



# LAND-PAK

- Rugged, reliable land survey solution
- Easy-to-use NavCom FieldGenius or NavCom SurvCE controller software
- Office CAD & GNSS post process software
- Built-in UHF radio link
- Ultra RTK (GPS+GLONASS)
- GSM 3G Network RTK support
- Lifetime StarFire™ license
  - 5cm standalone operation
  - RTK Extend™ through base station outages
- Removable SD card for static survey
- Three year warranty



**NAVCOM**

A John Deere Company

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# LAND-PAK



## LAND-PAK

The LAND-PAK system provides an unprecedented level of performance and flexibility by including Ultra RTK, StarFire and RTK Extend capabilities as standard. With Ultra RTK users receive centimeter level performance up to 40 km from the base station while StarFire provides five centimeter accuracy anywhere, anytime without the need for a base station. NavCom's patented RTK-Extend feature allows users to work in challenging environments and maintain RTK-level accuracy even during base station radio outages.

LAND-PAK includes, as standard, a choice in easy to use controller, office and GNSS post processing software, the SF-3040 GNSS receiver along with all the necessary hardware and accessories making it a complete turn-key land survey solution. The rugged, waterproof and shock proof design coupled with hot swappable batteries ensures continuous operation in the harshest of environments.

UHF and GSM communication links with support for multiple RTK formats allows the LAND-PAK rover to work with a variety of base stations and RTK networks. The Sapphire™ GNSS technology with multi-constellation (GPS, GLONASS) support and superior signal sensitivity allows operation even in shaded environments.

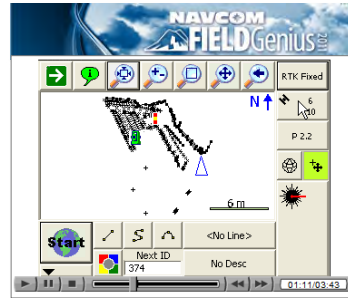
Quick setup, ease of use and superb performance allows LAND-PAK to meet the needs of even the most demanding surveyor.

### FEATURES

- Integrated UHF and GSM support
- Bluetooth® cable free, all-on-the pole design
- Multi-constellation support (GPS & GLONASS)
- Ultra RTK (up to 40km baseline)
- Single-base network with support for multiple message formats
- Built-in StarFire receiver with lifetime license
- StarFire five centimeter standalone accuracy
- StarFire Over IP delivery Included
- RTK Extend: Coast through base station outages
- Dual hot swappable batteries for continuous operation
- SF-3040 GNSS receiver operates as a base or rover
- Water and shock resistant
- Three year warranty



# All The Right Tools Included



## LAND-PAK System

### SF-3040 Receivers (Qty 2) Included

- L1, L2, G1, (G2 or L5) Navigation 5Hz
- StarFire Enabled
- Lifetime StarFire License (Including Over IP delivery)
- RTK including Single-base network
- RTK Extend

### Receiver Accessories Included

- USB Configuration Flash Drive
- 1 Watt UHF 403-473Mhz (Qty 2)
- UHF Module Antenna
- Li-Ion Batteries (Qty 4)
- SD Memory Cards (Qty 2)
- USB Device Cable, 6ft
- COM1 Serial Cable, 6ft
- Battery Charger, Dual Bay (Qty 2)

### Hardware Accessories Included

- Aluminum Rover Pole
- Clamp & Pole Clamp for Controller
- Wood & Fiberglass Tripod
- Fiberglass Extension Rod
- Tribrach w/ optical plummet
- Fixed Tribrach Adapter
- GPS Pocket Rod/Tape Measure
- Hard Shell Transit Case
- Canvas Tripod Bag

### LAND-PAK Controller and Software Included

- NavCom Controller Kit

### Software Available

- NavCom FieldGenius or NavCom SurvCE
- NavCom SurveyCAD or NavCom Survey
- NavCom StarPoint Post Processing Software

