

Leica Captivate GNSS Equipment List



- when it has to be **right**

Leica
Geosystems

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GS18 GNSS Receiver

1 GS18 I GNSS Receiver



864 379	GS18	Leica GS18 I LTE Basic SmartAntenna *
864 380	GS18	Leica GS18 I LTE Performance SmartAntenna
864 381	GS18	Leica GS18 I LTE Unlimited SmartAntenna
864 382	GS18	Leica GS18 I LTE & UHF Basic SmartAntenna *
864 383	GS18	Leica GS18 I LTE & UHF Performance SmartAntenna
864 384	GS18	Leica GS18 I LTE & UHF Performance SmartAntenna (NAFTA)
879 671	GS18	Leica GS18 I LTE & UHF Performance SmartAntenna (JP)
864 386	GS18	Leica GS18 I LTE & UHF Unlimited SmartAntenna

* Available in selected countries only.

	Leica GS18 I Basic *	Leica GS18 I Performance	Leica GS18 I Unlimited
Supported GNSS Systems			
Multi-frequency (L2, L5, L-band)	○	●	●
GLONASS	○	○	●
Galileo	○	○	●
BeiDou	○	○	●
QZSS	○	○	●
RTK performance			
DGPS	○	●	●
RTK unlimited	○	●	●
Network RTK	○	●	●
SmartLink fill	○	○	●
SmartLink	○	○	○
Position update & data recording			
20 Hz positioning	●	●	●
Raw data logging	●	●	●
RINEX logging	○	○	●
NMEA out	○	○	●
Additional features			
Tilt compensation	●	●	●
Image point measurement	●	●	●
RTK Reference Station functionality	○	●	●

● Standard

○ Optional

2 GS18 T GNSS Receiver



855 299	GS18	Leica GS18 T LTE Basic SmartAntenna *
899 218	GS18	Leica GS18 T LTE Limited SmartAntenna *
855 300	GS18	Leica GS18 T LTE Performance SmartAntenna
855 301	GS18	Leica GS18 T LTE Unlimited SmartAntenna
855 302	GS18	Leica GS18 T LTE & UHF Basic SmartAntenna *
899 220	GS18	Leica GS18 T LTE & UHF Limited SmartAntenna *
855 303	GS18	Leica GS18 T LTE & UHF Performance SmartAntenna
855 304	GS18	Leica GS18 T LTE & UHF Performance SmartAntenna (NAFTA)
865 980	GS18	Leica GS18 T LTE & UHF Performance SmartAntenna (JP)
855 305	GS18	Leica GS18 T LTE & UHF Unlimited SmartAntenna

* Available in selected countries only.

	Leica GS18 T Basic *	Leica GS18 T Limited *	Leica GS18 T Performance	Leica GS18 T Unlimited
Supported GNSS Systems				
Dual-frequency (L2, L-band)	○	●	●	●
Multi-frequency (L2, L5, L-band)	○	○	●	●
GLONASS	○	○	○	●
Galileo	○	○	○	●
BeiDou	○	○	○	●
QZSS	○	○	○	●
RTK performance				
DGPS	○	●	●	●
RTK unlimited	○	●	●	●
Network RTK	○	●	●	●
SmartLink fill	○	○	○	●
SmartLink	○	○	○	○
Position update & data recording				
20 Hz positioning	●	●	●	●
Raw data logging	●	●	●	●
RINEX logging	○	○	○	●
NMEA out	○	○	○	●
Additional features				
Tilt compensation	●	●	●	●
RTK Reference Station functionality	○	●	●	●
No country limitation	●	○	●	●

● Standard
○ Optional

3 Additional GS18 Receiver Options

GNSS software options

856 073	LOP59	Multi-frequency option, enables L2, L5 and L-band tracking on a GS18 receiver.
856 074	LOP60	GLONASS option, enables GLONASS tracking on a GS18 receiver.
856 075	LOP61	Galileo option, enables Galileo tracking on GS18 receiver.
856 076	LOP62	BeiDou option, enables BeiDou tracking on GS18 receiver.
856 077	LOP63	QZSS option, enables QZSS tracking on a GS18 receiver.

Position rate and data recording options

856 080	LOP65	RINEX option, allows logging of RINEX data on GS18 receiver.
856 081	LOP66	NMEA out option, enables NMEA to be streamed from GS18 receivers.

RTK related options

856 082	LOP67	DGPS option for GS18 receivers, enables the receiver to compute a DGPS position.
856 083	LOP68	Unlimited RTK option, enables RTK positions to be computed from a single base station with no limit of distance.
856 084	LOP69	Unlimited RTK and Network RTK, enables RTK position to be computed from a single base station and within a RTK network.
856 085	LOP70	Upgrade option for GS18 receivers from RTK unlimited only to RTK unlimited including RTK Network. (LOP10 to LOP12)
5308082		SmartLink fill option, enables SmartLink fill on GS18 receiver for 1 year.
5308083		SmartLink fill option, enables SmartLink fill on GS18 receiver for 2 years.
5308084		SmartLink option, enables SmartLink (including SmartLink fill) on GS18 receiver for 1 year.
5308085		SmartLink option, enables SmartLink (including SmartLink fill) on GS18 receiver for 2 years.
5308086		SmartLink fill to SmartLink upgrade, upgrades current SmartLink fill activation to SmartLink on GS18.
5308087		SmartLink Trial option, enables SmartLink (including SmartLink fill) on GS18 receiver for 1 month.

Other options

856 086	LOP71	RTK Reference station option, allows a GS18 receiver to transmit RTK data
905 770	LOP68	GS18 Limited upgrade to Performance, removes country/region lock from GS18 Limited and upgrades its capabilities to same options as Performance.

4 RTK Modems

The GS18 LTE models are equipped with an internal modem for RTK Rover and RTK Base usage. The LTE modem requires an external antenna. For UHF RTK Rover or Base usage external radio modems can be connected. The GS18 UHF models are equipped with internal modem and internal UHF radio for RTK Rover and RTK Base usage. The UHF modem requires an external antenna.

4.1 Satellite Radio Modem



Satellite modem

828 005	GFU30	Satellite M3-TR4 403-470 MHz RX/TX radio in GFU housing. Transceiver UHF radio module. User manual and CE Declaration of Conformity included.
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Cables for Satellite modem

733 297	GEV171	1.8m Y-cable to program the Satellite radio modem inside the GFU housing.
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4.2 Satellite High Power Radio



789 636	HPR2	Satellite Easy Pro 35W high power radio, 403-473 MHz RX/TX radio. Includes power cable for connecting to 12V battery and programming cable.
844 965	HPR3	Satellite-4Pro 35W high power radio, 403-473 MHz RX/TX radio. Includes power cable for connecting to 12V battery and programming cable. Available in selected countries only.
799 776	GEV266	Data cable to connect Satel HPR radio to GS14/GS16 GNSS receiver.
806 097	GVP712	Container for Satel HPR High Power Radio.

5 External RTK Antennas

5.1 External RTK Antennas



GS18 RTK antennas

834 668	GAT27	Multiband Antenna for 700-2700 MHz GSM/UMTS/LTE mobile networks and 900 MHz radio.
849 256	GAT28	UHF radio antenna for GS18 SmartAntenna (frequency range 403-473 MHz).

RTK antenna arm

855 149	CA41	Arm to mount external UHF antenna to GS18 SmartAntenna for SmartPole use.
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Gainflex radio antennas

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

5.2 Accessories for Mounting External RTK Antenna on Second Tripod (Base)



RTK antenna cables

772 002	GEV238	1.2m external antenna cable. Connects GS18 to GEV142 extension cable.
667 201	GEV142	1.6m extension antenna cable.

Telescopic rod, antenna arm and base for telescopic rod

667 228	GAD32	Telescopic rod with 5/8" screw. Fits in base 667 236.
667 220	GAD34	Arm 3cm long, screws on telescopic rod. Gainflex antenna fits on arm. Antenna cable connects to arm.
667 236	GHT36	Base with 5/8" screw, for setting up telescopic rod on tripod.

6 Accessories for Using External Radios with GS18 Receiver



Brackets and holders for GFU radios

748 417	GHT58	Bracket to mount a radio built into the Leica GFU radio housing on a tripod.
767 896	GHT64	Holder for GFU radios. Attaches to all GPS poles.

Cables for external radios

733 297	GEV171	1.8m Y-cable to program the Satellite radio modem inside the GFU housing.
796 492	GEV264	1.8m Y-cable for RTK reference setup, connects GS receiver to a GEB371 external battery and a Leica GFU radio.
811 818	GEV274	Y-cable for RTK reference setup, connects GS receiver to a power source (SAE plug) and a Satel HPR radio.

7 Additional Accessories for GS18 Pole Setups - GNSS Rover

7.1 Survey Poles



Poles with 5/8" screw

752 292	GLS30	Telescopic carbon GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.
855 146	CRP15	Quick Snap Connector. Allows fast and easy mounting of the GS SmartAntenna on the pole.

7.2 Holder and Clamp for Poles



767 880	GHT63	Clamp arrangement for attaching the GHT62 or GHT66 to all poles (except mini reflector poles).
807 157	GHT66	Pole holder base plate for CS20 field controller.

7.3 QuickStand



560 138	GST6	Quickstand with 3 telescopic legs, for aluminium poles.
667 319	GSR111	Dual-strut support, for all GLS poles.

8 Additional Accessories using the GS18 Receiver in a SmartPole Setup



Please refer to the Leica Nova TPS Equipment lists for additional accessories using the GS18 receiver in a SmartPole setup.

9 Additional Accessories for GS18 Tripod Setups - GNSS Base

9.1 Tribachs



777 508	GDF321	Tribachs Series 5000, without optical plummet.
777 509	GDF322	Tribachs Series 5000, with optical plummet.
842 062	GDF312	Tribachs Series 3000, with optical plummet.

9.2 Tripods



399 244	GST05	Wooden tripod with polymer coating, with accessories.
563 630	GST05L	Aluminium tripod, telescopic, with accessories.
667 301	GST120-9	Heavy duty tripod, self-closing, with side clamp screws and carrying strap.

9.3 Carriers



Carrier with 5/8" screw		
667 216	GRT146	Carrier with 5/8" screw, GNSS antenna screws on directly.
Carriers with stub		
667 313	GRT144	Carrier with stub.
667 217	GAD31	Screw-to-stub adapter for fitting GPS antenna on carriers with stub and poles with stub.

9.4 Height Hook



667 244	GZS4-1	Height hook with integrated tape measure. Supplied with additional tape graduated in feet and inches.
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10 Containers for GS18 Receiver



833 516	GVP716	Backpack carrying systems for all large TPS and GNSS containers.
833 517	GVP717	Sidebag for large GNSS container (current version).
833 518	GVP718	Basic backstrap for large GNSS container (current version).
833 519	GVP719	Shoulderstrap for large GNSS container (current version).
855 306	GVP734	Hard container for SmartAntenna, CS field controller and accessories for a Rover setup.
855 307	GVP735	Hard container for 2 SmartAntennas, CS field controller and accessories for a Base and Rover setup.

GS16 GNSS Receiver

11 GS16 GNSS Receiver



851 142	GS16	Leica GS16 Basic SmartAntenna *
843 496	GS16	Leica GS16 3.75G Basic SmartAntenna *
899 223	GS16	Leica GS16 3.75G Limited SmartAntenna *
838 033	GS16	Leica GS16 3.75G Performance SmartAntenna
838 037	GS16	Leica GS16 3.75G Unlimited SmartAntenna
843 497	GS16	Leica GS16 3.75G & UHF Basic SmartAntenna *
899 224	GS16	Leica GS16 3.75G & UHF Limited SmartAntenna *
838 034	GS16	Leica GS16 3.75G & UHF Performance SmartAntenna
838 035	GS16	Leica GS16 3.75G & UHF Performance SmartAntenna (NAFTA)
838 036	GS16	Leica GS16 3.75G & UHF Performance SmartAntenna (JP)
869 397	GS16	Leica GS16 3.75G & UHF900 Performance *
838 039	GS16	Leica GS16 3.75G & UHF Unlimited SmartAntenna

* Available in selected countries only.

	Leica GS16 Basic *	Leica GS16 Limited *	Leica GS16 Performance	Leica GS16 Unlimited
Supported GNSS Systems				
Dual-frequency (L2, L-band)	○	●	●	●
Multi-frequency (L2, L5, L-band)	○	○	●	●
GLONASS	○	○	○	●
Galileo	○	○	○	●
BeiDou	○	○	○	●
QZSS	○	○	○	●
RTK performance				
DGPS	○	●	●	●
RTK unlimited	○	●	●	●
Network RTK	○	●	●	●
SmartLink fill	○	○	○	●
SmartLink	○	○	○	○
Position update & data recording				
5 Hz positioning	●	●	●	●
20 Hz positioning	○	○	●	●
Raw data logging	●	●	●	●
RINEX logging	○	○	○	●
NMEA out	○	○	○	●
Additional features				
RTK Reference Station functionality	○	●	●	●
No country limitation	●	○	●	●

● Standard
○ Optional

12 Additional GS16 Receiver Options

GNSS software options		
843 510	LOP53	Multi-frequency option, enables L2, L5 and L-band tracking on a GS10, GS15, GS16 or GS25 receiver.
843 513	LOP54	GLONASS option, enables GLONASS tracking on a GS10, GS15, GS16 or GS25 receiver.
843 514	LOP55	Galileo option, enables Galileo tracking on GS10, GS15, GS16 or GS25 receiver.
843 515	LOP56	BeiDou option, enables BeiDou tracking on GS10, GS15, GS16 or GS25 receiver.
856 090	LOP73	QZSS option, enables QZSS tracking on a GS10, GS15, GS16 or GS25 receiver.
Position rate and data recording options		
767 808	LOP5	20Hz option, enables to compute positions with an update rate up to 20Hz on GS10, GS15, GS16 or GS25 receiver.
767 811	LOP8	RINEX option, allows logging of RINEX data on GS10, GS15, GS16 or GS25 receiver.
767 818	LOP15	NMEA out option, enables NMEA to be streamed from GS10, GS15, GS16 or GS25 receivers.
RTK related options		
771 497	LOP16	DGPS option for GS10, GS15, GS16 or GS25 receivers, enables the receiver to compute a DGPS position.
767 813	LOP10	Unlimited RTK option, enables RTK positions to be computed from a single base station with no limit of distance.
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, GS15, GS16 or GS25 receivers from RTK unlimited only to RTK unlimited including RTK Network. (LOP10 to LOP12)
5307068		SmartLink fill option, enables SmartLink fill on GS10, GS15, GS16 or GS25 receivers for 1 year.
5306241		SmartLink fill option, enables SmartLink fill on GS10, GS15, GS16 or GS25 receivers for 2 years.
5307067		SmartLink option, enables SmartLink (including SmartLink fill) on GS10, GS15, GS16 or GS25 receivers for 1 year.
5307118		SmartLink option, enables SmartLink (including SmartLink fill) on GS10, GS15, GS16 or GS25 receivers for 2 years.
5307410		SmartLink fill to SmartLink upgrade, upgrades current SmartLink fill activation to SmartLink on GS10, GS15, GS16 and GS25.
5307119		SmartLink Trial option, enables SmartLink (including SmartLink fill) on GS10, GS15, GS16 and GS25 receivers for 1 month.
Other options		
767 816	LOP13	RTK Reference station option, allows a GS10, GS15, GS16 or GS25 receiver to transmit RTK data
905 769	LOP67	GS16 Limited upgrade to Performance, removes country/region lock from GS16 Limited and upgrades its capabilities to same options as Performance.
GNSS hardware options *		
851 143	LOP57	3.75G modem upgrade for GS
851 144	LOP58	UHF modem upgrade for GS

* Available in selected countries only for 851 142 GS16 Basic.

13 RTK Modems

The GS16 3.75G models are equipped with an internal modem and integrated antenna for RTK Rover and RTK Base usage. For UHF RTK Rover or Base usage external radio modems can be connected. The GS16 UHF models are equipped with internal modem and internal UHF radio for RTK Rover and RTK Base usage. The UHF modem requires an external RTK antenna.

13.1 Satellite Radio Modem



Satellite modem

828 005	GFU30	Satellite M3-TR4 403-470 MHz RX/TX radio in GFU housing. Transceiver UHF radio module. User manual and CE Declaration of Conformity included.
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Cables for Satellite modem

733 297	GEV171	1.8m Y-cable to program the Satellite radio modem inside the GFU housing.
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13.2 Satellite High Power Radio



789 636	HPR2	Satellite Easy Pro 35W high power radio, 403-473 MHz RX/TX radio. Includes power cable for connecting to 12V battery and programming cable.
844 965	HPR3	Satellite-4Pro 35W high power radio, 403-473 MHz RX/TX radio. Includes power cable for connecting to 12V battery and programming cable. Available in selected countries only.
799 776	GEV266	Data cable to connect Satel HPR radio to GS14/GS16 GNSS receiver.
806 097	GVP712	Container for Satel HPR High Power Radio.

14 External RTK Antennas

14.1 External RTK Antennas



RTK antenna arm

767 790	GAD108	Arm to mount external UHF antenna to GS14/GS16 SmartAntenna.
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Radio antennas

639 964	GAT1	Gainflex radio antenna (frequency range 400-435 MHz).
667 243	GAT2	Gainflex radio antenna (frequency range 435-470 MHz).
782 500	GAT18	Multiband Antenna for 824-2170 MHz GSM/UMTS mobile networks and 900 MHz radio.

14.2 Accessories for Mounting External RTK Antenna on Second Tripod (Base)



Adapter

767 791	GAD109	Transition adapter from external UHF antenna connector of a GS14/GS16 SmartAntenna to standard TNC connector. Allows to connect an external UHF antenna directly or via gainflex cable.
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RTK antenna cables

636 959	GEV120	2.8m antenna cable.
667 201	GEV142	1.6m extension antenna cable.

Telescopic rod, antenna arm and base for telescopic rod

667 228	GAD32	Telescopic rod with 5/8" screw. Fits in base 667 236.
667 220	GAD34	Arm 3cm long, screws on telescopic rod. Gainflex antenna fits on arm. Antenna cable connects to arm.
667 236	GHT36	Base with 5/8" screw, for setting up telescopic rod on tripod.

15 Accessories for Using External Radios with GS16 Receiver



Brackets and holders for GFU radios

748 417	GHT58	Bracket to mount a radio built into the Leica GFU radio housing on a tripod.
767 896	GHT64	Holder for GFU radios. Attaches to all GPS poles.



Cables for external radios

733 297	GEV171	1.8m Y-cable to program the Satelline radio modem inside the GFU housing.
796 492	GEV264	1.8m Y-cable for RTK reference setup, connects GS14/GS16 receiver to a GEB371 external battery and a Leica GFU radio.
811 818	GEV274	Y-cable for RTK reference setup, connects GS receiver to a power source (SAE plug) and a Satel HPR radio.

16 Additional Accessories for GS16 Pole Setups - GNSS Rover


16.1 Survey Poles



Poles with 5/8" screw

768 226	GLS13	Telescopic aluminium GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.
752 292	GLS30	Telescopic carbon GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.

Pole with stub

 Requires GAD31 screw to stub adapter for GS16 receiver to be mounted on these poles.

766 359	GLS31	Telescopic carbon Total Station reflector pole with stub. Snap locks at 2.00m for GNSS antennas.
667 217	GAD31	Screw to stub adapter.

16.2 Holder and Clamp for Poles




767 880	GHT63	Clamp arrangement for attaching the GHT62 or GHT66 to all poles (except mini reflector poles).
807 157	GHT66	Pole holder base plate for CS20 field controller.

16.3 QuickStand




560 138	GST6	Quickstand with 3 telescopic legs, for aluminium poles.
667 319	GSR111	Dual-strut support, for all GLS poles.

17 Additional Accessories using the GS16 Receiver in a SmartPole Setup

 Please refer to the Leica Viva TPS and Leica Nova TPS Equipment lists for additional accessories using the GS16 receiver in a SmartPole setup.

18 Additional Accessories using the GS16 Receiver in a SmartStation Setup

 Please refer to the Leica Viva TPS and Leica Nova TPS Equipment lists for additional accessories using the GS16 receiver in a SmartStation setup.

19 Additional Accessories for GS16 Tripod Setups - GNSS Base

19.1 Tribachs



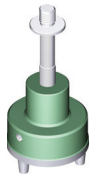
777 508	GDF321	Tribachs Series 5000, without optical plummet.
777 509	GDF322	Tribachs Series 5000, with optical plummet.
842 062	GDF312	Tribachs Series 3000, with optical plummet.

19.2 Tripods



399 244	GST05	Wooden tripod with polymer coating, with accessories.
563 630	GST05L	Aluminium tripod, telescopic, with accessories.
667 301	GST120-9	Heavy duty tripod, self-closing, with side clamp screws and carrying strap.

19.3 Carriers



Carrier with 5/8" screw		
667 216	GRT146	Carrier with 5/8" screw, GNSS antenna screws on directly.
Carriers with stub		
667 313	GRT144	Carrier with stub.
667 217	GAD31	Screw-to-stub adapter for fitting GPS antenna on carriers with stub and poles with stub.

19.4 Height Hook



667 244	GZS4-1	Height hook with integrated tape measure. Supplied with additional tape graduated in feet and inches.
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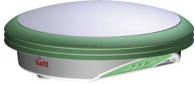
20 Containers for GS16 Receiver



833 516	GVP716	Backpack carrying systems for all large TPS and GNSS containers.
833 517	GVP717	Sidebag for large GNSS container (current version).
833 518	GVP718	Basic backstrap for large GNSS container (current version).
833 519	GVP719	Shoulderstrap for large GNSS container (current version).
855 306	GVP734	Hard container for SmartAntenna, CS field controller and accessories for a Rover setup.
855 307	GVP735	Hard container for 2 SmartAntennas, CS field controller and accessories for a Base and Rover setup.
817 055	GVP722	Hard container for SmartAntenna, CS field controller and accessories for a SmartPole and SmartStation setup.

GS07 GNSS Receiver

21 GS07 GNSS Receiver



869 374	GS07	GS07 SmartAntenna. Geodetic 320 channels GNSS receiver, includes GPS, QZSS, dual-frequency, Network RTK, raw and RINEX data logging and 5 Hz positions. Easily upgradeable to Glonass, Galileo and BeiDou.
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22 Additional GS07 Receiver Software Options

GNSS Software options (to be loaded on GS07)

869 410	LOP74	GS07 Glonass option.
869 412	LOP75	GS07 Galileo option.
869 413	LOP76	GS07 BeiDou option.
872 463	LOP78	GS07 Multi-frequency option.

23 Additional Accessories for GS07 Pole Setups - GNSS Rover


23.1 Survey Poles



Poles with 5/8" screw

768 226	GLS13	Telescopic aluminium GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.
752 292	GLS30	Telescopic carbon GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.

Pole with stub

 Requires GAD31 screw to stub adapter for GS07 receiver to be mounted on these poles.

766 359	GLS31	Telescopic carbon Total Station reflector pole with stub. Snap locks at 2.00m for GNSS antennas.
667 217	GAD31	Screw to stub adapter.

