



2011 Catalog and Price List



You will see this RoHS Compliant icon displayed on many of the items listed herein. This means that the product does not contain lead as prohibited by the European Community and has been assembled using "Lead Free" silver solder.

GPAC is an aftermarket supplier of replacement cables and accessories. References made throughout this catalog to various manufacturers are made respective to the trademarks and copyrights of the individual owners to indicate the correct replacement cable or connector type only. This page and contents are copyrighted 2011 by GPS Precision Accessories Company, LLC

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Connector Identification



Heavy Duty Straight "N" connector (plug). This is a typical connector on older GPS Units and found on the Geodetic style antennas. The connector I supply is double soldered and extremely durable.



Straight "TNC" connector (plug). This is the most common connector employed on modern GPS units now. The "TNC" was invented by Paul Neill of Bell labs and Carl Concelman of the Amphenol Company and was dubbed the TNC (Threaded Neill-Concelman)



"TNC" right angle connector (plug)



"TNC" female (jack).



"BNC" connector. Found on Pacific Crest Radios and others. Invented by Paul Neill of Bell Labs and Carl Concelman of Amphenol and dubbed the BNC (Bayonet Neill-Concelman)

LEMO FFA.1E connector found on select Trimble GPS units and Topcon GB500 and GB1000 radios.



"SMB" (Sub-Miniature version B) connector. Used on the Thales Promark Receiver. This connector is carried in Right Angle (shown) and Straight styles.

About Antenna Cables

Antenna Cable

GPAC cables are constructed from Mil Specification, RG142B/U coaxial cable. This cable is chosen for its Strength, Durability and Electrical Properties.

Typical Original Equipment Manufacturers (OEM) cable is fabricated with a RG58 type cable.

Why is GPAC cable superior?

The most important characteristic of antenna cable is its signal transmission properties; how well it conducts the signal from the antenna to the GPS Receiver. The measure of this performance is stated as attenuation per given length. In other words how much of the initial signal is lost along the length before it reaches the receiver. RG142B/U delivers 63% STRONGER signal levels at any given length compared to OEM cables. This is pretty important when the signals are marginal.

The second important characteristic of antenna cable is its durability; how well it holds up over time. GPAC cables have a number of positive features that contribute to durability. For one, the cable jacket is Teflon as opposed to Polyethylene jacketed OEM cables. Teflon is more resistive to deformation and abrasion. Secondly, the center conductor in OEM cables is stranded copper as opposed to silver plated, copper clad steel in RG142B/U cable. Silver is a better conductor and steel is many times stronger than plain copper.

Lastly the shielding that protects the signal from stray noise and strong RF fields is a double layer silver coated copper as opposed to a single layer shield on OEM cables.

Stock Cable Lengths

Off the shelf cables are constructed in 3.5 meter (11.5 feet) lengths unless otherwise noted. Other lengths are available up to 30 meters (98.5 feet). For applications requiring lengths over 30 meters please contact us for specifics.

GPS Antenna Cables

Type "N" connectors are found on Geodetic & Marine Antennas. Older GPS receivers such as the Ashtech Z-12 use a Type "N" antenna connector. The body of the female connector is 15.6mm (0.62 inches) in diameter.

The TNC connector is the most common antenna connector used on current models of GPS equipment. The TNC is smaller than the type "N" connector. The body diameter of the Female Jack is 11mm (0.43 inches)



RAN3.5TNC

Right Angle N to TNC X 3.5 meters long. Standard Right Angle N connector to a Standard straight TNC connector.

Price Each: \$65.95



N3.5RAN

Heavy duty N to a Standard Right Angle N X 3.5 meters long. Use where a tight turn is required at one connector.

Price Each: \$71.50



N3.5N

Type "N" to Type "N" X 3.5 meters long. It features heavy duty N connectors.

Price Each: \$57.20



N3.5RATNC

Heavy duty N to a Right Angle TNC X 3.5 meters long. Use where a tight turn is required at the TNC connector.

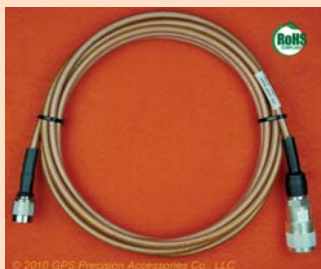
Price Each: \$57.20



TNC3.5TNC

TNC to TNC X 3.5 meters long. It fits almost every brand of GPS receivers.

Price Each: \$49.50



N3.5TNC

Type N to TNC X 3.5 meters long. Features a heavy duty N connector and a TNC straight connector.

Price Each: \$54.95



TNC3.5RATNC

TNC to Right Angle TNC X 3.5 meters long.

Price Each: \$51.70

RPTNC3.5RATNC

Reverse Polarity TNC to Right Angle TNC X 3.5 meters long. For Topcon Hiper 900MHz antenna jack.



Price Each: \$51.70

TNC3.5FMTNC

TNC Female to TNC Male X 3.5 meters long. Used as an extension cable.



Price Each: \$51.70

TNC3.5RPTNC

TNC to Reverse Polarity TNC X 3.5 meters long. For Topcon Hiper 900MHz antenna jack.



Price Each: \$51.70

BNC GPS Antenna Cables.

The BNC connector is used on Pacific Crest GPS equipment. The BNC connector is about the same size as the TNC except it has no thread and has 2 opposing pins on the body.

The body diameter of the Female Jack is approximately 9.7mm (0.38 inches)

RPRATNC3.5RATNC

Reverse Polarity, Right Angle TNC to Right Angle TNC X 3.5 meters long. For Topcon HiPer 900MHz.



Price Each: \$51.70

BNC3.5FMBNC

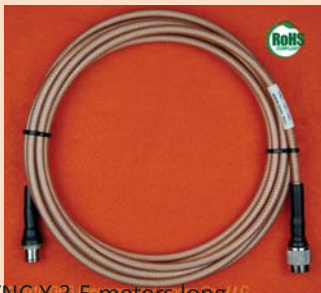
BNC to Female BNC X 3.5 meters long. Used primarily to extend a BNC cable.



Price Each: \$51.70

TNC3.5QCTNC

TNC to Quick Connectable TNC X 3.5 meters long.