## LAND-PAK Network Rover

### SF-3040 Receivers (Qty 1) Included

- L1, L2, G1, (G2 or L5) Navigation 5Hz
- StarFire Enabled
- Lifetime StarFire License (Including Over IP delivery)
- RTK including Single-base network
- RTK Extend

### Receiver Accessories Included

- USB Configuration Flash Drive
- Li-Ion Batteries (Qty 2)
- SD Memory Cards (Qty 1)
- USB Device Cable, 6ft
- COM1 Serial Cable, 6ft
- Battery Charger, Dual Bay (Qty 1)

### Hardware Accessories Included

- Aluminum Rover Pole
- Clamp & Pole Clamp for Controller
- GPS Pocket Rod/Tape Measure
- Hard Shell Transit Case

### LAND-PAK Controller and Software Included

- NavCom Controller Kit

### Software Available

- NavCom FieldGenius or NavCom SurvCE
- NavCom SurveyCAD or NavCom Survey
- NavCom StarPoint Post Processing Software

# LAND-PAK

More  
Your Complete Survey System

# LAND-PAK TECHNICAL SPECIFICATIONS

## PERFORMANCE<sup>1</sup>

- Multi-constellation Support
    - Multi-frequency GNSS SBAS
  - Accuracy (RMS)
    - RTK: <40km
    - RTK Extend (<15min) StarFire
    - Static (post processed) Velocity
  - Position & Raw data rates<sup>2</sup>
- |                                     |  |
|-------------------------------------|--|
| GPS, GLONASS                        |  |
| StarFire, WAAS, EGNOS, MSAS & GAGAN |  |
| Horizontal / Vertical               |  |
| 1cm + 0.5ppm / 2cm + 1ppm           |  |
| 3cm + 1ppm / 6cm + 2ppm             |  |
| <5cm / <10cm                        |  |
| 5mm + 0.5ppm / 10mm + 0.5ppm        |  |
| 0.01ms                              |  |
| 1Hz, 5Hz, 10Hz                      |  |

## COMMUNICATIONS

- Integrated UHF radio
  - GSM 3G
  - Ports
- |   |  |
|---|--|
| 1 watt, 403-473MHz                              |  |
| Integrated in the controller                    |  |
| 2 x RS232, USB 2.0 (Host or Device), Bluetooth™ |  |
- Data message formats
    - Differential Correction
    - RTK Correction
- |  |  |
|--|--|
| RTCM 2.3 and 3.1, SBAS, & StarFire (proprietary) |  |
| CMR/CMR+, RTCM, NavCom Proprietary UltraRTK™     |  |
| Removable 2 GB SD card                           |  |
- Memory

## ENVIRONMENTAL

- Power
    - Batteries
    - External Power
  - Temperature (ambient)
    - Operating
    - Storage
  - Enclosure
  - Certifications
- |                                    |  |
|------------------------------------|--|
| Li-Ion 2.2 Ah 7.4v                 |  |
| Nominal 12v DC, 0.5A (9-32v range) |  |
| -20° to +45° C (-4° to +113° F)    |  |
| -40° to +85° C (-40° to +185° F)   |  |
| IP66 (water resistant/dustproof)   |  |
| Shock resistant (2m pole drop)     |  |
| FCC / CE                           |  |

## CONTROLLER - Nautiz X7

- Display
  - Operating system
  - Communication
  - WLAN:
  - Battery
  - Storage
  - Camera
  - Temperature
  - Enclosure
  - Certifications
- |   |  |
|---|--|
| Sunlight readable, Color LED / Touch screen, VGA resolution (480x640) |  |
| Windows® Mobile 6.1   |  |
| PAN: Bluetooth 2.0 + EDR  |  |
| Integrated 802.11b/g  |  |
| GSM/UMTS (HSDPA/EDGE)   |  |
| 5600 mAh Li-ion battery pack  |  |
| 4 GB iNAND Flash  |  |
| Integrated 3MP camera & LED Flash                                     |  |
| -30 C to +60 C  |  |
| Waterproof (IP67), Shock/vibration resistant (MIL-STD-810G)           |  |
| FCC / CE  |  |

