

Leica Viva TPS TPS1200+ Equipment List



- when it has to be **right**

Leica
Geosystems

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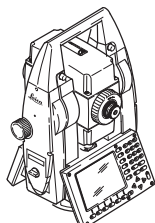
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Total Station

1 Total Station

1.1 Models



	TC	TCR	TCRM	TCA	TCP	TCRA	TCRP
Angle measurement	●	●	●	●	●	●	●
Distance measurement (to reflector IR-Mode)	●	●	●	●	●	●	●
Dist. meas. without reflector (RL-Mode)	-	●	●	-	-	●	●
Motorised	-	-	●	●	●	●	●
Automatic Target Recognition (ATR)	-	-	-	●	●	●	●
PowerSearch (PS)	-	-	-	-	●	-	●
Guide Light (EGL)	○	○	○	●	●	●	●
Laser Guide GUS74	-	-	-	○	-	○	-
Radio field controller CS10/CS15	○	○	○	○	○	○	○
SmartStation GS09 receiver	○	○	○	○	○	○	○
SmartStation GS12 receiver	○	○	○	○	○	○	○
SmartStation GS15 receiver	○	○	○	○	○	○	○
Requires CS10/CS15 field controller.							

- Standard
- Optional
- Not available

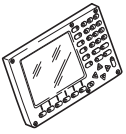
1.2 Angular Accuracies

	1201+ (1")	1202+ (2")	1203+ (3")	1205+ (5")
TC	759 466	759 465	759 464	759 463
TCR	PinPoint R400	759 470	759 469	759 468
	PinPoint R1000	759 474	759 473	759 472
TCRM	PinPoint R400	759 685	759 684	759 681
	PinPoint R1000	759 479	759 477	759 476
TCA		754 306	754 305	754 304
	Laser Guide GUS74	756 452	756 451	756 450
TCP		754 310	754 309	754 308
TCRA	PinPoint R400	754 314	754 313	754 312
	PinPoint R1000	754 318	754 317	754 316
	PinPoint R400 + GUS74	756 456	756 455	756 454
	PinPoint R1000 + GUS74	756 460	756 459	756 458
TCRP	PinPoint R400	754 322	754 321	754 320
	PinPoint R1000	754 326	754 325	754 324

All TPS1200+ models are delivered with one colour touch screen, standard applications, user manuals and container GVP625.

2 Additional Options



2.1 Touch Screen, Second Keyboard




769 992	GTS23	2nd keyboard with touch screen and colour display, for TPS1200+/TM30 instruments, for telescope position 2, fitted.
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2.2 Communication Side Cover

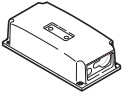


741 963	GSD02	Communication side cover, including bluetooth, for non-motorized TPS1200+ instruments (TC, TCR models). Required for SmartAntenna adapter GAD104/GAD110.  Can only be ordered together with a new instrument.
755 538	GSD03	Communication side cover, including bluetooth, for motorized TPS1200+ instruments. Required for SmartAntenna adapter GAD104/GAD110 and RadioHandle RH15.  Can only be ordered together with a new instrument. For all PowerSearch instruments the GSD03 Communication side cover is standard and does not need separate ordering.

2.3 Internal Memory

738 407	GIM256	Internal memory 256 MB for TPS1200+ instruments, fitted at factory.  Can only be ordered together with a new instrument.
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2.4 Electronic Guide Light (EGL)



762 692	EGL5	Electronic guide light, for all TPS1200+ instruments without ATR.
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2.5 Producer Certificates



366 358	GDI33	Producer Certificate O, all main products.
559 655	GDI35	Producer Inspection Certificate M for theodolites and total stations: Angle.
663 177	GDI46	Producer Inspection Certificate M for total stations: Distance measurement to prisms.
366 359	GDI34	Producer Inspection Certificate M for total stations: Angle and Distance measurement to prisms.
723 945	GDI51	Producer Inspection Certificate M for total stations: Distance measurement to prisms and to any surfaces (reflectorless).
723 946	GDI52	Producer Inspection Certificate M for total stations: Angle and Distance measurement to prisms and to any surfaces (reflectorless).

2.6 Calibration Certificates



757 424	GDI58	Calibration Certificate for electronic total stations - Swiss accredited Calibration Laboratory: Angle Hz and V.
757 425	GDI59	Calibration Certificate for electronic total stations - Swiss accredited Calibration Laboratory: Angle Hz, V and Distance measurement to prism.
777 783	GDI61	Calibration Certificate for electronic total stations - Swiss accredited Calibration Laboratory: Angle Hz, V, Distance measurement to prism and to any surface (reflectorless).

3 SmartWorx TPS Application Programs & Software Options

3.1 SmartWorx TPS Application Programs

	Setup includes: <ul style="list-style-type: none"> • Get station coordinates from GPS, from job or enter manually • Local Resection • Orientation by Known Azimuth • Orientation by Known Backsight • Orientation & Height Transfer to up to 10 target points • Resection Helmert • Resection to up to 10 target points
	Survey includes: <ul style="list-style-type: none"> • AutoPoint recording • Remote Heights • Target Offset calculations

3.2 SmartWorx TPS Application Programs, Standard

738 478	COGO includes: <ul style="list-style-type: none"> • Arc Calculations • Intersections • Inverse • Line Calculations • Shift, Rotate & Scale (Manual) • Shift, Rotate & Scale (Match Pts) • Traverse
737 844	Alignment Tool Kit
740 269	Determine Coordinate System
752 691	DXF Import
744 617	GPS Survey
738 477	Stakeout

3.3 SmartWorx TPS Application Programs, Optional

748 188	Area Division (requires COGO)
744 866	Athletics
748 186	Cross Section
734 169	DTM Stakeout (requires Stakeout)
760 346	DXF Export
742 442	Hidden Point
763 403	Land XML Export
744 701	Monitoring (requires Sets of Angles)
734 167	Reference Line
734 181	Reference Plane
734 182	RoadRunner
746 388	RoadRunner Rail
742 591	RoadRunner Tunnel
734 168	Sets of Angles
734 170	Traverse
765 559	Traverse Adjustment (requires Traverse)
748 187	Volume Calculation

3.4 Optional Licences for SmartStation Setups

 Additional TPS licences for GS12 SmartStation setups can be found in the chapter 20.4.

 Additional TPS licences for GS09 SmartStation setups can be found in the chapter 19.2.

Accessories for Total Station

4 Accessory Sets

734 963	TPS1200+	Accessory Set Consisting of: GDF121 tribrach, 2 GEB221 batteries, GKL221 charger with two GDI221 charging adapters, MCF256 CompactFlash card 256MB, GEV189 Data transfer cable Lemo 0/USB.
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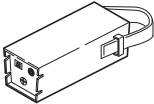
5 Power Supply

5.1 Internal Batteries



733 270	GEB221	Lithium-Ion battery, 7.4V/4.4Ah, rechargeable. To be used with TPS1200+.
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5.2 External Batteries



727 367	GEV171	External universal battery, NiMH, 12V/9Ah, rechargeable.
749 279	GEV208	External power supply unit. To connect TPS1200+ instruments to mains power (220V to 12V). ☞ Requires a GEV52 or GEV187 cable.

5.3 Battery Cables



439 038	GEV71	Car battery cable 4m, to connect 12V car battery.
409 678	GEV52	Cable, connects TPS1200+ or DNA to external battery.
734 697	GEV186	Y-cable, connects TPS1200+ to TCPS28 and external battery.
734 698	GEV187	Y-cable, connects TPS1200+ to PC (9-pin RS232 serial) and external battery, 2m.
707 525	GK1	Lemo Canon converter 30°, for PC (Lemo to RS232) to be used with GEV186 cable.

5.4 Battery Chargers



733 271	GKL221	Charger, to be used with up to two charging adapters GDI221 or GDI222, charger cable and net adapter included.
733 323	GDI221	Adapter for GKL221 for charging 2 Li-Ion batteries GEB241, GEB221, GEB211 or GEB212.
734 389	GDC221	Car adapter for the GKL221 charger. Allows the use of the GKL221 with a cigarette lighter; 12V/24V DC/DC converter. Can also be used to power CS10/CS15 field controller directly from a cigarette lighter.
734 752	GKL211	Charger, for Li-Ion batteries GEB221, GEB211 and GEB212, car adapter cable and net adapter included.

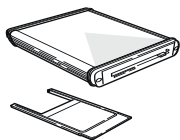
6 Data Storage and Data Transfer

6.1 CompactFlash Card



733 257	MCF256	CompactFlash card 256MB for TPS instruments and CS10/CS15 field controller.
745 995	MCF1000	CompactFlash card 1GB for TPS instruments and CS10/CS15 field controller.

6.2 Card Reader & Adapter



767 895	MCR7	Card reader for SD/CF cards.
733 258	MCFAD1	CompactFlash PC card adapter.

6.3 Data Transfer Cables



563 625	GEV102	Data transfer cable, connects TPS1200+ to PC (9-pin RS232 serial), 2m.
734 697	GEV186	Y-cable, connects TPS1200+ to TCPS28 and external battery.
734 698	GEV187	Y-cable, connects TPS1200+ to PC (9-pin RS232 serial) and external battery, 2m.
734 700	GEV189	Data transfer cable, Lemo to USB connector (incl. USB electronics), 2.0m. Connects TPS1200+/DNA to PC for data transfer. PC driver and user manual included on CD.
756 367	GEV217	Data transfer cable, connects CS10/CS15 field controller with CBC01 Lemo connector to TPS1200+, 1.8m.
707 525	GK1	Lemo Canon converter 30°, for PC (Lemo to RS232) to be used with GEV186 cable.