Price Each: \$51.70

TNC3.5BNC

TNC to BNC X 3.5 meters long. Used primarily to connect a Pacific Crest HPB antenna jack to the whip antenna adaptor base.



Price Each: \$49.50

RATNC3.5BNC

RA TNC to BNC X 3.5 meters long. Used primarily to connect a Pacific Crest HPB to an antenna adapter.



Price Each: \$51.70

RAN10.0FFA1E

Right Angle N to LEMO FFA.1E connector X 10 meters long. Used with Trimble or Topcon GPS Equipment.



Price Each: \$185.00

FFA GPS antenna Cables

The LEMO FFA.1E coaxial connector is used on certain models of Trimble and Topcon GPS equipment. The connector is a latching type connector, push on / pull off. It has 3 equally spaced latching tabs around the outside approximately 9mm (0.36 inches) back from the front edge. The connector is approximately 12.1mm (0.48 inches) in diameter.

Handheld GPS Antenna Cables.

Antenna cables for Trimble GeoExplorer GeoXH, GeoXM, and GeoXT; Thales Promark II and Promark III and Mobile Mapper handheld GPS units

TNC3.5FFA1E

TNC to LEMO FFA.1E connector X 3.5 meters long. Used with Trimble or Topcon GPS Equipment.



Price Each: \$110.00

TNC1.5SMB

SMB to TNC X 1.5 meter long. Connects the Thales Promark & Promark II to a standard TNC equipped antenna. Constructed of RG316 Teflon Coax.



Price Each: \$55.00

N10.0FFA1E

Heavy Duty N to LEMO FFA.1E connector X 10 meters long. Used with Trimble or Topcon GPS Equipment.



Price Each: \$172.00

TNC1.5RASMB

Right Angle SMB to TNC X 1.5 meter long. Connects the Thales Promark & Promark II to a standard TNC equipped antenna. Constructed of RG316 Teflon Coax.



Price Each: \$55.00



TNC1.5FFA.00

LEMO FFA.00 to TNC X 1.5 meter long. Connects the Thales Mobile Mapper or the Thales Promark III to a standard TNC equipped antenna.

Price Each: \$77.00



ANRA

Right Angle Type N adapter. Used to make N connections in tight spaces. Chrome plated brass and low VSWR.

Price Each: \$30.00



TNCRA1.5SMB

Right Angle TNC to SMB Plug X 1.5 meters long. Connects Trimble GeoExplorer to the Zephyr antenna. Constructed with RG316 Teflon Coax.

Price Each: \$55.00



ANTNCFM

TNC Female to Male Type N. Used to adapt a TNC cable to a Type N jack. Chrome plated brass and low VSWR.

Price Each: \$20.00

RF Cable Adapters

Various RF coaxial cable adapters to convert cable gender, type, and or direction.



ATNCFM

TNC Female Barrel Adapter. Used to join 2 TNC male cables. Chrome plated brass and low VSWR.

Price Each: \$15.00



ABNCFMTNC

BNC Female to TNC Male Adapter. Between series RF cable adapter. Used to adapt a BNC male plug to TNC female jack. Chrome plated brass and low VSWR.

Price Each: \$15.00



ATNCM

TNC double Male adapter. Used to join 2 Female TNC connectors. Chrome plated brass and low VSWR.

Price Each: \$15.00



ATNCRA

Right Angle TNC adapter. Used to make TNC connections in tight spaces. Chrome plated brass and low VSWR.

Price Each: \$15.00



ABNCTNCFM

BNC Male to TNC Female Adapter. Between series RF cable adapter. Used to adapt a BNC female jack to TNC male plug. Chrome plated brass and low VSWR.

Price Each: \$15.00



AFFATNC

Adapter cable to convert an existing Trimble antenna cable with a LEMO FFA.1E coaxial connector to a TNC jack.

Price Each: \$55.00

Ashtech Data, Communication, & Power Cables

Connector Types and Sizes used by Ashtech

Z-Surveyor & Extreme Data & Power Plug Diameter = 6.9mm (0.27 inches)

Data Ports - Fischer S102 7-pin or ODU S10F1C 7-pin

Power Port - Fischer S102 3-pin or ODU S10F1C 3-pin

Z-12 Power Plug Diameter = 9.0mm (0.35 inches)

Power Port - Fischer S103 3-pin or ODU S11F1C

Z-12 Data Plug Diameter = 12.0mm (0.47 inches)

Data Port – Fischer S104 16-pin or ODU S12F1C

M-12 Power Plug Diameter = 11.4mm (0.45 inches)

Power Port – Amphenol MS310 3-pin female

If your Ashtech model is not listed but the plug style and pin count matches, the listed replacement cable will work correctly.

Cables that utilize a SAE 2-pin power connector are wired such that the exposed pin is B+



AZHPB

Ashtech Z-Surveyor & Extreme to Pacific Crest RFM96W or PDL HPB Modem cable. Fischer / ODU 7-pin male to LEMO 1B 5-pin male by 80" long. With SAE 2-pin flat connector.

Price Each: \$199.00

AZLPB

Ashtech GPS Z-Surveyor & Extreme to Pacific Crest RFM96W LPB. Equipped with a Fischer / ODU 7-pin on one end and a LEMO 0B 5-pin on the other.



Price Each: \$171.00

AZ12DL

Ashtech GPS Z-Surveyor Data Collector / PC cable. Equipped with a DB9F Serial connector and a Fischer / ODU 16-pin connector. 2 meter (80 inches) OAL.



Price Each: \$199.00

AZPDL

Ashtech GPS Z-Surveyor to a Pacific Crest PDL. Equipped with a Fischer / ODU 7-pin and a LEMO 0B Right Angle 5-pin. Supplies power to the PDL from the receiver.



Price Each: \$181.00

AZHDPWR

Ashtech GPS Z-Surveyor Power Cable. Comes with a Fischer / ODU 3-pin connector HD Clips fuse holder & 10A fuse. 2 meter (80 inches).



Price Each: \$115.00

AZDLCOIL

Ashtech GPS Z-Surveyor Data Collector / PC cable. Equipped with a DB9F Serial connector and a Fischer / ODU 7-pin connector. 14" coil cord extends approximately 48".



Price Each: \$171.00

AZ12HDPWR

Ashtech GPS Z-12 Power Cable. Comes with a Fischer / ODU 3-pin connector HD Clips fuse holder & 10A fuse. 2 meter (80 inches).