23.2 Holder and Clamp for Poles



767 880	GHT63	Clamp arrangement for attaching the GHT62 or GHT66 to all poles (except mini reflector poles).
807 157	GHT66	Pole holder base plate for CS20 field controller.

23.3 QuickStand



560 138	GST6	Quickstand with 3 telescopic legs, for aluminium poles.
667 319	GSR111	Dual-strut support, for all GLS poles.

24 Containers for GS07 Receiver



833 516	GVP716	Backpack carrying systems for all large TPS and GNSS containers.
833 517	GVP717	Sidebag for large GNSS container (current version).
833 518	GVP718	Basic backstrap for large GNSS container (current version).
833 519	GVP719	Shoulderstrap for large GNSS container (current version).
855 306	GVP734	Hard container for SmartAntenna, CS field controller and accessories for a Rover setup.
855 307	GVP735	Hard container for 2 SmartAntennas, CS field controller and accessories for a Base and Rover setup.
817 055	GVP722	Hard container for SmartAntenna, CS field controller and accessories for a SmartPole and SmartStation setup.

GS25 GNSS Receiver

25 GS25 GNSS Receiver



843 494	GS25	Leica GS25 Basic receiver *
843 495	GS25	Leica GS25 Performance receiver
838 043	GS25	Leica GS25 Unlimited receiver

* Available in selected countries only.

	Leica GS25 Basic *	Leica GS25 Performance	Leica GS25 Unlimited
Supported GNSS Systems			
Multi-frequency (L2, L5, L-band)	○	●	●
GLONASS	○	○	●
Galileo	○	○	●
BeiDou	○	○	●
QZSS	○	○	●
RTK performance			
DGPS	○	●	●
RTK unlimited	○	●	●
Network RTK	○	●	●
SmartLink fill	○	○	●
SmartLink	○	○	○
Position update & data recording			
5 Hz positioning	●	●	●
20 Hz positioning	○	●	●
Raw data logging	●	●	●
RINEX logging	○	○	●
NMEA out	○	○	●
Additional features			
RTK Reference Station functionality	○	●	●
Event & PPS Output ports	●	●	●

● Standard

○ Optional

GS10 GNSS Receiver

26 GS10 GNSS Receiver



838 029	GS10	Leica GS10 Basic receiver *
838 030	GS10	Leica GS10 Performance receiver
838 032	GS10	Leica GS10 Unlimited receiver

* Available in selected countries only.

	Leica GS10 Basic *	Leica GS10 Performance	Leica GS10 Unlimited
Supported GNSS Systems			
Multi-frequency (L2, L5, L-band)	○	●	●
GLONASS	○	○	●
Galileo	○	○	●
BeiDou	○	○	●
QZSS	○	○	●
RTK performance			
DGPS	○	●	●
RTK unlimited	○	●	●
Network RTK	○	●	●
SmartLink fill	○	○	●
SmartLink	○	○	○
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

27 Additional GS10/GS25 Receiver Options

GNSS software options		
843 510	LOP53	Multi-frequency option, enables L2, L5 and L-band tracking on a GS10, GS15, GS16 or GS25 receiver.
843 513	LOP54	GLONASS option, enables GLONASS tracking on a GS10, GS15, GS16 or GS25 receiver.
843 514	LOP55	Galileo option, enables Galileo tracking on GS10, GS15, GS16 or GS25 receiver.
843 515	LOP56	BeiDou option, enables BeiDou tracking on GS10, GS15, GS16 or GS25 receiver.
856 090	LOP73	QZSS option, enables QZSS tracking on a GS10, GS15, GS16 or GS25 receiver.
Position rate and data recording options		
767 808	LOP5	20Hz option, enables to compute positions with an update rate up to 20Hz on GS10, GS15, GS16 or GS25 receiver.
767 809	LOP6	Upgrade option from 5Hz to 20Hz. (LOP4 to LOP5)
767 811	LOP8	RINEX option, allows logging of RINEX data on GS10, GS15, GS16 or GS25 receiver.
767 818	LOP15	NMEA out option, enables NMEA to be streamed from GS10, GS15, GS16 or GS25 receivers.

RTK related options		
771 497	LOP16	DGPS option for GS10, GS15, GS16 or GS25 receivers, enables the receiver to compute a DGPS position.
767 813	LOP10	Unlimited RTK option, enables RTK positions to be computed from a single base station with no limit of distance.
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, GS15, GS16 or GS25 receivers from RTK unlimited only to RTK unlimited including RTK Network. (LOP10 to LOP12)
5307068		SmartLink fill option, enables SmartLink fill on GS10, GS15, GS16 or GS25 receivers for 1 year.
5306241		SmartLink fill option, enables SmartLink fill on GS10, GS15, GS16 or GS25 receivers for 2 years.
5307067		SmartLink option, enables SmartLink (including SmartLink fill) on GS10, GS15, GS16 or GS25 receivers for 1 year.
5307118		SmartLink option, enables SmartLink (including SmartLink fill) on GS10, GS15, GS16 or GS25 receivers for 2 years.
5307410		SmartLink fill to SmartLink upgrade, upgrades current SmartLink fill activation to SmartLink on GS10, GS15, GS16 and GS25.
5307119		SmartLink Trial option, enables SmartLink (including SmartLink fill) on GS10, GS15, GS16 and GS25 receivers for 1 month.
Other options		
767 816	LOP13	RTK Reference station option, allows a GS10, GS15 or GS25 receiver to transmit RTK data.

28 GNSS Antennas



Select the antenna for GS10/GS25 receiver.

Choke ring antennas are only required for special applications such as when using a GS10/GS25 receiver as a permanent reference station receiver.

28.1 GNSS Single and Triple Frequency Antennas



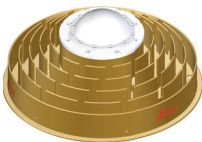
770 708	AS05	GPS/GLONASS single frequency antenna.
770 701	AS10	GPS/GLONASS/Galileo/BeiDou triple frequency antenna, includes L-Band signals.

28.2 Field Base GNSS Antennas



773 758	AR10	GPS/GLONASS/Galileo/BeiDou triple frequency reference station antenna, includes L-Band signals. With integrated radome.
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28.3 Choke Ring Antennas



794 207	AR20	GNSS choke ring antenna for GPS/GLONASS/Galileo/BeiDou/QZSS receivers. Includes Galileo E6 and L-Band signals. Planar structure element.
794 208	GVP705	Weather protection radome for AR20 antenna.
765 733	AR25	GNSS choke ring antenna for GPS/GLONASS/Galileo/BeiDou receivers. Includes Galileo E6 and L-Band signals. Dorne-Margolin antenna element.
765 734	GVP653	Weather protection radome for AR25 antenna.

29 GNSS Antenna Cables for GS10/GS25 Receiver

29.1 GNSS Antenna Cables for GS10/GS25 using as Rover



667 200	GEV141	1.2m antenna cable.
667 201	GEV142	1.6m extension for antenna cable.
724 969	GEV194	1.8m antenna cable.

29.2 GNSS Antenna Cables for GS10/GS25 Base Setup



Short cables		
667 200	GEV141	1.2m antenna cable.
724 969	GEV194	1.8m antenna cable.

Medium cables		
636 959	GEV120	2.8m antenna cable.
632 372	GEV119	10m antenna cable.

Extra long cables		
632 390	GEV108	30m antenna cable.
664 813	GEV134	50m antenna cable.

29.3 PPS/Event Cables for GS25



667 744	GEV150	PPS output cable for GS25 (port PPS) with BNC connector.
403 448	GEV42	Event input cable for GS25 (port E1) with BNC connector.
789 061	GEV262	Event input cable for GS25 (port E2) with BNC connector.

30 RTK Modems

30.1 Satellite Radio Modems for GS10 Receiver



Satellite modems		
828 005	GFU30	Satellite M3-TR4 403-470 MHz RX/TX radio in GFU housing. Transceiver UHF radio module. User manual and CE Declaration of Conformity included.

Cables for Satellite modems		
733 297	GEV171	1.8m Y-cable to program the Satellite radio modem inside the GFU27 housing.
639 968	GEV125	Cable for Satellite radios without GFU housing to be connected to GS10/GS15.

30.2 Satellite Radio Modems for GS25 Receiver



Satellite modems		
828 007	SLR6-1	Satellite M3-TR4 403-470 MHz RX/TX radio for GS25. Transceiver UHF radio module. User manual and CE Declaration of Conformity included.

Cables for Satellite modems		
639 968	GEV125	Cable for Satellite radios without GFU housing to be connected to GS10/GS15/GS25.

30.3 Satellite High Power Radios



789 636	HPR2	Satellite Easy Pro 35W high power radio, 403-473 MHz RX/TX radio. Includes power cable for connecting to 12V battery and programming cable.
844 965	HPR3	Satellite-4Pro 35W high power radio, 403-473 MHz RX/TX radio. Includes power cable for connecting to 12V battery and programming cable. Available in selected countries only.
817 713	GEV275	Data cable to connect Satel HPR radio to GS GNSS receiver.
806 097	GVP712	Container for Satel HPR High Power Radio.

30.4 Mobile Phones for GS10



767 861	GFU29	GFU29, 5 band UMTS module for global use in GFU housing. Compatible with GSM, GPRS, EDGE, HSDPA networks.
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30.5 Mobile Phones for GS25



776 236	SLG1-2	SLG1-2, 5-Band (850/900/1800/1900/2100 MHz) Telit 3G GSM/GPRS/UMTS module. Provides full flexibility due to 5-band technology, supports all GSM, GPRS, EDGE and UMTS network providers.
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31 RTK Antennas

31.1 External RTK Antennas



Gainflex radio antennas

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

Antennas for mobile phones

782 500	GAT18	Multiband GSM/UMTS Antenna for 850/1900 MHz, for 900/1800 MHz and for 2100 MHz mobile networks
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31.2 Accessories for Mounting RTK Antenna on the AS05/AS10 Antenna



Antenna cables

667 200	GEV141	1.2m antenna cable.
667 201	GEV142	1.6m extension for antenna cable.
724 969	GEV194	1.8m antenna cable.
636 959	GEV120	2.8m antenna cable.

RTK antenna arm

667 219	GAD33	15cm, attaches to GNSS antenna. Gainflex antenna fits on arm. Antenna cable connects to arm.
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31.3 Accessories for Mounting RTK Antenna on Second Tripod (Base)



RTK antenna cables

636 959	GEV120	2.8m antenna cable.
667 201	GEV142	1.6m extension for antenna cable.

Telescopic rod, antenna arm and base for telescopic rod

667 228	GAD32	Telescopic rod with 5/8" screw. Fits in base 667 236.
667 220	GAD34	Arm 3cm long, screws on telescopic rod. Gainflex antenna fits on arm. Antenna cable connects to arm.
667 236	GHT36	Base with 5/8" screw, for setting up telescopic rod on tripod.

32 Additional Accessories for GS10/GS25 Pole Setups - GNSS Rover


32.1 Survey Poles



Poles with 5/8" screw

768 226	GLS13	Telescopic aluminium GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.
752 292	GLS30	Telescopic carbon GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble.

Poles with stub

 Requires GAD31 screw to stub adapter for AS10 antenna to be mounted on these poles.

754 391	GLS12	Telescopic aluminium Total Station reflector pole with stub. Snap locks at 2.00m for GNSS antennas.
766 359	GLS31	Telescopic carbon Total Station reflector pole with stub. Snap locks at 2.00m for GNSS antennas.
667 217	GAD31	Screw to stub adapter.

32.2 Minipack Setup



Backpack

770 707	GVP647	Minipack, holds GS10 GNSS Receiver.
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Holders

767 880	GHT63	Clamp arrangement for attaching the GHT62 or GHT66 to all poles (except mini reflector poles).
807 157	GHT66	Pole holder base plate for CS20 field controller.


Antenna cables

667 200	GEV141	1.2m antenna cable.
667 201	GEV142	1.6m extension antenna cable.
636 959	GEV120	2.8m antenna cable.

Telescopic rod and RTK antenna arm

667 228	GAD32	Telescopic rod with 5/8" screw. Fits in Minipack 667 137. Fits in base 667 236.
667 220	GAD34	Arm 3cm long, screws on telescopic rod. Gainflex antenna fits on arm. Antenna cable connects to arm.
734 388	GAD46	Double arm adapter, screws on telescopic rod. Allows to connect up to 2 mobile phone/radio antennas and up to 2 antenna cables on arm.

32.3 All on the Pole Setup

 Only possible when using GLS12/GLS13 poles.

Holders

733 265	GHT40	Holder for all variants of GS10 for balanced all-on-the-pole setup.
767 879	GHT62	Pole holder base plate for CS15 field controller.
767 880	GHT63	Clamp arrangement for attaching the GHT62 or GHT66 to all poles (except mini reflector poles).
807 157	GHT66	Pole holder base plate for CS20 field controller.

Antenna cable for GNSS antenna and RTK antenna

724 969	GEV194	1.8m antenna cable.
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RTK antenna arm

667 219	GAD33	15cm, attaches to GNSS antenna. Gainflex antenna fits on arm. Antenna cable connects to arm.
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32.4 QuickStand



560 138	GST6	Quickstand with 3 telescopic legs, for aluminium poles.
667 319	GSR111	Dual-strut support, for all GLS poles.

33 Additional Accessories for GS10/GS25 Tripod Setups - GNSS Base

33.1 Tribrachs



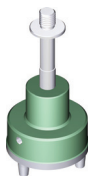
777 508	GDF321	Tribrachs Series 5000, without optical plummet.
777 509	GDF322	Tribrachs Series 5000, with optical plummet.
842 062	GDF312	Tribrachs Series 3000, with optical plummet.

33.2 Tripods



667 301	GST120-9	Heavy duty tripod, self-closing, with side clamp screws and carrying strap.
399 244	GST05	Wooden tripod with polymer coating, with accessories.
563 630	GST05L	Aluminium tripod, telescopic, with accessories.

33.3 Carriers



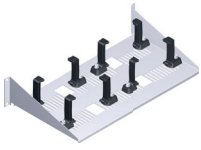
Carrier with 5/8" screw		
667 216	GRT146	Carrier with 5/8" screw, GNSS antenna screws on directly.
Carriers with stub		
667 313	GRT144	Carrier with stub.
667 217	GAD31	Screw-to-stub adapter for fitting GPS antenna on carriers with stub and poles with stub.

33.4 Height Hook




667 244	GZS4-1	Height hook with integrated tape measure. Supplied with additional tape graduated in feet and inches.
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34 Mounting Kits for GS25




Mounting kits for GS25 receiver

774 439	GEV249	Rack mount shelf for GS25 receiver. For fitting the receiver to standard IT rack (requires 2 U in the rack).  Requires GEV250 Wall mount kit (774 440) to mount the receiver on the shelf.
774 440	GEV250	Wall Mount Kit for GS25 receiver. For attaching the receiver to a wall bench, table or cabinet.

35 Container for GS10/GS25 Receiver



 All GS10/GS25 need to be ordered with at least one container.

833 516	GVP716	Backpack carrying systems for all large TPS and GNSS containers.
833 517	GVP717	Sidebag for large GNSS container (current version).
833 518	GVP718	Basic backstrap for large GNSS container (current version).
833 519	GVP719	Shoulderstrap for large GNSS container (current version).
817 056	GVP723	Hard container for GNSS Receiver, CS field controller and accessories for a Base setup.

Additional Accessories for GS Receivers

36 Power Supply

36.1 Internal Batteries for GS14, GS15, GS16 and GS07 Receiver



772 806	GEB212	Lithium-Ion battery, 7.4V/2.6Ah, rechargeable. To be used with GS14, GS15, GS16 or GS07 receiver.
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36.2 Internal Batteries for GS18 Receiver



799 190	GEB331	Lithium-Ion battery, 11.1V/2.8Ah, rechargeable. To be used with GS18 receiver.
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36.3 Internal Batteries for GS10 Receiver



733 270	GEB221	Lithium-Ion battery, 7.4V/4.4Ah, rechargeable. To be used with GS10 receiver.
793 973	GEB222	Lithium-Ion battery, 7.4V/6Ah, rechargeable. To be used with GS10 receiver.

36.4 Internal Batteries for GS25 Receiver



793 975	GEB242	Lithium-Ion battery, 14.8V/5.8Ah, rechargeable, for GS25 receiver.
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36.5 External Power Supply



External battery		
818 916	GEB371	External universal battery, Li-Ion, 13 V, 250 Wh, rechargeable.
Power cables		
758 469	GEV219	Power cable, 1.8m, connects GS receiver to external GEB371 battery.
439 038	GEV71	4m car battery cable, connects all battery cables to 12V car battery.
Power cables for GS10/GS25		
560 130	GEV97	Power cable, 1.8m, connects GS10/GS25 receiver to external GEB371 battery.
733 298	GEV172	Power cable, 2.8m, connects GS10/GS25 receiver to 2 external GEB371 batteries.
Power supply unit		
807 696	GEV270	Power supply unit for TPS/GPS/DNA, for indoor use only. Input 90-264 VAC to output 13.2VDC 40W, with Lemo connection for power cables.

36.6 Battery Chargers



799 185	GKL311	Single-bay Charger Professional 3000. Charger for one Li-Ion battery (GEB211, GEB212, GEB221, GEB222, GEB241, GEB242 and GEB331), including AC/DC adaptor and cigarette lighter cable.
799 187	GKL341	Multi-bay Charger Professional 5000. Charges up to 4 batteries (GEB211, GEB212, GEB221, GEB222, GEB241, GEB242 and GEB331), including power cable.
734 389	GDC221	Car adapter for the GKL341 charger. Allows the use of the GKL341 with a cigarette lighter; 12V/24V DC/DC converter. Can also be used to power CS15 field controller directly from a cigarette lighter.
774 437	GEV242	Charger for GEB371 external battery.

37 Data Storage and Data Transfer

37.1 Memory Devices for GS10, GS18 and GS25 Receiver



767 856	MSD1000	SD memory card 1 GB for GS10/GS18/GS25 receiver and CS field controller, industrial grade.
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37.2 Memory Devices for GS16 Receiver



795 993	MMSD01	microSD card 1 GB for GS16 receiver, includes SD card adapter.
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37.3 Card Reader



767 895	MCR7	Card reader for SD/CF cards.
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37.4 Data Transfer Cables



Serial cables

733 280	GEV160	Serial data transfer cable, 2.8m, connects GS10/GS25 receiver (port 2) to PC. (Lemo to 9pin RS232)
733 282	GEV162	Serial data transfer cable, 2.8m, connects GS receiver (port 1) or CS field controller to PC. (Lemo to 9pin RS232)
806 094	GEV268	Serial data transfer cable, converter cable USB to serial (Lemo to USB connector), 2.0m, connects GS10/GS25 receiver (port 2) to PC. PC driver included on CD.
806 095	GEV269	Serial data transfer cable, converter cable USB to serial (Lemo to USB connector), 2.0m, connects GS receiver (port 1) or CS field controller to PC. PC driver included on CD.



USB cable

767 899	GEV234	USB cable, 1.65m, connects GS receiver or CS field controller to USB port of a PC. (Lemo to USB)
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38 Cables to connect GS10/GS16/GS18/GS25 to CS Field Controller



In cases where high data speed communication is required between GS and CS field controller, cables should be used instead of a Bluetooth connection.



USB cables

767 899	GEV234	USB cable, 1.65m, connects GS receiver or CS field controller to USB port of a PC. (Lemo to USB)
772 807	GEV237	USB cable, 1.65m, connects GS receiver to CS field controller. (Lemo to Lemo)

39 Radio Accessories

806 098	GST74	Antenna mast including tripod, extendable up to 5m.
806 096	GVP711	Soft bag for car battery, including 2 cables with SAE adapter.
806 101	GAD117	Adapter antenna to mast, required for GAT23/GAT24 UHF antenna, includes 5m antenna cable with TNC connector.
806 099	GAT23	UHF radio antenna (frequency range 430-450 Mhz, 5.5dBi gain).
806 100	GAT24	UHF radio antenna (frequency range 450-470 Mhz, 5.5dBi gain).
811 818	GEV274	Y-cable for RTK reference setup, connects GS receiver to a power source (SAE plug) and a Satel HPR radio.
817 713	GEV275	Data cable to connect Satel HPR radio to GS GNSS receiver.
806 097	GVP712	Container for Satel HPR High Power Radio.

Field Controller

40 CS20 Field Controller

40.1 CS20 Field Controller



876 476	CS20	CS20 Basic Field Controller Ruggedized field controller with 5" WVGA touch display, 4GB eMMC Flash Memory, 2GB SDRAM, SD card slot, 5MP camera and LED flash. Includes internal Bluetooth/WLAN module, QWERTY keypad, stylus.
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876 477	CS20 LTE	CS20 LTE Field Controller Ruggedized field controller with 5" WVGA touch display, 4GB eMMC Flash Memory, 2GB SDRAM, SD card slot, 5MP camera and LED flash. Includes internal Bluetooth/WLAN module, 4G GSM/UMTS/LTE module, internal TS communication module, QWERTY keypad, stylus.
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876 479	CS20 LTE (US/CA)	CS20 LTE Field Controller (US, CA) Ruggedized field controller with 5" WVGA touch display, 4GB eMMC Flash Memory, 2GB SDRAM, SD card slot, 5MP camera and LED flash. Includes internal Bluetooth/WLAN module, 4G GSM/UMTS/LTE module, internal TS communication module, QWERTY keypad, stylus.
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876 478	CS20 LTE Disto	CS20 LTE Disto Field Controller Ruggedized field controller with 5" WVGA touch display, 4GB eMMC Flash Memory, 2GB SDRAM, SD card slot, 5MP camera and LED flash. Includes internal Bluetooth/WLAN module, 4G GSM/UMTS/LTE module, internal TS communication module, integrated Disto-Lasermeter QWERTY keypad, stylus.
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876 480	CS20 LTE Disto (US/CA)	CS20 LTE Disto Field Controller (US, CA) Ruggedized field controller with 5" WVGA touch display, 4GB eMMC Flash Memory, 2GB SDRAM, SD card slot, 5MP camera and LED flash. Includes internal Bluetooth/WLAN module, 4G GSM/UMTS/LTE module, internal TS communication module, integrated Disto-Lasermeter QWERTY keypad, stylus.
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40.2 CGR UHF RTK Expansion Pack

798 497	CGR4	UHF RTK radio expansion pack for receiving GNSS RTK corrections, 403-470 MHz. GAT26 RTK radio antenna not included.
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817 014	GAT26	UHF radio antenna for CGR4 radio, 400-470MHz.
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40.3 CTR20 TS Communication Expansion Pack



6010023	CTR20 expansion pack set	TS communication expansion pack set including CTR20 module and GAT25 radio antenna.
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Not available in EU countries due to EN 300 328 V.1.8.1.

Recommended only for robotic applications systematically exceeding ranges beyond 400 m.

41 Leica Captivate Software and Apps - CS20 Field Controller

41.1 Leica Captivate Software for CS20 Field Controller

827 698	Leica Captivate - Measure and Stake for CS20.
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41.2 Apps included in Leica Captivate for CS20 Field Controller


The following apps are included in Leica Captivate for CS20 (827 698).