7 Optical Accessories

7.1 Eyepiece



377 802	FOK53	Magnification eyepiece, additional eyepiece for increasing telescope magnification to 42x. ☞ Modification in a workshop necessary.
308 838	FOK53	Magnification eyepiece, additional eyepiece for increasing telescope magnification to 42x. ☞ Modification ex factory. Can only be ordered with a new instrument.
734 514	GFZ3	Diagonal eyepiece for telescope.
376 236	GOK6	Eyepiece for steep sights, with joint allowing variable sighting angle.

7.2 Autocollimation Set



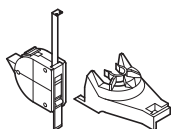
199 899	GOA2	Autocollimation eyepiece.
394 787	GEB62	Plug-in lamp, with cable for autocollimation eyepiece.
394 792	GEB63	Battery box for autocollimation eyepiece and eyepiece lamp.

7.3 Objective



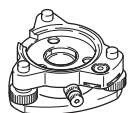
743 504	GVO13	Objective solar filter for TPS instruments.
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8 Instrument Height Meter



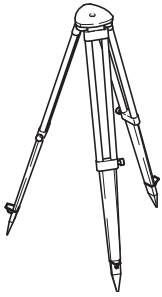
667 718	GHM007	Instrument height meter.
722 045	GHT196	Distance holder for height meter.

9 Tribrachs



667 304	GDF121	Tribrach, without optical plummet, pale green.
667 307	GDF122	Tribrach, with optical plummet, pale green.
748 888	GDF111-1	Tribrach, without optical plummet, pale green.
667 308	GDF112	Tribrach, with optical plummet, pale green/red.

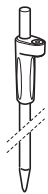
10 Tripods



296 632	GST20	Tripod, telescopic, with accessories (plumb bob, carrying strap and side clamp screws), with pouch.
394 752	GST20-9	Tripod, telescopic, with accessories.
667 301	GST120-9	Tripod, telescopic, selfclosing, with accessories.
332 200	GST4	Tripod-star, for setting up tripods on hard and slippery surfaces.

11 Reflector Poles

11.1 Standard Poles

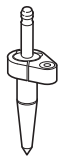


385 500	GLS11	Reflector pole, telescopic, with circular bubble, cm and ft graduation, extends to 2.15m.
754 391	GLS12	Reflector pole, telescopic to 2.00m with circular bubble, cm graduations.
754 389	GLS12F	Reflector pole, telescopic to 2.00m with circular bubble, ft graduations.
752 292	GLS30	Telescopic carbon GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.
766 359	GLS31	Reflector carbon-fibre pole with circular bubble and twist lock. Snap-locks at 2.00m for GPS (GNSS) antennas with GAD31 adapter or GRZ122 reflector (SmartPole setup).
667 309	GLS111	Reflector pole, with bull's-eye bubble, cm/ft graduation, extends to 2.60m, with red/white 0.20m graduations.
667 310	GLS112	Reflector pole, with bull's-eye bubble, cm/ft graduation, extends to 3.65m, with red/white 0.20m graduations.
555 720	GSR2	Dual-strut support for GLS11/GLS11K plumbing pole.
667 319	GSR111	Dual-strut support for all GLS.
403 428	GZW12	Extension 1m long, for reflector pole GLS11 and carriers.

11.2 Hidden Point Pole

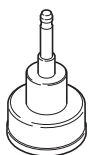
742 329	GMP112	Hidden Point pole extension for GMP111 (mini prism pole set). Includes mini prism with holder and 30cm adapter pole.
744 495	GMP112-0	Hidden Point pole extension for GMP111-0. Includes mini prism and 30cm adapter pole.

11.3 Mini Pole



403 427	GLS14	Mini reflector pole, (prism/target 20cm over point), with circular bubble.
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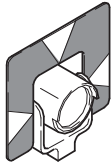
12 Reflector Carriers



667 313	GRT144	Carrier with stub, pale green.
667 316	SNLL121	Precision carrier, with plate level and zenith-nadir laser plummet.
428 340	GZR3	Precision carrier, with plate level and optical plummet.
725 566	GZR103	Carrier, with plate level and optical plummet, for reflectors and GPS antenna, pale green.

13 Reflectors

13.1 Circular Reflectors



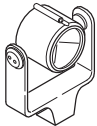
362 830	GPR1	Circular prism, in black housing.
641 618	GPR111	Circular prism, with holder and target plate.
753 492	GPR113	Circular prism, with red holder.
641 617	GPR121	Circular prism, with metal holder and target plate.
362 820	GPH1	Single-prism holder.
400 080	GPH3	Three-prism holder.
362 823	GZT4	Target plate, for GPH1.

13.2 360° Reflectors



639 985	GRZ4	360° reflector.
644 327	GRZ101	360° mini prism with 1/4" thread fitting. Not supported by PowerSearch.
754 384	GRZ122	360° reflector with 5/8" thread adapter for mounting of GPS antenna.
742 006	GAD103	Adapter for attaching GRZ101 to all poles with Leica Geosystems stub.

13.3 Precision Reflectors



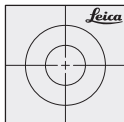
555 631	GPH1P	Single-prism precision reflector.
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13.4 Mini Reflectors



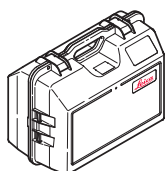
641 662	GMP101	Mini prism, incl. bubble, target plate and spike, in bag, also suitable for GLS11 and GRT44 (same height as GPH1, additive constant +17.5mm).
641 762	GMP104	Mini prism, with L-bar, for fixed installations.
641 615	GMP111	Mini prism, incl. bubble, with GLS115 pole set.
642 534	GMP111-0	Mini prism 0-constant, incl. bubble, with GLS115 pole set.
743 503	GAD105	Adapter for GMP111 to all poles with Leica Geosystems stub.

13.5 Reflector Tapes



763 532	GZM29	Reflective tape, 20x20mm for short range, pack of 20 pieces.
763 533	GZM30	Reflective tape, 40x40mm for medium range, pack of 20 pieces.
763 534	GZM31	Reflective tape, 60x60mm for long range, pack of 20 pieces.

14 Additional Containers



754 598	GVP640	Hard container for GS09 SmartAntenna and corresponding GS09 SmartStation accessories.
767 828	GVP642	Viva hard container for GS15 SmartAntenna, CS10/CS15 field controller, and corresponding SmartPole and SmartStation accessories.
782 384	GVP656	Viva hard container for GS12 SmartAntenna, CS10/CS15 field controller, and corresponding SmartPole and SmartStation accessories.
744 501	GDZ66	Backstraps (2) for GVP640 and GVP642 hard container.
667 451	GVP609	Container for 2 circular prisms GPR111/121, 2 carriers/laser plummet and 2 tribrachs.
727 589	GVP102	Soft bag with shoulder strap, for prism station, consist of tribrach, prism carrier or laser plummet and prism.

Remote Control

15 Remote Control

15.1 Remote Control Sets

Advanced Remote Control Sets

6003611	Advanced CS10 Set for TPS1200+ and TS30/TM30 instruments, consisting of CS10 radio field controller with integrated TPS radio modem, CBC01 Lemo connector modul and CS SmartWorx Viva licence key (767 909), GHT62 pole holder with GHT63 pole clamp, RH15 RadioHandle, 2 GEB212 battery and container.
6003612	Advanced CS15 Set for TPS1200+ and TS30/TM30 instruments, consisting of CS15 radio field controller with integrated TPS radio modem, CBC01 Lemo connector modul and CS SmartWorx Viva licence key (767 909), GHT62 pole holder with GHT63 pole clamp, RH15 RadioHandle, 2 GEB212 battery and container.

Professional Remote Control Set

6003841	Professional CS15 Set for TPS1200+ and TS30/TM30 instruments, consisting of CS15 UMTS radio field controller with intrgrated TPS radio modem, CBC01 lemo connector modul and CS SmartWorx Viva licence key (767 909), GHT62 pole holder with GHT63 pole clamp, RH15 RadioHandle, 2 GEB212 batteries and container.
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15.2 CS10/CS15 Radio Field Controller



767 866	CS10 Radio Field Controller	CS10 Radio Field Controller. Ruggedized WinCE field controller with full VGA colour touch screen, 1GB NAND flash memory, 512MB SDRAM, CF/SD card slot and 2MP camera. Includes Bluetooth, internal WLAN module, internal TPS radio module, numeric keypad, stylus. Available with either Lemo connector (CBC01) or DSUB connector module (CBC02).
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767 871	CS15 Radio Field Controller	CS15 Radio Field Controller. Ruggedized WinCE field controller with full VGA colour touch screen, 1GB NAND flash memory, 512MB SDRAM, CF/SD card slot and 2MP camera. Includes Bluetooth, internal WLAN module, internal TPS radio module, QWERTY keypad, stylus. Available with either Lemo connector (CBC01) or DSUB connector module (CBC02).
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781 600	CS15 UMTS Radio Field Controller	CS15 UMTS Radio Field Controller. Ruggedized WinCE UMTS field controller with full VGA colour touch screen, 1GB NAND flash memory, 512 MB SDRAM, CF/SD card slot and 2MP camera. Includes UMTS module, Bluetooth, interal WLAN module, internal TPS radio module, QUERTY keypad and stylus. Available with either Lemo connector (CBC01) or DSUB connector module (CBC02).
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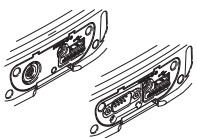
Extra pen

781 521	GDZ69	Extra pen with screw driver for CS10 and CS15 field controller.
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Anti-glare display foils

767 907	SPF01	Anti-glare display foils for CS10 and CS15 field controller.
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16 Connector Modules for CS10/CS15



767 874	CBC01	Lemo connector module with power jack, Lemo (USB and Serial) and USB A host for CS10 and CS15 field controller. ☞ Can only be ordered with CS10/CS15 field controller.
767 875	CBC02	DSUB connector module with power jack, DSUB 9-pin, USB A host and USB mini AB for CS10 and CS15 field controller. ☞ Can only be ordered with CS10/CS15 field controller.