Price Each: \$125.00

AZDL

Ashtech GPS Z-Surveyor Data Collector / PC cable. Equipped with a DB9F Serial connector and a Fischer / ODU 7-pin connector. 2 meter (80 inches) OAL.



Price Each: \$171.00

AZPWR

Ashtech GPS Z-Surveyor Power Cable. Comes with a Fischer / ODU 3-pin connector HD Clips 2 meter (80 inches) OAL.



Price Each: \$105.00



AZ12PWR

Ashtech GPS Z-12 Power Cable. Comes with a Fischer / ODU 3-pin connector HD Clips 2 meter (80 inches) OAL.

Price Each: \$115.00



AZPWRCOIL

Ashtech GPS Z-Surveyor Power Cable. Comes with a Fischer / ODU 3-pin & an Amphenol 3-pin connector. It fits the standard Ashtech Bag Battery & flashlight/battery pack.

Price Each: \$165.00



AZ12PWRCOIL

Ashtech GPS Z-12 Power Cable. Comes with a Fischer / ODU 3-pin & an Amphenol 3-pin connector. It fits the standard Ashtech Bag Battery.

Price Each: \$165.00



AM12PWR

Ashtech GPS M-12 Power Cable. Comes with a Amphenol 3-pin connector on one end and HD clips, fuse holder & 10A fuse. Overall length is 80 inches (2 meters).

Price Each: \$125.00



LGEV97

GEV97 Replacement Power Cable. LEMO 1B size 5-pin connectors on both ends. This cable can also be used to separate the Terminal from the SR530. 2 meter overall length (80 inches)

Price Each: \$171.00

Leica Data, Communication, & Power Cables

Connector Types and Sizes used by Leica

System 500 GPS Uses LEMO connectors for Data & Power

Ports 1 & 3 Data uses FGA.1B 8-pin

Port 2 Power uses FGG.1B 5-pin

Terminal Port uses FGG.1B 5-pin

System 1200 GPS Uses LEMO connectors for Data & Power

Ports 1-3 Data uses FGA.1B 8-pin

Power Port uses FGG.1B 5-pin

RX Port uses FGI.1B 8-pin

Cables that utilize the same exact connector are interchangeable between the System 500 and 1200 GPS Units only.

Cables that utilize a SAE 2-pin power connector are wired such that the exposed pin is B+

LGEV160

GEV160 Replacement Cable. Equipped with a LEMO 1B 8-pin and a DB-9F Serial port connector. 2 meter overall length (80 inches).



Price Each: \$155.00

L530HPB

Data cable to connect SR530 series GPS Receivers to a Pacific Crest RFM96W HPB. Equipped with a LEMO 1B 8-pin and a LEMO 1B 5-pin connector. Equipped with a SAE 2-pin for power. 2 meter overall length (80 inches)



Price Each: \$199.00

LGEV163

System 1200 RX port to RX1250 Controller. Equipped with LEMO FGI connectors on both ends. Similar to Leica GEV 163 cable. 2 meter overall length (80")



Price Each: \$171.00

L530HPBCLIP

Data cable to connect SR530 to a Pacific Crest RFM96W HPB. Equipped with a LEMO 1B 8-pin and 1B 5-pin connector. With fuse and holder & HD clips. 2 meter overall length (80 inches)



Price Each: \$199.00

LGEV173

System 1200 RX1250 Controller to Smart antenna. 1.2 meters long. Equipped with LEMO FGI connectors on both ends. Similar to Leica GEV 173 cable.



Price Each: \$171.00

L530LPB

Data cable to connect SR530 to a Pacific Crest RFM96W LPB rover. Equipped with a LEMO 1B 8-pin and 5-pin connector. This cable supplies power to the LPB Rover. 2 meter overall length (80 inches)



Price Each: \$171.00

LGEV215

Wye cable to connect the Leica Smart Antenna and the RX1250 to a GEB171 battery. Also works with the GS09 Smart Antenna and the CS09 controller with a GEB171 battery. 2 meter overall length (80")



Price Each: \$240.00

L530PDL

Data cable connects SR530 GPS Receivers to a Pacific Crest PDL rover. Equipped with a LEMO 1B 8-pin and a Right Angle 0B 5-pin connector. This cable supplies power to the PDL. 2 meter overall length (80 inches)



Price Each: \$181.00

L5303AS

SR530 to a Satel 3AS radio. Equipped with a LEMO 1B 8-pin and a DB15M 15-pin connector. Comes with fuse holder, fuse, and HD clips. 2 meter overall length (80")



Price Each: \$199.00

LGFU6pc

Data cable used to program the Leica GFU6 (Pacific Crest) radio. Equipped with a female LEMO connector that mates with the GFU6 connector pins, a DB9F PC connector, and a SAE2-pin power connector. Overall length is 2.0 meters.



Price Each: \$179.00

L5303ASd

SR530 to a Satel 3ASd radio. Equipped with LEMO 1B 8-pin connectors. Comes with fuse holder, fuse, and HD clips. 2 meter overall length (80")



Price Each: \$199.00

LGS5+

Download cable fits Leica GS5+ and GS20 series GPS Receivers. Equipped with a 8-pin Switchcraft connector and a DB-9F Serial connector. 2 meter overall length (80 inches)



Price Each: \$125.00

L5303ASdATO

SR530 to a Satel 3ASd radio. Equipped with LEMO 1B 8-pin connectors. Comes with ATO fuse holder, fuse, and SAE 2-pin. 2 meter overall length (80")



Price Each: \$199.00

LTC802

This wye cable is used to connect a Leica TC802, TCRA1103, and other Leica instruments with a Lemo FGA.0B 5 pin receptacle to a GEB-171 battery pack and computer or data collector. 2 meter overall length (80")



Price Each: \$199.00

L530PWR

Power cable for System 500 / 1200. With fuse holder, fuse and HD clips. 2 meter overall length (80")



Price Each: \$115.00

LTC802PWR

Power cable for Leica TC802, TCRA1103, and other Leica instruments with a Lemo FGA.0B 5 pin receptacle. With Fuse holder, fuse & HD clips. 2 meter overall length (80")