Measure includes:

- Measure
- Code points
- Automatically measure points
- Remote Heights
- Target Offset calculations

<p>Setup includes:</p> <ul style="list-style-type: none"> • Get station coordinates from GNSS, 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 • Orientate to object
<p>Stake points includes:</p> <ul style="list-style-type: none"> • Navigate to point using various methods: from and behind instrument, point, base line, arrow, North • Quality control - checking of coordinate differences before storing • Automatically select next closest point • Graphical selection of point from map • Edit heights and offset heights of points • Acoustic beep getting faster when getting closer to point
<p>COGO includes:</p> <ul style="list-style-type: none"> • Inverse • Traverse • Intersections • Angle calculations • Line & arc calculations • Bearing & distance calculations • Shift, Rotate, Scale (manual & matching points) • Triangle calculations
<p>Determine coordinate system:</p> <ul style="list-style-type: none"> • 1 step, 2 step, 3D Transformation • All common projections
<p>Alignment Editor:</p> <ul style="list-style-type: none"> • Horizontal alignments • Vertical alignments • Cross sections • Chainage equations
<p>Control data: Create points and lines</p>
<p>Data import: ASCII, XML, DXF, DTM, alignments</p>
<p>Data export: ASCII, Custom, DXF, XML, Style Sheets, FBK, RW5, RAW and local formats</p>
<p>3rd party total station control:</p> <ul style="list-style-type: none"> • Topcon total station control • Nikon total station control • SOKKIA total station control

41.3 Optional Apps for Leica Captivate for CS20 Field Controller

 The following apps require a valid license key.

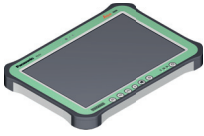
827 701	Area Division
827 702	Stake DTM
827 699	Measure and Stake to Line
827 700	Measure to Plane / Grid
827 704	Check and Stake Road
827 705	Check and Stake Tunnel
827 706	Check and Stake Rail
827 711	Sets of Angles
827 703	Volume Calculation
827 708	Hidden Point
827 709	Traverse
827 712	QuickVolume
839 679	Inspect Surfaces
836 670	Tunnel Profile Generator
855 971	RINEX Export

41.4 Optional Licences for Leica Captivate for CS20 Field Controller


827 714	Active Assist
827 715	Leica Exchange

42 CS35 Tablet

42.1 CS35 Tablet



875 363	CS35-1	CS35-1 10" Tablet, EU, RU Ruggedized Win10 64-bit Tablet Computer including: 10" touch-widescreen, 256 GB SSD hard drive, 8 GB SDRAM, WLAN 802.11 b/g/n/a/ac, 4G Integrated Mobile Broadband module, Bluetooth v4.1, Stylus, 1x Battery (4.2Ah), AC/DC adaptor and 8MP camera with flash.
875 364	CS35-2	CS35-2 10" Tablet, US, CA Ruggedized Win10 64-bit Tablet Computer including: 10" touch-widescreen, 256 GB SSD hard drive, 8 GB SDRAM, WLAN 802.11 b/g/n/a/ac, 4G Integrated Mobile Broadband module, Bluetooth v4.1, Stylus, 1x Battery (4.2Ah), AC/DC adaptor and 8MP camera with flash.

 All CS35 Tablets are delivered with stylus, tether, one GEB235 Lithium-Ion battery (10.8 V/4.1 Ah, rechargeable) and country specific AC/DC adaptor.

42.2 CTR35 Long-range Bluetooth Device

844 474	CTR35	Long-range Bluetooth device for CS35.
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 Recommended only for robotic applications requiring extended range.

43 Leica Captivate Software and Apps - CS35 Tablet

43.1 Leica Captivate Software for CS35 Tablet

827 719	Leica Captivate - Measure and Stake for CS35.
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43.2 Apps included in Leica Captivate for CS35 Tablet

 The following apps are included in Leica Captivate for CS35 (827 719).

Measure includes:

- Measure
 - Code points
 - Automatically measure points
 - Remote Heights
 - Target Offset calculations
-

Setup includes:

- Get station coordinates from GNSS, 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
 - Orientate to object
-

Stake points includes:


- Navigate to point using various methods: from and behind instrument, point, base line, arrow, North
 - Quality control - checking of coordinate differences before storing
 - Automatically select next closest point
 - Graphical selection of point from map
 - Edit heights and offset heights of points
 - Acoustic beep getting faster when getting closer to point
-

COGO includes:

- Inverse
 - Traverse
 - Intersections
 - Angle calculations
 - Line & arc calculations
 - Bearing & distance calculations
 - Shift, Rotate, Scale (manual & matching points)
 - Triangle calculations
-

<p>Determine coordinate system:</p> <ul style="list-style-type: none"> • 1 step, 2 step, 3D Transformation • All common projections
<p>Alignment Editor:</p> <ul style="list-style-type: none"> • Horizontal alignments • Vertical alignments • Cross sections • Chainage equations
<p>Control data: Create points and lines</p>
<p>Data import: ASCII, XML, DXF, DTM, alignments</p>
<p>Data export: ASCII, Custom, DXF, XML, Style Sheets, FBK, RW5, RAW and local formats</p>
<p>3rd party total station control:</p> <ul style="list-style-type: none"> • Topcon total station control • Nikon total station control • SOKKIA total station control

43.3 Optional Applications for Leica Captivate for CS35 Tablet

 The following apps require a valid license key

827 722	Area Division
827 723	Stake DTM
827 720	Measure and Stake to Line
827 721	Measure to Plane / Grid
827 725	Check and Stake Road
827 726	Check and Stake Tunnel
827 727	Check and Stake Rail
827 730	Sets of Angles
827 724	Volume Calculation
827 728	Hidden Point
827 729	Traverse
827 731	QuickVolume
839 681	Inspect Surfaces
836 671	Tunnel Profile Generator

43.4 Optional Licences for Leica Captivate for CS35 Tablet

827 734	Leica Exchange
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Accessories for Field Controller

44 Accessories for CS20 Field Controller

44.1 Internal Batteries



799 190	GEB331	Li-Ion battery, 11.1 V / 2.8 Ah, rechargeable, for CS20.
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44.2 Battery Chargers



799 185	GKL311	Single-bay Charger Professional 3000. Charger for one Li-Ion battery (GEB211, GEB212, GEB221, GEB222, GEB241, GEB242 and GEB331), including AC/DC adaptor and cigarette lighter cable.
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799 187	GKL341	Multi-bay Charger Professional 5000. Charges up to 4 batteries (GEB211, GEB212, GEB221, GEB222, GEB241, GEB242 and GEB331), including power cable.
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734 389	GDC221	Car adapter for the GKL341 charger. Allows the use of the GKL341 with a cigarette lighter; 12V/24V DC/DC converter. Can also be used to power CS10/CS15 field controller directly from a cigarette lighter.
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44.3 Memory Devices



767 856	MSD1000	SD memory card 1 GB for total stations, GNSS receivers and field controllers, industrial grade.
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789 139	MSD08	SD memory card 8 GB for total stations, GNSS receivers and field controllers, industrial grade.
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765 199	MS1	USB memory stick, 1 GB, for total stations and field controllers, industrial grade.
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44.4 Card Reader & Adapter

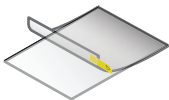


767 895	MCR7	Card reader for SD/CF cards.
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44.5 Pen and Screen Protections Foils



Pen		
813 914	GDZ71	Pen with tether clip interface for CS20 field controller and TS16/MS60/TS60 instruments.



813 582	GHT76	Tether to connect GDZ71 Pen to CS20 field controller.
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Screen Protection Foil set

813 781	SPF05	5" WVGA screen protection foils for CS20 field controller and TS16/MS60/TS60 instruments.
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44.6 Additional Power Accessories



822 787	GEV276	Power supply unit for CS20, for indoor use only. Input 100-240 VAC to output 15.0 VDC, 40 W.
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44.7 Pole Accessories



807 157	GHT66	Holder attaching a CS20 with a GHT63 clamp to a pole. GHT63 is not included.
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767 880	GHT63	Clamp arrangement for attaching the GHT66 and GHT78 to all poles.
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44.8 Utility Hook and Hand Strap



Utility hook

807 245	GHT68	Utility hook for CS20 field controller for attaching to belt or tripod.
845 832	GHT70	Clamp arrangement for attaching the GHT66 and GHT78 to all tripods.

Hand strap


807 158	GHT67	Hand strap for CS20 field controller.
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45 Accessories for CS35 Tablet

45.1 Internal Batteries




832 119	GEB235	Lithium-Ion battery, 10.8 V/4.1 Ah, rechargeable, for CS35 Tablet.
832 120	GEB236	Lithium-Ion battery, 10.8 V/8.7 Ah, rechargeable, for CS35 Tablet.

 All CS35 Tablets are delivered with one GEB235 Lithium-Ion battery (10.8 V/4.1 Ah, rechargeable).

45.2 Battery Chargers



832 118	GKL235	Charger for CS35 batteries GEB235 and GEB236. Country specific AC/DC adaptor (GEV280-x) not included.
832 113	GEV280-1	AC/DC adaptor, EU. Power Supply for CS35 Tablet.
8321 14	GEV280-2	AC/DC adaptor, UK. Power Supply for CS35 Tablet.
832 115	GEV280-3	AC/DC adaptor, US. Power Supply for CS35 Tablet.
832 116	GEV280-4	AC/DC adaptor, AUS. Power Supply for CS35 Tablet.
832 117	GEV280-5	AC/DC adaptor, CH. Power Supply for CS35 Tablet.
842 648	GEV280-6	AC/DC adaptor, JP, Power Supply for CS35 Tablet.

 Country specific AC/DC adaptor (GEV280-x) is delivered with CS35 Tablet.

45.3 Pen and Screen Protection Foils




Pen

832 121	GDZ75	Digitiser Pen for CS35 Tablet.
851 539	GDZ76	Digitiser Pen for CS35 Tablet, MK4 models.
832 122	GHT77	Tether to tie GDZ75 Digitiser Pen to CS35 Tablet.

Screen Protection Foil set

832 126	SPF06	Screen protection foils for CS35 Tablet.
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 All CS35 Tablets are delivered with one GDZ75 Digitiser Pen and a GHT77 Tether.

45.4 Pole Accessories



832 127	GHT78	Tablet holder for attaching a CS35 Tablet with a GHT63 clamp to a pole. GHT63 is not included.
767 880	GHT63	Clamp arrangement for attaching the GHT66 and GHT78 to all poles.

45.5 Hand Strap



833 343	GHT79	Hand strap for CS35 Tablet. Including 4 high corner guards.
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Care Packages

46 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.

Trademarks

47 Trademarks

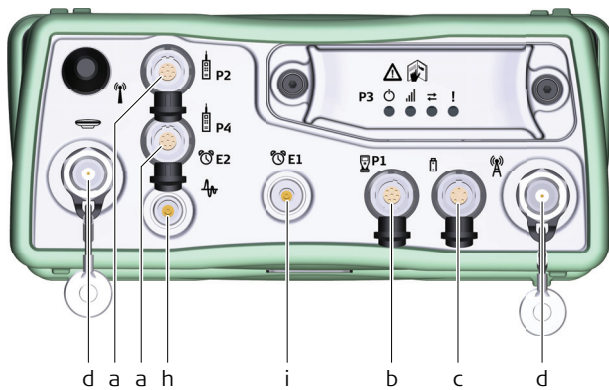
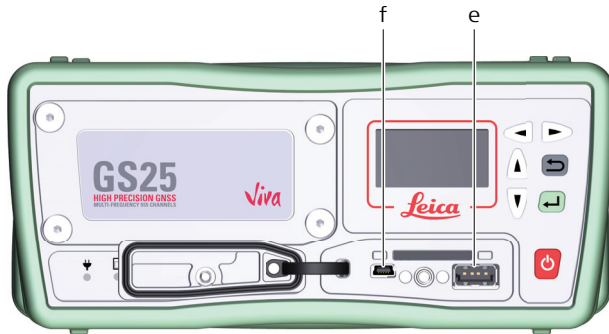
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Other trademarks and trade names are those of their respective owners.

System Viva GNSS Cables Overview

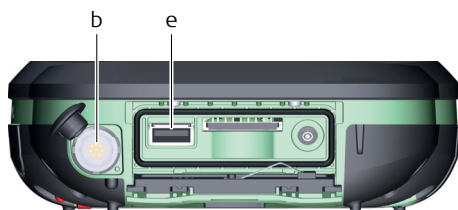
GS25 Receiver



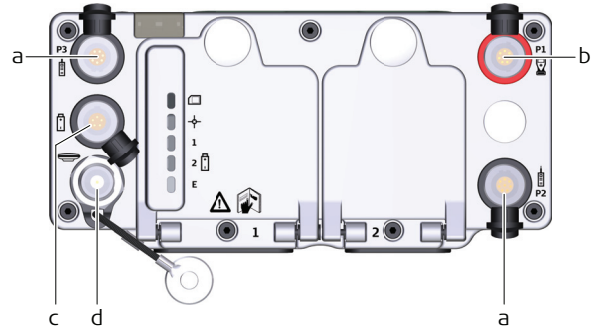
GS16 Receiver



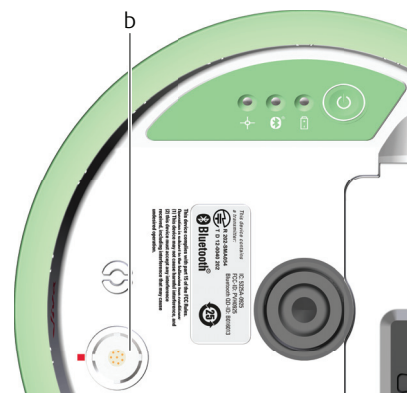
CS20 Controller



GS10 Receiver



GS07 Receiver

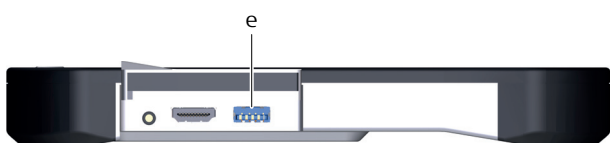


- a) Lemo1, 8pin, 30°
- b) Lemo1, 8pin, 135°
- c) Lemo1, 5pin, 0°
- d) TNC connector
- e) USB type A
- f) Mini USB AB
- g) QN connector
- h) Lemo FFA
- i) H&S QLA connector
- j) SMB connector

GS18 Receiver



CS35 Tablet



Power cables

Art. no	Name	Connector 1	Connector 2	Description
560 130	GEV97	Lemo1, 5pin, 0°	Lemo1, 5pin, 0°	Length 1.8 m Allows GS10 (power port) to be externally powered.
758 469	GEV219	Lemo1, 8pin, 135°	Lemo1, 5pin, 0°	Length 1.8 m Allows GS10/GS14/GS15/GS16/GS18 (port 1) to be externally powered.
822 787	GEV276	5.5 mm barrel connector	Mains plug	Length 1.2 m, + 1.5 m Allows CS20 to be externally powered via the power jack. AC/DC mains plug type is country specific.
439 038	GEV71	Lemo1, 5pin, 0° (female)	Crocodile clips	Length 4.0 m Allows powering of any device from car battery.
809 028	GEV272	Lemo, 4pin, 0°	SAE	Length 2.0 m Allows powering of Satel HPR from the GVP711 battery soft bag.
807 696	GEV270	Lemo1, 5pin, 0° (female)	Mains plug	Length 0.8 m + 1.5 m Allows powering of any GS from standard mains socket (country specific).

Y - power cables

Art. no	Name	Connector 1	Connector 2	Connector 3	Description
733 298	GEV172	Lemo1, 5pin, 0°	Lemo1, 5pin, 0°	Lemo1, 5pin, 0°	Length 2.8 m Allows GS10 (power port) to be externally powered by 2 external batteries.
756 365	GEV215	Lemo1, 8pin, 135°	Lemo1, 8pin, 135°	Lemo1, 5pin, 0°	Length 2.0 m Allows connection between CS20 and GS10/GS14/GS15/GS16/GS18 (port 1) while being powered from the GEB371.
796 492	GEV264	Lemo1, 8pin, 135°	Lemo1, 8pin, 30° (female)	Lemo1, 5pin, 0°	Length 1.8 m Allows connection between GS14/GS16/GS18, external radio in GFU housing and GEB371 with GS and radio being externally powered.
811 818	GEV274	Lemo1, 8pin, 135°	Lemo1, 8pin, 30°	SAE	Length 2.8 m Allows connection between GS10/GS14/GS15/GS16/GS18 (port1), Satel HPR radio with GS being externally powered.

Radio programming cables

Art. no	Name	Connector 1	Connector 2	Connector 3/4	Description
767 803	GEV231	15pin (GS15 slot-in port) (female)	RS232 serial, 9pin	Lemo1, 5pin, 0°	Length 1.8 m Allows an SLR radio device to be externally powered and programmed by a PC.
733 297	GEV171	Lemo1, 8pin, 30° (female)	RS232 serial, 9pin	Lemo1, 5pin, 0°	Length 1.8 m Allows a radio within a GFU device to be externally powered and programmed by a PC.
793 364	GEV261	Lemo1, 8pin, 135°	RS232 serial, 9pin	Lemo1, 5pin, 0° and USB type A	Length 1.8 m Allows a GS14/GS16/GS18 radio to be programmed by a PC.
809 029	GEV273	Lemo2, 8pin, 30°	RS232 serial, 9pin		Length 2.0 m Allows a Satel HPR radio to be programmed by a PC.

Radio cables

Art. no	Name	Connector 1	Connector 2	Description
767 897	GEV232	Lemo1, 8pin, 30°	Lemo1, 8pin, 30° (female)	Length 2.8 m Allows GFU devices to be connected to a GS10 (port 2 and 3), or GS25 (port 2 and 4).
767 898	GEV233	Lemo1, 8pin, 30°	Lemo1, 8pin, 30° (female)	Length 0.8 m Allows GFU devices to be connected to a GS10 (port 2 and 3), or GS25 (port 2 and 4).
639 968	GEV125	Lemo1, 8pin, 30°	15pin, RS232 serial	Length 1.8 m Allows a Satelline modem (not inside housing) to be connected to a GS10 (port 2 and 3), or GS25 (port 2 and 4).
817 713	GEV275	Lemo1, 8pin, 30°	Lemo2, 8pin, 30°	Length 1.8 m Data cable to connect Satel HPR (35W) high power radio to GS10/GS25 GNSS receiver.
799 776	GEV266	Lemo1, 8pin, 135°	Lemo2, 8pin, 30°	Length 1.8 m Data cable to connect Satel HPR (35W) high power radio to GS14/GS16/GS18 GNSS receiver.

Serial data transfer cables

Art. no	Name	Connector 1	Connector 2	Description
733 280	GEV160	Lemo1, 8pin, 30°	RS232 serial, 9pin	Length 2.8 m Allows serial connection between GS10 (port 2 and 3), or GS25 (port 2 and 4) to PC to stream NMEA or RTK data.
733 282	GEV162	Lemo1, 8pin, 135°	RS232 serial, 9pin	Length 2.8 m 1. Allows serial connection between GS (port 1) to PC to stream NMEA or RTK data. 2. Allows serial connection between CS20 and hidden point device, ASCII input device, PC etc.
733 283	GEV163	Lemo1, 8pin, 135°	Lemo1, 8pin, 135°	Length 1.8 m Allows serial connection between CS20 and GS10/GS25 port 1.

USB to serial converter cables

Art. no	Name	Connector 1	Connector 2	Description
806 094	GEV268	Lemo1, 8pin, 30°	USB type A	Length 2.0 m Allows GS10 (port 2 and 3) or GS25 (port 2 and 4) to be connected to a PC where a serial connection is required, but no 9pin RS232 port physically exists on the PC. This cable allows a serial connection through the USB port of the PC to the CS or GS hardware.
806 095	GEV269	Lemo1, 8pin, 135°	USB type A	Length 2.0 m Allows CS20 and GS port 1 to be connected to a PC where a serial connection is required, but no 9pin RS232 port physically exists on the PC. This cable allows a serial connection through the USB port of the PC to the GS hardware.

USB data transfer cables

Art. no	Name	Connector 1	Connector 2	Description
767 899	GEV234	Lemo1, 8pin, 135°	USB type A	Length 1.65 m 1. Allows a CS20 to connect to a GS (port 1). 2. Allows a USB connection between the USB port of a PC to a GS (port 1). 3. Allows a USB connection between the USB port of a PC to a CS20.
772 807	GEV237	Lemo1, 8pin, 135°	Lemo1, 8pin, 135°	Length 1.65 m Allows a CS20 to connect to a GS (port 1).

PPS/Event cables

Art. no	Name	Connector 1	Connector 2	Description
667 744	GEV150	Lemo FFA	BNC	Length 2.0 m PPS output cable for GS25 (port PPS) with BNC connector.
403 448	GEV42	H&S QLA	BNC	Length 2.0 m Event input cable for GS25 (port E1) with BNC connector.
789 061	GEV262	Lemo1, 8pin, 30°	BNC	Length 2.0 m Event input cable for GS25 (port E2) with BNC connector.

