# Base Station
# Champion QB1

## Power. Performance. Accuracy.

The QB1 series was designed with industry-level accuracy to provide quick and easy differential data to all kinds of survey and GIS applications. It is a perfect upgrade for GPS/GLONASS/Galileo/BeiDou. The QB1 provides a cost-effective answer to demanding applications such as geodetic reference stations, academic research and more.

Champion QB1

**Champion**
INSTRUMENTS

# Champion QB1

## GNSS Specifications

Pacific Crest BD970 GPS Engine

220 channels with simultaneously tracked satellite signals*

| | |
|---|---|
| GPS | L1 C/A, L2E, L2C, L5 |
| GLONASS | L1 C/A, L1 P, L2 C/A (GLONASS M Only), L2 P |
| BeiDou | B1, B2 |
| Galileo | L1 BOC, E5A, E5B, E5AltBOC |
| SBAS | L1 C/A, L5 |

Advanced multipath mitigation technology

Low noise carrier phase measurement with <1 mm precision in a 1 Hz. bandwidth

## Performance Specifications

Real-Time Kinematics (RTK)

| | |
|---|---|
| Horizontal | 10 mm + 1 ppm RMS |
| Vertical | 20 mm + 1 ppm RMS |
| Initialization Time | Typically < 10 s |
| Initialization Reliability | Typically > 99.9% |

Post Processing Static

| | |
|---|---|
| Horizontal | 2.5 mm + 1 ppm RMS |
| Vertical | 5 mm + 1 ppm RMS |
| Baseline Length | ≤ 300 km |

## Physical Specifications

| | |
|---|---|
| Size | 8.27 in x 6.3 in x 2.28 in (210 mm x 160 mm x 58 mm) |
| Weight | 3.3 lbs (1500 g) |

## Environment

| | |
|---|---|
| Operating Temperature | -30 °C to +65 °C (-22 °F to 149 °F) |
| Storage Temperature | -40 °C to +75 °C (-40 °F to 167 °F) |
| Humidity | 100% condensation |
| Drop | 1.5 m protection |

## Electrical Specifications

| | |
|---|---|
| Power Consumption | 1.5 W nominal, dependent on user's settings |
| External Power Input | 12 VDC |

## User Interface

PC control utility via serial cable allows for basic receiver setup and maintenance

## Web User Interface

Allows local and remote configuration, data revival and firmware updates

## Communication

1x LAN Port

1 port with RJ45 connector supports links to 10/100 M BaseT Networks

HTTP, HTTPS, TCP/IP, UDP, FTP, NTRIP Server, NTRIP Client

Proxy server support

Routing table support

NTP server, NTP client support

UPnP and zeroconf support

Setup of multiple streaming/monitoring ports

Email alerts and position monitoring

2x COM Ports

| | |
|---|---|
| Options | External TX radio: 1 W - 20 W adjustable |
| Data Formats | RTCM 2.1, RTCM 2.2, RTCM 2.3, RTCM 2.x, RTCM 3.x, RTCM 3.2, CMR, CMR+, SCMRX |
| Position/Status/I/O | NMEO0183 v. 2.30, GSOF |
| Observables | RT17, RT27, BINEX < RTCM 3.x Up to 20 Hz. output standards |

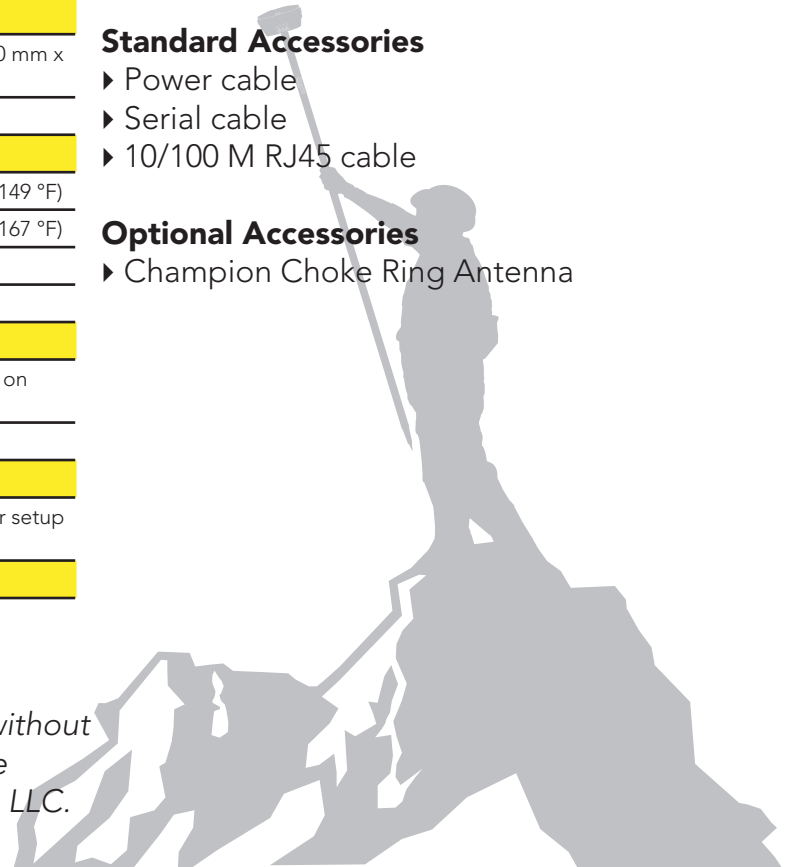*Reception is dependent upon firmware versions and licensed features*

## Standard Accessories
‣ Power cable
‣ Serial cable
‣ 10/100 M RJ45 cable

## Optional Accessories
‣ Champion Choke Ring Antenna

*Specifications are subject to change without notice. Champion, Champion QB1 are trademarks of Champion Instruments, LLC.*

eGPS Solutions
4317 Park Drive
Suite 104
Norcross, GA 30093

t: 770.695.3361
f: 770.695.0803
info@egps.net
www.egps.net

Champion INSTRUMENTS
www.championinstruments.com