO connectivity for Windows (MDAC 2.8)	CX DX	CX DX
	InterBase Express (IBX) Components, including support for iOS and Android	CX DX	CX DX

RAD SERVER [3]

ENHANCED IN 10.3.2 RIO!	RAD Server (formerly known as EMS) turnkey REST based middleware stack that includes API hosting, data access, and SQL Database access, with significantly optimized performance[2]	CX DX
INTRODUCED IN 10.2 TOKYO!	Build, test and deploy RAD Server packages on Linux	DX
	Create custom REST APIs for your business functionality and map them to custom URIs, using loadable packages for RAD server	CX DX
	Integrated with FireDAC high-performance enterprise data access for Oracle, DB2, Microsoft SQL Server, Informix, SQL Server, and many more database servers	CX DX
INTRODUCED IN 10.3 RIO!	New EndpointProduce attribute to map MIME types (from Accept HTTP request header) to GET endpoints; new EndpointConsume attribute to map MIME types (from Content-Type HTTP request header) to PUT, POST, PATCH endpoints	CX DX
INTRODUCED IN 10.3 RIO!	HTTP Verb to Custom Method Name Mapping	CX DX
INTRODUCED IN 10.3 RIO!	Ability to Delegate Processing of a Request to a Custom Class or Component (sharing response processing code)	CX DX
INTRODUCED IN 10.3 RIO!	New TEMSFileResource and TEMSDataSetResource components for an extremely simplified implementation of RAD Server endpoints mapped to file system folders access and database tables and queries access, including support for paging and sorting	CX DX
INTRODUCED IN 10.3.2 RIO!	New FireDAC database connection wizard, for generating a properly configured TEMSDataSetResource components mapped to queries for one or more selected database tables	CX DX
INTRODUCED IN 10.2 TOKYO!	RAD Server (EMS) multi-tenancy support and console app for managing tenants configuration (on Windows and Linux)	CX DX
INTRODUCED IN 10.2 TOKYO!	RAD Server File Dispatching Support	CX DX
ENHANCED IN 10.3.2 RIO!	RAD Server Console UI redesign and migration to the Ext JS library	CX DX
ENHANCED IN 10.3.2 RIO!	EMS Push Notifications server support for iOS and Android (updated to Firebase)	CX DX
	EMSClientAPI component to simplify EMS client side development	CX DX
ENHANCED IN 10.2 TOKYO!	User, groups, sessions, and API calls analytics and reporting using a web based interface using the EMS Console (eventually filtered by tenant)	CX DX
ENHANCED IN 10.3.2 RIO!	Redesigned and expanded RAD Server Console (RSConsole.exe) client application to manage user accounts, edit the local configuration and run REST debugger-based requests against a RAD Server instance	CX DX
	ThingPoint provides developers with an enterprise access point between remote gadgets and devices; a ThingPoint can locally store, filter, and compute vast amounts of IoT data collected at the edge, while ensuring only critical data is synched with the central repository, an Enterprise Mobility Services server	CX DX
ENHANCED IN 10.3.2 RIO!	Support for declaring and retrieving EMS metadata, based on the Swagger open API initiative (http://swagger.io). This allows the use of the metadata language as YAML or JSON for the representation of the EMS REST API. Initial documentation generation is now an option of the RAD Server module wizard.	CX DX
INTRODUCED IN 10.3.2 RIO!	Installers to deploy the RAD Server engine and all of the required files to Windows and Linux servers* *Available for download in the GetIt Package Manager*	CX DX
INTRODUCED IN 10.3.3 RIO!	Support to deploy Delphi Linux applications in general and RAD Server applications in particular to Docker. *Available for download in the GetIt Package Manager*	DX

WEBBROKER AND DATASNAP MULTI-TIER

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[3] *In version 10.3 Rio, Enterprise editions include also a single site RAD Server deployment license (additional RAD Server deployment licenses are sold separately), while Architect editions include a multi-site deployment license*