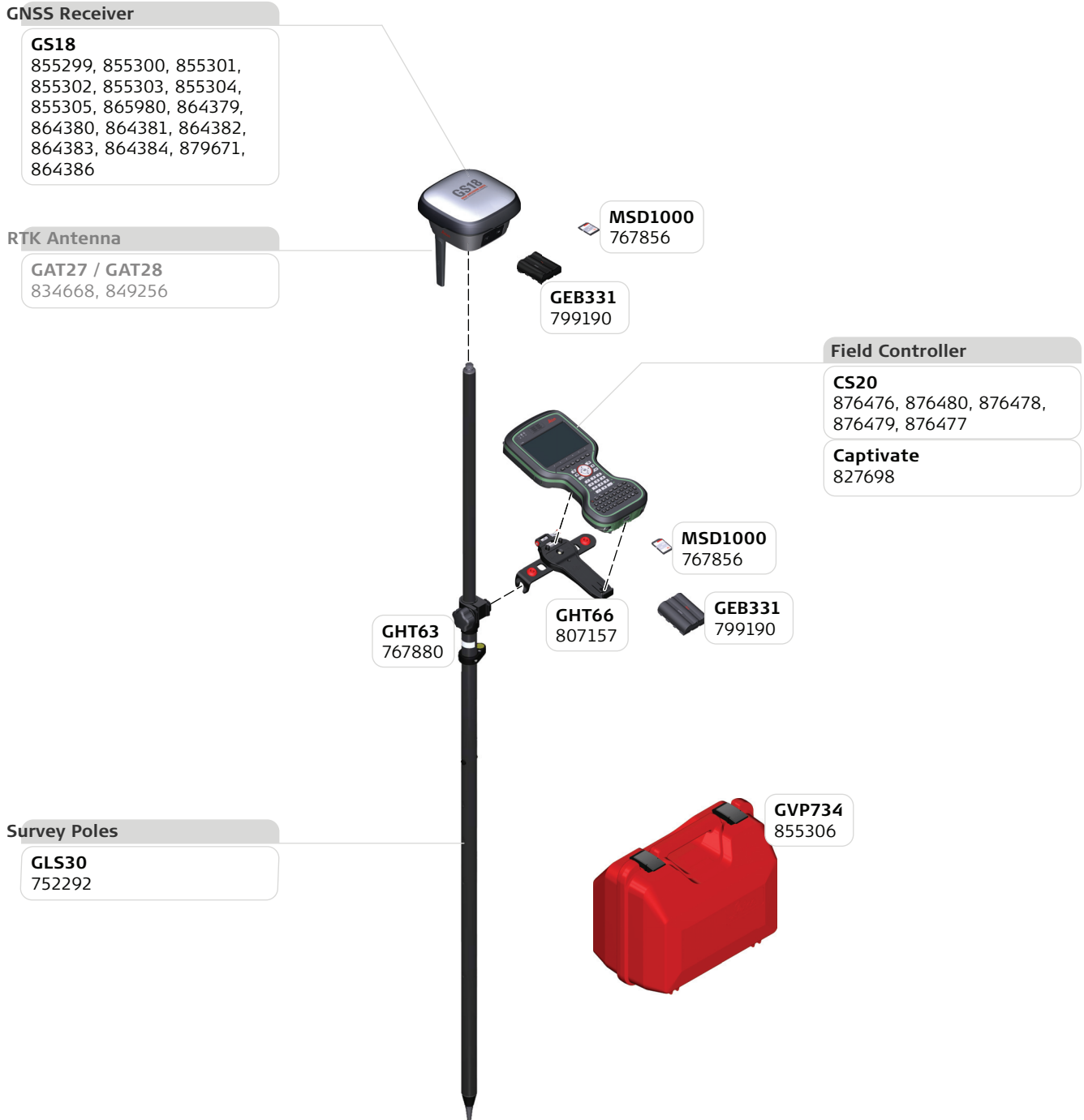
Antenna cables for connecting GNSS antennas or RTK antennas


Art. no	Name	Connector 1	Connector 2	Description
667 200	GEV141	TNC connector	TNC connector	Length 1.2 m
772 002	GEV238	TNC connector	SMB connector	Length 1.2 m
667 201	GEV142	TNC connector	TNC connector (male)	Length 1.6 m Extension cable.
636 959	GEV120	TNC connector	TNC connector	Length 2.8 m
632 372	GEV119	TNC connector	TNC connector	Length 10 m
632 390	GEV108	TNC connector	TNC connector	Length 30 m
664 813	GEV134	TNC connector	TNC connector	Length 50 m

Suggested GNSS Setups

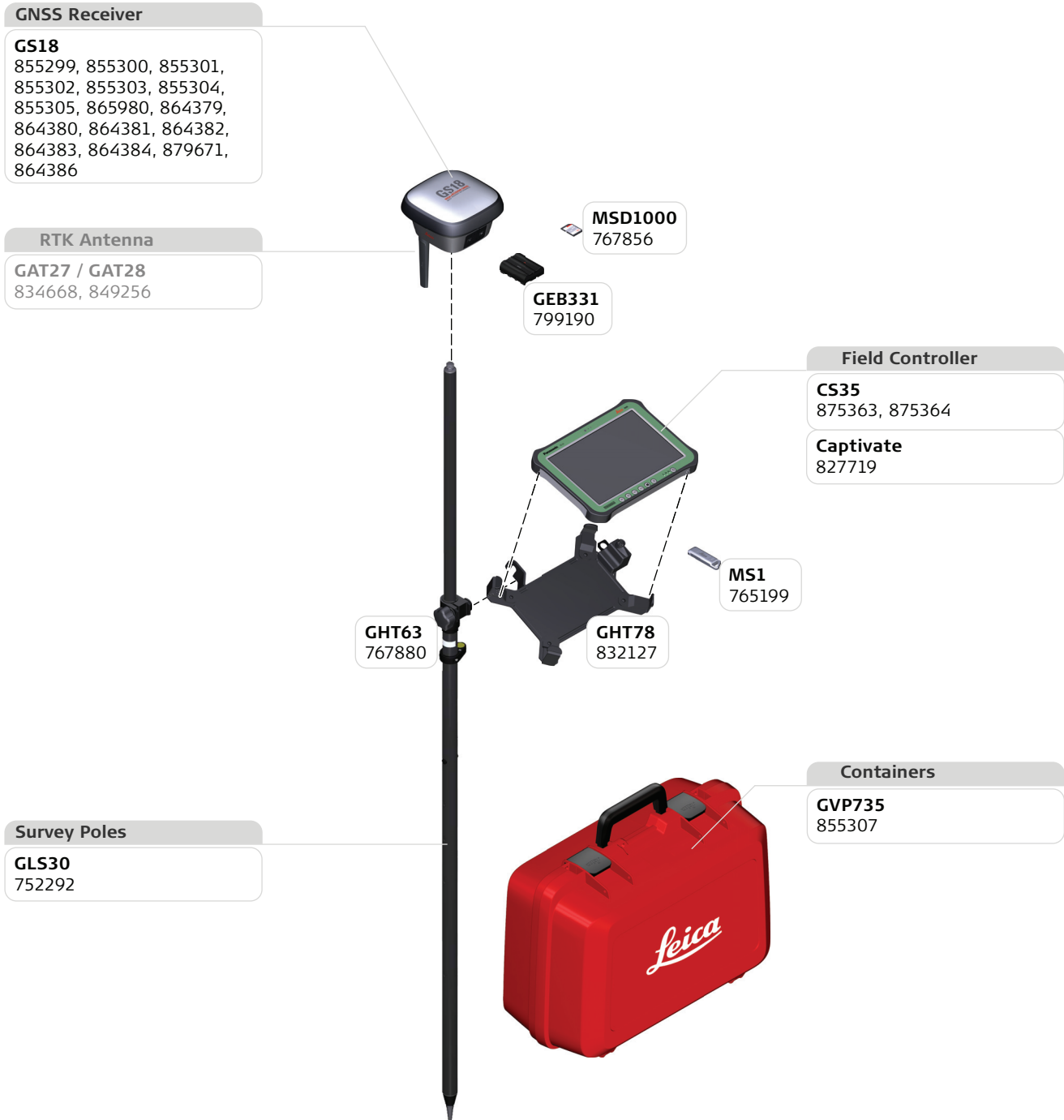
48 GS18 Real Time Rover


48.1 Using CS20 Field Controller



 Please refer to the Leica Nova TPS Equipment lists for the usage of a GS18 receiver in a SmartPole setup.

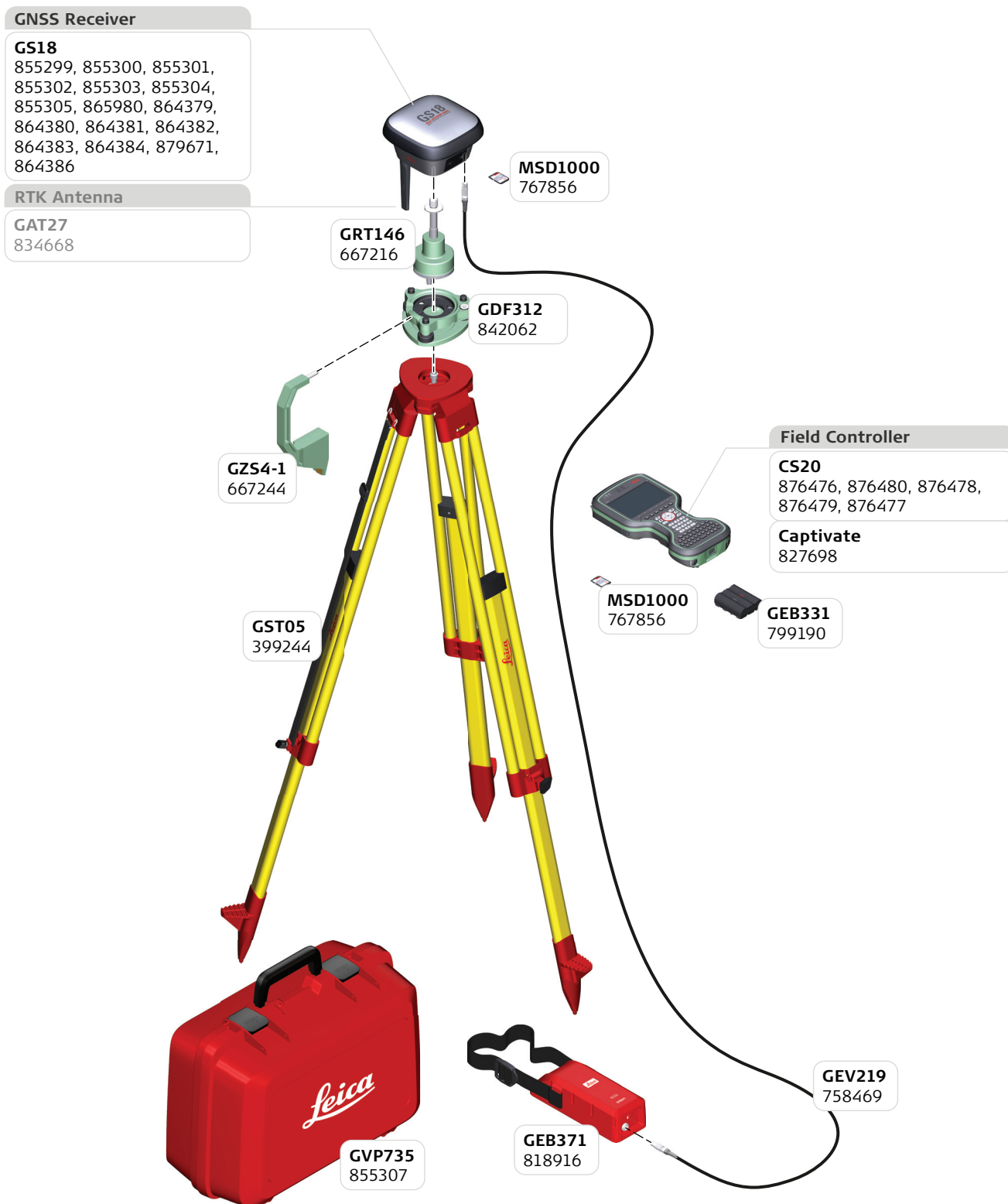
48.2 Using CS35 Tablet



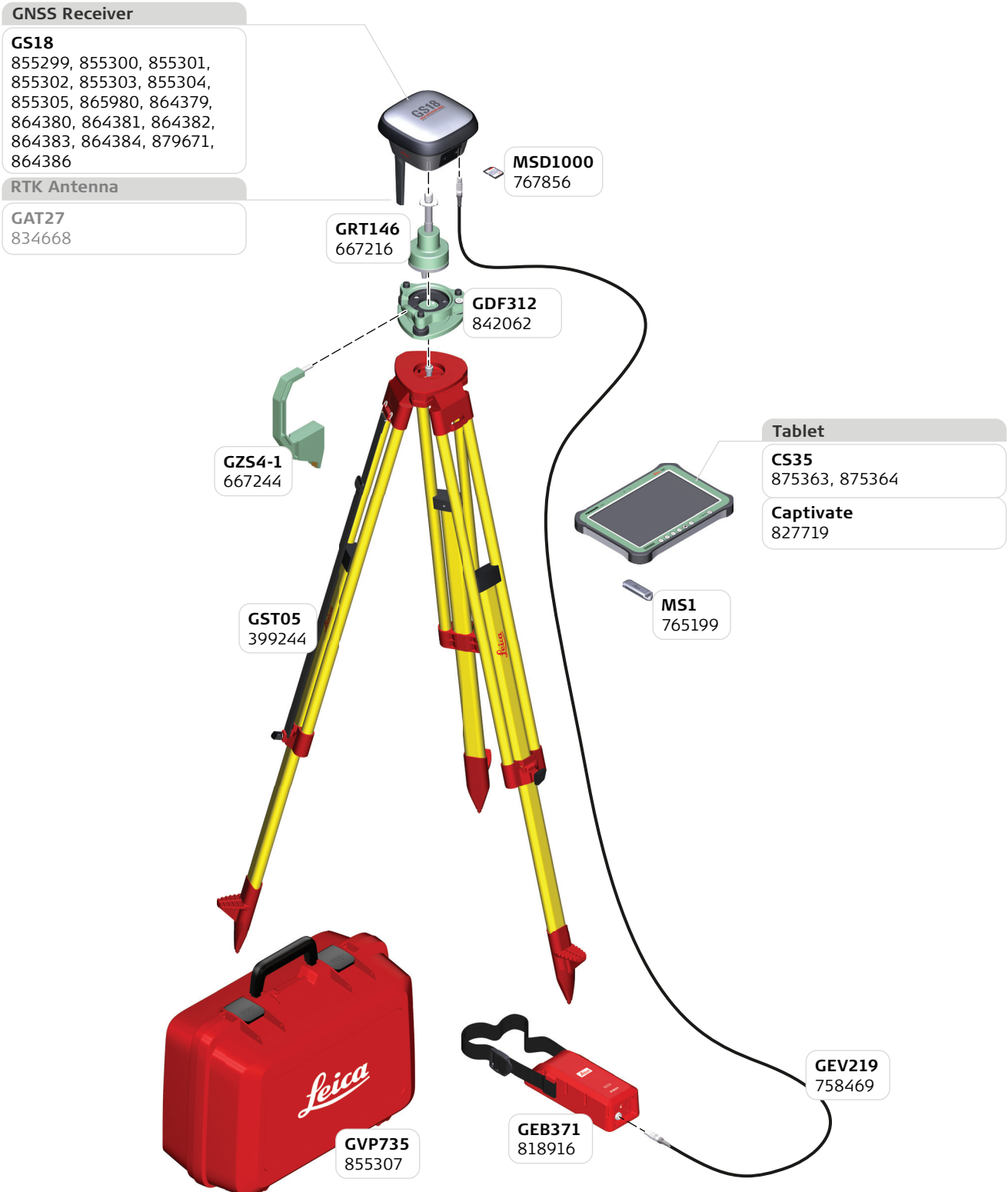
 Please refer to the Leica Nova TPS Equipment lists for the usage of a GS18 receiver in a SmartPole setup.

49 GS18 Real Time Reference - Tripod Setup

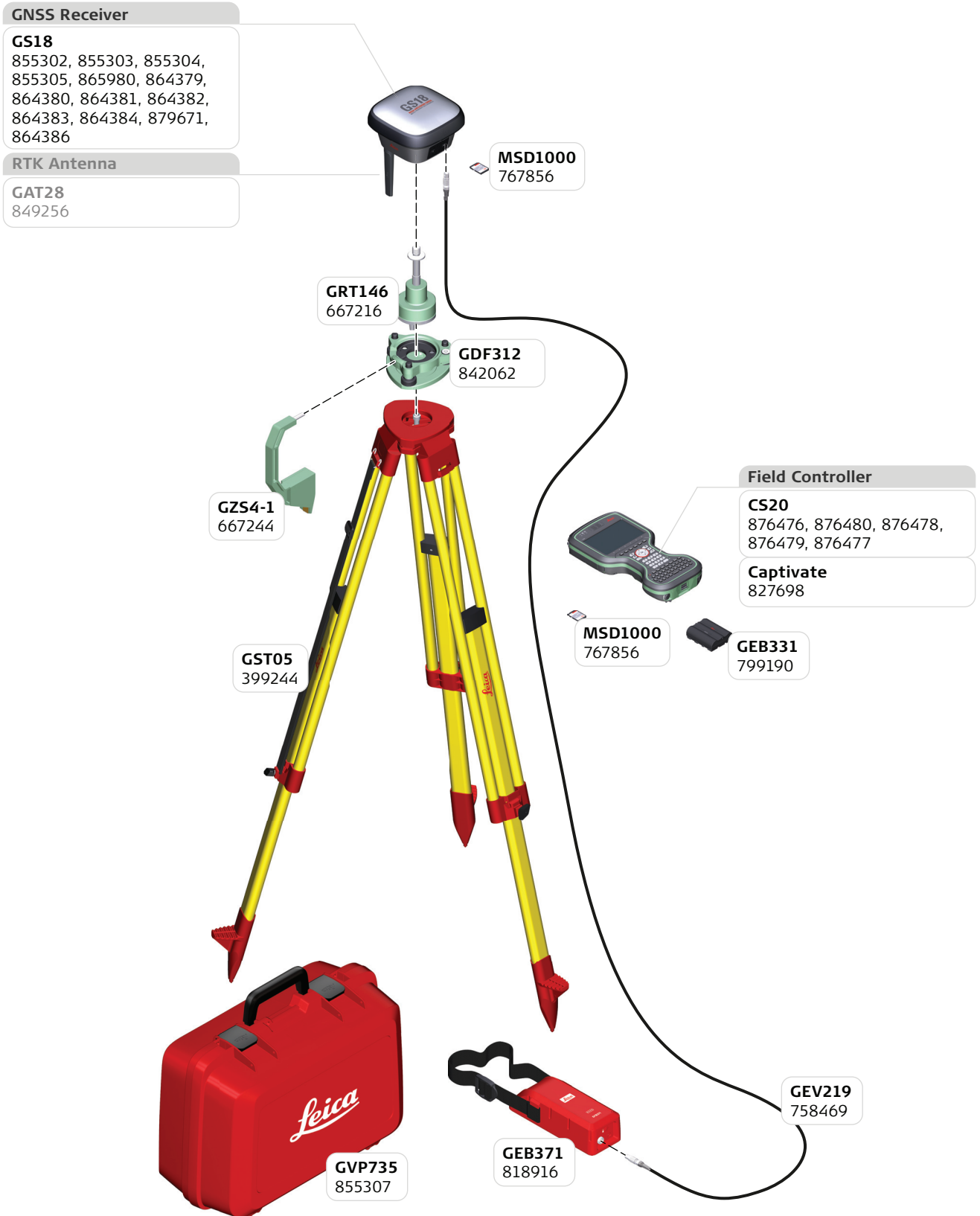
49.1 Using GS18 phone modem and CS20 Field Controller



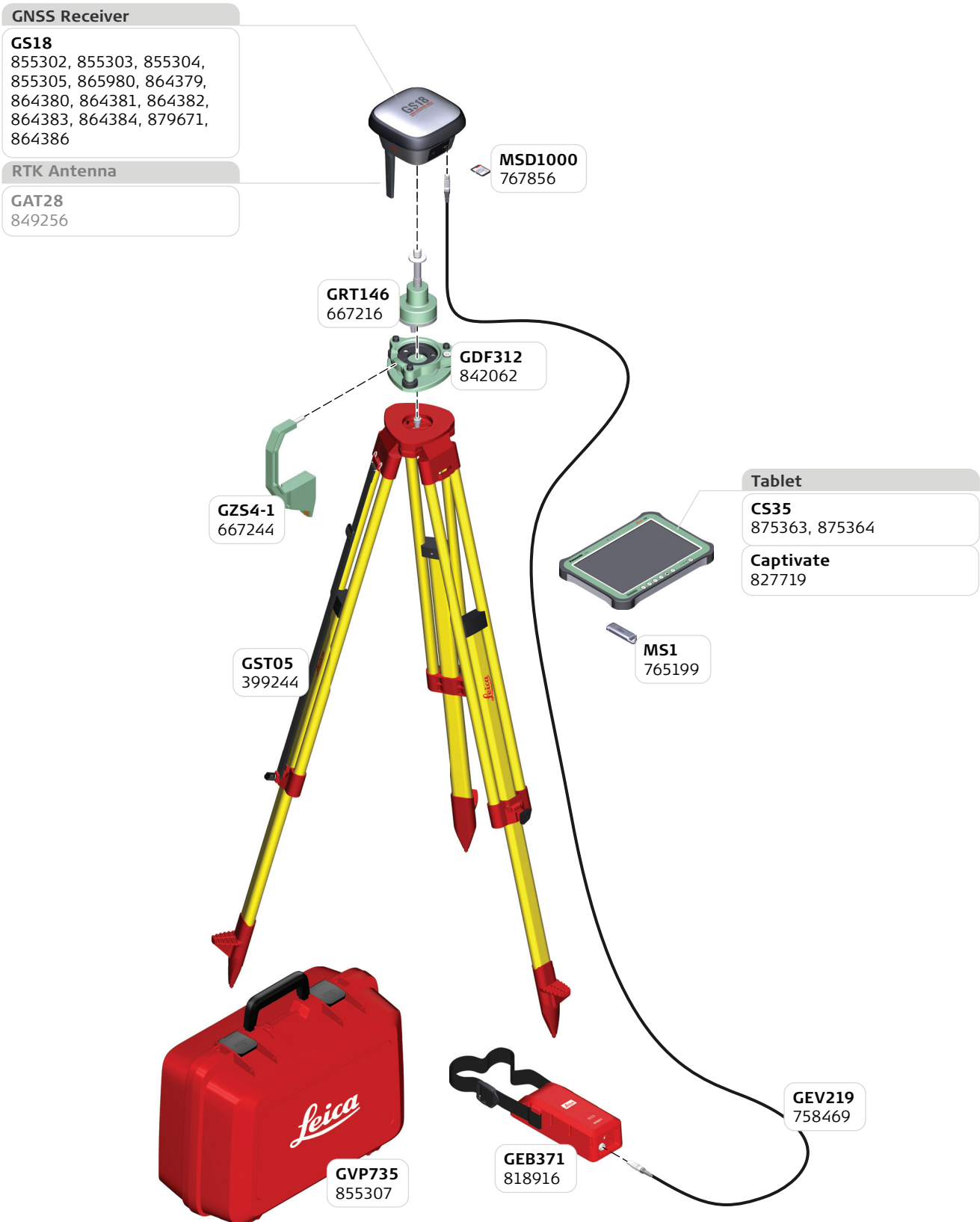
49.2 Using GS18 phone modem and CS35 Tablet