Price Each: \$115.00

Sokkia Data, Communication, & Power Cables

Connector Types and Sizes used by Sokkia

Sokkia 2300 GPS Uses Fischer or ODU connectors for Data & Power

Data Ports are Fischer S102 7-pin or ODU S10F1C 7-pin

Power Port is a Fischer S102 3-pin or ODU S10F1C 3-pin

Sokkia GSR2600, GSR2700 and Radian GPS Uses LEMO connectors for Data & Power

Data Port is a LEMO FGG.1K 10-pin

Power Port (except Radian) uses FGG.0B 4-pin

Radian Power Port is a FGM.0B 4-pin (Receiver port has male pins)

Cables that utilize a SAE 2-pin power connector are wired such that the exposed pin is B+

S23LPB

Data cable connects Sokkia GSR2300 to Pacific Crest RFM96W LPB rover. Equipped with an ODU / Fisher 7-pin and a LEMO 0B 5-pin connector. 2 meter overall length (80")



Price Each: \$171.00

S23PDL

Data cable connects Sokkia GSR2300 to Pacific Crest PDL rover. Equipped with an ODU / Fisher 7-pin and a Right Angle LEMO 0B 5-pin connector. 2 meter overall length (80")



Price Each: \$181.00

S23HPB

Data cable connects Sokkia GSR2300 to Pacific Crest RFM96W HPB base radio or PDL HPB. Equipped with an ODU / Fisher 7-pin and a LEMO 1B 5-pin connector with a SAE 2-pin connector. 2 meter overall length (80")



Price Each: \$199.00

S23DL

Data cable to connect the Sokkia GSR2300 to a computer or data collector. Equipped with a ODU / Fisher 7-pin connector at one end and a DB-9F connector on the other end. 2 meter overall length (80")



Price Each: \$171.00

S23HPBCLIP

Data cable connects Sokkia GSR2300 to Pacific Crest RFM96W HPB base radio or PDL HPB. Equipped with an ODU / Fisher 7-pin and a LEMO 1B 5-pin connector with a fuse and HD clips. 2 meter overall length (80")



Price Each: \$215.00

S23PWR

Power cable for Sokkia GSR2300 GPS Receivers. Equipped with a ODU / Fisher 3-pin and Heavy Duty Alligator Clips. 2 meter overall length (80")



Price Each: \$105.00

S23HDPWR

Power cable for Sokkia GSR2300 GPS Receivers. Equipped with a ODU / Fisher 3-pin Weather resistant fuse holder, fuse, and Heavy Duty Alligator Clips. 2 meter overall length (80")



Price Each: \$115.00

S27HPB

Data cable connects GSR2700 to a Pacific Crest RFM96W HPB base radio or PDL HPB. Equipped with an LEMO 1K 10 pin & 1B 5-pin connector with a SAE 2-pin connector. 2 meter overall length (80")



Price Each: \$215.00

S27DL

Data cable to connect GSR2700 to a computer or data collector. Equipped with a LEMO 1K 10-pin connector and a DB-9F connector. Overall length is 2.0 meters (80")



Price Each: \$171.00

S27LPB

Data cable connects GSR2700 to a Pacific Crest RFM96W LPB rover. Equipped with an LEMO 1K 10 pin & 0B 5-pin connector. 2 meter overall length (80")



Price Each: \$181.00

S27PDL

Data cable connects GSR2700 to a Pacific Crest PDL rover. Equipped with an LEMO 1K 10 pin & 0B 5-pin connector. 2 meter overall length (80")



Price Each: \$181.00

S27HPBCLIP

Data cable connects GSR2700 to Pacific Crest RFM96W HPB base radio or PDL HPB. Equipped with an LEMO 1K 10 pin & 1B 5-pin connector with fuse & holder, & HD Clips. 2 meter overall length (80")



Price Each: \$225.00

S27DAP

Data cable to connect the GSR2700 to the DAP Data collector. Equipped with a LEMO 1K 10-pin and a ODU / Fischer 7-pin connector. Overall length is 2.0 meters (80")



Price Each: \$181.00

S273ASd

Data cable connects GSR2700 to Satel 3ASd modem. Equipped with an LEMO 1K 10 pin & 1B 8-pin connectors with fuse & holder, & HD Clips. 2 meter overall length (80")



Price Each: \$225.00

S27HDPWR

Power cable for Sokkia GSR2700 GPS Receivers. Equipped with a LEMO 0B 4-pin Weather resistant fuse holder, fuse, and HD Clips. Overall length is 2 meters (80")



Price Each: \$115.00

S273AS

Data cable connects GSR2700 to Satel 3AS modem. Equipped with an LEMO 1K 10 pin & DB15M connector with fuse & holder, & HD Clips. 2 meter overall length (80")



Price Each: \$215.00

S27PWR

Power cable for Sokkia GSR2600 and GSR2700 GPS Receivers. Equipped with a LEMO 0B 4-pin and Heavy Duty Alligator Clips. Overall length is 2 meters (80")



Price Each: \$105.00

SRPWR

Power cable for Sokkia Radian GPS Receivers. Equipped with a LEMO 0B 4-pin FEMALE connector and SAE 2-pin. Overall length is 1 meter (40")



Price Each: \$85.00

Topcon Data, Communication, & Power Cables

Connector Types and Sizes used by Topcon

GB500, GB1000, Hiper, Hiper Lite, & Hiper + all use Fischer / ODU connectors

Data Ports are 7-pin connectors

Power Port uses a 5-pin connector

Cables that utilize a SAE 2-pin power connector are wired such that the exposed pin is B+

TOPHPB

This cable connects Topcon to the Pacific Crest RFM96W HPB. Configured with an ODU 7-pin to LEMO 1B 5-pin. Comes with the standard SAE 2-pin flat connector wired to the LEMO 5-pin connector. 2 meter overall length (80")



Price Each: \$199.00

TOPHPBCLIP

This cable connects Topcon to the Pacific Crest RFM96W HPB. Configured with an ODU 7-pin to LEMO 1B 5-pin. Comes with 40 inch power lead w/Fuse & holder, spliced midway between ends. 2 meter overall length (80")



Price Each: \$215.00

TOPPDL

This cable connects the Topcon GB-500, GB1000, and Hiper to the Pacific Crest PDL Radio Modem. Configured with an ODU 7-pin male to LEMO 0B Right Angle 5-pin male by 2 meters (80") long.