17 SmartWorx Viva Software and Application Programs

17.1 SmartWorx Viva Software for CS10/CS15


767 908	SmartWorx Viva software and DVD.
767 910	CS SmartWorx Viva LT licence key.  Requires 767 908 SmartWorx Viva software.
767 909	CS SmartWorx Viva licence key.  Requires 767 908 SmartWorx Viva software.
767 911	CS SmartWorx Viva LT to CS SmartWorx Viva upgrade option.

17.2 Applications Included with SmartWorx Viva

	CS Smart- Worx Viva	CS Smart- Worx Viva LT
Survey includes:		
• Survey	●	●
• Code points	●	●
• Auto points recording	●	○
• Remote Heights	●	-
• Target Offset calculations	●	●
Setup includes:		
• Get station coordinates from GPS, from Job or enter manually	●	○
• Orientation by known Azimuth	●	●
• Orientation by known Backsight	●	●
• Orientation & Height transfer to up to 10 target points	●	●
• Resection up to 10 target points	●	●
• Resection Helmert	●	●
• Orientation to Line	●	●
Stakeout includes:		
• Navigate to point using various methods: North, point, to and from total station	●	○
• Quality control - checking of coordinate differences before storing	●	-
• Automatic selection of next closest point to stake	●	-
• Graphical selection of point from map	●	●
• Edit heights and offset heights of points	●	-
• Acoustic "reversing beep" when getting closer to point	●	-
COGO includes:		
• Inverse	●	●
• Traverse	●	●
• Intersections	●	●
• Line calculations	●	●
• Arc calculations	●	●
• Angle and curve calculator	●	-
• Shift, Rotate & Scale (manual)	●	●
• Shift, Rotate & Scale (match Points)	●	●
Determine coordinate system:		
• 1 step, 2 step, 3D Transformation	●	●
• All common projections	●	●
Alignment Tool Kit:		
• Horizontal alignments	●	●
• Vertical alignments	●	●
• Cross sections	●	●
• Chainage equations	●	●
Data import: ASCII, DXF	●	●
Data export: Custom ASCII, DXF, LandXML, FBK, RW5, RAW	●	●





- All options and functionality available
- Limited options and functionality
- Not available

17.3 Additional SmartWorx Viva Software Packages

		SmartWorx Viva	SmartWorx Viva LT
767 913	Worksite+ includes: <ul style="list-style-type: none"> CS DTM Stakeout application (767 919) CS Reference Line application (767 915) CS Surface & Volumes application (767 920) 	● ● ●	● ○ ●
767 912	Survey+ includes: <ul style="list-style-type: none"> CS Reference Plane and Grid Scanning (767 916) CS Survey Cross Section (767 918) CS Traverse (767 927) CS Sets of Angles (767 929) CS Hidden Point (767 926) <p> Requires Art. No. 767 909 SmartWorx Viva.</p>	● ● ● ● ●	- - - - -

● All options and functionality available
 ○ Limited options and functionality
 - Not available

17.4 Optional Applications for SmartWorx Viva

		SmartWorx Viva	SmartWorx Viva LT
767 917	CS COGO Area Division  Requires COGO application.	●	●
767 919	CS DTM Stakeout  Requires Stakeout application.	●	●
767 931	CS Monitoring  Requires Sets of Angles application.	●	-
767 915	CS Reference Line  Requires Stakeout application.	●	○
767 916	CS Reference Plane and Grid Scanning	●	-
767 921	CS RoadRunner	●	○
767 923	CS RoadRunner Rail	●	-
767 922	CS RoadRunner Tunnel	●	-
777 645	CS RoadRunner Importer	●	●
767 929	CS Sets of Angles	●	-
767 918	CS Cross Section	●	-
767 920	CS Surface and Volumes	●	●
767 926	CS TPS Hidden Point	●	-
767 927	CS Traverse	●	-

● All options and functionality available
 ○ Limited options and functionality
 - Not available

17.5 Optional Licences for CS10/CS15 Controller

 Further CS licences for GS12 SmartPole setups can be found in the chapter 20.3.

779 474	Topcon total station control licence.
782 287	Nikon totalstation control licence.
782 286	SOKKIA totalstation control licence.

17.6 SmartWorx Viva PC Software

773 894	SmartWorx Viva PC Software. Licence Key to run the SmartWorx Viva software on a PC.
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Accessories for Remote Control

18 Accessories for Remote Control

18.1 Internal Batteries



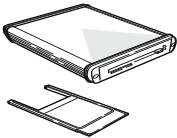
733 269	GEB211	Lithium-Ion battery, 7.4V/2.2Ah, rechargeable. To be used with CS10/CS15 field controller and GS09 or GS15 receivers.
772 806	GEB212	Lithium-Ion battery, 7.4V/2.6Ah, rechargeable. To be used with CS10/CS15 field controller and GS09 or GS15 receivers.

18.2 Memory Devices



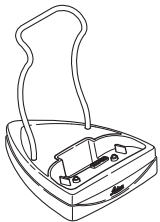
767 856	MSD1000	SD memory card 1GB for CS10 and CS15 field controller.
733 257	MCF256	CompactFlash card 256MB for TPS instruments and CS10/CS15 field controller.
745 995	MCF1000	CompactFlash card 1GB for TPS instruments and CS10/CS15 field controller.
765 199	MS1	USB memory stick, 1GB, industrial grade.

18.3 Card Reader & Adapter



767 895	MCR7	Card reader for SD/CF cards.
733 258	MCFAD1	CompactFlash PC card adapter.

18.4 Docking Station

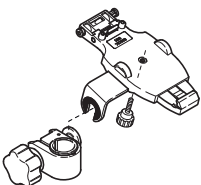


767 906	CCS01	Docking station for CS10 and CS15 field controller for charging and data transfer to PC, includes: GEV223 (USB A to USB mini data transfer cable).
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18.5 Additional Power Accessories

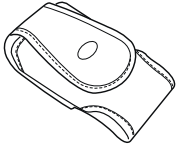
767 900	GEV235	1.5m power cable. Allows CS10/CS15 controller to be externally powered via the power jack. Usable in the EU.
773 753	GEV235-1	1.5m power cable. Allows CS10/CS15 controller to be externally powered via the power jack. Usable in the US.
773 754	GEV235-2	1.5m power cable. Allows CS10/CS15 controller to be externally powered via the power jack. Usable in Japan.
773 755	GEV235-3	1.5m power cable. Allows CS10/CS15 controller to be externally powered via the power jack. Usable in the UK.
773 756	GEV235-4	1.5m power cable. Allows CS10/CS15 controller to be externally powered via the power jack. Usable in Australia.
734 389	GDC221	Car adapter for the GKL221 charger. Allows the use of the GKL221 with a cigarette lighter; 12V/24V DC/DC converter. Can also be used to power CS10/CS15 field controller directly from a cigarette lighter.

18.6 Pole Accessories for CS10/CS15 Field Controller



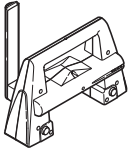
767 879	GHT62	Pole holder base plate for CS10 and CS15 field controller.
767 880	GHT63	Clamp arrangement for attaching the GHT62 to all poles.

18.7 Softbags and Hand Strap for CS10/CS15 Field Controller



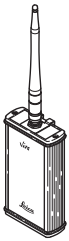
Soft bags		
767 904	GVP643	Soft bag for CS10 field controller for transportation and protection against dirt. Including belt loop.
767 905	GVP644	Soft bag for CS15 field controller for transportation and protection against dirt. Including belt loop.
Hand strap		
767 877	GHT61	Hand strap for CS10 and CS15 field controller with utility hook for attaching to belt or tripod.

18.8 RH15 RadioHandle



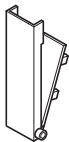
772 300	RH15	Radio Handle with integrated radio modem and radio antenna. Used as radio modem for TPS1200+ and TS30/TM30 instruments together with CS10 & CS15 field controller (frequency range 2402 - 2452MHz).
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18.9 TCPS28 Modems



772 301	TCPS28B	Radio modem (base) with antenna, user manual. Used as radio modem for TPS1200+ and TS30/TM30 instruments to communicate with CS10 & CS15 field controller (frequency range 2402 - 2452MHz).
772 302	TCPS28R	Radio modem (remote) with antenna, user manual. Used as external radio to establish radio connection with TCPS28B (frequency range 2402 - 2452MHz).

18.10 TCPS28 Accessories



734 163	GHT43	Adapter for mounting TCPS28 radio module on GST20/GST120 tripod.
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18.11 Cables for CS10/CS15 Field Controller and TCPS28 Radio Modems



Cable adapters		
734 389	GDC221	Car lighter to power jack for CS10/CS15 field controller.
707 525	GK1	Lemo Canon converter 30°, for PC (Lemo to RS232) to be used with GEV186 cable.
Data transfer cables		
764 700	GEV223	Data transfer cable for connecting CS10/CS15 field controller to PC (USB A to USB mini connector).
767 899	GEV234	Cable to connect CS10/CS15 field controller to GS10/GS15 SmartAntenna for data transfer. USB A to Lemo connector (for GS15 SmartStation setup).
772 807	GEV237	Cable to connect CS10/CS15 field controller to GS15 SmartAntenna for data transfer. Lemo to Lemo connector (for GS15 SmartStation setup).
Power cables		
758 469	GEV219	Power cable, connects CS10/CS15 (with Lemo CBC01 connector module) to external battery.
Y - power cables		
734 697	GEV186	Y-cable, connects TPS1200+ to TCPS28 and external battery.