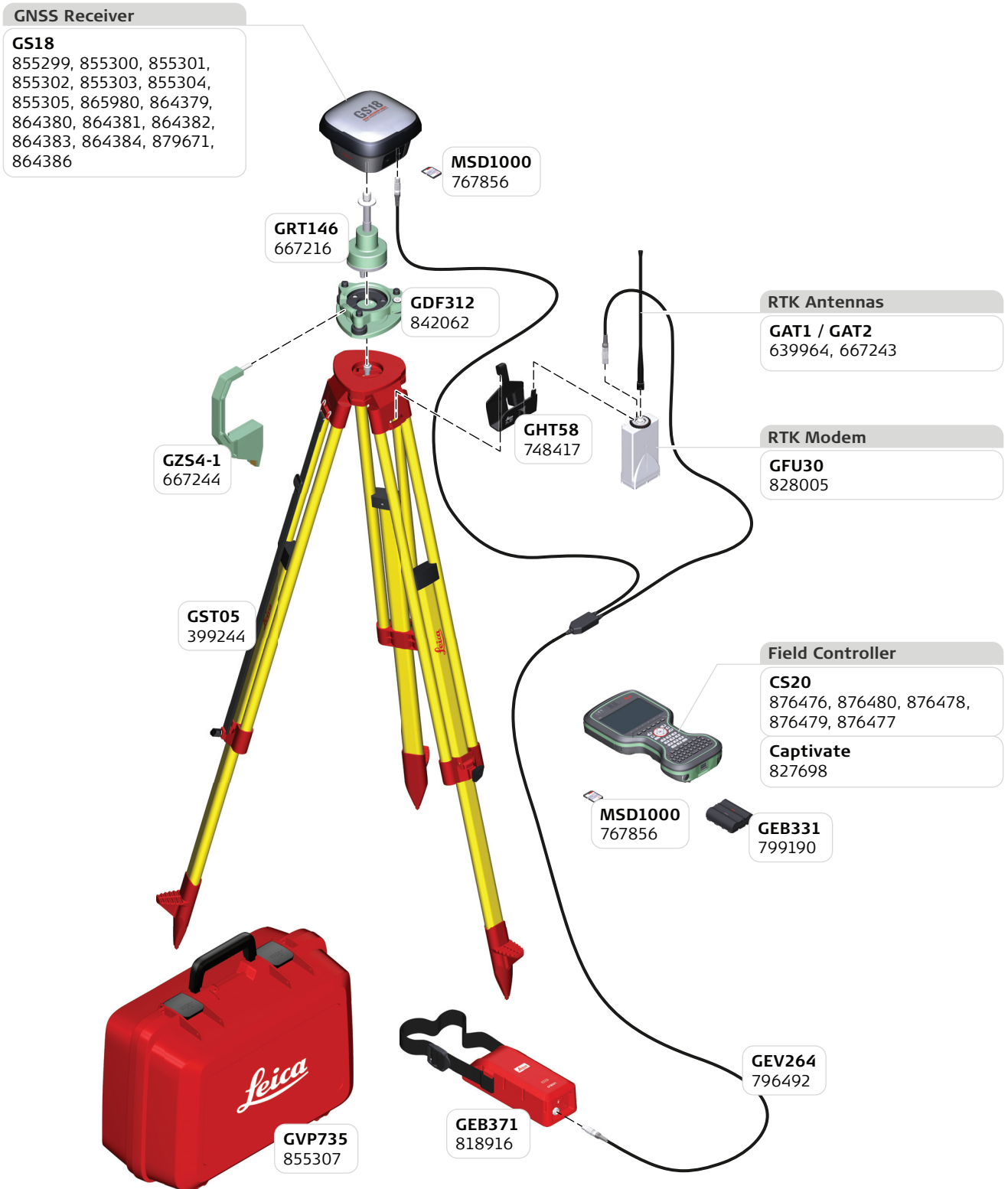
49.3 Using GS18 radio modem and CS20 Field Controller



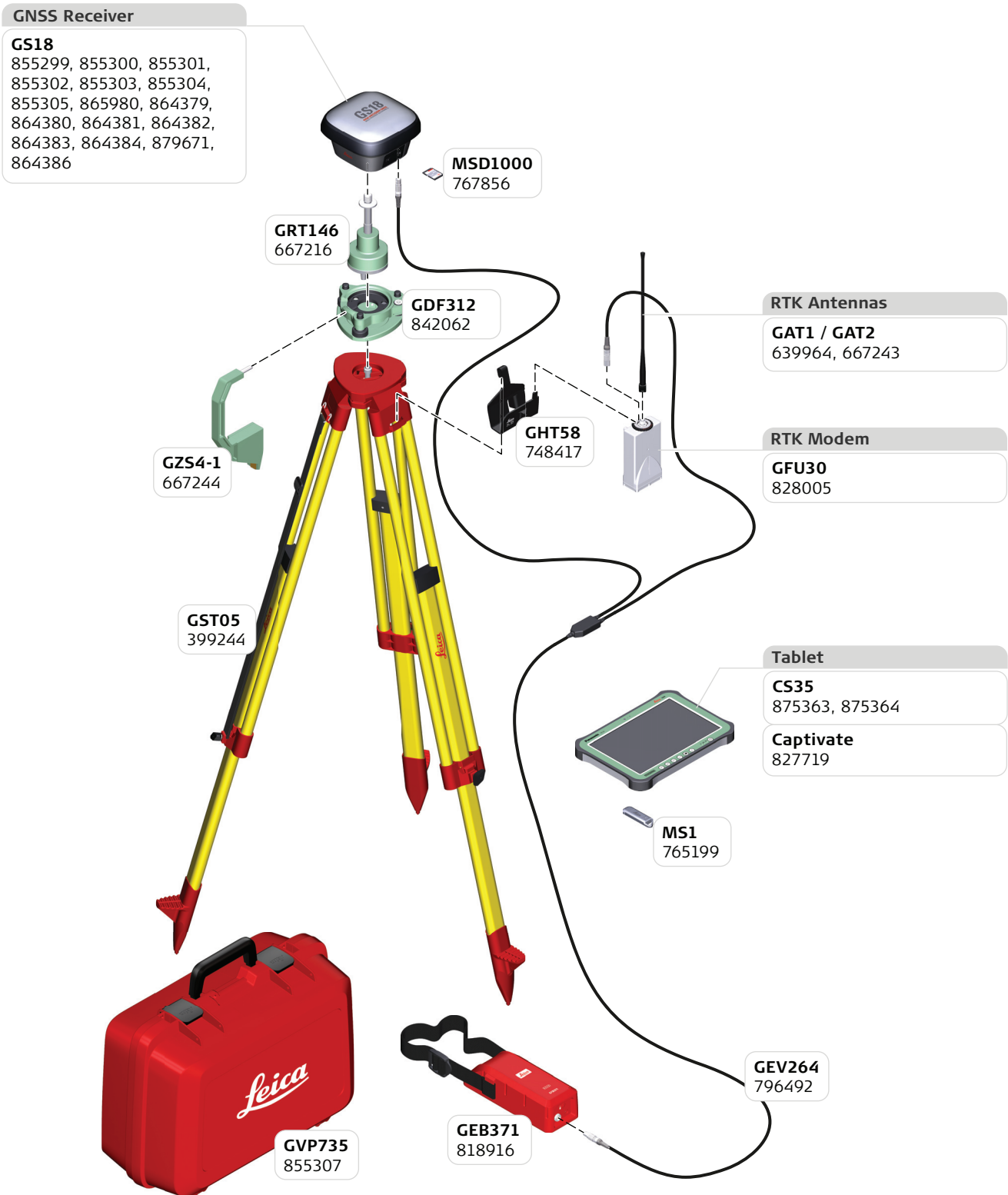
49.4 Using GS18 radio modem and CS35 Tablet



49.5 Using external RTK module and CS20 Field Controller

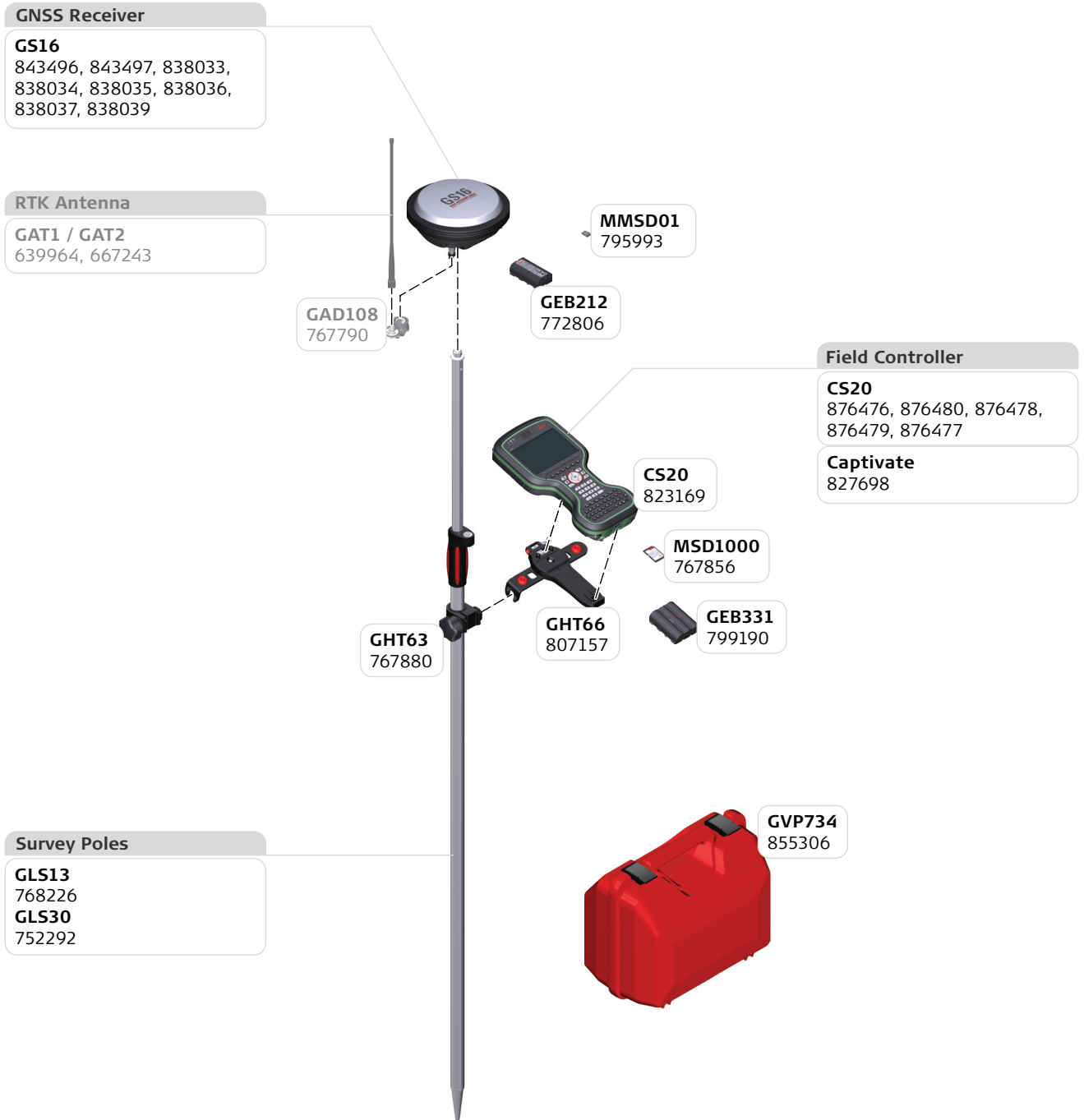



49.6 Using external RTK module and CS35 Tablet



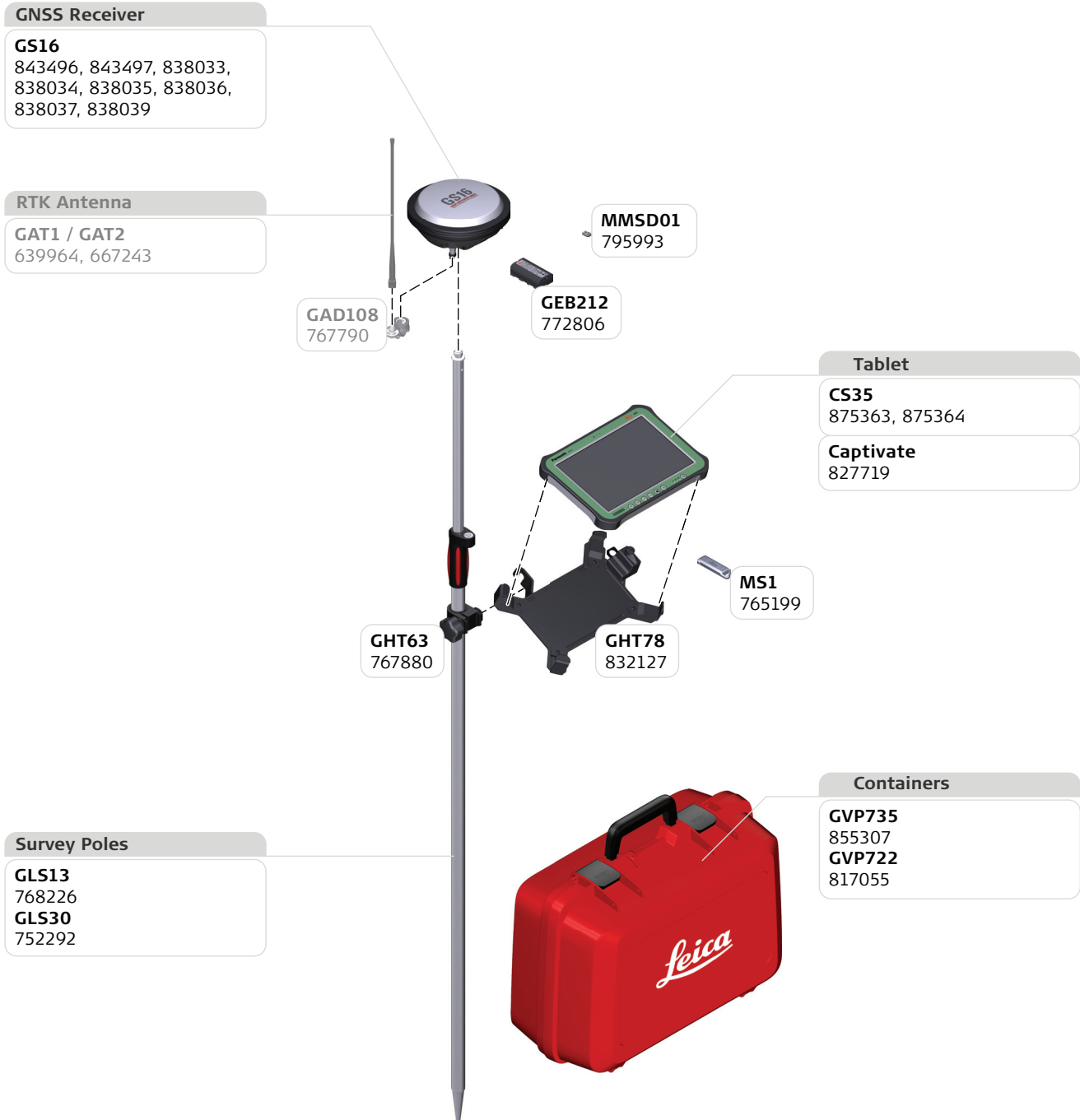
50 GS16 Real Time Rover

50.1 Using CS20 Field Controller



 Please refer to the Leica Viva TPS or Leica Nova TPS Equipment lists for the usage of a GS16 receiver in a SmartPole or SmartStation setup.

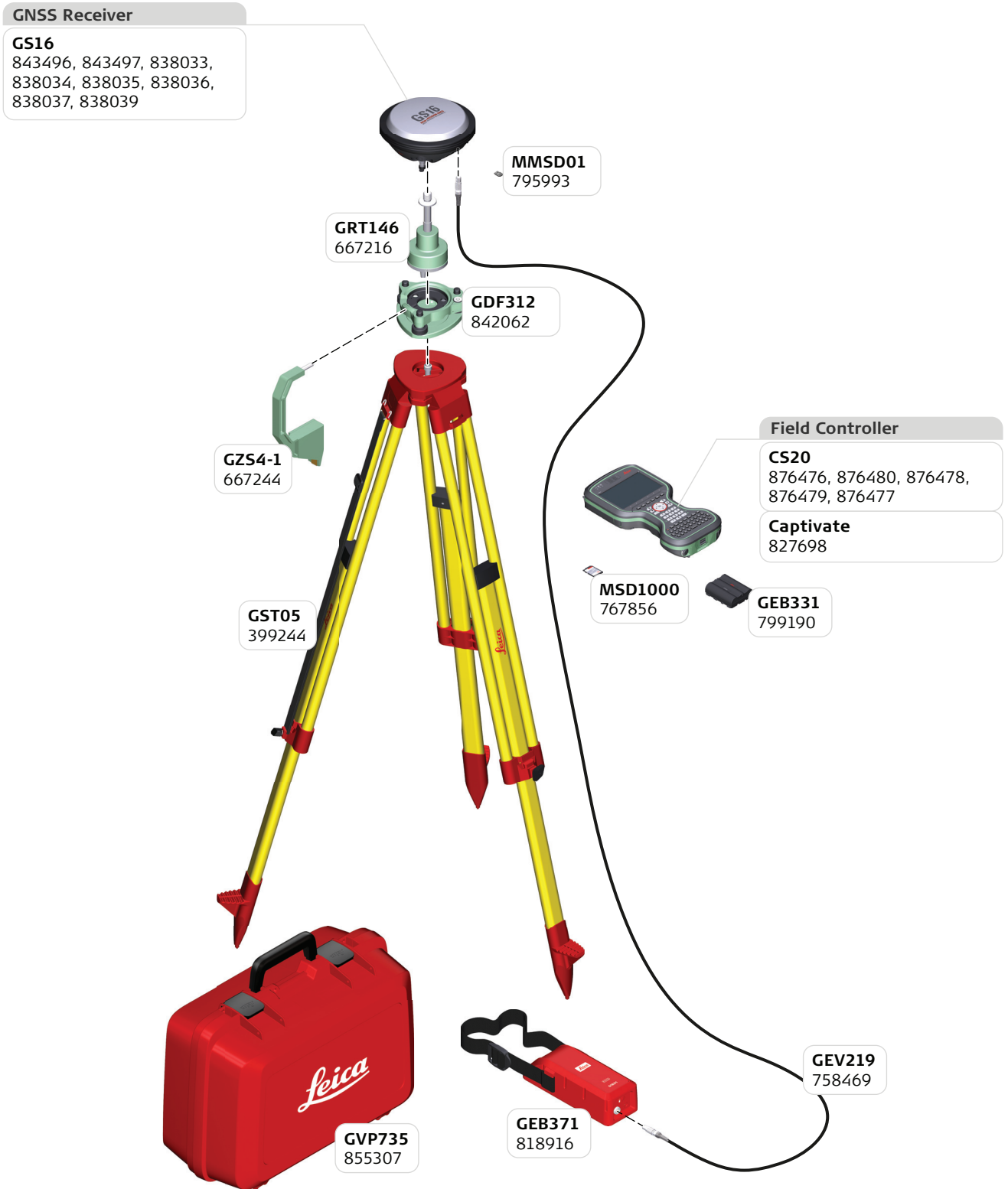
50.2 Using CS35 Tablet



 Please refer to the Leica Viva TPS or Leica Nova TPS Equipment lists for the usage of a GS16 receiver in a SmartPole or SmartStation setup.

