



Support Note

10 SEPTEMBER 2020

TRIMBLE RANGER 7 DATA COLLECTOR AND TRIMBLE TSC7 CONTROLLER: HOW TO DETERMINE IF YOU HAVE THE LATEST OS / BIOS / EC / DRIVER / APPS INSTALLED

This support note describes the release history of the Trimble® Ranger® 7 data collector / TSC7 controller, including the operating system, BIOS / EC, drivers and utility applications. It includes release dates and versions of drivers / software utilities that were included with each Trimble OS release as well as how to determine the versions installed on the Ranger 7 / TSC7 device.





Affected Units

This support note applies to all Trimble Ranger 7 and TSC7 devices.

List of Released & Supported OS / Driver / Software for Ranger 7 and TSC7 Devices

The following table lists the only supported versions of Trimble OS, BIOS / EC, drivers and utility applications for the Ranger 7 / TSC7 devices.

- [Operating System](#)
- [BIOS / EC](#)
- [Drivers](#)
- [Utilities / Applications / EMPOWER Module Support Components](#)

Operating System * NOTE: The Microsoft Windows Version & OS Build listed below may change if more recent Microsoft Windows 10 Updates have been installed on the Ranger 7 / TSC7 device.					To find the version installed on your Ranger 7 / TSC7
Trimble Production OS Version (Model)	B23-T For instructions on installing this version, see SprtNote_Ranger7-TSC7_OS B23-T_Update&ReloadInstructions_Eng	B25-T For instructions on installing this version, see SprtNote_Ranger7-TSC7_OS B25-T_Update&ReloadInstructions_Eng	B27-T For instructions on installing this version, see SprtNote_Ranger7-TSC7_OS B27-T_Update&ReloadInstructions_Eng	B28-T For instructions on installing this version, see SprtNote_Ranger7-TSC7_OS B28-T_Update&ReloadInstructions_Eng	Start>  > System> About -OR- Control Panel\ System and Security\ System
Trimble OS Production Release Date	Dec. 2018	May 2019	January 2020	May 2020	
Windows Edition	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Start>  > System> About -OR- Control Panel\ System and Security\ System
Windows Version	1803 (April 2018 Update, Codename Redstone 4)*	1809 (October 2018 Update, Codename Redstone 5)*	1903 (May 2019 Update, Codename 19H1)*	2004 (May 2020 Update, Codename 20H1)*	Start>  > System> About
Windows OS Build	17134.81*	17763.316*	18362.295*	19041.388*	Start>  > System> About
Microsoft Release Date	30 April 2018	13 November 2018 (final)	21 May 2019	27 May 2020	

BIOS / EC

NOTE: The BIOS production release is not tied to the OS production release - they are installed separately, have different version schemes and may be released on different schedules.

To find the version installed on your Ranger 7 / TSC7, and for instructions on updating the BIOS / EC, see:

[SprtNote_Ranger7-TSC7_BIOS-EC-X70_UpdateProcedure_Eng](#)

BIOS Version	X61	X64	X66	X68	X70	SprtNote_Ranger7-TSC7_BIOS-EC-X70_UpdateProcedure_Eng
EC Version	Bone_ECX61	Bone_ECX64	Bone_ECX66	Bone_ECX68	Bone_ECX70	SprtNote_Ranger7-TSC7_BIOS-EC-X70_UpdateProcedure_Eng
Production Release Date	16 May 2018	06 November 2018	May 2019	October 2019	August 2020	


Drivers

NOTES-

- The driver versions listed below are provided by Trimble, bundled with the respective Trimble OS listed in the chart. The driver versions listed below may change if more recent Microsoft Windows 10 updates have been installed on the Ranger 7 / TSC7 device.
- Some of the hyperlinks in this section are to a zip file which contains a set of drivers for the Ranger 7 / TSC7 platform. It is over 1 GB, so it may take a while to download. This package is intended for customers or system builders who create their own OS using a different Microsoft Windows 10 SKU. The drivers are supplied with an unattend.xml file to assist with Windows image creation. Other users interested in individual drivers for troubleshooting purposes can find installers for each driver in the relevant folder.
- To install the updated components that were included in OS B27-T, see: [SprtNote_Ranger7-TSC7_OS-B28-T_Update&ReloadInstructions_Eng](#)


To find the version installed on your Ranger 7 / TSC7









(Device Manager can be launched by typing 'Device Manager' in the Search box next to the Start icon in the lower left corner of the display).




Trimble OS Version (Model)	B23-T	B25-T	B27-T	B28-T	Start>  > System> About
Intel Chipset	10.1.17.1	10.1.17.1	10.1.17.1	10.1.17.1	Device Manager> System devices> Intel(R) Celeron(R)/... (open any of

					these entries)> Driver tab
Intel Integrated Sensor Solution	3.0.0.3418	3.0.0.3418	3.0.0.3418	3.0.0.3418	Device Manager> System devices> Intel(R) Integrated Sensor Solution> Driver tab
Intel Serial IO	30.100.1750.1	30.100.1750.1	30.100.1750.1	30.100.1750.1	Device Manager> System devices> Intel(R) Serial IO..(open any of these entries)> Driver tab
Intel TXE (Trusted Execution Engine)	3.0.0.1115	3.0.0.1115	3.0.0.1115	3.1.50.8267	Device Manager> System devices> Intel(R) Trusted Execution Engine Interface> Driver tab
Intel Graphics Driver	24.20.100.6026	24.20.100.6026	24.20.100.6026	27.20.100.8190	Device Manager> Display adapters> Intel(R) HD Graphics> Driver tab
Realtek PC Camera Driver (Rear Facing Camera)	10.0.16299.11318	10.0.16299.11318	10.0.18362.20114	10.0.18362.20114	Device Manager> Cameras (B19.2-T: Imaging devices)> USB 8M DocCam> Driver tab
Microsoft Camera Driver (Front Facing Camera)	10.0.16299.11318	10.0.16299.11318	10.0.18362.1	10.0.18362.1	Device Manager> Cameras