Price Each: \$181.00

TOPPWR

Topcon GB-500, GB1000, and Hiper Power Cable with Heavy Duty alligator clips. 2 meters (80") long.



Price Each: \$105.00

TOPLPB

This cable connects the Topcon GB-500, GB1000, and Hiper to the Pacific Crest RFM96W LPB Radio Modem. Configured with an ODU 7-pin male to LEMO 0B 5-pin male by 2 meters (80") long.



Price Each: \$171.00

TOP3AS

This cable connects Topcon to Satel 3AS Epic Modem. Configured with an ODU 7-pin male to DB-15M plug by 2 meters (80") long. A 40 inch power cable with fuse & holder & HD alligator clips, is spliced midway between ends.



Price Each: \$199.00

TOPDL

Topcon GB-500, GB1000, and Hiper Data Collector / PC Cable. Configured with an ODU 7-pin male to DB-9F plug. 2 meters (80") long



Price Each: \$171.00

TOPHDPWR

Topcon GB-500, GB1000, and Hiper Power Cable with weather resistant fuse holder, fuse and Heavy Duty alligator clips. 2 meters (80") long



Price Each: \$115.00

TOP3ASd

This cable connects Topcon to Satel 3AS Epic Pro Modem. Configured with an ODU 7-pin to LEMO 8-pin by 2 meters (80") long. A 40 inch power cable with fuse & holder & HD alligator clips, is spliced midway between ends.



Price Each: \$215.00

Trimble Data, Communication, & Power Cables

Connector Types and Sizes used by Trimble

R6, R7, R8, 4700, 4800, 5700, & 5800 GPS Uses LEMO connectors for Data & Power

Data Port is a 7-pin 0B LEMO, some models have a 9-pin serial port as well

Power ports are shared with the data port and also use 7-pin 0B LEMO connectors

4000 & 7400 GPS Uses LEMO connectors for Data & Power

Data Port is a 7-pin 1B LEMO (Note this is the larger connector)

Power Port uses LEMO 1B 5-pin

5600 and Geodimeter 600 uses Hirose connectors for Data & Power

Data and power are combined into a 4-pin connector

Cables that utilize the same exact connector are interchangeable between the various Trimble models only.

Cables that utilize a SAE 2-pin power connector are wired such that the exposed pin is B+

T4PWR

Trimble 4000 Power cable. Equipped with a LEMO 1B 5-pin and Heavy Duty alligator clips. Overall length is 2 meters (80")



Price Each: \$115.00

T4HPB

Data cable used to connect Trimble 4000 series GPS Receivers to a Pacific Crest RFM96W or PDL, HPB Base. Equipped with a LEMO 1B 7-pin and a LEMO 1B 5-pin connector with a SAE 2-pin connector. Overall length is 2 meters (80")



Price Each: \$199.00

T43AS

Data cable connects Trimble 4000 to Satel 3AS Epic radio. Equipped with a LEMO 1B 7-pin and a DB-15M 15-pin connector. A 1 meter (40") power cable with fuse holder, fuse and HD alligator clips, is spliced midway. Overall length is 2 meters (80")



Price Each: \$199.00

T4HDPWR

Trimble 4000 Heavy Duty Power cable. Equipped with a LEMO 1B 5-pin and Weather resistant fuse holder, fuse, and Heavy Duty alligator clips. Overall length is 2 meters (80")



Price Each: \$125.00

T43ASd

Data cable connects Trimble 4000 to Satel 3ASd Epic Pro radio. Equipped with a LEMO 1B 7-pin and 8-pin connectors. A 1 meter (40") power cable with fuse holder, fuse and HD alligator clips, is spliced midway. Overall length is 2 meters (80")



Price Each: \$215.00

T8HPB

Data cable used to connect Trimble R8 series GPS Receivers to a Pacific Crest RFM96W or PDL, HPB Base. Equipped with a LEMO 0B 7-pin and a LEMO 1B 5-pin connector with a SAE 2-pin connector. Overall length is 2 meters (80")



Price Each: \$199.00

T8T3

Data I/O cable. Similar to the Trimble 31288. Equipped with LEMO 0B 7-pin connectors on both ends, with a fuse and holder and Heavy Duty Alligator clips. Overall length is 2 meters (80").



Price Each: \$181.00

T8PDL

This cable connects Trimble R8 to a Pacific Crest PDL Radio Modem. Configured with an LEMO 7-pin male to LEMO 0B Right Angle 5-pin male by 2 meters (80") long.



Price Each: \$181.00

T31288

Data I/O cable. Similar to the Trimble 31288. Equipped with LEMO 0B 7-pin connectors on both ends. Overall length is 2 meters (80").



Price Each: \$181.00

T8HDHPB

Data cable connect Trimble R8 to a Pacific Crest RFM96W or PDL, HPB Base. Equipped with a LEMO 0B 7-pin and 1B 5-pin connectors. Overall length is 2 meters (80") A 1 meter (40") power cable with fuse holder, fuse and HD alligator clips, is spliced midway.



Price Each: \$199.00

T59044

Data collector / PC cable. Similar to Trimble 59044. Comes with a LEMO 0B 7-pin and a DB-9F connector. A 1 meter (40") power cable with fuse holder, fuse and HD alligator clips, is spliced midway. Overall length is 2 meters (80").



Price Each: \$171.00

T8LPB

This cable connects Trimble R8 to a Pacific Crest LPB Radio Modem. Configured with an LEMO 7-pin male to LEMO 0B 5-pin male by 2 meters (80") long.