## CONTROLLER - Archer2

- Display
  - Operating system
  - Communication
  - WLAN:
  - Battery
  - Storage
  - Camera
  - Temperature
  - Enclosure
  - Certifications
- |   |  |
|---|--|
| Sunlight readable, High visibility back lit LCD, WVGA LCD TFT (800x480) |  |
| Windows Embedded Handheld 6.5.3   |  |
| Bluetooth 2.1 + EDR   |  |
| WiFi-802.11b/g/n with extended range, 3.75G modem                       |  |
| Intelligent Li-Ion battery  |  |
| 3.7VDC@10600mAh, 38.16Whr   |  |
| 8GB Flash   |  |
| 5MP resolution w/autofocus and LED illuminator+video capture            |  |
| -30 C to +60 C  |  |
| Waterproof (IP68), Shock/vibration resistant (MIL-STD-810G)             |  |
| FCC / CE  |  |

<sup>1</sup>Performance dependent on location, satellite geometry atmospheric conditions and GNSS corrections.

<sup>2</sup>LAND-PAK comes with 5Hz Standard. Contact your dealer for other options.

Technical specifications subject to change at NavCom's discretion.

## LAND-PAK DATA COLLECTOR SOFTWARE

### NavCom FIELDGENIUS KEY FEATURES

- Windows Interface with Smart Objects, Incredible Graphics
- Real-Time Drawing Generation with Automatic Linework
- Enter, edit and stake points
- Built in COGO – Intersections, Inversing, Traversing
- DXF Import of Background, and lines, arcs, polylines & points
- 3D Data View with Dynamic Zoom, Pan, Scroll
- Import/Export DXF, ASCII or FBK for painless Autodesk import
- RTK network support via GSM
- StarFire support
- Support for total stations

### NavCom SURVCE KEY FEATURES

- Easy to use Tab-based Menu Interface with Enhanced Graphics
- Enter, edit, and stake points
- Supports LandXML points
  - DTM, graphics, alignments, profiles & sections
- Hot List lets users jump to the SurvCE 2 routines that previously had shortcuts without having to memorize key strokes.
- Supports several GPS network protocols
  - NTRIP, TCP & UDP
- Allows the user to code in numerous coding styles that may be defined by their office package.
- Automatic Geodetic Transformations
- RTK network support via GSM
- Support for total stations

## LAND-PAK DESKTOP SOFTWARE

### NavCom SURVEYCAD KEY FEATURES

- Integrated Survey, Design and CAD Functions – Download, calculate, design, draft, check and print
- Powerful Survey Calculations – COGO, coordinate transformations, Multi-point averaging, cluster analysis, right of ways, areas, fixed areas, mass intersections, multiple perpendicular ties and stake computations
- Complete Traverse or Network Adjustments – Angle Balance, Transit, Compass, Crandall's Classical Methods, Vertical Balance, Full 3D Least Squares Adjustment and Reprocessing & pre-analysis
- Active Drawing Technology

## NavCom SURVEY KEY FEATURES

- The most popular office survey solution in the U.S. and is now translated into 5 different major languages
- Built on IntelliCAD 7.2
- Project Setup: Flexible data storage methods
- Drawing Cleanup: Fix common drafting errors
- Data Compatibility: Supports industry standard LandXML and scores of specific data conversions

## LAND-PAK GNSS POST PROCESSING SOFTWARE

### NavCom STARPOINT KEY FEATURES

- Base Station data
  - Utilize data from a dedicated or nearby base station
  - Automatic internet search & download data from a nearby base station(s)
- Coordinate System
  - 62 standard datums and 22 standard ellipsoids predefined
  - 12 map projection templates including US State-Plane
- Rigorous Automated Processing Engine
  - Static/Rapid static
  - Stop and go
  - Kinematic/Semi-kinematic
  - OTF (for single and dual frequency receivers)
- Quality Control
  - Editing of GNSS data file properties
  - Graphical tools to help analyze
  - Common vector analysis
  - Least Squares Adjustment to adjust network of baselines

# NAVCOM

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