Feature		CX	DX	CX	DX
	WebBroker library for HTTP servers development and integration, supporting CGI, ISAPI libraries for Microsoft IIS, and native HTTP servers based on Indy library	CX	DX	CX	DX
	WebBroker support for Apache HTTP server modules	CX	DX	CX	DX
	WebBroker default encoding changed to UTF-8 rather than ANSI	CX	DX	CX	DX
INTRODUCED IN 10.2 TOKYO!	WebBroker deployment support in Linux, as stand-alone or Apache modules				DX
	Create multi-tier database applications with DataSnap for Windows servers			CX	DX
INTRODUCED IN 10.2 TOKYO!	Create multi-tier database applications with DataSnap for Linux servers				DX
	Deploy DataSnap servers on Microsoft IIS server (HTTP or HTTPS) using the WebBroker architecture			CX	DX
ENHANCED IN 10.2 TOKYO!	Deploy DataSnap servers on Apache HTTP server (using HTTP or HTTPS) using the WebBroker architecture. For Delphi available also on Linux.			CX	DX
	DataSnap clients uses System.NET for HTTP and HTTPS, with no need to deploy the OpenSLL client library (now both for REST connections and HTTP connections)			CX	DX
	DataSnap server methods support TDBXJSONStream parameter for passing JSON streams between client and server			CX	DX
	HTTPS support in stand-alone DataSnap Applications			CX	DX
	DataSnap server ability to terminate socket connection. Communication Timeout for HTTP protocol			CX	DX
	Specific DataSnap support for exposing FireDAC datasets and reconciling changes using deltas (with the unit FireDACJSONReflect), now with data compression for better throughput optimization			CX	DX
	Heavyweight callbacks support broadcasting to specific callbacks			CX	DX
	Authentication and role-based authorization.			CX	DX
	Callback channel events for servers and clients			CX	DX
	DataSnap REST server support for multiple Callback Tunnels			CX	DX
	Session Events for TCP/IP Protocol, Object support in DataSnap sessions			CX	DX
	Monitor and control connections			CX	DX
INTRODUCED IN 10.2 RIO!	DataSnap REST now explicitly specifies "Content-Type=application/json"			CX	DX
ENHANCED IN 10.2 RIO!	DataSnap REST client connection (TDSRestConnection), for all platforms, with new SecureProtocols property			CX	DX
	Allow query parameters in REST calls and store them			CX	DX
	Proxy information support for HTTP connections			CX	DX
	ServerMethods give complete control over functionality of middle tier. Use TJSONValue pairs making it easier to pass data			CX	DX
	Improved Session events for increased simplicity of a multi-tier implementation			CX	DX
	DataSnap wizards from the Object Gallery to make server and client creation even easier			CX	DX
	DataSnap wizard source code enabling developers to build their own DataSnap server wizards			CX	DX
	Added support for REST(ful) interface and exposure from the Server and REST client proxy generation			CX	DX
	DataSnap Server Proxy generation for Object Pascal and C++ clients			CX	DX
	Support for HTTP and HTTPS communication protocol beyond the local DataSnap (TCP/IP) approach; Added HTTP tunneling support for client code outside the firewall			CX	DX
	Added Filter support for encryption and compression over-the-wire			CX	DX
	Included encryption PC1 and compression filters now included for quick enablement.			CX	DX
	Lightweight Callbacks			CX	DX

	Windows 32-bit and 64-bit native (DBX) clients and REST clients			CX	DX
	macOS REST clients				DX
	REST / JavaScript client support for browser platforms			CX	DX
DATABASE TOOLS					
	Data Explorer support for FireDAC, optimized to add and manage database connections and browse database schema, including primary keys, foreign keys and sequences or generators	CX	DX	CX	DX
	Data Explorer optimized to add and manage database connections and browse DB schema	CX	DX	CX	DX
	Drag and Drop from FireDAC nodes and dbExpress nodes in the Data Explorer into forms and data modules to speed development	CX	DX	CX	DX
	Direct SQL manipulation for any FireDAC connection	CX	DX	CX	DX
	SQL console views for running queries and viewing results on any dbExpress 4 supported database	CX	DX	CX	DX
INCLUDED DATABASES					
ENHANCED IN 10.3.3 RIO!	InterBase 2020 Developer Edition – up to 20 users and 80 logical connections	CX	DX	CX	DX
ENHANCED IN 10.3.3 RIO!	IBLite 2020 for iOS and Android with unlimited deployment license	CX	DX	CX	DX
ENHANCED IN 10.3.3 RIO!	IBLite 2020 for Windows with unlimited deployment license	CX	DX	CX	DX
ENHANCED IN 10.3.3 RIO!	IBLite 2020 for macOS with unlimited deployment license		DX		DX
INTRODUCED IN 10.2.3 RIO!	Free InterBase ToGo Deployment License for mobile platforms			CX	DX
CLOUD SUPPORT					
	Windows Azure components including AzureConnectionString, AzureBlobManagement, AzureQueueManagment, and AzureTableManagment	CX	DX	CX	DX
	Cloud libraries now use the System.Net native HTTP and HTTPS support	CX	DX	CX	DX
	Ability to manipulate Windows Azure blobs, queues, and tables	CX	DX	CX	DX
	MetaData support for TAzureQueueManagement	CX	DX	CX	DX
	ContinuationToken support for Azure Table	CX	DX	CX	DX
ENHANCED IN 10.2 TOKYO!	Azure support updated to the current Azure APIs	CX	DX	CX	DX
	Amazon Simple Storage Service (S3) API	CX	DX	CX	DX
	Amazon Queue Service API	CX	DX	CX	DX
	Amazon SimpleDB API	CX	DX	CX	DX
ENHANCED IN 10.4 SYDNEY!	AWS support updated to the current AWS APIs and a more flexible support for regions	CX	DX	CX	DX
	Deploy to Amazon EC2 and Windows Azure	CX	DX	CX	DX
REST CLIENT LIBRARY AND BAAS					
ENHANCED IN 10.3 RIO!	REST Client Library for simplified invocation of REST services, with improvements in MIME types handling, new properties (RedirectsWithGET and SecurityProtocols) and new events (OnNeedClientCert and OnAuthEvent)	CX	DX	CX	DX
	Authorization support including Basic Authentication, Plan Authentication, OAuth1, OAuth2	CX	DX	CX	DX
	TRestClient, TRestRequest, and TRestResponse components	CX	DX	CX	DX
	REST Debugger tool for testing REST calls and their parameters	CX	DX	CX	DX
INTRODUCED IN 10.3 RIO!	Enhanced REST Request parameters, with support for list parameters, parameters streaming, query parameters for all request methods, content body access	CX	DX	CX	DX
	JSON reader and writers used in the REST client library	CX	DX	CX	DX
	Backend as a Service (BAAS) architecture, with unified interfaces for the most common operations like user management, file storage, objects storage, and notifications support	CX	DX	CX	DX

