



PDC400A

Portable Data Collector with GPS, Run/Idle, I/O

LOCATE • MONITOR • TRACK • CONTROL

TeraHop's Portable Data Collector (PDC) is a self-contained wireless communications device that stores and transmits vital data about your equipment and vehicles. PDCs are compact and fully ruggedized for the harsh environments of construction sites, industrial yards, road-going vehicles, and remote facilities.

Operation

When attached to a piece of equipment, the PDC400A collects data about the asset, and relays it to a central database for display and analysis. The PDC monitors location, engine run and idle time, auxiliary equipment use, and other critical information about your equipment and vehicles. Use PDC400A data to:

- Reduce unnecessary maintenance of vehicles and auxiliary equipment
- Track compliance with policies and regulations for idle time, speed, or emissions
- Confirm intact and timely shipments, verify time and location of damage claims
- Verify proper use of vehicles or other equipment, see routes and stops
- Compare performance of equipment, vehicles, and personnel
- Use run time and location for accurate job costing
- Identify and optimize underutilized assets

The PDC400A connects to vehicle or line power operating at 12 or 24 V Direct Current. Installation is fast and straightforward, mounting in 30 minutes. Run/idle sensor easily connects to power into the ignition coil or to a fuel line, GPS antenna attaches to PDC top, and optional I/O hook up to a convenient front panel.

TeraHop Network Overview

PDCs use TeraHop's unique message hopping technology to expand site coverage while maintaining low power consumption. This enables PDCs to penetrate into buildings, tunnels, and other environments that are typically challenging for radio reception.

TeraHop Network Systems use a portable Gateway Router (GR) to collect data from PDCs. A GR is small and rugged, and can be taken onsite in any vehicle, or permanently affixed to a site structure. It collects and stores all data accumulated from PDCs, then transmits the data to a secure central database via a wireless or wired connection. The TeraHop Server can share site-wide data to popular software applications, providing visibility to any connected device, on or off site.

About TeraHop Networks

TeraHop Networks is a leading manufacturer of asset monitoring and portable networking devices. Companies in the construction, transportation, manufacturing, emergency response, and mining industries use TeraHop's patented, subscription-free technology to cut costs and reduce waste by monitoring the location and condition of their mobile assets and personnel. TeraHop products are ready to run right out of the box, without satellite, cellular, Wi-Fi, or cabled network communication infrastructure. Power options for TeraHop products include battery, vehicle, and line power.

TeraHop provides hassle-free, reliable, and affordable asset management hardware that integrates with popular maintenance, monitoring, and tracking software platforms. Privately held, TeraHop has offices in Seattle, Washington and Alpharetta, Georgia.

FEATURES

- Captures engine run and idle time
- Collects asset location and speed
- Tracks runtime of auxiliary equipment
- Monitors optional switches and sensors
- Controls secondary equipment
- Vehicle or line power
- Operates 24/7 without user intervention
- Fully rugged and harsh environment certified
- Ready to use out of the box, fast to install
- No cell or satellite subscription

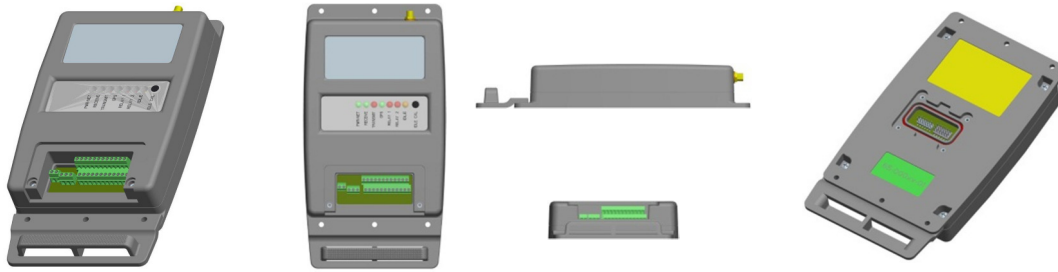
USES

Equipment managers in heavy construction, fleet operations, logistics, and facilities can use the PDC400A to monitor and track:

- Mobile equipment
- Vehicles
- Inventory
- Goods in transit

PDC400A

Technical Specifications



Physical Characteristics

Description: Plastic case with topside access to I/O, back access to user-settable switches, wire protection, mounting tabs

Dimensions: 9.3" length, 4.9" width, 1.4" height

Weight: 1.5 pounds (not including external wires, antennas, cables, mounting hardware, sensors)

Analog Inputs: Two (2) general-purpose analog sensor inputs, user-selectable 5V or 12V DC sensor power, user-selectable 2-wire 4-20 mA type or 0-12V DC analog voltage

Digital Inputs: Four (4) general-purpose, opto-isolated digital sensor inputs, user-selectable 12V or 24V DC power, dry contact or powered switch

External relay control: Two (2) relays for switching external circuitry, 12V DC 5 Amp Form C, automatic relay actuation

RS-232: 3-wire serial communications interface

I/O Connector: Accepts wire up to 16 AWG, secured with screw

Onboard Switches: Jumpers in protected underside panel

Indicator Lights: Power/active network, PDC receive and transmit, GPS satellite reception, relay 1 and 2, idle indicator

Button: Idle calibrate

Environmental Performance

Operating Temperature: -25°C to +55°C (-13°F to +131°F)

Storage Temperature: -40°C to +85°C (-40°F to +185°F)

Humidity: 100%, condensing

Shock: 4' drop on concrete without damage

Dust and Moisture Protection: IP-66 for main enclosure, IP-56 for user-accessible area

Vibration: SAE J1455

Salt Fog: ASTM B 117-07 (21 days)

Power Options

Vehicle Power: Operates at either 12V or 24V DC, vehicle wiring kit

Fuse: In-line fuse protects PDC from vehicle power faults

Line Power: Operates at either 12V or 24V DC, AC power adapter

RF Network Characteristics

Transceiver: Patented data transfer radio, wake on demand

Frequency/Range: 2.4 GHz, license-free globally

Antennas: Internal

Hopping: Wireless routing up to 16 hops

Regulatory Compliance: FCC Part 15C, Class B

Firmware: Wireless over-the-air setup, customization, and updates

GPS

Receiver: Embedded high-performance GPS receiver stores latitude, longitude, time, and speed

Antenna Options: High-performance active antenna on 5 meter cable (magnetic base, 1.9" x 1.6" x 0.5"), or rugged passive housing-mounted compact antenna (1.2" long)

Accuracy: Position 2.5 m, velocity 0.1 m/s, heading 0.5 deg

Acquisition Time: Approximately 1 second hot start, 32 seconds cold

Sample Rate: Configurable to 1 minute

Event Recording

Types: Location, run/idle, run time, shock/motion, on/off switch, sensor inputs for temperature, pressure, levels, other uses

Memory: Stores up to 4,000 GPS events and 2,000 sensor events

Run Time: Available from run/idle sensor or contact switch, includes stop location

Run/Idle Sensors: Attach to injector power, coil, or fuel line

Accelerometer: Internal 3-axis accelerometer with configurable settings for shock or motion

Contact Switch: Recommend low-current dry contact, normally open. Resolution: 0.1 hour