51 GS16 Real Time Reference - Tripod Setup

51.1 Using GS16 phone modem and CS20 Field Controller

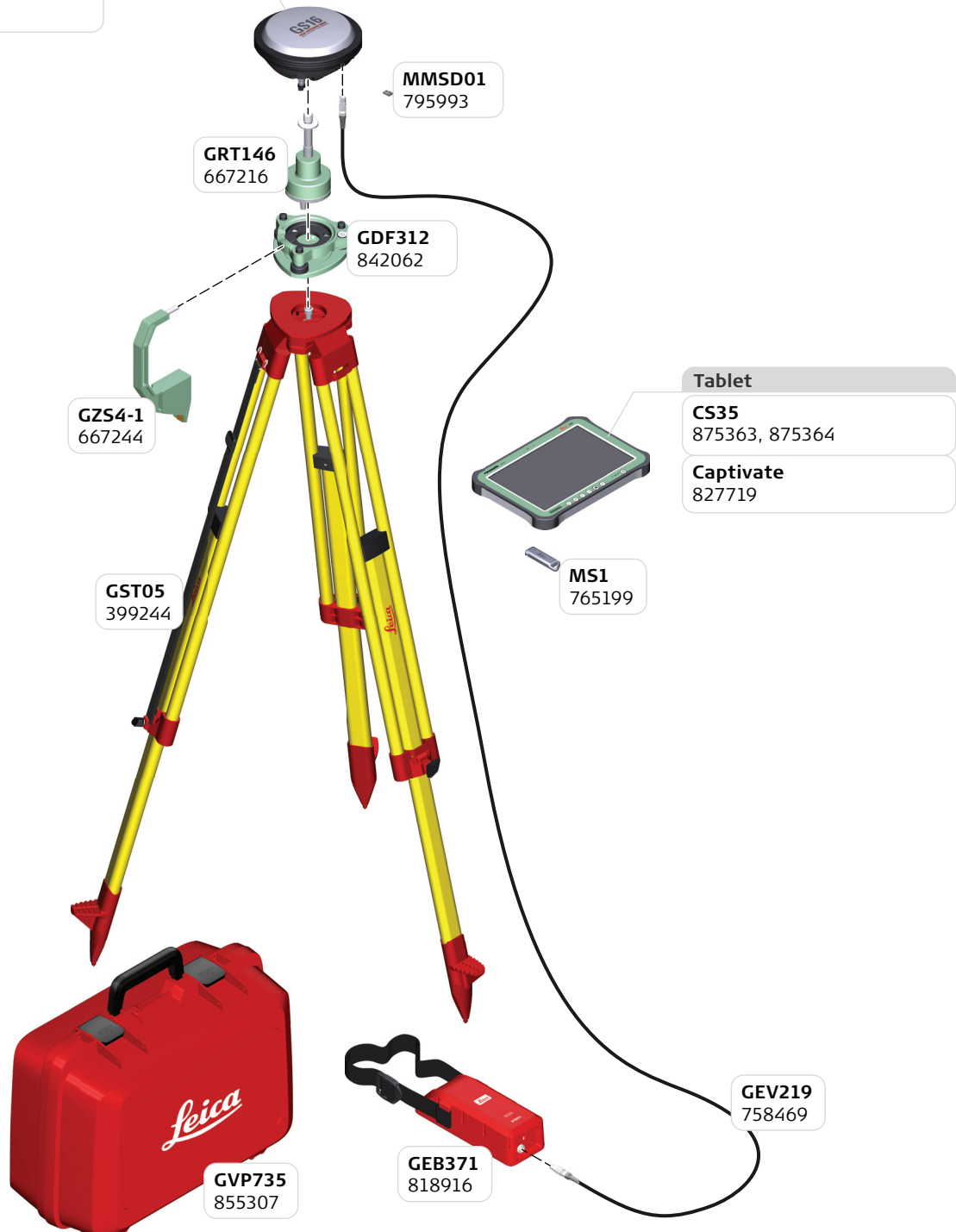


51.2 Using GS16 phone modem and CS35 Tablet

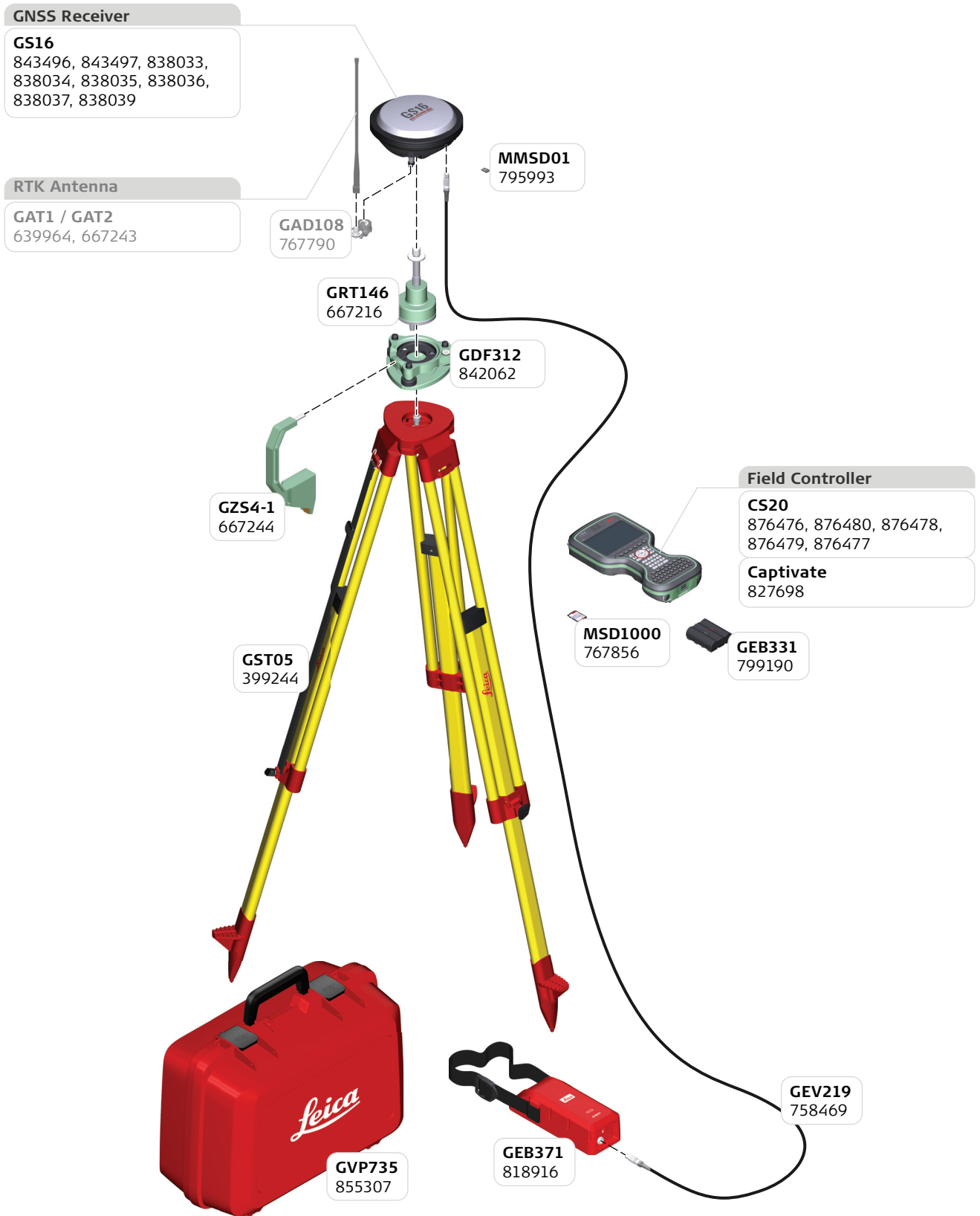
GNSS Receiver

GS16

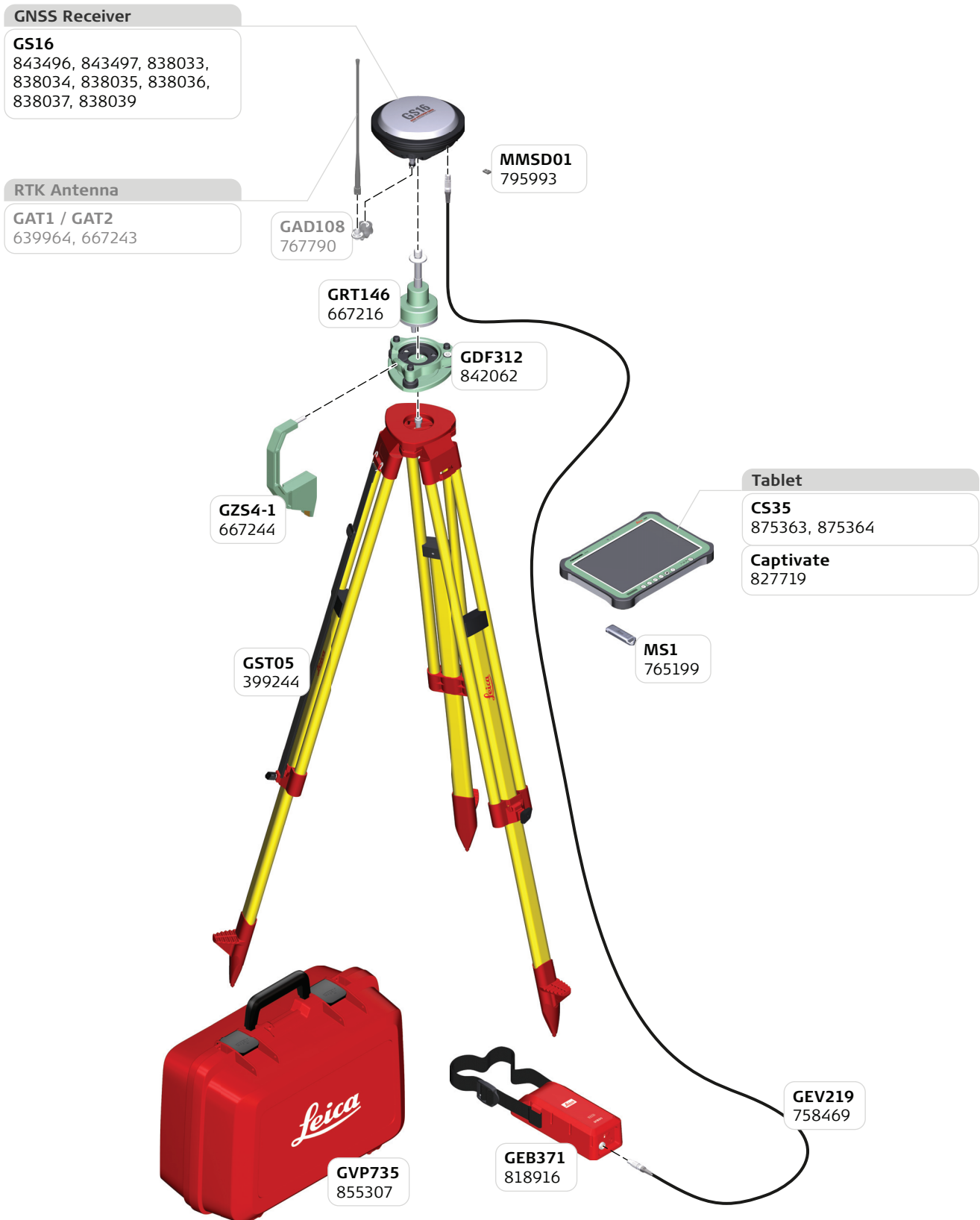
843496, 843497, 838033,
838034, 838035, 838036,
838037, 838039



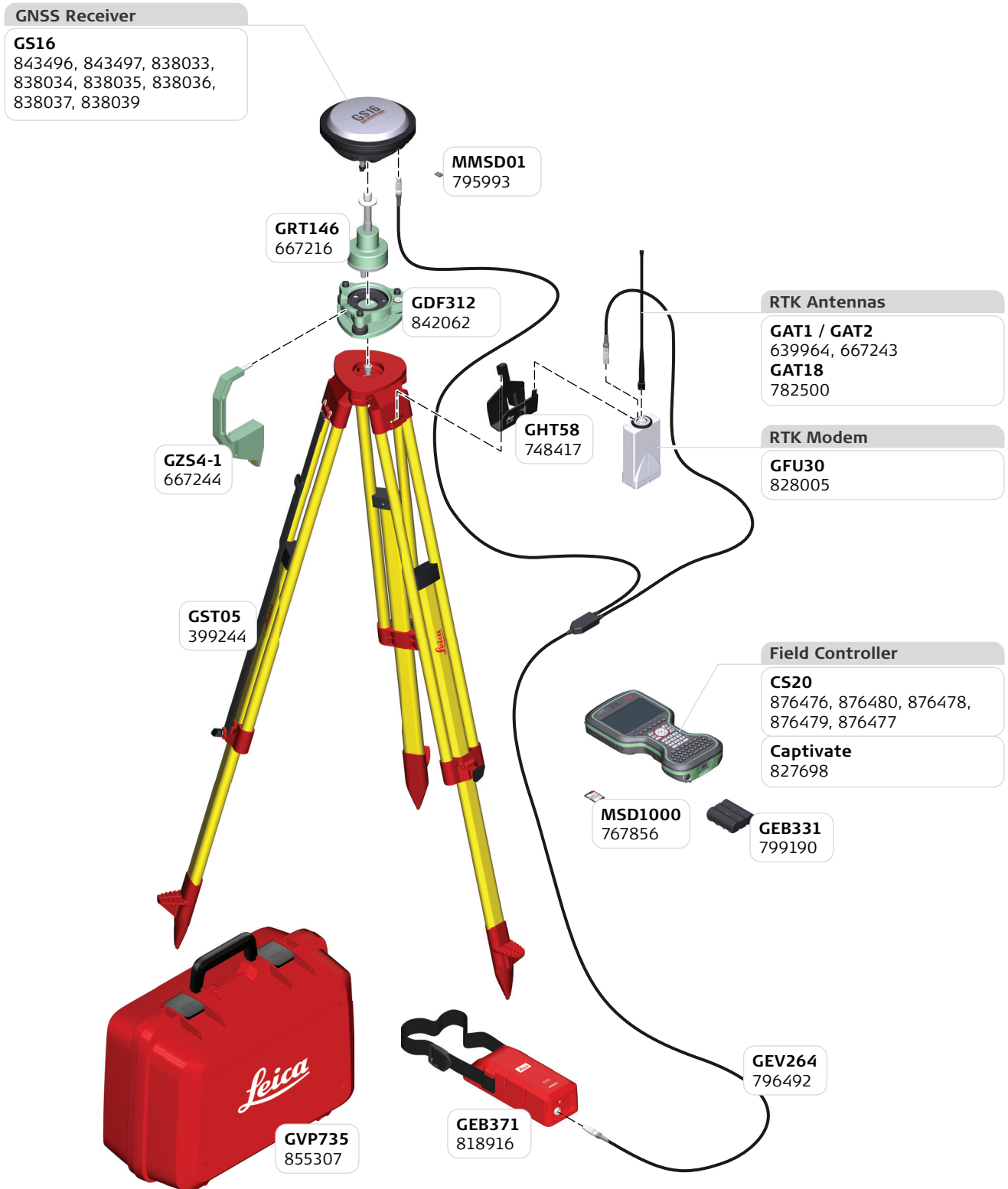
51.3 Using GS16 radio modem and CS20 Field Controller



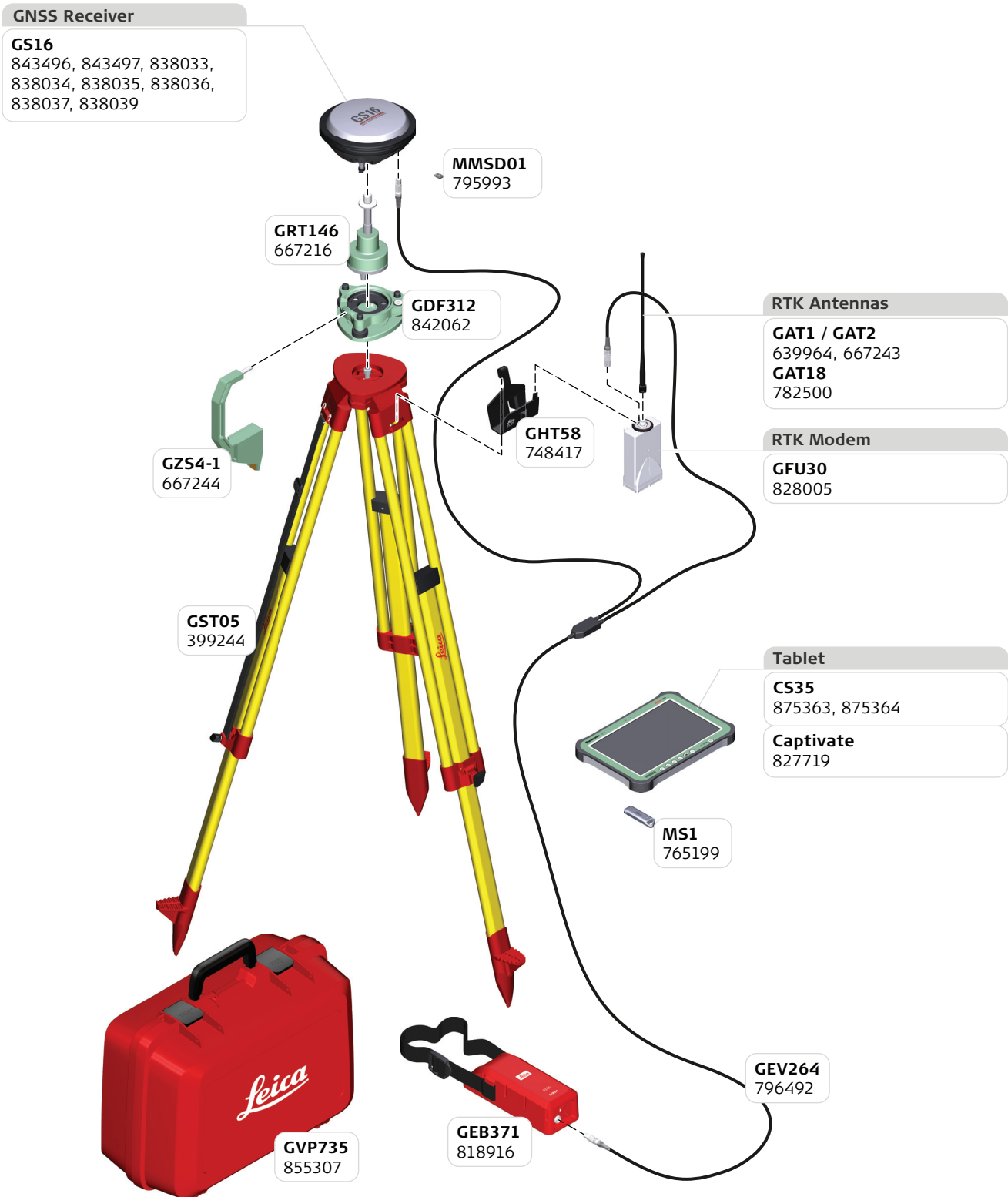
51.4 Using GS16 radio modem and CS35 Tablet