SmartStation

19 SmartStation Setup using GS09 Antenna

19.1 GS09 Antenna

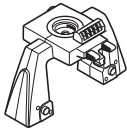



769 646	GS09	GPS/GLONASS dual frequency antenna. Can be used with TPS1200+ and TS30/TM30 instruments for SmartStation setup.
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19.2 Additional TPS Software Options for GS09 Receiver

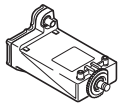
752 656		GPS raw data logging license (for SmartStation with GS09 antenna)
752 873		TPS GLONASS option (for SmartStation with GS09 antenna)

19.3 SmartAntenna Adapter



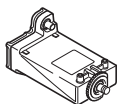
741 965	GAD104	SmartAntenna adapter. Required to attach GS09 antenna and/or radio modem in GFU14 housing onto TPS1200+/TS30/TM30.  Requires Communication side cover GSD02 or GSD03 on the TPS side.
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19.4 Satellite Radio Modems



Satellite modems		
733 275	GFU14-0	Satellite 3AS radio modem (433.525MHz, 25.0kHz channel spacing, 0.5W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
733 276	GFU14-1	Satellite 3AS radio modem (406.425MHz, 25.0kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 272	GFU14-2	Satellite 3AS radio modem (445.000MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 273	GFU14-3	Satellite 3AS radio modem (443.000MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 274	GFU14-4	Satellite 3AS radio modem (440.550MHz, 25.0kHz channel spacing, 0.5W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 275	GFU14-5	Satellite 3AS radio modem (458.150MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 276	GFU14-6	Satellite 3AS radio modem (439.8625MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
753 928	GFU14-7	Satellite 3AS radio modem (464.5000MHz, 25.0kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
756 623	GFU14-8	Satellite 3AS radio modem (458.6000MHz, 25.0kHz channel spacing, 0.5W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
767 859	GFU27	Satellite M3 TR1 403-470Mhz RX/TX radio in GFU housing. Transceiver UHF radio module. User manual and CE Declaration of Conformity included.
Cable for Satellite modems		
733 297	GEV171	1.8m cable to program the Satellite 3AS radio modem inside the GFU14 housing.

19.5 Pacific Crest Radio Modems

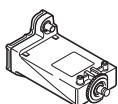


 Pacific Crest radio modems must be ordered directly from your local Pacific Crest office or representative.

PDL receive only modems built into the Leica GFU radio housing with 12.5 or 25kHz channel spacing within the following frequency bands are available:

- 410 - 430MHz
- 430 - 450MHz
- 450 - 470MHz
- 223 - 235MHz

19.6 Mobile Phones



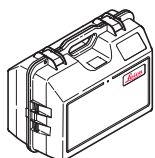
750 242	GFU24	Housing with Siemens MC75 GSM/GPRS module (Quad-Band GSM 850/900/1800/1900MHz), fits on GAD104 SmartAntenna adapter.
750 243	GFU25	CDMA cellular phone for Canada, Multitech MTMMC-C-N12 for Bell mobility network, integrated into housing, fits on GAD104 SmartAntenna adapter.
744 754	GFU19	US CDMA cellular phone Multitech MTMMC-C; intergrated into housing, fits on GAD104 SmartAntenna adapter.
767 860	GFU28	5-Band (850/900/1800/1900/2100Mhz) Telit 3.5G GSM/GPRS/UMTS module in GFU housing. Provides fully flexibilty due to 5-band technology and therefore global compatible to all GSM, GPRS, EDGE and UMTS network providers.
783 170	GFU28-1	5-Band (850/900/1800/1900/2100 Mhz) Telit 3G GSM/GPRS/UMTS module for US and Canada only. Provides fully flexibilty due to 5-band technology and therefore compatible to GSM,GPRS,EDGE and UMTS network providers in US and CAN.

19.7 Antennas for Radio Modems and Mobile Phones



Antennas for radio modems		
743 281	GAT1201	Antenna for radio modem for use with SmartStation (400-435MHz).
743 282	GAT1202	Antenna for radio modem for use with SmartStation (435-470MHz).
Antennas for mobile phones		
743 283	GAT1203	Antenna for 900/1800MHz mobile network for use with SmartStation.
743 284	GAT1204	Antenna for US mobile network (800/1900MHz) for use with SmartStation.

19.8 Container for GS09 Antenna & SmartStation Accessories



754 598	GVP640	Hard container for GS09 SmartAntenna and corresponding GS09 SmartStation accessories.
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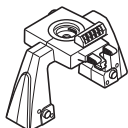
20 SmartStation & Smartpole Setup using a GS12 GNSS Receiver


20.1 GS12 GNSS Receiver



782 288	GS12	GS12 GNSS receiver, Geodetic 120 channels GNSS receiver, includes: GPS L1+L2, 1 Hz position rate, easily upgradeable with TS/GS12 or CS/GS12 options (e.g. Glonass, Gallileo, GPS L5, Network Licence, Raw data logging).
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20.2 SmartAntenna Adapter



741 965	GAD104	GS12 SmartAntenna Adapter. Required to attach a GS12 GNSS Antenna onto a TPS1200+ Instrument.  Requires Communication side cover GSD02 or GSD03 on the TPS side.
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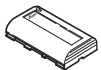
20.3 Additional CS Options for GS12 GNSS SmartPole Setup

782 278	GSW949	CS/GS12 GLONASS License. License key for the CS10/CS15 field controller which enables use of GLONASS with a GS12 receiver.
782 279	GSW950	CS/GS12 GPS L5 License. License key for the CS10/CS15 field controller which enables use of GPS L5 with a GS12 receiver.
782 280	GSW951	CS/GS12 GPS Galileo License. License key for the CS10/CS15 field controller which enables use of Galileo with a GS12 receiver.
782 281	GSW952	CS/GS12 5Hz License. License key for the CS10/CS15 field controllers which enables to compute 5Hz positions with a GS12 receiver.
782 282	GSW953	CS/GS12 Raw Data Logging License. License key for the CS10/CS15 field controllers which enables logging of Leica MDB raw data with a GS12 receiver.
782 283	GSW954	CS/GS12 RINEX Logging License. License key for the CS10/CS15 field controllers which enables logging of RINEX raw data with a GS12 receiver.
782 284	GSW955	CS/GS12 Network RTK Network License. License key for the CS10/CS15 field controllers which enables the GS12 receiver to work within an RTK network. Includes unlimited RTK baseline.
782 285	GSW956	CS/GS12 Leica Lite RTK License. License key for the CS10/CS15 field controllers which enables the GS12 antenna to receive Leica Lite RTK messages.

20.4 Additional TPS Options for GS12 SmartStation Setup

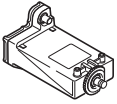
752 873	GSW583	GS12 GLONASS License for TPS1200+, TS30/TM30 instruments. License key for the TPS1200+ total stations which enables use of GLONASS with a GS12 receiver.
768 424	GSW706	GS12 GPS L5 License for TPS1200+, TS30/TM30 instruments. License key for the TPS1200+ total stations which enables use of GPS L5 with a GS12 receiver.
766 717	GSW679	GS12 GPS Galileo License for TPS1200+, TS30/TM30 instruments. License key for the TPS1200+ total stations which enables use of Galileo with a GS12 receiver.
752 656	GSW532-1	GS12 Raw Data Logging License for TPS1200+, TS30/TM30 instruments. License key for the TPS1200+ total stations which enables logging of Leica MDB raw data with a GS12 receiver.
6002648		GS12 Pre-Signal Bundle for TPS1200+, TS30/TM30 instruments (SmartStation). Consists of GLONASS option, GPS L5 option and Galileo option.

20.5 Power Supply



733 269	GEB211	Lithium-Ion battery, 7.4V/2.2Ah, rechargeable. To be used with CS10/CS15 field controller and GS09, GS12 or GS15 receivers.
772 806	GEB212	Lithium-Ion battery, 7.4V/2.6Ah, rechargeable. To be used with CS10/CS15 field controller and GS09, GS12 or GS15 receivers.

20.6 Sateline Radio Modems



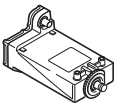
Satellite modems


733 275	GFU14-0	Satellite 3AS radio modem (433.525MHz, 25.0kHz channel spacing, 0.5W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
733 276	GFU14-1	Satellite 3AS radio modem (406.425MHz, 25.0kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 272	GFU14-2	Satellite 3AS radio modem (445.000MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 273	GFU14-3	Satellite 3AS radio modem (443.000MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 274	GFU14-4	Satellite 3AS radio modem (440.550MHz, 25.0kHz channel spacing, 0.5W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 275	GFU14-5	Satellite 3AS radio modem (458.150MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
738 276	GFU14-6	Satellite 3AS radio modem (439.8625MHz, 12.5kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
753 928	GFU14-7	Satellite 3AS radio modem (464.5000MHz, 25.0kHz channel spacing, 1.0W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
756 623	GFU14-8	Satellite 3AS radio modem (458.6000MHz, 25.0kHz channel spacing, 0.5W) already intergrated into housing, fits on GAD104 SmartAntenna adapter. User manual and CE Declaration of Conformity included.
767 859	GFU27	Satellite M3 TR1 403-470Mhz RX/TX radio in GFU housing. Transceiver UHF radio module. User manual and CE Declaration of Conformity included.