Feature				

	Feature	CX	DX	CX	DX
	Integrated BaaS support for Kinvey and the Parse API	CX	DX	CX	DX
	JSON reader and writers used in the BaaS client library	CX	DX	CX	DX
XML AND SOAP					
	TXMLDocument component working on all platforms	CX	DX	CX	DX
	TXMLDocument component support for MSXML on Windows; native OmniXML library and native ADOM library on other platforms	CX	DX	CX	DX
	Easier selection of the default XML engine for XML data processing	CX	DX	CX	DX
	Easily create Win32, Win64 SOAP Web Services	CX	DX	CX	DX
	Build client-side SOAP Web Services, including support for SOAP 1.2 clients and mobile platforms	CX	DX	CX	DX
ENHANCED IN 10.3.1 RIO!	SOAP clients use the HTTP client library, with full support for the native SSL layer on each platform (with improved support for client certificates)	CX	DX	CX	DX
	WSDL External Schema support			CX	DX
	XML Transformation Tools and Components to exchange data between XML and datasets			CX	DX
	Native Object Pascal and C++ XML bindings to simplify XML programming – access XML documents using interfaces			CX	DX
	SOAP runtime support for optional and unbounded elements	CX	DX	CX	DX
ADDITIONAL AND THIRD PARTY INTEGRATED TOOLS					
CONNECT TO REST APIS WITH ENTERPRISE CONNECTORS					
INTRODUCED IN 10.3.3 RIO!	Enterprise Connector, powered by CData, allow you to integrate 70+ Enterprise applications, simplifying connectivity into a standard model using SQL*			CX	DX
INTRODUCED IN 10.3.3 RIO!	Includes components for QuickBooks Desktop, MailChimp, Salesforce, YouTube, SugarCRM, Jira, SurveyMonkey, Amazon DynamoDB, Couchbase, PayPal, eBay, Google Sheets, Facebook, Twitter, Slack, Dropbox and more* *requires separate download from CData web site			CX	DX
FILE COMPARE WITH BEYOND COMPARE TEXT COMPARE					
	Beyond Compare Text Compare integration	CX	DX	CX	DX
	Compare and edit the contents of files with syntax highlighting	CX	DX	CX	DX
	Ignore changes in whitespace and comments	CX	DX	CX	DX
	Print reports of differences or save them as HTML or plain	CX	DX	CX	DX
	Filter display to only show differences, optionally with a few lines of context	CX	DX	CX	DX
	Built-in support for Object Pascal, C++, HTML, DFMs, and more	CX	DX	CX	DX
	Adds a "Compare" menu to the IDE's "Edit" menu and Project Manager, with commands to compare against previous revisions, other editor tabs, and original files	CX	DX	CX	DX
	Automatically configured for both differences and merges from the History view	CX	DX	CX	DX
LOGGING WITH CODESITE EXPRESS					
UPDATED IN 10.4 SYDNEY!	Raize Software CodeSite Express integration provides advanced application logging and debugging capabilities* *Available for download in the GetIt Package Manager	CX	DX	CX	DX
	Log all kinds of information without data conversions including strings, numbers, dates & times and even objects, string lists, exceptions, and much more	CX	DX	CX	DX
	Log information from application code (including recursive functions and multiple threads) without interrupting program execution or causing side effects	CX	DX	CX	DX
	Emphasize important logging information through a variety of message types	CX	DX	CX	DX
	Send logging messages to a CodeSite Log File for later review or to the CodeSite Live Viewer for real-time analysis, or to both simultaneously	CX	DX	CX	DX
	Utilize the extensive analysis tools in the CodeSite Viewers to analyze message logs and locate problem areas faster	CX	DX	CX	DX
	Filter message logs by application name, process id, thread name, computer name, category, and message text	CX	DX	CX	DX