51.5 Using external RTK module and CS20 Field Controller

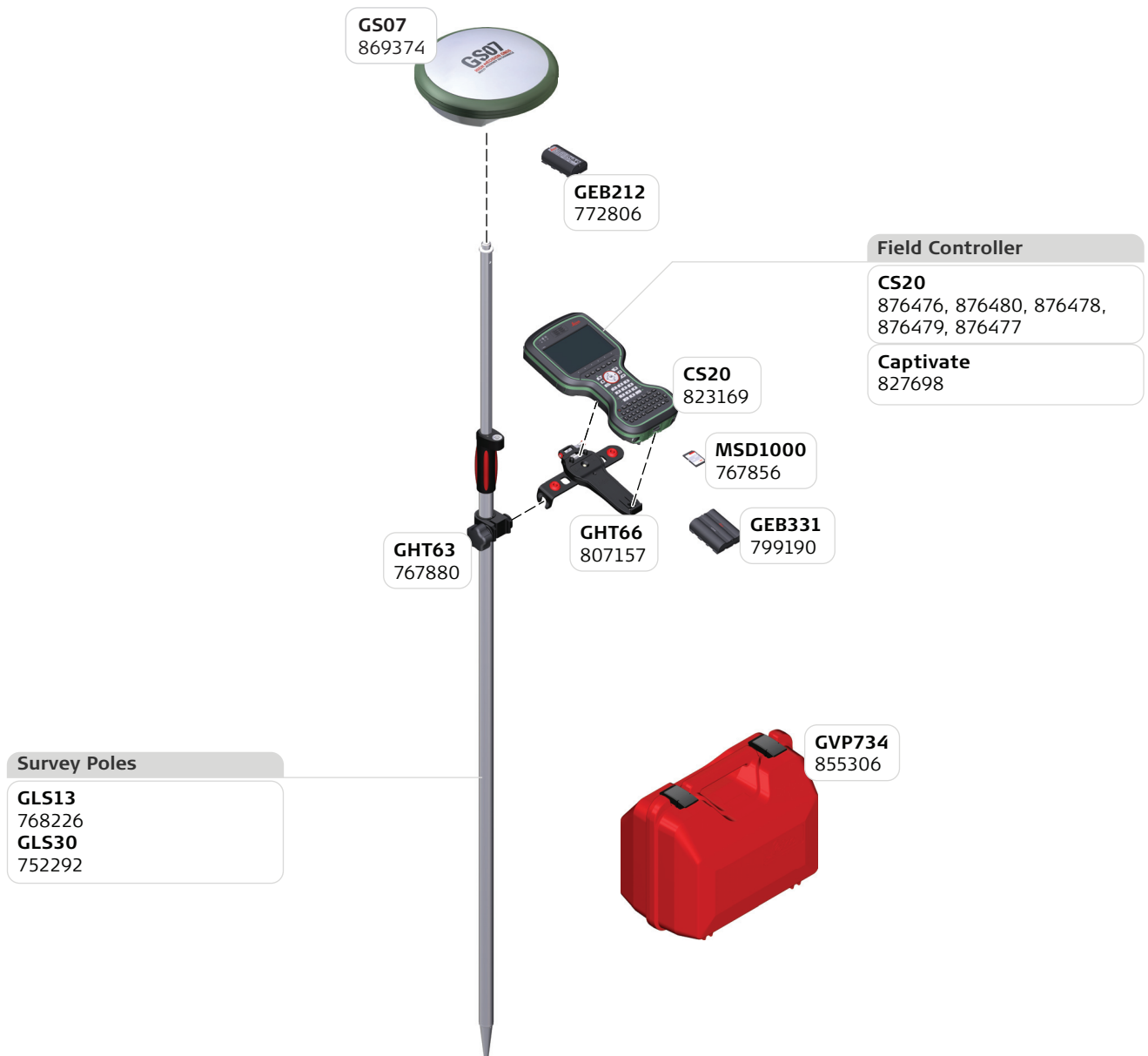


51.6 Using external RTK module and CS35 Tablet

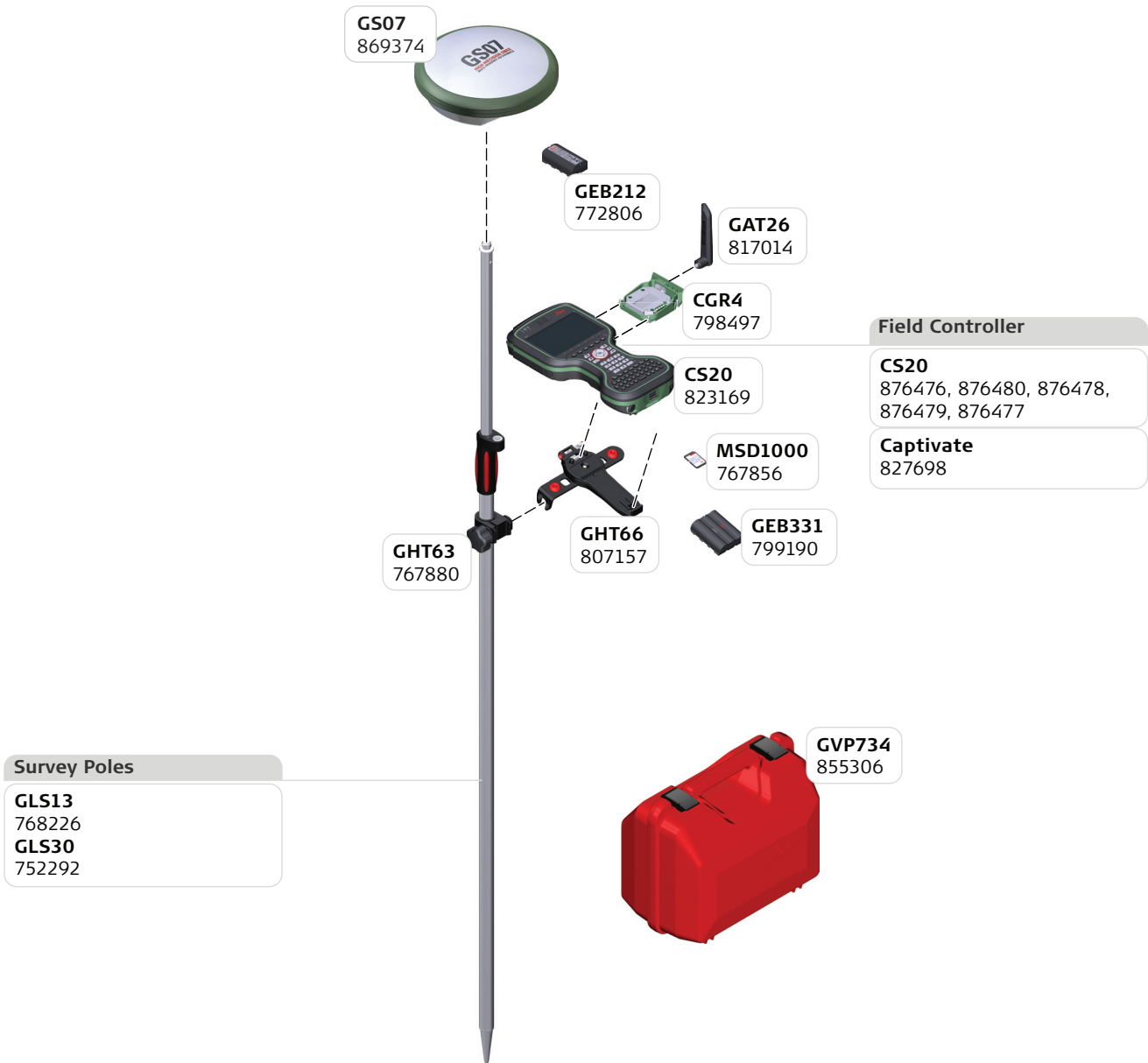


52 GS07 Real Time Rover

52.1 Using CS phone modem

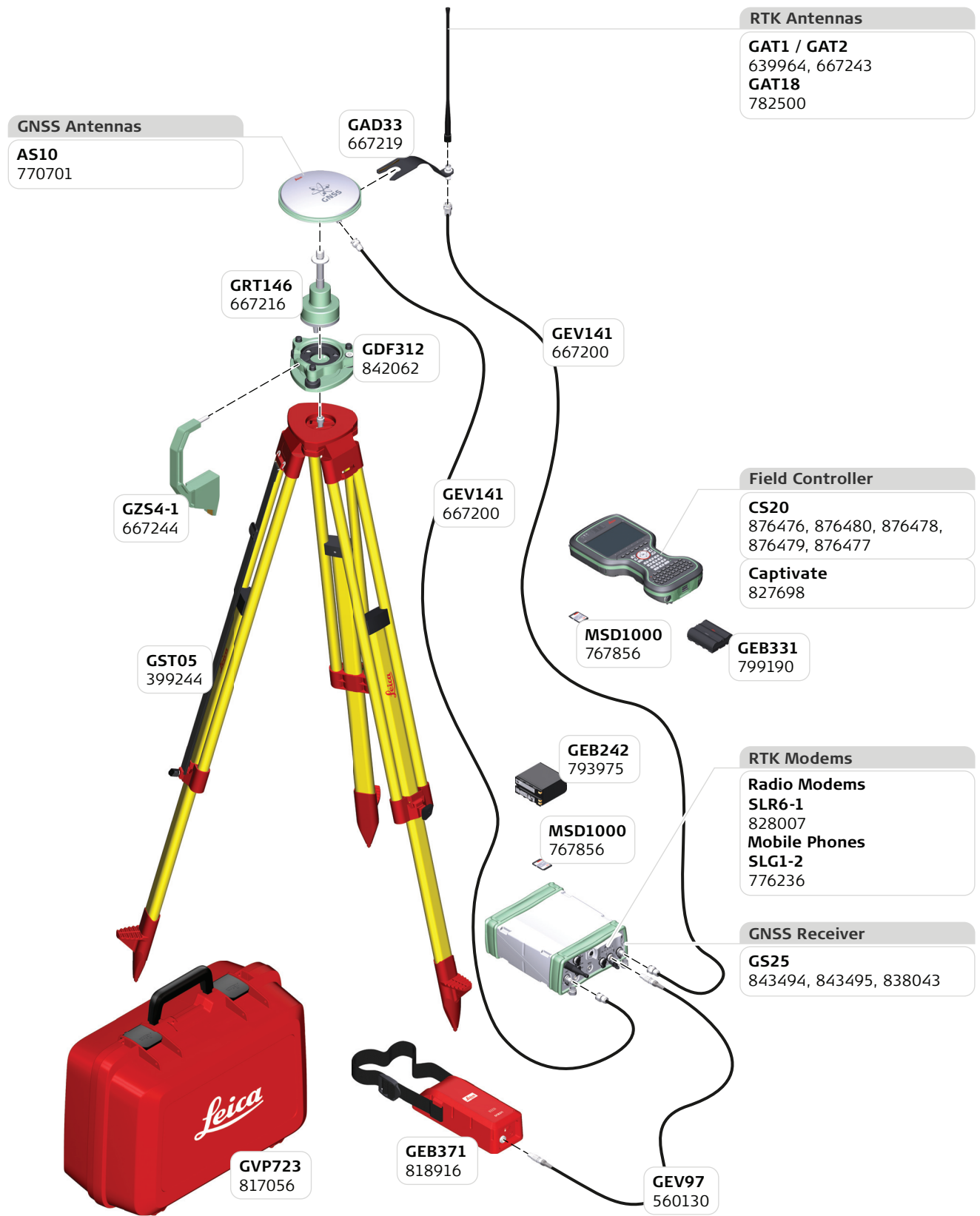


52.2 Using CGR UHF radio expansion pack

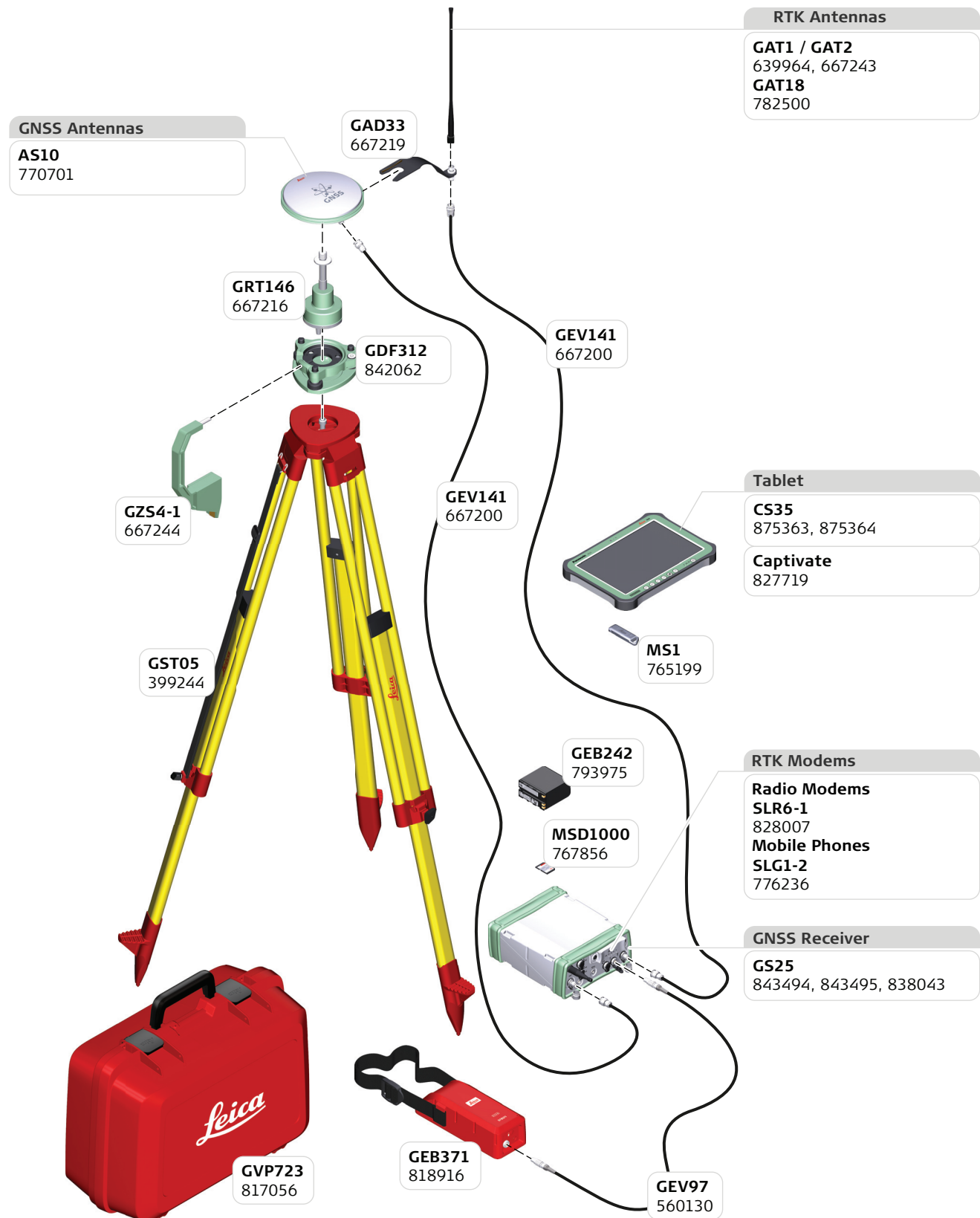


53 GS25 Real Time Reference - Tripod Setup

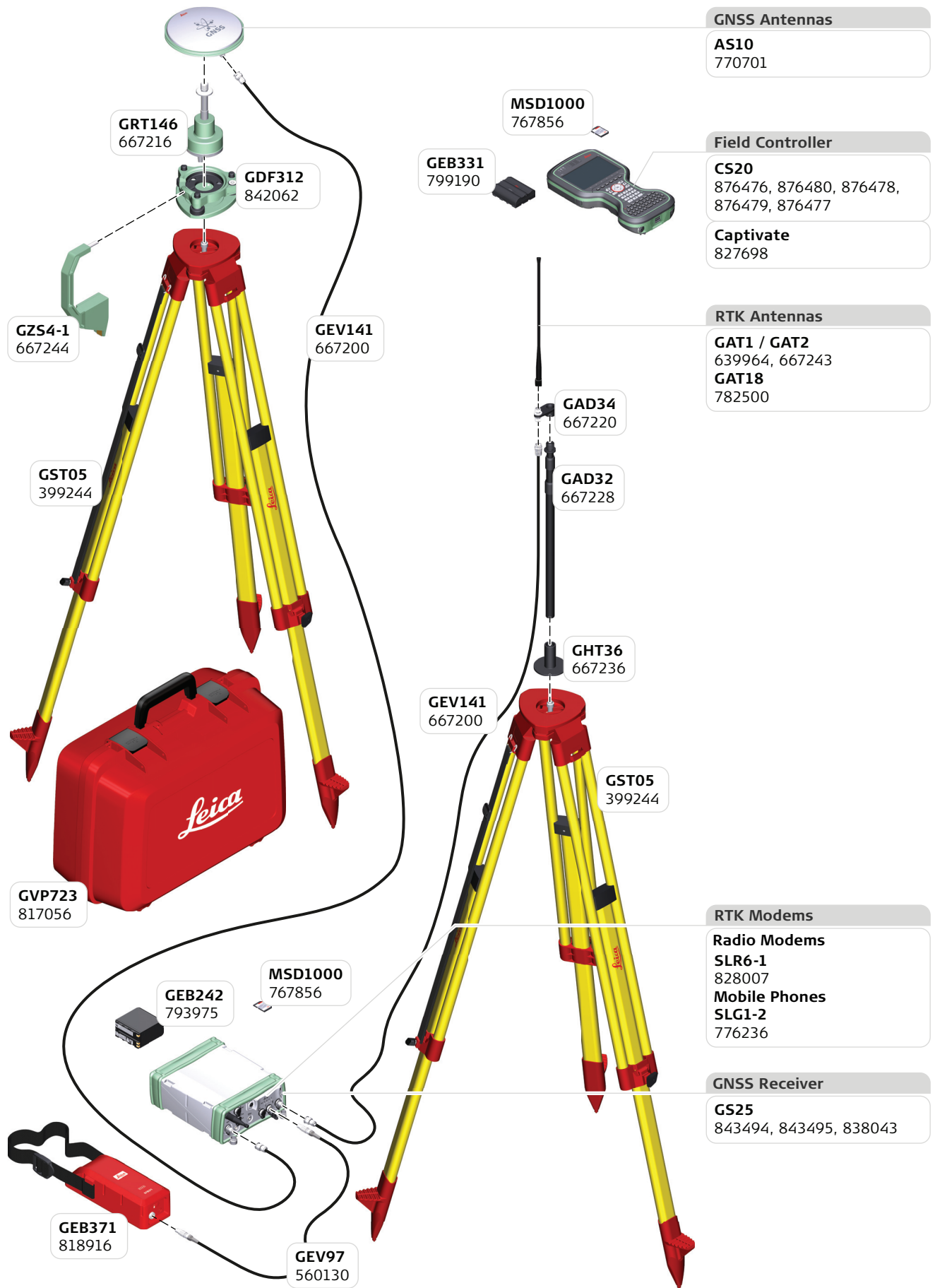
53.1 Using One Tripod and CS20 Field Controller



53.2 Using One Tripod and CS35 Tablet



53.3 Using Two Tripods and CS20 Field Controller



GNSS Antennas
AS10
 770701

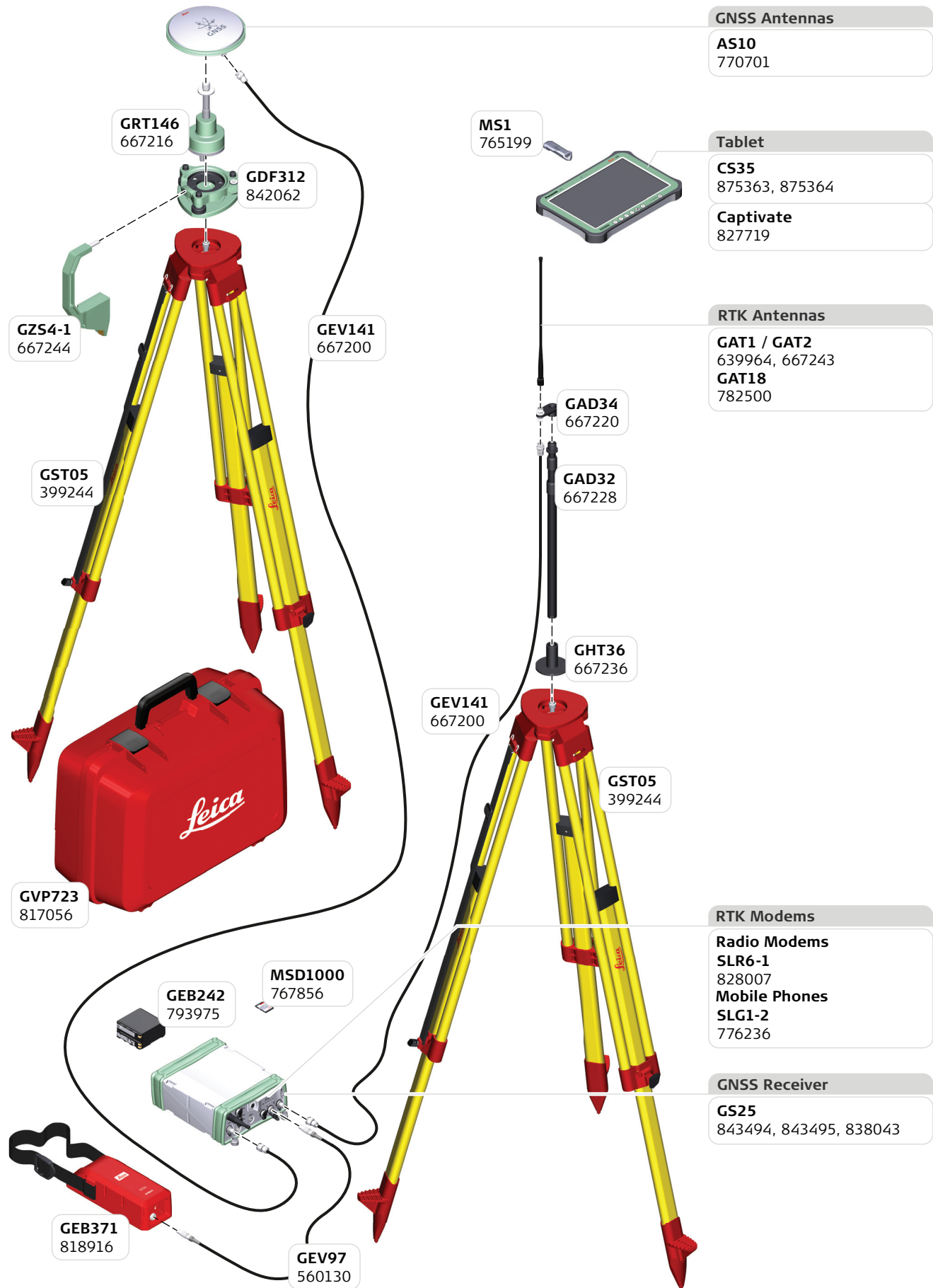
Field Controller
CS20
 876476, 876480, 876478,
 876479, 876477
Captivate
 827698

RTK Antennas
GAT1 / GAT2
 639964, 667243
GAT18
 782500

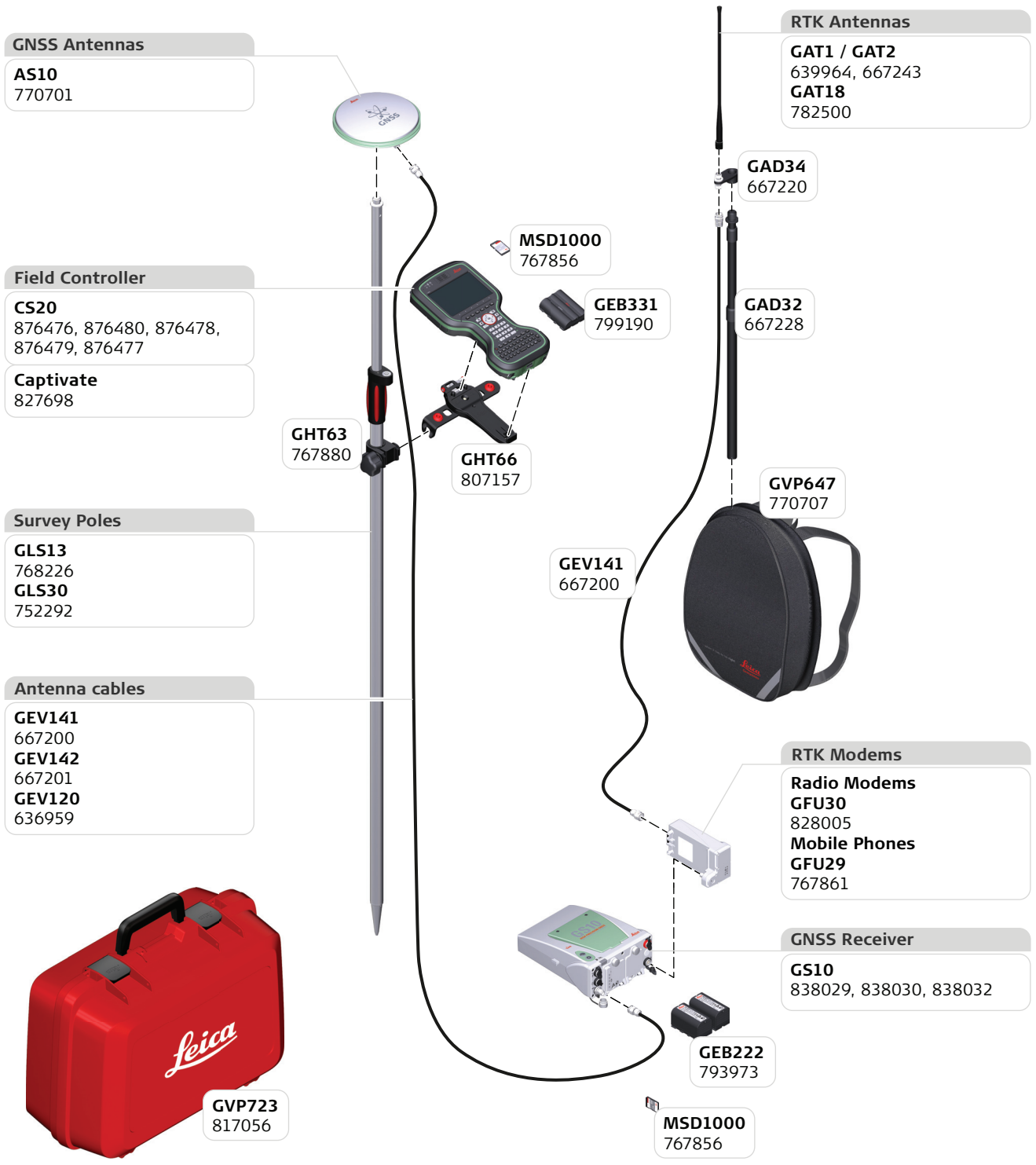
RTK Modems
Radio Modems
SLR6-1
 828007
Mobile Phones
SLG1-2
 776236