Cable for Sateline modems

733 297	GEV171	1.8m cable to program the Sateline 3AS radio modem inside the GFU14 housing.
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20.7 Pacific Crest Radio Modems

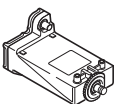


 Pacific Crest radio modems must be ordered directly from your local Pacific Crest office or representative.

PDL receive only modems built into the Leica GFU radio housing with 12.5 or 25kHz channel spacing within the following frequency bands are available:

- 410 - 430MHz
- 430 - 450MHz
- 450 - 470MHz
- 223 - 235MHz

20.8 Mobile Phones



750 242	GFU24	Housing with Siemens MC75 GSM/GPRS module (Quad-Band GSM 850/900/1800/1900MHz), fits on GAD104 SmartAntenna adapter.
750 243	GFU25	CDMA cellular phone for Canada, Multitech MTMMC-C-N12 for Bell mobility network, integrated into housing, fits on GAD104 SmartAntenna adapter.
744 754	GFU19	US CDMA cellular phone Multitech MTMMC-C; intergrated into housing, fits on GAD104 SmartAntenna adapter.
767 860	GFU28	5-Band (850/900/1800/1900/2100Mhz) Telit 3.5G GSM/GPRS/UMTS module in GFU housing. Provides fully flexibilty due to 5-band technology and therefore global compatible to all GSM, GPRS, EDGE and UMTS network providers.
783 170	GFU28-1	5-Band (850/900/1800/1900/2100 Mhz) Telit 3G GSM/GPRS/UMTS module for US and Canada only. Provides fully flexibilty due to 5-band technology and therefore compatible to GSM,GPRS,EDGE and UMTS network providers in US and CAN.

20.9 Antennas for Radio Modems and Mobile Phones



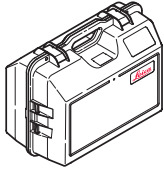
Antennas for radio modems

743 281	GAT1201	Antenna for radio modem for use with SmartStation (400-435MHz).
743 282	GAT1202	Antenna for radio modem for use with SmartStation (435-470MHz).

Antennas for mobile phones

743 283	GAT1203	Antenna for 900/1800MHz mobile network for use with SmartStation.
743 284	GAT1204	Antenna for US mobile network (800/1900MHz) for use with SmartStation.

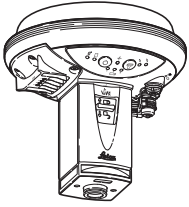
20.10 Container for GS12 Receiver



782 384	GVP656	Viva hard container for GS12 SmartAntenna, CS10/CS15 field controller, and corresponding SmartPole and SmartStation accessories.
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21 SmartStation Setup using GS15 GNSS Receiver

21.1 GS15 GNSS Receiver

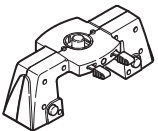


767 789	GS15	Leica GS15 Basic SmartAntenna
771 502	GS15	Leica GS15 Limited SmartAntenna
771 503	GS15	Leica GS15 Performance SmartAntenna
771 504	GS15	Leica GS15 Professional SmartAntenna

	Leica GS15 Basic	Leica GS15 Limited	Leica GS15 Performance	Leica GS15 Professional
Supported GNSS Systems				
GPS L2	●	●	●	●
GPS L5	○	○	○	●
GLONASS	○	○	○	●
Galileo	○	○	○	●
RTK performance				
DGPS/RTCM	○	●	●	●
RTK up to 5km	○	●	●	●
RTK unlimited	○	○	●	●
Network RTK	○	○	●	●
Leica Lite RTK	○	○	○	●
Position update & data recording				
5 Hz positioning	○	●	●	●
20 Hz positioning	○	○	●	●
Raw data logging	○	●	●	●
RINEX logging	○	○	○	●
NMEA out	○	○	○	●
Additional features				
RTK Reference Station functionality	○	○	●	●

- Standard
- Optional

21.2 SmartAntenna Adapter



767 802	GAD110	SmartAntenna adapter to mount GS15 SmartAntenna.
		Requires Communication side cover GSD02 or GSD03 on the TPS side.

21.3 Additional GS15 Receiver Options

GNSS Software options

767 804	LOP1	GPS L5 option, enables GPS L5 tracking on a GS10 or GS15 receiver.
767 805	LOP2	GLONASS option, enables GLONASS tracking on a GS10 or GS15 receiver.
767 806	LOP3	Galileo option, enables Galileo tracking on GS10 or GS15 receiver.

Position update and data recording options

767 807	LOP4	5Hz option, enables to compute positions with an update rate up to 5Hz.
767 808	LOP5	20Hz option, enables to compute positions with an update rate up to 20Hz.
767 809	LOP6	Upgrade option from 5Hz to 20Hz. (LOP4 to LOP5)
767 810	LOP7	Raw data option, allows logging of GNSS raw data on GS10 or GS15 receiver or on a CS10/CS15 field controller.
767 811	LOP8	RINEX option, allows logging of RINEX data on GS10 or GS15 receiver.

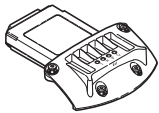
RTK performance options

767 812	LOP9	5km RTK option, enables RTK positions to be computed up to a distance of 5km from a single base station.
767 813	LOP10	Unlimited RTK option, enables RTK positions to be computed from a single base station with no limit of distance.
767 814	LOP11	Upgrade from 5km RTK to unlimited RTK. (LOP9 to LOP10)
767 815	LOP12	Unlimited RTK and Network RTK, enables RTK position to be computed from a single base station and within a RTK network.
767 817	LOP14	Upgrade option for GS10 or GS15 receivers from RTK unlimited only to RTK unlimited including RTK Network. (LOP10 to LOP12)
771 971	LOP20	Leica Lite option, to receive System 900 RTK data on the GS10, GS15 receivers.

Other options

767 816	LOP13	RTK Reference station option, allows a GS10 or GS15 receiver to transmit RTK data.
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21.4 RTK Modems



Satellite radio modules

767 819	SLR1	Satellite 3AS 403-470 MHz TXO radio. RTK transmitting only UHF radio module to be easily plugged into the GS15 GNSS receiver.
767 820	SLR2	Satellite 3AS 403-470 MHz RXO radio. RTK receive only UHF radio module to be easily plugged into the GS15 GNSS receiver.
781 646	SLR5	Satellite M3 TR1 403-470MHz RX/TX radio. RTK receive and transmit UHF radio module to be easily plugged into the GS15 GNSS receiver.

Pacific Crest radio modules

767 821	SLR3-1	Pacific Crest ADL RX/TX radio 390-430Mhz. RTK receive and transmit UHF radio module to be easily plugged into the GS15 GNSS receiver.
767 822	SLR3-2	Pacific Crest ADL RX/TX radio 430-470Mhz. RTK receive and transmit UHF radio module to be easily plugged into the GS15 GNSS receiver.

6002544 Configuration tool kit for programming Satellite and Pacific Crest SLR RTK radio modules; includes programming cable GEV231 and configuration software CD ROM.



SLR radios will be delivered pre-configured according to country-specific radio regulations. In countries where radios need to be configured locally, the configuration tool kit is to be used.




External high power radios such as Satellite Epic Pro (10, 35W), Pacific Crest (2, 35W) or GFU radios can be used for RTK communication instead of the slot-in RTK modems.

Mobile phone modules

767 823	SLG1	5-Band (850/900/1800/1900/2100MHz) Telit GSM/GPRS/UMTS module. Provides full flexibility due to 5-band technology and is globally compatible to all GSM, GPRS, EDGE and UMTS network providers. Can be easily plugged into the GS15 GNSS receiver.
774 689	SLG2	4-Band (850/900/1800/1900MHz) Siemens MC75i GSM/GPRS module. Universal 4-band technology supports GSM, GPRS, and EDGE network providers. Can be easily plugged into the GS15 GNSS receiver.
767 824	SLC1	Dual band Telit CDMA 1xRTT module for US. Supports Sprint (US) network provider and can be easily plugged into the GS15 GNSS receiver.

767 825	SLC2	Dual band Telit CDMA 1xRTT module for US. Supports Verizon (US) network provider and can be easily plugged into the GS15 GNSS receiver.
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21.5 External RTK Antennas

 The GS15 receiver is equipped with internal GSM/GPRS/UMTS antenna and internal UHF antenna as standard. In areas of poor GSM/GPRS/UMTS or UHF reception, the use of an external RTK antenna may improve reception.



