VETWEET

ELECTRONICS DIVISION

VEHICLE MANAGEMENT SYSTEM

VeTWEET is a vehicle management system, designed specifically for the movement of vehicles within the Airport Movement Area. It consists of a 1090MHz transmitter transponder with an embedded DGPS/ BAS module, which can be quickly and easily installed to an existing vehicle.

It improves situation awareness by providing identification and positioning information of equipped vehicles to a Controller based in the Control Tower.

This is done via a Multilateration system and/or ADS-B ground stations installed in the airport.

In order to ensure continuity of the service in the absence of GPS, the system also incorporates internal gyroscopes and an odometer.

DUAL-LINK CAPABILITY

Both versions are available with a dual-link capability by adding a HyperLan 5GHz or WiFi 2.4GHz module. This dual-link capability makes VeTWEET the best solution for satisfying the Air Traffic Services and Fleet Management requirements of the modern airport.

VETWEET PLUS

VeTWEET plus is an enhanced version of the standard system. It consists of a 1090MHz transceiver (Rx/Tx) and a 10.4 inch touch-screen display with an integrated onboard computer, installed within the vehicle.

This enhanced version allows vehicle drivers to navigate the Airport Movement Area, even in low visibility conditions, by means of a moving map onto which other vehicle and aircraft positions can be displayed. VeTWEET plus supports the digital communication of information between a vehicle drivers and the ATC Controllers/ Airport Operators.

LEONARDO

SYSTEM ARCHITECTURE

The Tx/Rx transceiver component of VeTWEET has been designed for outdoor use in all weather conditions. It is easily installed on top of the vehicle by means of integrated magnets. The antenna (1090MHz, GPS, HyperLan or WiFi) and transceiver are housed within a radome and powered via RS422 through a car power socket.

Main feature include:

- DGPS/SBAS position information
- ADS-B in/out
- TIS-B/FIS-B
- On board situational awareness
- Recognition capability
- Short and extended squitter transmission
- Ease of installation
- Cost and ease of maintenance
- Compact dimensions
- Easy to configure
- Low power consumption
- Low electromagnetic emission.

The touch-screen on-board computer comprises an integrated central unit and a graphical 10.4 inch touchscreen display.

TECHNICAL DESCRIPTION

APPLICABLE STANDARDS

- CAO Annex 10, Vol.4
- RTCA DO-260A
- EEE 802.11/a-b-g

1090MHZ ANTENNA

- Rx
  - Bandwidth: ICAO compliant
  - Message types: DF17/18
- TX
  - Bandwidth: ICAO compliant
  - Message types:
    DF11 (config. format)
    DF18 (config. format)
  - Transmitter frequency (jittered):
    1Hz (DF11)
    2Hz/0.2Hz (DF18 surface)
    0.2Hz (DF18 identification)
    0.2Hz (DF18 Oper. Status)
  - Output power: 40, 43 dBm (configurable)

DISPLAY

- Type: TFT 800x600 pixel, 10.4”
- Input devices :resistive touch-screen
- Backlight: fluorescent backlight
- Audio: Acoustic alarm

2.4GHZ/5GHZ ANTENNA

- Bit rate: Up to 54Mbit/s
- Operating frequency:
  - 2.4 - 2.5GHz
  - 5.47 - 5.725GHz

OUTPUT POWER

- 2.4 - 2.5GHz: 20 dBm EIRP (adjustable)
- 5.47 - 5.725GHz: 30 dBm EIRP (adjustable)
- Data encryption: WPA, WPA2, WEP

ENVIRONMENTAL

- Operating environment
  - Temperature: -30°C to +55°C
  - Humidity: IP-67 compliant

ELECTRICAL

- Input voltage: 10.8 - 27V
- Power consumption: < 10W

INTERFACES

- RS422 or Ethernet 10/100 BaseT (IEEE 802.3)

For more information:
infomarketing@leonardocompany.com

Electronics Division
Via Tiburtina
Km 12.400
00131 Rome - Italy
T +39 06 41501
F +39 06 4131133

MM07962 1-17

leonardocompany.com

LEONARDO