GNSS Receiver
GS25
 843494, 843495, 838043

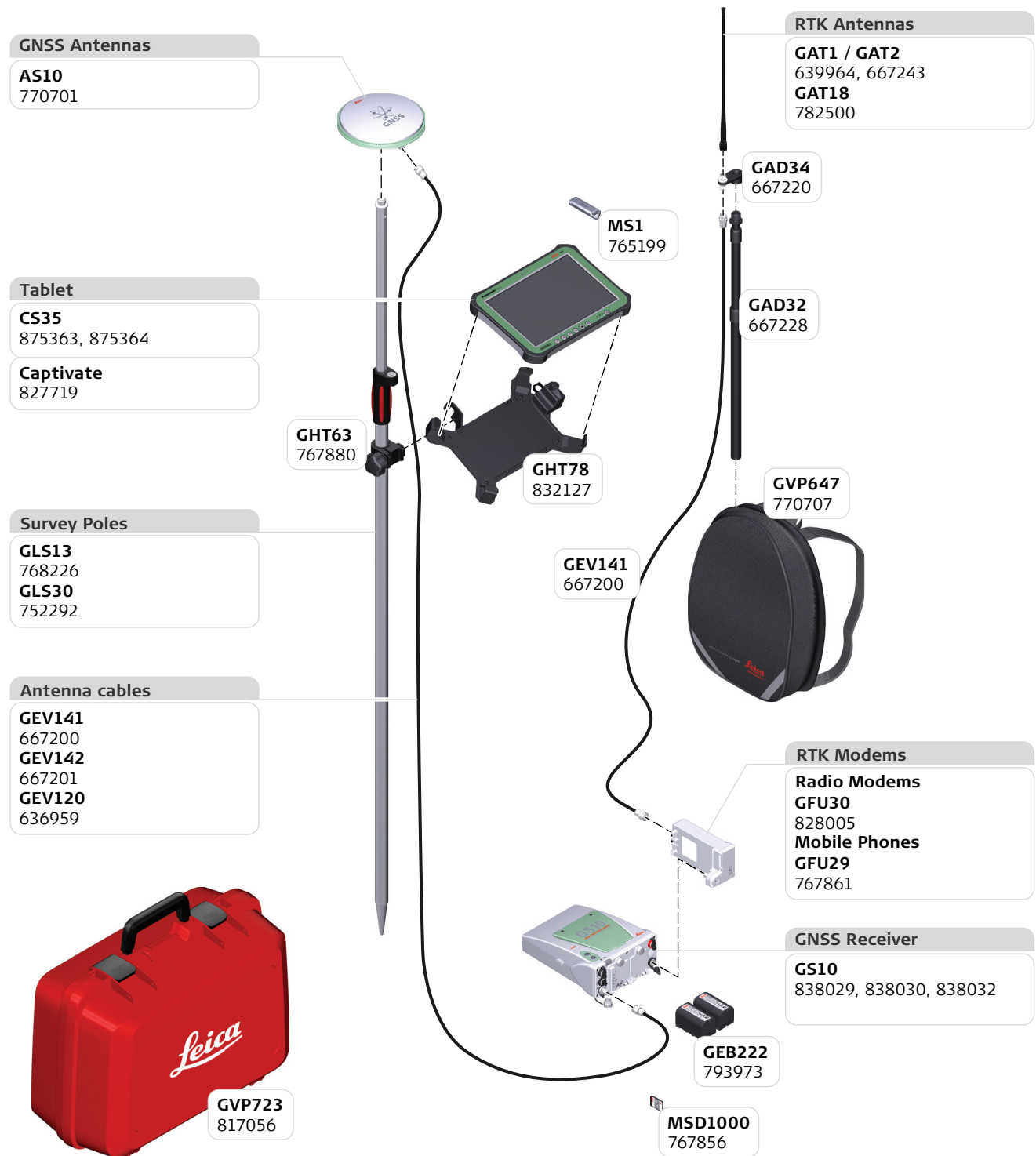
53.4 Using Two Tripods and CS35 Tablet



54 GS10 Real Time Rover - Pole plus Minipack and CS20 Field Controller

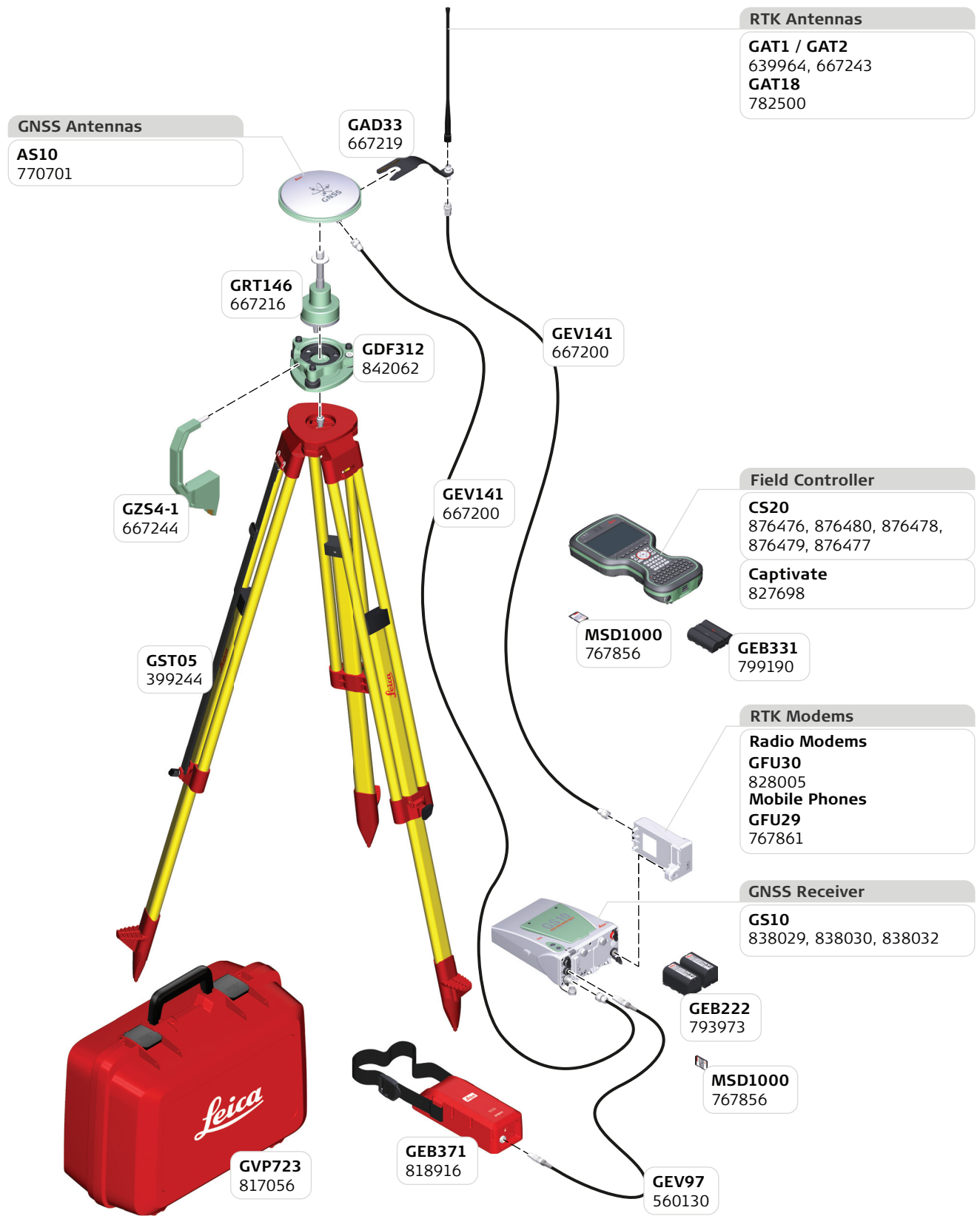


55 GS10 Real Time Rover - Pole plus Minipack and CS35 Tablet

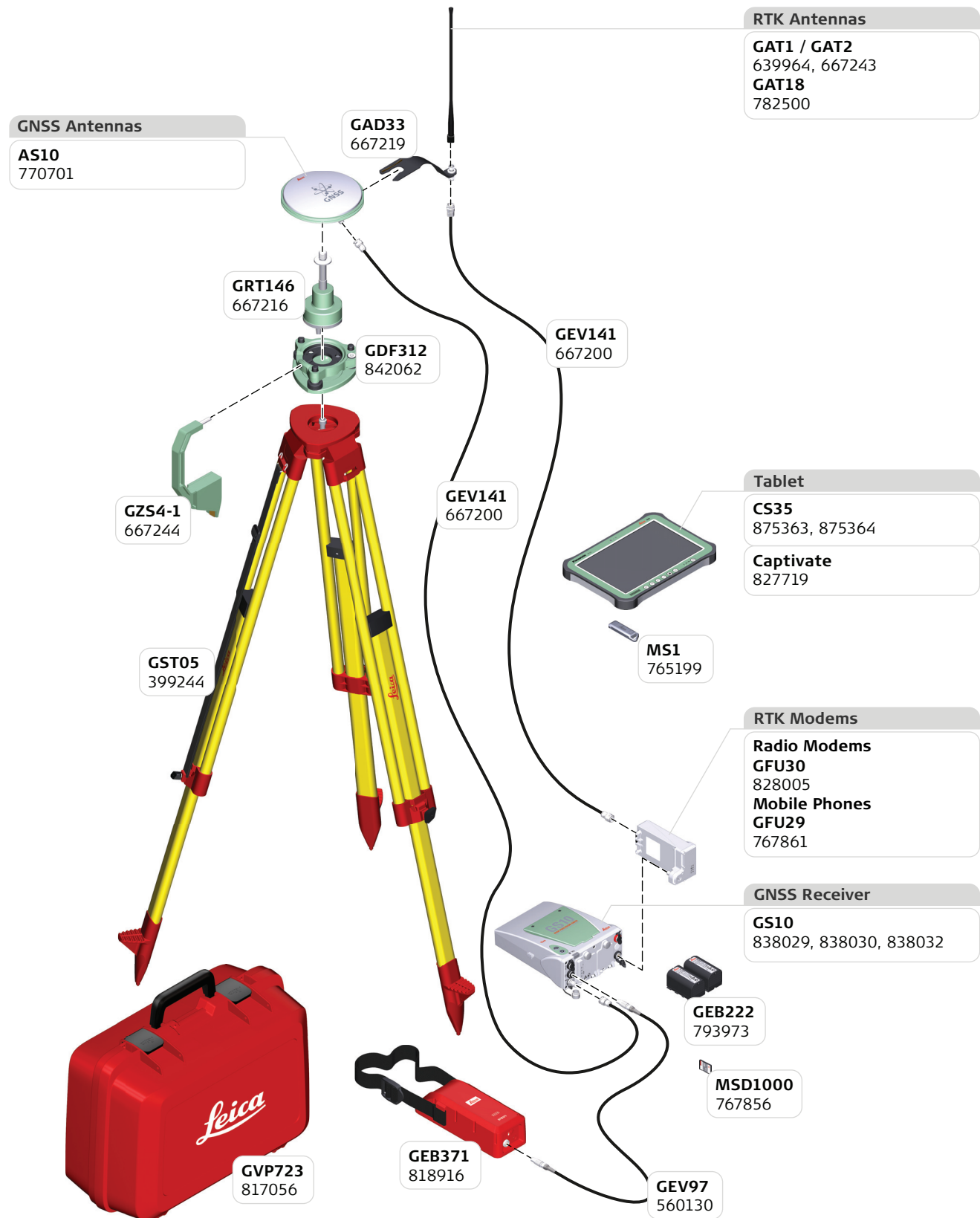


56 GS10 Real Time Reference - Tripod Setup

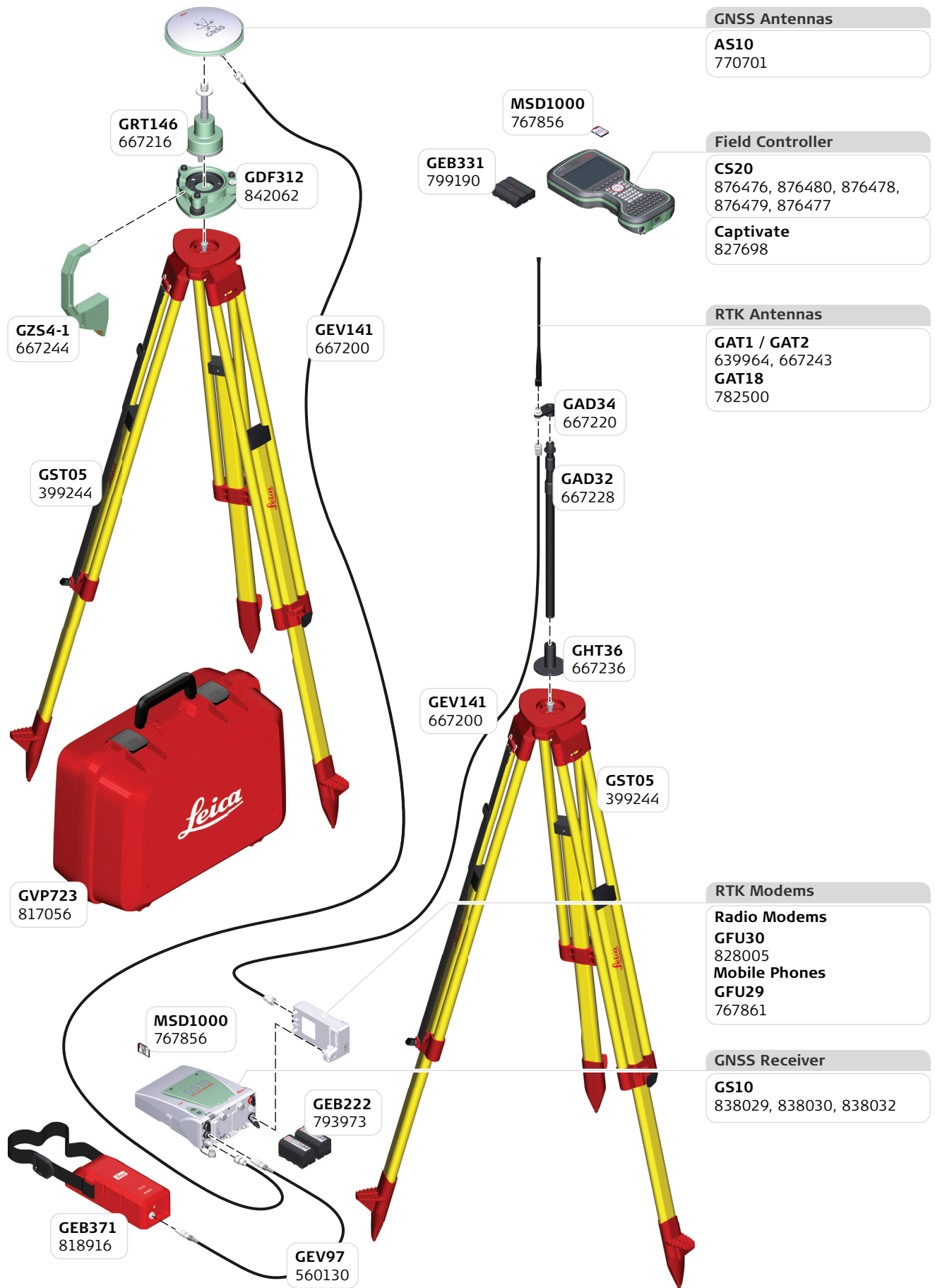
56.1 Using One Tripod and CS20 Field Controller



56.2 Using One Tripod and CS35 Tablet



56.3 Using Two Tripods and CS20 Field Controller



GNSS Antennas

AS10
770701

Field Controller

CS20
876476, 876480, 876478,
876479, 876477

Captivate
827698

RTK Antennas

GAT1 / GAT2
639964, 667243
GAT18
782500

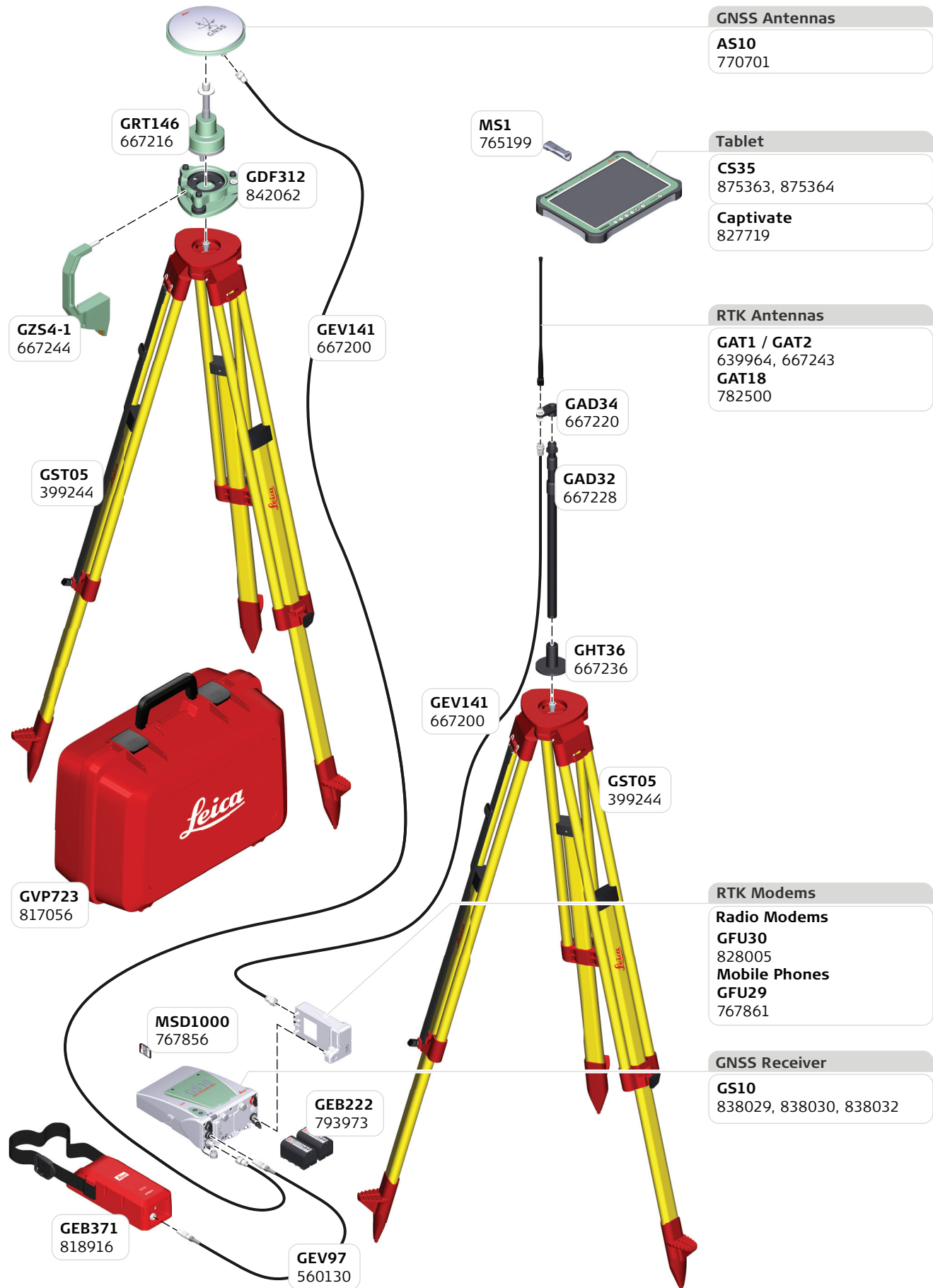
RTK Modems

Radio Modems
GFU30
828005
Mobile Phones
GFU29
767861

GNSS Receiver

GS10
838029, 838030, 838032

56.4 Using Two Tripods and CS35 Tablet



GNSS Antennas

AS10
770701

Tablet

CS35
875363, 875364

Captivate
827719

RTK Antennas

GAT1 / GAT2
639964, 667243
GAT18
782500

RTK Modems

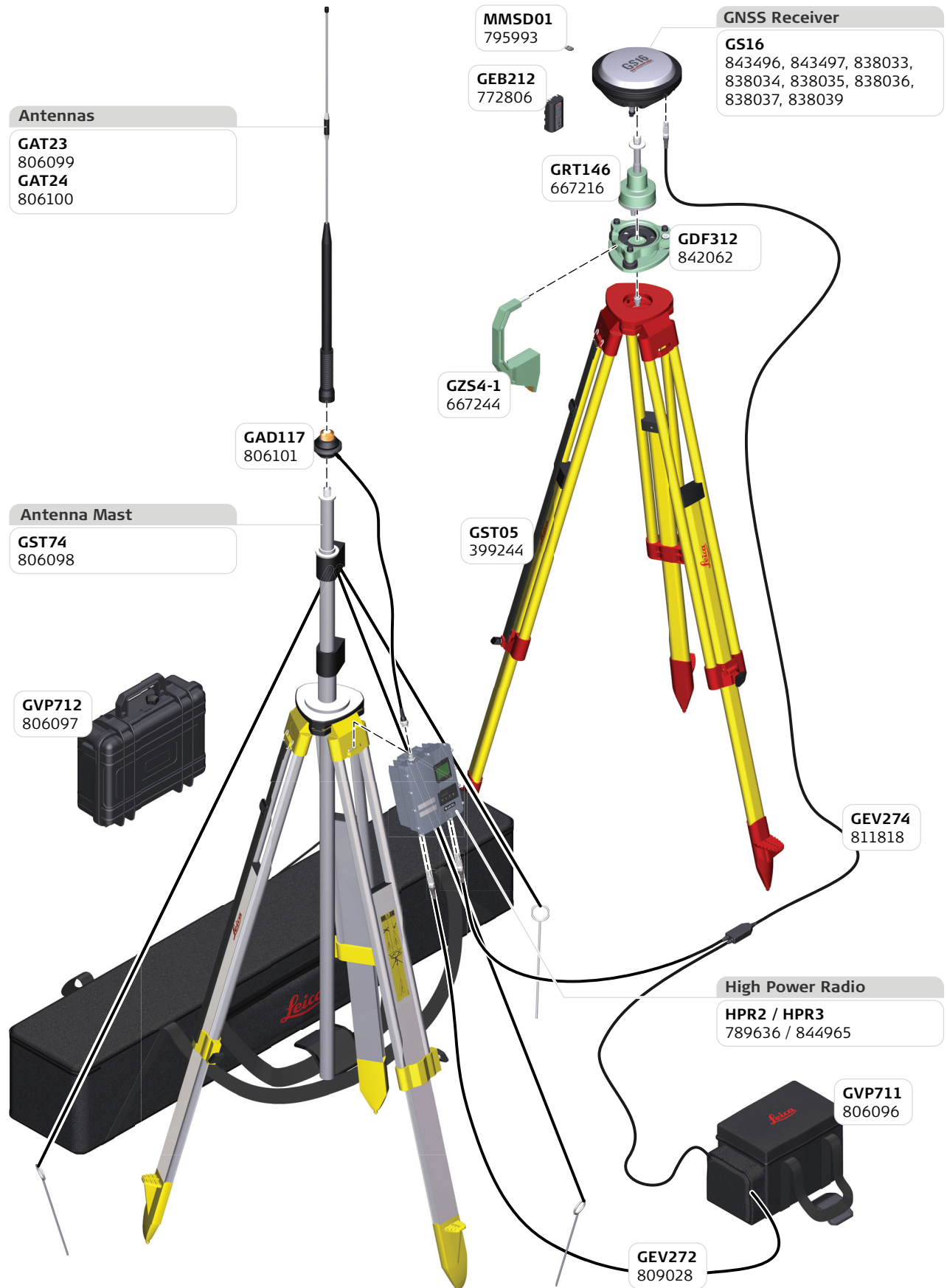
Radio Modems
GFU30
828005
Mobile Phones
GFU29
767861

GNSS Receiver

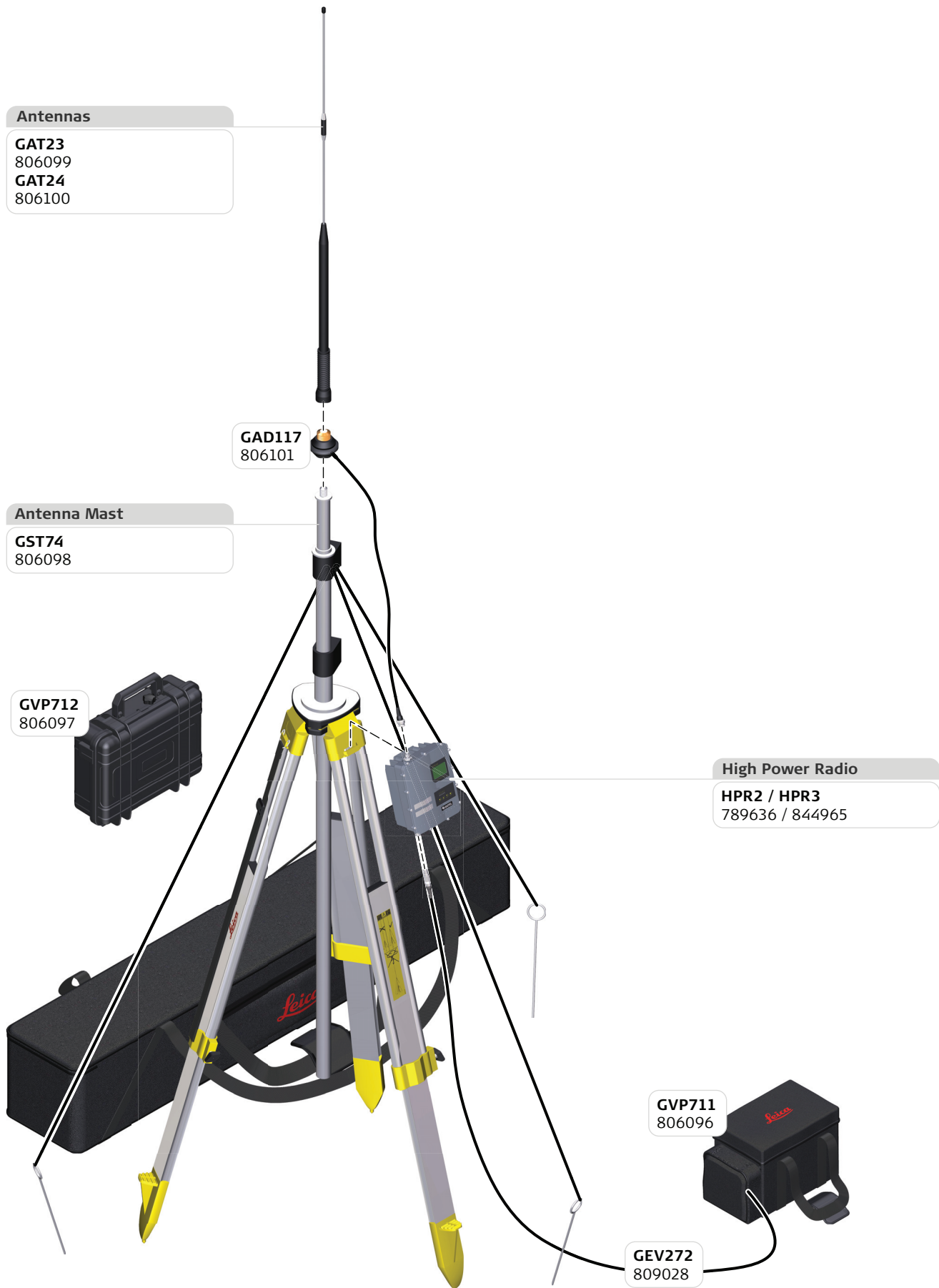
GS10
838029, 838030, 838032

57 Satellite High Power Radio (HPR)

57.1 Satellite High Power Radio Setup with GS16



57.2 Satellite High Power Radio Setup - Standalone



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846207 - 1.7.0en - IV.20

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