Price Each: \$171.00

T4TSC1

Data cable used to connect Trimble 4000 series GPS Receivers to a Trimble TSC1 survey controller/ data collector. Features LEMO 7-pin connectors on both ends. Overall length is 2 meters (80")



Price Each: \$171.00

T83AS

Data cable connects Trimble R8 to Satel 3AS Epic radio. Equipped with a LEMO 0B 7-pin and a DB-15M 15-pin connector. A 1 meter (40") power cable with fuse holder, fuse and HD alligator clips, is spliced midway. Overall length is 2 meters (80")



Price Each: \$199.00

T8PWR

Trimble R8 Power cable. Equipped with a LEMO 0B 7-pin and Heavy Duty alligator clips. Overall length is 2 meters (80")



Price Each: \$105.00

T83ASdATO

Data cable connects Trimble R8 to Satel 3ASd Epic Pro radio. Equipped with a LEMO 0B 7-pin and a 1B 8-pin connector. A 1 meter (40") power cable with ATO fuse holder, fuse and HD alligator clips, is spliced midway. Overall length is 2 meters (80")



Price Each: \$215.00

T83ASd

Data cable, Trimble R8 to Satel 3ASd Epic Pro radio. Equipped with a LEMO 0B 7-pin and a 1B 8-pin connector. A 1 meter (40") power cable with fuse holder, fuse and HD alligator clips, is spliced midway. Overall length is 2 meters (80")



Price Each: \$215.00

T8HDPWR

Trimble R8 Power cable. Equipped with a LEMO 0B 7-pin fuse and holder, and Heavy Duty alligator clips. Overall length is 2 meters (80")



Price Each: \$115.00

Pacific Crest Cables

Connector Types and Sizes used by Pacific Crest

RFM96W, HPB, PDL, and LPB models use LEMO connectors

RFM96W HPB, PDL HPB use 1B 5-pin connectors

RFM96W LPB uses a 5-pin connector

PDL LPB uses a Right Angle 5-pin connector

Cables that utilize a SAE 2-pin power connector are wired such that the exposed pin is B+

PACPC2

LEMO 1B and 0B 5-pin to DB-9F serial port connector. Comes with a 1 meter (40 inch) power lead with fuse and holder and Heavy Duty Alligator clips. This cable can program all models with either a 0B or 1B 5-pin connector. That includes HPB, LPB and PDL models.



Price Each: \$250.00

PACPC

LEMO 1B 5-pin male to DB-9F serial port connector. Comes with the standard SAE 2-pin flat connector wired to the LEMO 5-pin connector. This cable is used to program a Pacific Crest RFM96W HPB Radio Modem. 2 meters (80") long.



Price Each: \$179.00

PACPC1

LEMO 0B 5-pin male to DB-9F serial port connector. Comes with the standard SAE 2-pin flat connector wired to the LEMO 5-pin connector. This cable is used to program a Pacific Crest RFM96W LPB or PDL Rover. 2 meters (80") long.



Price Each: \$179.00

Miscellaneous Data, Communication, & Power Cables

N2DL

Download cable fits Nav-com SF-2040 and RT-3010 series GPS Receivers. Equipped with a LEMO 1K 7-pin (COM 1 or COM 2 on the receiver end) and a DB-9 computer serial port connector. 2 meters long (80 inches).



Price Each: \$171.00

R8PDL

Data cable to connect Racal 8 to Pacific Crest PDL. Note this cable doesn't have an internal power connection so it won't work with the RFM96W LPB rovers. Available with a right angle LEMO connector as an option..



Price Each: \$181.00

R8DL

Data Cable to download Racal 8 receiver to computer. Equipped with a DB-9 computer connector and a Fischer 102 5-pin connector. 2 Meters long (80 inches).



Price Each: \$171.00

Base and Rover Radio Antennas and Accessories



RTK Antenna Adapter.

Machined from solid brass.

Features a nickel-plated brass "TNC" cable connector and a NMO style antenna mount. (1 1/8" x 18 tpi)

The bottom has been drilled and tapped for a 5/8" - 11 thread which matches the standard mounting thread common to survey equipment.

Price Each \$65.95

Base and Rover Radio Antennas and Accessories



Larsen NMO450CHW

Larsen 1/2 wave base antenna.

Features a stainless steel center loaded whip and black base made to fit the standard Motorola NMO style mounting system. The 1/2 wave antenna does not need a ground plane, so it can be mounted on a tripod or a pole.

The antenna is approximately 36 inches tall.

Covers 450 - 470mHz for use in the USA.

Price Each: \$60.40



Larsen NMO406CHW

Larsen 1/2 wave base antenna.

Features a stainless steel center loaded whip and black base made to fit the standard Motorola NMO style mounting system. The 1/2 wave antenna does not need a ground plane, so it can be mounted on a tripod or a pole.

The antenna is approximately 36 inches tall.

Covers 406 - 430mHz for use in Canada.

Price Each: \$60.40



Larsen NMOQW450

Larsen 1/4 wave rover antenna

Fits a standard Motorola type mount, NMO style.

It features a stainless steel radiator.

Used with various GPS Rover radios.

Covers 450 - 470mHz for use in USA

Price Each: \$6.80



Larsen NMOQW406

Larsen 1/4 wave rover antenna

Fits a standard Motorola type mount, NMO style.

It features a stainless steel radiator.

Used with various GPS Rover radios.

Covers 406 - 430mHz for use in Canada

Price Each: \$6.80



BMUF9115

Maxrad BMUF9115 1/2 wave trilinear antenna. Black, 5dB gain, frequency coverage 896-940 mHz. Features elevated feed and closed coils. Requires a Motorola NMO type base adapter.

Price Each: \$109.95

900 mHz Topcon Hiper extended range kit.

Consists of a Maxrad BMUF9115 1/2 wave trilinear antenna, GPAC NMO Adapter, and 3.5 meters of feed line with 1 straight and 1 right angle connector, part number RPTNC3.5RATNC or right angle connectors on both ends, part number RPRATNC3.5RATNC.

The kit replaces the rubber “duck” antenna on the HiPer and greatly extends the useful range of the HiPer when used as a base radio for RTK.

Elevating the antenna by 3.5 meters above the GPS unit, helps improve communication with the rover radio. Plus the added signal gain realized in the antenna, is like a “boost” in output power by nearly 2.5 times!

100% compatible with the HiPer and ready to operate. No adjustments are required.

Save more than \$26.00 over the individual prices.



**Price Each:
RPTNC3.5RATNC
\$200.00**

GPAC Portable Power Solutions



The GPAC Portable Power Solution is an organized system of batteries, cases, chargers, cables, and power accessories, to supply 12 volt power to various types of GPS and Survey Instruments.

The Portable Power Solution is designed to delivery optimum power in a safe, easy to carry package. The system eliminates the caustic, fume producing lead acid batteries that are difficult to handle safely, can tip over and spill acid, and can produce corrosive fumes that are detrimental to your expensive GPS and Survey equipment.