						(B19.2-T: Imaging devices)> USB 2M WebCam> Driver tab
Realtek High Definition Audio Codec Driver		6.0.1.8281	6.0.1.8281	6.0.1.8281	6.0.1.8281	Device Manager> Sound, video and game controllers> Realtek High Definition Audio> Driver tab
WLAN	Qualcomm CB260NF	12.0.0.468	12.0.0.468	12.0.0.468	11.0.0.10512	Device Manager> Network adapters> Qualcomm Atheros QCA61x4A Wireless Network Adapter> Driver tab
Bluetooth		10.0.0.468	10.0.0.468	10.0.0.468	10.0.0.468	Device Manager> Bluetooth> Qualcomm Atheros Bluetooth 4.1> Driver tab
Sierra WWAN EM7430 (APAC) Sierra WWAN EM7455 (NA & EU)		10.0.17134.1	10.0.17763.168	10.0.18362.1	8.10.4836.0002	Device Manager> Network adapters> Sierra Wireless EM7455B or EM7430 Qualcomm Snapdragon X7 LTE-A> Driver tab
PL2303 USB-to-Serial Controller		3.8.18.0	3.8.18.0	3.8.18.0	3.8.18.0	Device Manager> Ports (COM & LPT)> External Serial Port (COM1)

						(B19.2-T:Prolific USB-to-Serial Comm Port (COM1))> Driver tab
ublox	u-blox GNSS Location Sensor	2.31.0.0	2.31.0.0	2.31.0.0	2.31.0.0	Device Manager> Sensors> u-blox GNSS Location Sensor> Driver tab
	u-blox Virtual COM Port	2.30.0.0	2.30.0.0	2.30.0.0	2.30.0.0	Device Manager> Ports (COM & LPT)> u-blox Virtual COM Port (COMx) > Driver tab
Trimble Keyboard FW Update Driver		8.33.31.883	8.33.31.883	8.33.31.883	8.33.31.883	Device Manager> I2C devices> Keyboard FW Update Driver> Driver tab
Realtek PCIE Card Reader		10.0.16299.29095	10.0.16299.29095	10.0.16299.29095	10.0.16299.29095	Start>  > Apps> Apps & features
Utilities / Applications / EMPOWER Module Support Components NOTES- <ul style="list-style-type: none"> The utility/app components listed below are unique Trimble components that are integrated with the Trimble OS; they are not updated by Microsoft updates. The EMPOWER components are available as individual installers, posted at https://www.trimble.com/empowermodules Components that have been updated from OS B27-T to OS B28-T may be installed using one executable; the links are linked to updated components in the chart, and instructions are available at: SprtNote Ranger7-TSC7 InstallationInstructions OS-B28-T Driver AppPackage Eng Utilities/applications that were not updated from OS B27-T to OS B28-T are included in the B28-T driver/app zip file at: https://C7 InstallationInstructions dl.trimble.com/mcs/tsc7_ranger7_drivers_b28_full_20200819.zip 						To find the version installed on your Ranger 7 / TSC7

Trimble OS Version (Model)	B23-T	B25-T	B27-T	B28-T	Start>  > System> About
Built-in Keyboard Tools	1.0.10.0	1.0.10.0	1.0.10.0	1.0.10.0	Start>  > Apps> Apps & features
PEGA_SDK	1.2.0	1.2.8	1.2.9	1.2.9	Start>  > Apps> Apps & features
Touch Control	1.3.0	1.3.0	1.3.0	1.3.0	Start>  > Apps> Apps & features
Trimble Asset Management (Trimble Asset Management-vX.X.X.XXX.msi) - Demo Application	1.0.0.261	1.1.0.361	1.1.0.384	1.1.0.388	Start>  > Apps> Apps & features
Trimble EMPOWER EM100 Support (EM100SupportPkg-vx.x.xx.x.msi) - Module Support Package (MSP)	1.0.21.7	1.0.29.33	1.1.2.56	1.3.1.66	Start>  > Apps> Apps & features
Trimble EMPOWER EM11X Support (EM110SupportPkg-vx.x.xx.xx.msi) - Module Support Package (MSP)	1.0.9.67	1.0.15.73	1.0.16.75	1.0.16.77	Start>  > Apps> Apps & features
Trimble EMPOWER EM120 Support (EM120SupportPkg-vx.x.xx.xx.msi) - Module Support Package (MSP)	1.0.13.56	1.0.14.57	1.0.15.58	1.0.15.59	Start>  > Apps> Apps & features

Trimble EMPOWER Hub (Empower.Hub-1.0.0.xxx.msi; Accessed under Start > EMPOWER > EMPOWER Hub)	1.0.0.533	1.0.0.536	1.0.0.538	1.0.0.538	Start>  > Apps> Apps & features
Trimble EMPOWER Module Manager (this app runs in the background - there is no User Interface)	1.0.23.109	1.1.2.115	1.1.2.115	1.1.6.119	Start>  > Apps> Apps & features
Power Center	1.0.1	1.0.1	1.0.1	1.0.1	Start>  > Apps> Apps & features
Touch Panel Firmware	v14	v14	v14	v14	The version can be checked during the beginning of the calibration process.

More Information

Contact your Trimble Regional Sales Manager or local Trimble Distribution Partner for more information.