RTK antenna arm

767 790	GAD108	Arm to mount external UHF/GSM antenna to GS15 SmartAntenna, useful in areas of poor radio or GSM network reception.
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Gainflex radio antennas

639 964	GAT1	Gainflex radio antenna (frequency range 400-435MHz).
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667 243	GAT2	Gainflex radio antenna (frequency range 435-470MHz).
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Antennas for mobiles phones

782 500	GAT18	Multiband GSM/UMTS Antenna for 850/1900MHz, for 900/1800MHz and for 2100MHz mobile networks.
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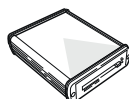


21.6 Memory Devices



767 856	MSD1000	SD memory card 1GB for CS10 and CS15 field controller.
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21.7 Card Reader



767 895	MCR7	Card reader for SD/CF cards.
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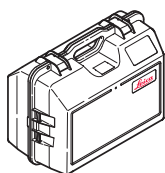
21.8 Power Supply



733 269	GEB211	Lithium-Ion battery, 7.4V/2.2Ah, rechargeable. To be used with CS10/CS15 field controller and GS09 or GS15 receivers.
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772 806	GEB212	Lithium-Ion battery, 7.4V/2.6Ah, rechargeable. To be used with CS10/CS15 field controller and GS09 or GS15 receivers.
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22 Additional Containers



767 828	GVP642	Viva hard container for GS15 SmartAntenna, CS10/CS15 field controller, and corresponding SmartPole and SmartStation accessories.
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Care Packages

23 Customer Care Packages

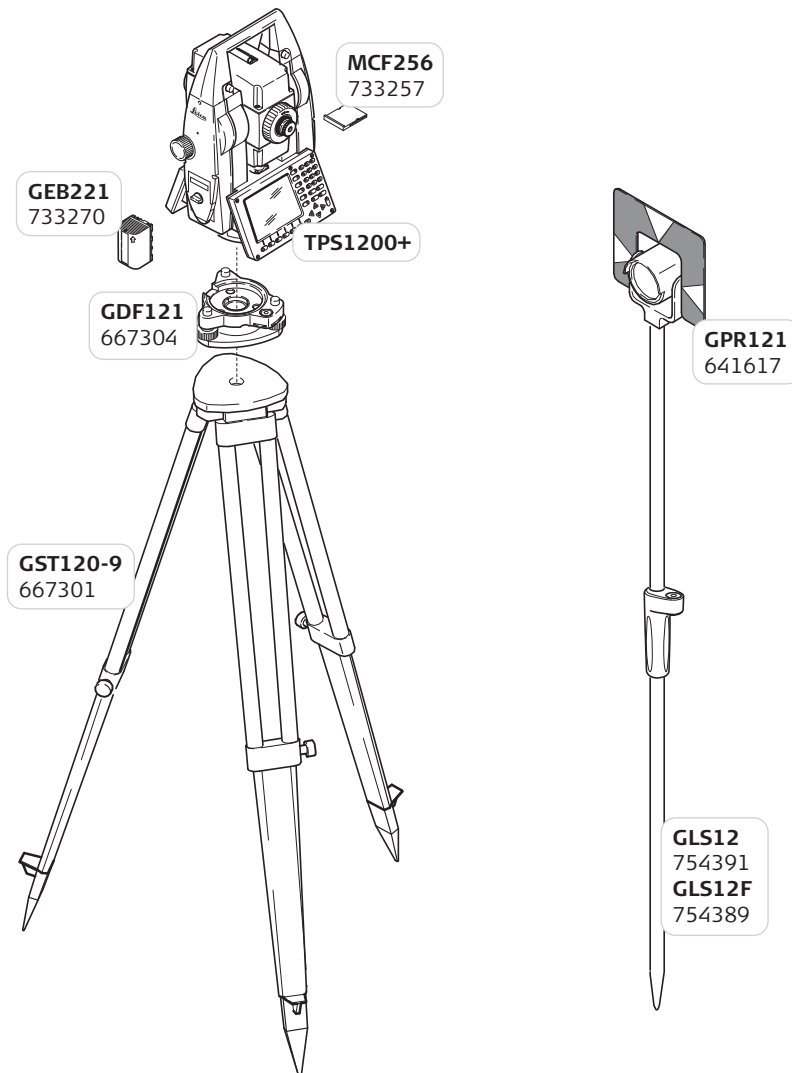


A wide selection of comprehensive Customer Care Packages (CCPs) is available bundling Hardware Maintenance, Software Maintenance, Customer Support and Extended Warranty.

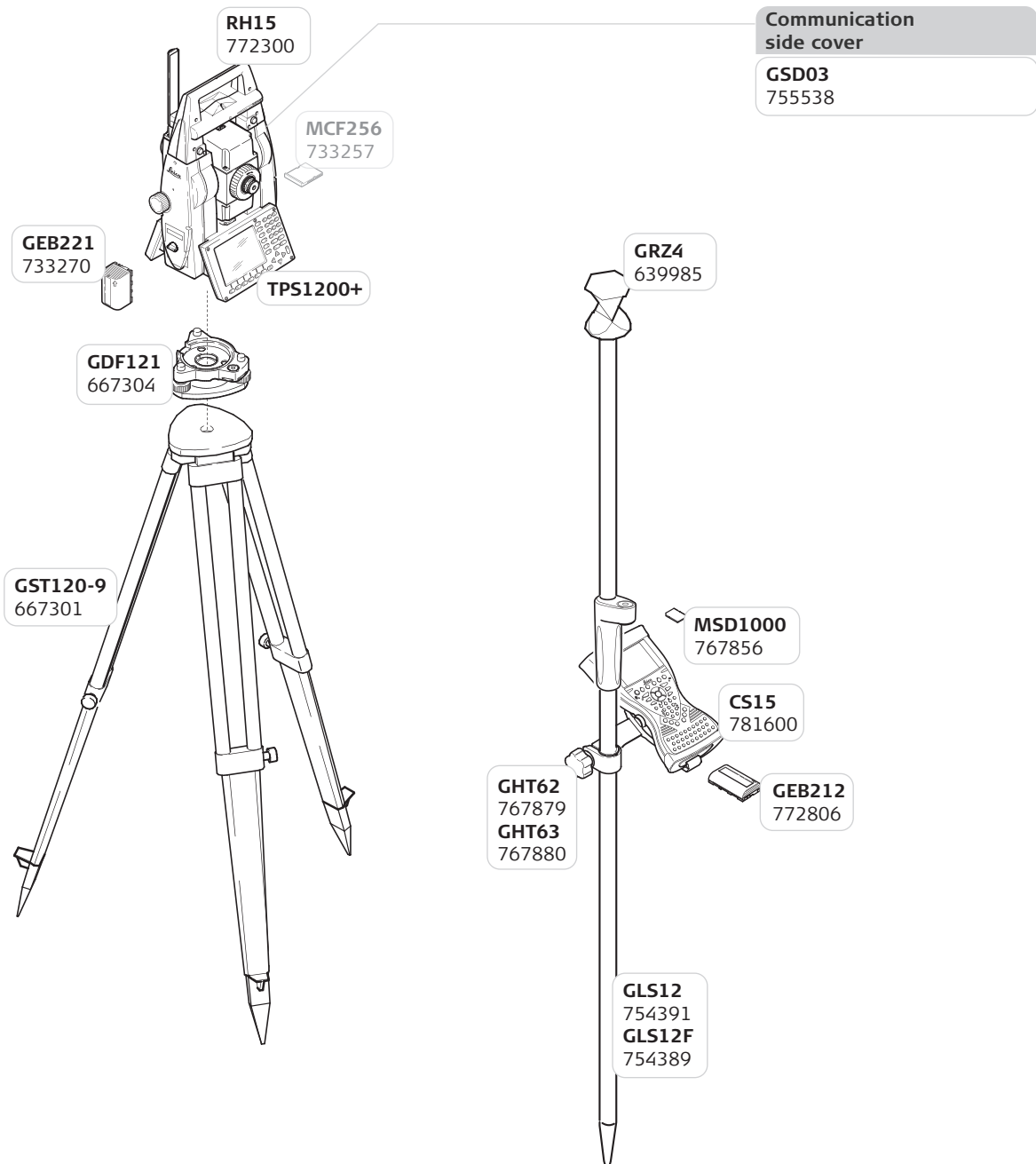
For more information about the CCP offering in your country please contact your local Leica Geosystems organization or distribution partner.