The Portable Power Solution batteries are totally enclosed to prevent accidental contact with the battery posts causing short circuits that can ruin the battery. The batteries are recharged through either of the outputs so you never need to access the battery directly. They are spill proof, can be operated upside down, and don't produce any corrosive fumes.

The system employs a heavy duty, 1000 denier, highly visible, safety orange, ballistic nylon carrying case. The cases are non-conductive, very strong, and have a built-in storage compartment for the battery cables, output connectors, and accessories. Carry straps have a soft molded handle that is comfortable and balances the weigh evenly in your hand.

All models have two power outputs terminated using Anderson Power Pole connectors. The 1235 pack has a fused SAE 2-pin connector in addition to the 2 regular outputs. Anderson Power Pole connectors are genderless allowing them to mate with themselves. Cables and accessories exchange between the different models and multiple packs can be plugged together to increase the total capacity of any one pack.

There are many different battery cables and accessories available to power virtually all models of Survey Equipment including Ashtech, Leica, Pacific Crest, Sokkia, Topcon and Trimble models. Custom cables are available on special order that combine data collection and power into a single cable. Useful for instruments that only have a single shared connector for both power and data.

Available in 4 sizes:

Model 1223 - 12 Volt, 4.6 Amp Hour

Model 1209 - 12 Volt, 9 Amp Hour

Model 1218 - 12 Volt, 18 Amp Hour

Model 1235 - 12 Volt, 35 Amp Hour

Model 1209 9 Amp Hour Pack

Complete kit with Case, Battery, Power Cable, Charger and Accessories

Price Each: \$199.95



Ashtech Model 1209ASH1

Complete kit with an instrument power cable to power Ashtech Z-Surveyor or Z-Extreme GPS Receivers. Instrument power cable is equipped with a S102 Fischer / ODU 3-pin connector.

Price Each \$199.95

Ashtech Model 1209ASH2

Complete kit with an instrument power cable to power Ashtech Z12 GPS Receivers. Instrument power cable is equipped with a S103 Fischer / ODU 3-pin connector.

Price Each \$199.95

Leica Model 1209L1

Complete kit with an instrument power cable to power Leica GPS Receivers. Instrument power cable is equipped with a LEMO FGG.1B 5-pin connector. Works with all models that accept the GEV97 power cable.

Price Each \$199.95

Leica Model 1209L2

Complete kit with an instrument power cable for Leica Total Stations. Power cable is equipped with a LEMO FGA.0B 5-pin connector. Works with TPS110, TPS400, TPS800, TPS1200 and other Leica Instruments.

Price Each \$199.95

Leica Model 1209L3

Complete kit with a GEB171 conversion adapter cable to convert the 1209 to accept all of your existing Leica power cables. The adapter is equipped with a LEMO 1B 5-pin receptacle.

Price Each \$199.95

Sokkia Model 1209S1

Complete kit with an instrument power cable to power Sokkia GSR2300 GPS Receivers. Instrument power cable is equipped with a S102 Fischer / ODU 3-pin connector.

Price Each \$199.95

Sokkia Model 1209S2

Complete kit with an instrument power cable to power Sokkia GSR2600 / GSR2700 Receivers. Instrument power cable is equipped with a LEMO FGG.0B 4-pin MALE connector.

Price Each \$199.95

Sokkia Model 1209S3

Complete kit with an instrument power cable to power Sokkia Radian Receivers. Instrument power cable is equipped with a LEMO FGG.0B 4-pin FEMALE connector.

Price Each \$199.95

Topcon Model 1209TOP1

Complete kit with an instrument power cable to power Topcon GB-500, GB1000, and Hiper GPS Receivers. Instrument power cable is equipped with a S102 Fischer / ODU 5-pin connector.

Price Each \$199.95

Trimble Model 1209T4

Complete kit with an instrument power cable to power Trimble 4000 GPS Receivers. Instrument power cable is equipped with a LEMO FGG 1B 5-pin connector.

Price Each \$199.95

Trimble Model 1209TR8

Complete kit with an instrument power cable to power R6, R7, R8, 4700, 4800, 5700, & 5800 Trimble models and other Trimble models that employ LEMO FGG.0B 7-pin connectors..

Price Each \$199.95

Model 1209 Accessories

1209SAEB

Covered SAE 2-pin connector. Accepts all brands of SAE 2-pin plugs including Pacific Crest. Configured with the Positive (red) connector covered and the Negative (black) exposed. This is the proper polarity to mate with Pacific Crest and GPAC cables. 1 foot long.



Price Each: \$9.95

1209C1

1000 denier, highly visible safety orange Ballistic Nylon case without battery and instrument power cable. Case includes wiring harness, charger and accessories. Battery compartment accepts any brand of SLA battery sized L: 6" W: 2.5" H: 3.7" with F2 Faston connectors.



Price Each: \$99.00

1209SLA

12 volt 9 amp hour SLA battery, model 1290. Various brands.



Price Each: \$24.95

1209BC1A

12 volt Automatic Sealed Lead Acid Battery Charger. Dual rate, Fast / Trickle - Maintaining. Wall mounted with 6 foot charger cable equipped with Anderson Power pole connectors.



Price Each: \$19.95

Portable Power Solutions Instrument Cables

Fits Models 1223, 1209, 1218 and 1235 Packs

Leica TPS

1209L500B

Instrument cable to connect TPS110, TPS400, TPS800, TPS1200 and other Leica Total Stations to a Portable Power Solutions pack. Instrument cable is equipped with a LEMO 0B 5-pin.



Price Each: \$79.95

Ashtech Z

1209ASH102B

Instrument cable to connect Ashtech GPS Z-Surveyor or Z-Extreme GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a S102 Fischer / ODU 3-pin connector.



Price Each: \$79.95

Leica GEB171

1209LGEB171

GEB171 conversion adapter cable. Converts a Portable Power Solutions pack to accept all Leica power cables. Has a LEMO 1B 5-pin receptacle that mates with a LEMO FGG.1B 5-pin plug.



Price Each: \$74.95

Ashtech Z-12

1209ASH103B

Instrument cable to connect Ashtech Z12 GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a S103 Fischer / ODU 3-pin connector.



Price Each: \$79.95

Sokkia 2300

1209S23B

Instrument cable to connect Sokkia GSR2300 GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a S102 Fischer / ODU 3-pin connector.



