



UNMANNED PLATFORMS
AND SUBSYSTEMS



- Up to 100 km range
- Automatic switching between Directional and Omni antenna
- Simultaneous Ethernet and Serial Data
- H.264 video encoder/decoder
- Automatic tracking
- Automatic antenna position, heading and level calibration
- Integrated magnetometer, tilt-sensor and GPS
- Slip rings on pan and azimuth axis
- Environmentally protected
- Direct drive positioner
- Piccolo® autopilot plug-in software available

Datasheet V1.0 Preliminary

PORTABLE DIGITAL DATA LINK SYSTEM PDDL



Portable Digital Data Link System:

The Portable Digital Data Link system (PDDL) is a complete solution for digital communication between the ground control station and the unmanned aircraft vehicle. The system consists of a Ground Data Terminal (GDT) and Aircraft Data Terminal (ADT). The PDDL has up to 12 Mbps link rate, serial communication port and Ethernet port. The GDT has fully automatic heading and level calibration.

Specifications:

Parameter	Value
Frequency	2.320-2.70 GHz or 2.405-2.407 GHz
Link Rate	Up to 12 Mbps
Encryption	128 bit AES/ 256 bit AES
Sensitivity	90dBm @ 12 Mbps , -95dBm @ 6 Mbps
Channel Bandwidth	2/4/8 MHz
Azimuth rotation	360° continuous
Elevation rotation	-13/+96 °
Resolution	0.036 degrees /129.6 arc seconds
Position calibration	Integrated Magnetometer, GPS, tilt-sensor
Interface	RS 485

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Power Requirements:

Parameter	Value
Input voltage GDT	48 VDC
Input current GDT	7 A max continuous, 13.2 A peak
Input voltage ADT	12 V
Input current ADT	0.5 A

Mechanical:

Parameter	Value
Positioner Mounting	Tripod and other options possible.
Height with tripod	1118-2007 mm
GDT weight (with tripod)	<25 Kg
GDT guy-wire anchors	Three mounting locations

Environmental:

Parameter	Value
Temperature	-20° C to +55° C
Humidity	Up to 95%

The screenshot displays the UAV flight software interface, which includes a map view, a flight parameters panel, and a primary flight display (PFD).

Map View: Shows a satellite map with a flight path and waypoints. Waypoints 10, 11, and 12 are marked. An antenna is indicated by a blue arrow. The map shows a rural area with fields and roads.

Flight Parameters Panel (Penguin's CoPilot Debug Edition): Displays various system metrics:

- Menu: Settings, Map, Gimbal
- System Status: CHT, PITOT, SRV, FLD, IGM, GEN, BAT, LOAD, FUEL, ALT, SYS
- Servo: Az: 330, El: 90
- Engine: Az: 30, El: 60
- Emergency: Az: 0, El: 30
- Antenna: Az: 0, El: 0
- Mode: Automatic
- Offset: Az: 0, El: 0
- RSSI: -85 dBm
- Calibrate Magnetometer: Az: 0, El: 0
- Target Predictor: Min altitude [m]: 4.36

Primary Flight Display (Piccolo '1'): Shows real-time flight data:

- Alt B. [m]: 134.2
- Wpt: 12
- IAS [m/s]: 11.7
- ETE: N/A
- RPM: 5854

Cursor Coordinates: Lat: 56.481930, Lon: 23.482882

Waypoint 11 Coordinates: Loc: Lat: 56.512198, Lon: 23.506289, Alt: 134.2 [m]