Suggested Equipment Setups

24 Conventional Surveying



25 Robotic Surveying

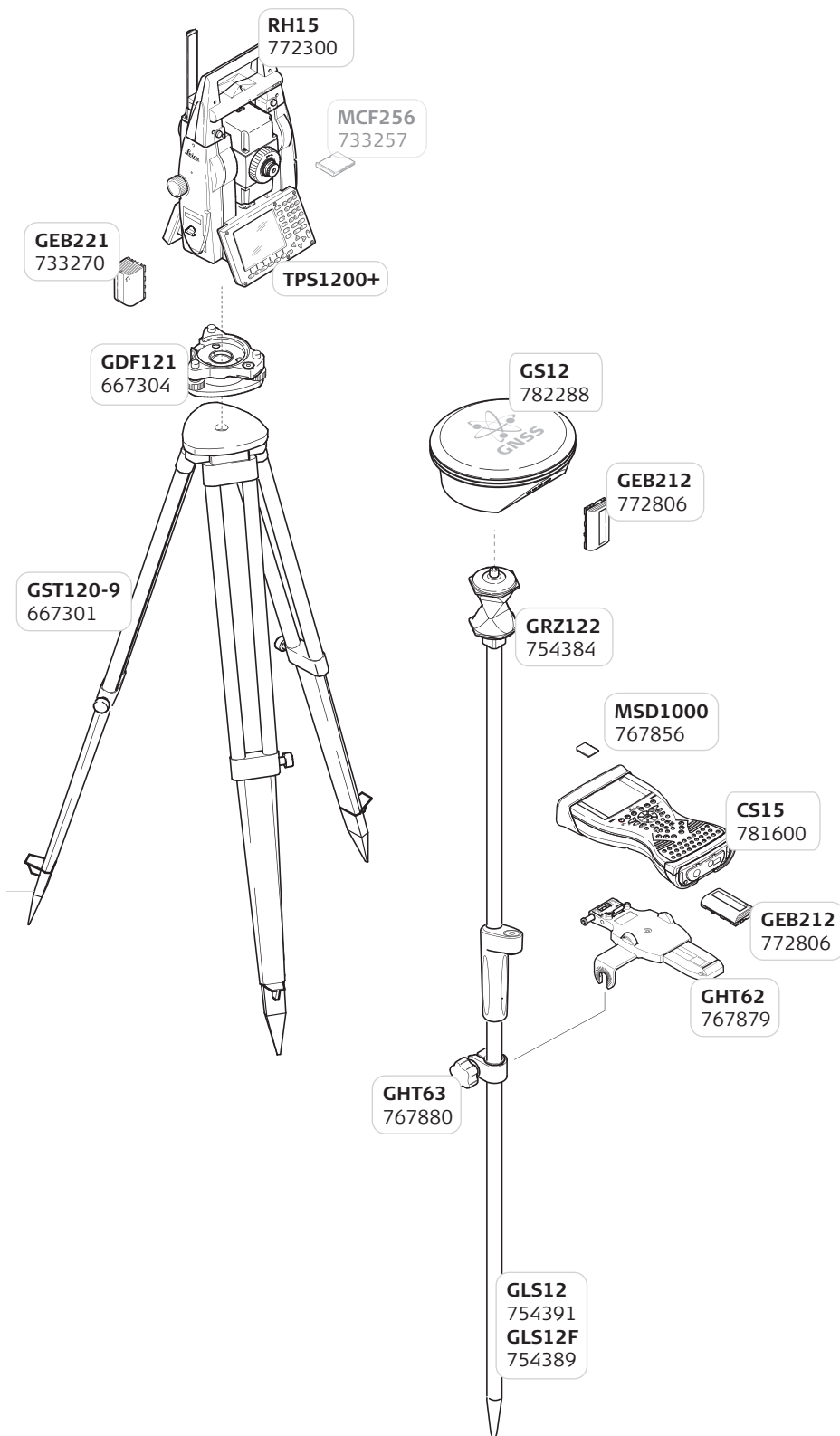


☞ Using SmartWorx Viva functionality on the CS15 radio field controller.

☞ For all PowerSearch instruments the GSD03 Communication side cover is standard and does not need separate ordering.

26 SmartPole Surveying

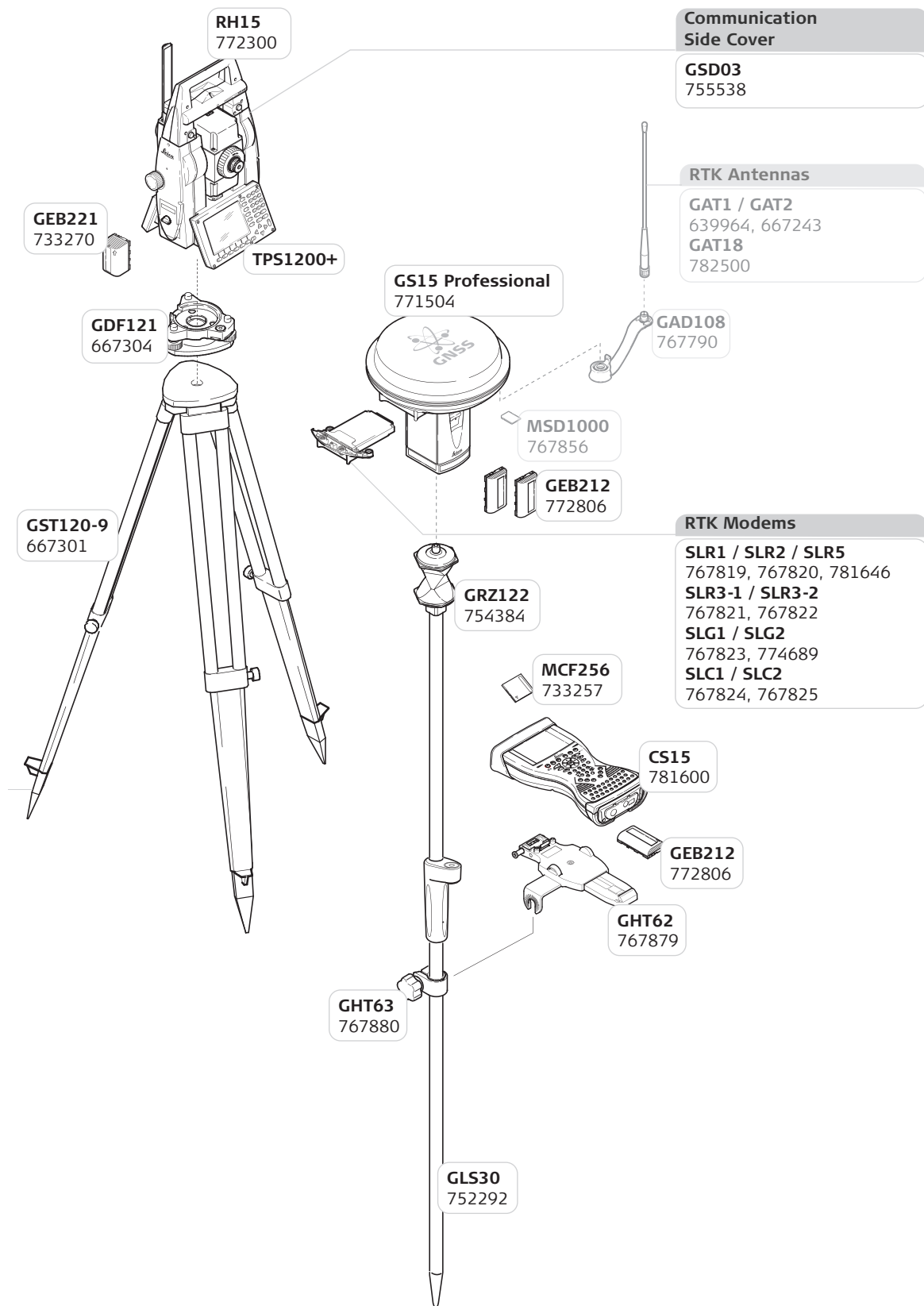
26.1 SmartPole using the GS12 GNSS Receiver



☞ SmartPole setup with GS12 GNSS receiver requires a Bluetooth mobile phone or CS15 UMTS field controller in order to receive RTK correction data.

☞ GFU RTK devices cannot be used for this SmartPole setup.

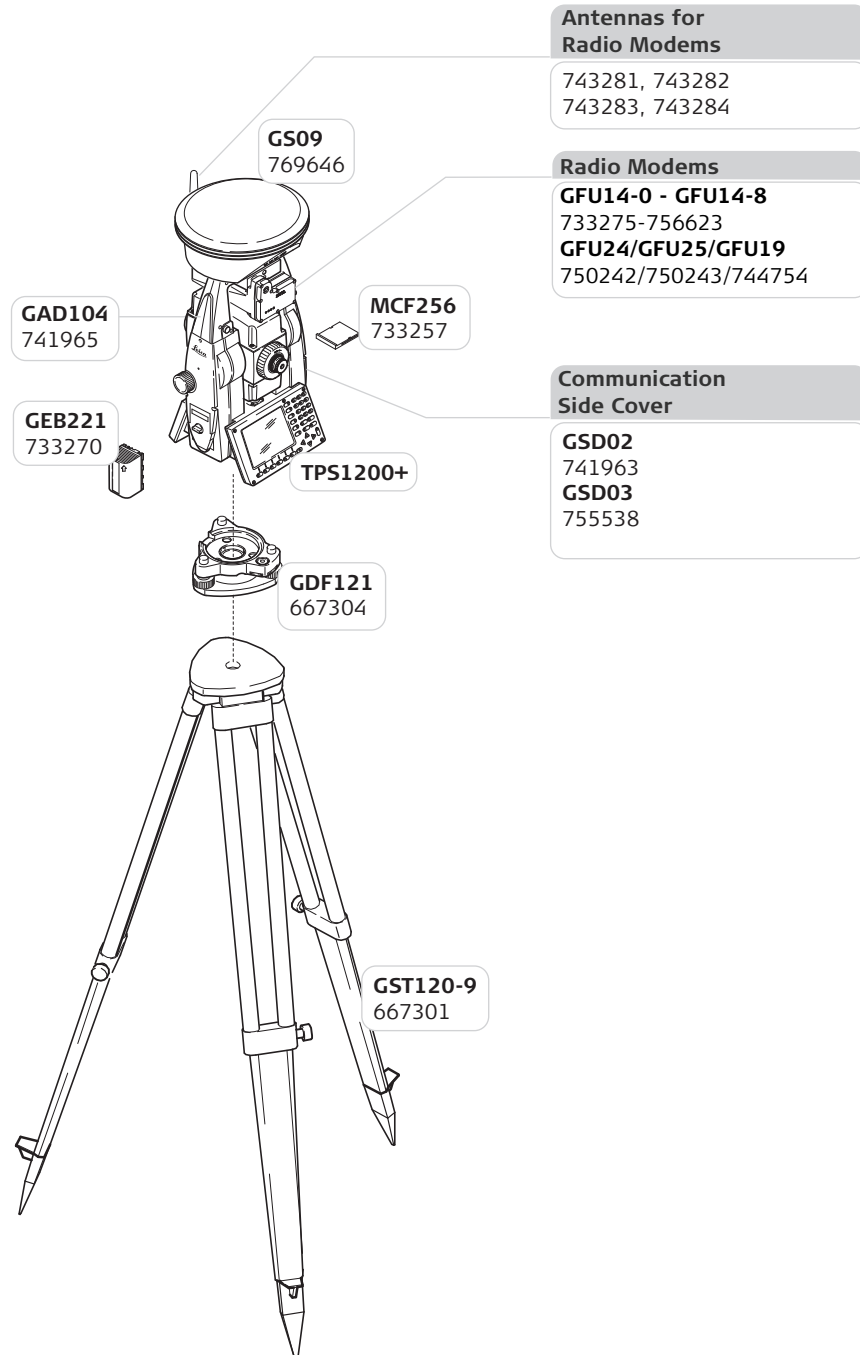
26.2 SmartPole using the GS15 GNSS Receiver






 For all PowerSearch instruments the GSD03 Communication side cover is standard and does not need separate ordering.