Price Each: \$79.95

Leica SR530

1209L500B

Instrument cable to connect SR530, System 1200, and all models that accept the Leica GEV97 cable to a Portable Power Solutions pack. Instrument cable is equipped with a LEMO 1B 5-pin.



Price Each: \$79.95

Sokkia 2600

1209S26B

Instrument cable to connect Sokkia Sokkia GSR2600 / 2700 GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a LEMO 0B 4-pin MALE connector.



Price Each: \$79.95

Sokkia Radian

1209SRB

Instrument cable to connect Sokkia Radian GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a LEMO 0B 4-pin FEMALE connector.



Price Each: \$79.95

Trimble 5600

1209T56B

Instrument cable to connect Trimble 5600 or Geodimeter 600 Total Station to a Portable Power Solutions pack. Instrument cable is equipped with a Hirose 4-pin connector.



Price Each: \$79.95

Topcon Hiper

1209TOPB

Instrument cable to connect Topcon GB500, GB1000, and Hiper GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a S102 Fischer / ODU 5-pin connector.



Price Each: \$79.95

Trimble 4000

1209T4B

Instrument cable to connect Trimble 4000 GPS Receiver to a Portable Power Solutions pack. Instrument cable is equipped with a LEMO 1B 5-pin connector.



Price Each: \$79.95

Trimble R8

1209TR8B

Instrument cable to connect Trimble R6, R7, R8, 4700, 4800, 5700, & 5800 GPS Receivers to a Portable Power Solutions pack. Instrument cable is equipped with a LEMO 0B 7-pin connector.



Price Each: \$79.95

Replacement Batteries & Chargers for Juniper Systems Data Collector

VBC-158P

AC / DC 110V - 240V FULLY AUTOMATIC CHARGER

Video Battery Charger
(with 110V and 12V adapters)



Note: Faceplates and contacts vary by battery code - order your charger plate that matches your battery (ie: for BLI-173, order VBC-173P)

Charges Empire BNH-158-3.5, Juniper Systems OEM batteries.

Price Each: \$29.95



BNH-158-3.5

3.6v 4000 mAh NiMh Replaces:

Juniper Systems 12523, VR151, Allegro CX, MX series, VSH-H11U and others.

Price Each: \$57.95

Replacement Batteries & Chargers for Leica Geosystems



BLI-211-LEC

7.4v 2400 mAh 19Wh Lithium-ion
Higher capacity. RoHS compliant, will charge with OEM charger.

Leica ATX1200 series, GPS1200 series, GRX1200 series, GS09, GNSS, GX1200 series, Piper 100, 200, RX1200 series, TC1200 series, TPS1200 series, GEB211, GEB221

Price Each: \$86.95



BLI-221-LEC

7.4v 5200 mAh 38Wh Lithium-ion
EXTRA High capacity.

RoHS compliant, will charge with OEM charger.

Leica GPS1200 series, GRX1200 series, GX1200 series, Piper 100, 200, TC1200 series, TPS1200 series, GEB221.

Price Each: \$115.95



BNH-159-2.1

6v 2100 mAh NiMh

Leica GEB111, TPS 300, 400, 700, 800 & 1100.

Price Each: \$37.95



BNH-159-4s

6v 4300 mAh NiMh

Leica GEB121, TPS 300, 400, 700, 800 & 1100.

Price Each: \$57.95

Replacement Batteries & Chargers for Leica Geosystems

VBC-6V/JPS

AC / DC 110V - 240V FULLY AUTOMATIC CHARGER. Charges Empire BNH-159 series, Leica GEB 111, 121 OEM batteries listed above..



Price Each: \$29.95

Replacement Batteries & Chargers for Trimble

EPP-100C

12v 2300 mAh Sealed Lead Acid



Trimble, 17466, Pro XRS, Pathfinder XR, Pro XR, Panasonic and many others.

Price Each: \$37.95

BLI-208

7.2v 2200mAh Lithium-ion (Doesn't have full length groove. Fits models listed)

Trimble 29518, MOLICEL MCC-1821, MCR-1821, MCR-1821C, MCR-1821C/1, MCR-1821C/1-H, MCR-1821I, MCR-1821J, MCR-1821J/1, MCR-1821J/1-H.



Price Each: \$49.95

MCH-1821DP

AC / DC 110V - 240V DUAL PORT FULLY AUTOMATIC CHARGER.

Charges Empire BLI-208, BLI-TRB-1, BLI-TRB-2, BLI-TRB-3 and OEM batteries.



Price Each: \$99.95

BLI-TRB1

7.4v 2200 mAh Lithium-ion. Battery has full length groove and is of slim design.

TSC1, 5700, 5800 GPS, 54344, 52030, 46607, 38403, 29518, 38403, 38403, MT1000, MultiTrack, Geoexplorer 3, R7 & R8, MCC1821, MCR-1821, MCR-1821C & similar



Price Each: \$69.95

BLI-TRB3

7.4v 2600 mAh Lithium-ion HIGH Capacity. Battery has full length groove and is of slim design.

TSC1, 5700, 5800 GPS, 54344, 52030, 46607, 38403, 29518, 38403, 38403, MT1000, MultiTrack, Geoexplorer 3, R7 & R8, MCC1821, MCR-1821, MCR-1821C & similar.



Price Each: \$79.95

GPAC Cable Specifications

2 and 3 Conductor Power Cable

Cable Diameter 5.25mm (0.20 inches), Conductors are 18AWG.

Red	B+
Black	B-
White	Signal Ground or Control (included in 3 conductor cable)

7-Conductor Data & Communication Cable

Cable Diameter 5.0mm (0.19 inches), 2 Conductors 24AWG, 5 - 26AWG

Red	B+ (24AWG)
Black	B- (24AWG)
White	Signal Ground
Green	RxD
Brown	TxD
Blue	RTS, Event, USB D+
Yellow	CTS, PPS, USB D-

9-Conductor RS-232 / USB Cable

Cable Diameter 5.6mm (0.22 inches), 9 Conductors 26AWG

Red	B+, DTR
Black	B-
White	Signal Ground
Green	RxD
Brown	TxD
Blue	RTS, Event, USB D+
Yellow	CTS, PPS, USB D-
Orange	DCD
Violet	DSR