

Battery Life in Tropos Routers

There are a number of factors that determine the useful life of the battery in a Tropos router. The most important are:

1. Number of discharge cycles
2. Depth of discharge
3. Operating temperature
4. Storage environment

Engineering analyses of batteries that have been installed in typical outdoor networks have shown that batteries in Tropos routers retain over 80% of their original capacity after five years.

ABB Tropos has offered Lithium-Ion battery-backup packs for many years. We have performed a number of technical experiments and analyses in order to predict useful life of the batteries used in our routers.

Number of discharge cycles:

In typical operation, where the battery is discharged only during power outages, the useful life should exceed five years under normal operation. Li-Ion battery manufacturers suggest that the useful lives for their products exceed 1000 discharge cycles with many disclaimers regarding application and environmental conditions. Tropos products include an intelligent charge controller in every BBU product and the useful life is optimized through proprietary battery management strategies (e.g. controlling the charge environment, operational temperature ranges, etc.).

Depth of discharge:

Tropos proprietary battery management systems ensure that the batteries will be maintained within controlled conditions all times. This helps optimize battery life in accordance with the battery manufacturers' recommendations.

Operating temperature:

Extremes of temperature can affect Lithium-Ion battery life. If the batteries are being operated in extreme high or low temperature environments, the life will be reduced. Tropos BBU management technology integrates thermal monitoring as part of the charge control system and our solutions include integrated heaters to maintain battery parameters within normal ranges.

Storage Environment:

Customers should always store products in controlled environments prior to deployment or during storage of spares. Extremely high temperatures can affect useful life but under normal environmental conditions Tropos products should deliver normal useful life.

For more information please contact:

ABB Inc.

Tropos Wireless Communication Systems

555 Del Rey Avenue

Sunnyvale, CA 94085

Phone: +1 408.331.6800

E-Mail: tropos.sales@nam.abb.com

abb.tropos.com