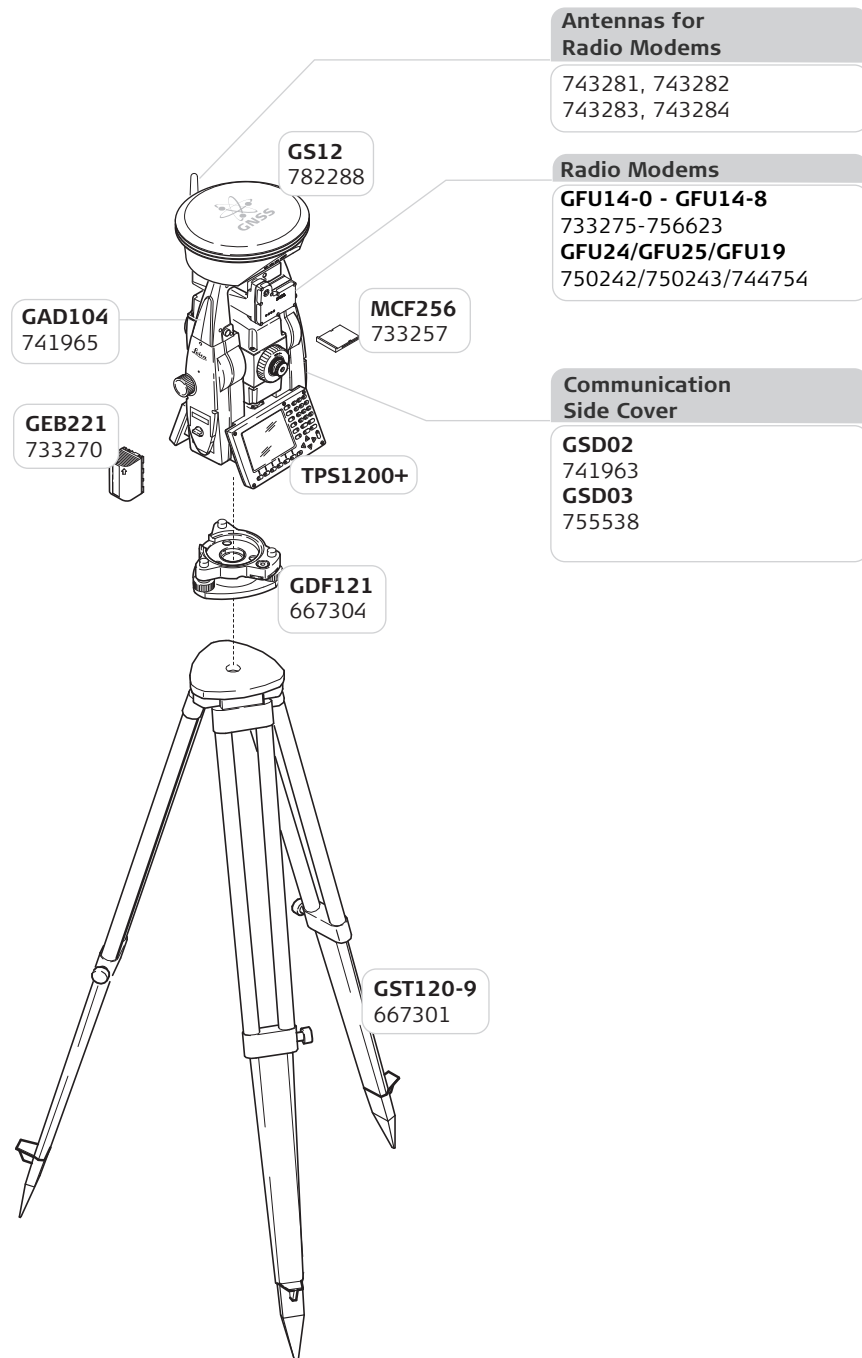
27 SmartStation




27.1 SmartStation using a GS09 Antenna



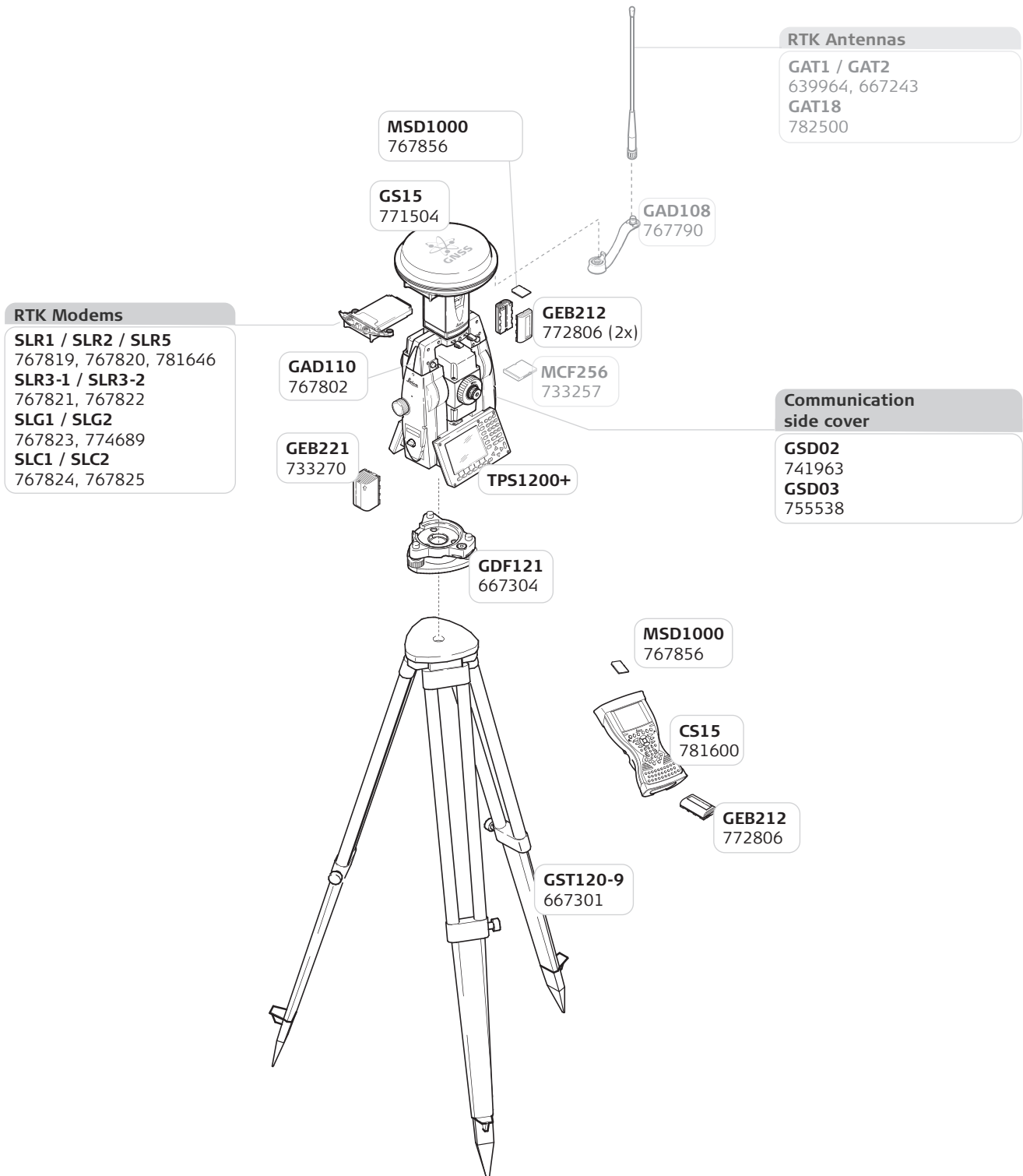
-  For all PowerSearch instruments the GSD03 Communication side cover is standard and does not need separate ordering.
-  GFU RTK device can be used for this SmartStation Setup.
-  Additional TPS licences for GS09 SmartStation setups can be found in the chapter 19.2.

27.2 SmartStation using a GS12 Antenna



-  For all PowerSearch instruments the GSD03 Communication side cover is standard and does not need separate ordering.
-  GFU RTK devices can be used for this SmartStation Setup.
-  Additional TPS licences for GS12 SmartStation setups can be found in the chapter 20.4.

27.3 SmartStation using a GS15 Antenna



 For all PowerSearch instruments the GSD03 Communication side cover is standard and does not need separate ordering.

Whether you want to stake-out an object on a construction site or you need accurate measurements of a tunnel or a bridge; whether you want to determine the area of a parcel of land or need the position of a power pole or to capture objects for as-built maps - you need reliable and precise data.

Leica Viva combines a wide range of innovative products designed to meet the daily challenges for all positioning tasks. The simple yet powerful and versatile Leica Viva hardware and software innovations are redefining state-of-the-art technology to deliver maximum performance and productivity. Leica Viva gives you inspiration to make your ambitious visions come true.

When it has to be right.

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customer satisfaction.**

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**Distance meter (Prism),
ATR and PowerSearch:**

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Laser plummet:

Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1

Distance meter (Non-Prism):

Laser class 3R in accordance with IEC 60825-1 resp. EN 60825-1



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