Plextek
Exceptional Engineering Solutions

Delivering novel concepts to deployable capability

PLX-DPNS

DISMOUNTED POSITION AND NAVIGATION SYSTEM

Situational Awareness in GNSS-Challenged Environments

DPNS delivers 3D positioning, navigation and team tracking capability to the dismounted user, in the absence of GNSS. This allows for precise 3D situational awareness in GNSS denied or degraded environments such as buildings, caves, tunnels and areas where heavy electronic counter-measures and hostile RF jamming is present.

Concept

» A small lightweight boot mounted unit (BMU) attached to boot or shoe of a user with an ergonomic strap

» The BMU forwards positional information to an Android smartphone, where it can be displayed on a digital map or navigation app

» With open architecture, it is extremely easy to integrate into any existing or future dismounted soldier or situational awareness system

Benefits

» 3D position and navigation capability for users in GNSS challenged environments

» Can provide commanders with the ability to accurately track their team in GNSS challenged environments

» Unlike pedometer-based devices, DPNS is accurate when a user is walking, running and even crawling or clambering over obstacles

» Accuracy is a function of distance travelled without GNSS, rather than time

» Low size, weight, and power with open architecture and interface

Core capability

» Integrated with ATAK

» Operates in subterranean environments, beneath canopy cover, and inside buildings

» Augments GNSS (when available) to increase accuracy

» Less than 1% drift over distance travelled up to 2 km without GNSS

» Charged wirelessly via QI standard charger

BMU Specification

SIZE	58 mm x 38 mm x 19 mm
WEIGHT	58 g
POWER	» 12 hour mission life » Up to 2.5 W » Internal Li-Polymer Rechargeable Battery 1800 mAh 3.7 V
OPERATING TEMPERATURE	-20 ˚C to at least +40 ˚C (when not being charged)
INTERFACES	» Battery Charging – wireless QI » RF – Bluetooth LE
DISPLAY	Status LEDs

End User Device

Standard Android handset

Mapping Software

Open Interface:

» ATAK

» Google Earth (for offline analysis)

hello@plextek.com | +44 (0) 1799 533200 | www.plextek.com