	Quickly organize the message log into multiple views by using the advanced CodeSite Message Organizer	CX DX	CX DX
	Control the amount of logging information generated by using additional CodeSite loggers with their own Category instead of relying on arbitrary logging levels	CX DX	CX DX
	Record method calls to add call stack structure to the message log	CX DX	CX DX
IP*WORKS! COMMUNICATION COMPONENTS			
	The full version of /n software's IP*Works! Components – A comprehensive suite of components for Internet communications including more than 40 individual components covering every major Internet Protocol* *Available for download in the GetIt Package Manager*	CX DX	CX DX
	Royalty free commercial components for Internet development including ATOM, CalDAV, FileMailer, FTP, HTMLMailer, HTTP, ICMPPort, IMAP, IPDaemon, IPInfo, IPMonitor, IPPOrt, JSON, LDAP, Mcast, MIME, MX, NetClock, NetCode, NetDial, NNTP, Ping, POP, RCP, REST, Rexec, Rshell, RSS, SMPP, SNPP, SOAP, Syslog, Telnet, TFTP, TraceRoute, UDPPort, WebDav, WebForm, WebUpload, Whois, XMLp, and XMPP	CX DX	CX DX
	Components are easy to use, with a uniform, intuitive, and extensible design; share common interfaces across platforms and technologies	CX DX	CX DX
	Components are fast, robust, and reliable with minimal resource consumption; lightweight and have no dependencies on external libraries	CX DX	CX DX
	Detailed reference documentation, hundreds of sample applications, fully-indexed helps files, and an extensive online knowledge base	CX DX	CX DX
TEECHART CHARTING COMPONENT			
UPDATED IN 10.4 SYDNEY!	TeeChart Standard components including chart, DBchart, and a rich set of different business graph types. * *Available for download in the GetIt Package Manager*	CX DX	CX DX
FASTREPORT REPORTING SOLUTIONS			
UPDATED IN 10.4 SYDNEY!	FastReport VCL RAD Edition reporting tool	CX DX	CX DX
	Exports to popular formats (PDF, RTF, HTML, BMP, JPEG, TIFF, GIF, TXT, CSV)	CX DX	CX DX
	Grouping with drill-downs	CX DX	CX DX
	Caching of the big reports(uses less memory)	CX DX	CX DX
	Six levels in master-detail-subdetail relation	CX DX	CX DX
UPDATED IN 10.4 SYDNEY!	FastReport FMX RAD Edition reporting tool * *Available for download in the GetIt Package Manager*	CX DX	CX DX
SENCHA EXT JS PROFESSIONAL EDITION			
	Ext JS HTML5/JavaScript (Framework and UI Component Library) - Pro Edition		CX DX ARCHITECT ONLY
	Cmd: Build Optimization Tool		CX DX ARCHITECT ONLY
	Ext JS Stencils: Design Kit		CX DX ARCHITECT ONLY
	Architect: Visual App Builder		CX DX ARCHITECT ONLY
	Sencha Themer: Styling Tool		CX DX ARCHITECT ONLY
AQUA DATA STUDIO			
	Register Servers/Databases, Database Navigator/Explorer		CX DX ARCHITECT ONLY
	Query Analyzer (SQL editor) and Query Builder		CX DX ARCHITECT ONLY
	Table Data Editor		CX DX ARCHITECT ONLY
	Visual Analytics		CX DX ARCHITECT ONLY

Schema/Data/File Compare Import/Export Data and DDL	CX DX ARCHITECT ONLY
ER Modeler	CX DX ARCHITECT ONLY
Database Administration	CX DX ARCHITECT ONLY

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