Thompson Aerospace

PRODUCT BRIEF

PoE Wireless Access Point (PWAP)

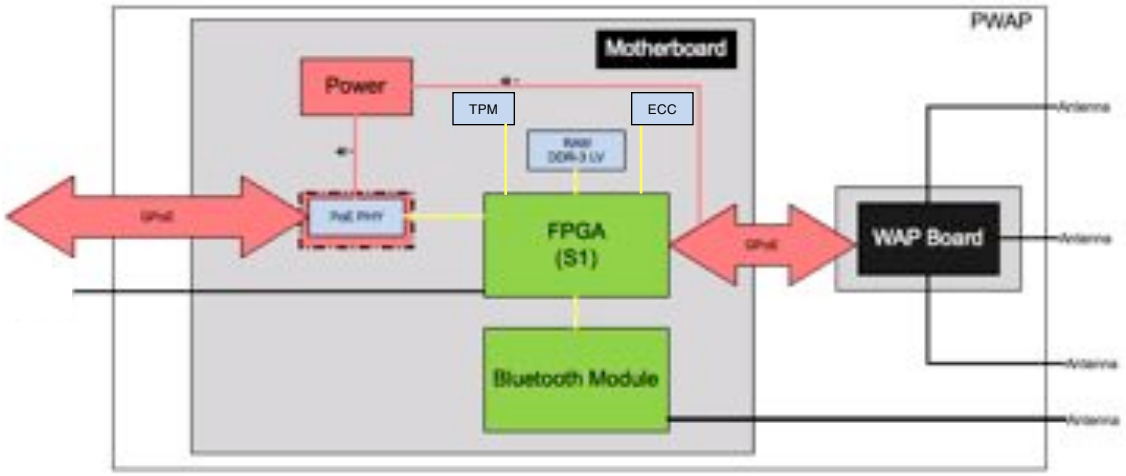
FEATURES

- **Connectivity:**
  - 802.11 a/g/n at 2.4 and 5 GHz
  - Bluetooth 4.0 at 2.4 GHz
  - Gigabit PoE at 48V (Power Device)
  - Keyline input and 4 outputs
- **Security:**
  - Real time encryption capability RTCA DO-326 Compliant:
    - AES CBC 256
    - ECDSA 1024
    - RSA 2048
  - Hardware enabled TPM/ECC
  - Fully managed Ethernet switching in firmware (DO-254)
  - 802.1X Compliant
  - Capable 802.11i, WPA2, WPA, AES, TKIP
- **Safety:**
  - DO-160F Approved
  - Meets commercial safety standards:
    - UL 60950-1
    - CAN/CSA-C22.2 No. 6095-1
    - UL 2043
    - IEC 60950-1
    - EN 60950-1

Part Number:
TA-PW1001-001

SUMMARY OF BENEFITS

- **Inflight Connectivity:**
  - Passenger Wifi access to content, purchasing and information.
  - Wifi and Bluetooth allows for crew and maintenance personal to communicate within the aircraft.
- **Inflight or Ground Data Exchange:**
  - Gate Information
  - Flight Plan change
  - Passenger manifest/preferences
  - Passenger inflight purchases
  - Maintenance Procedures and Data
  - Performance Data
- **Cabin Services:**
  - Usage as a secure access point for content, moving map, information, with the addition of Connectivity Sever Unit version 2.
- **Maintenance Functioning:**
  - Maintenance and crew personal can view aircraft data updated onboard and via cloud computing services
- **Security:**
  - Allows for Access Control List (ACL) to be used.
  - Allowing different users, different levels of access. i.e. Airline is able to determine rules for wireless access based on their requirements.



Product Overview

The PWAP is the next generation of WAP product based on our extensive in-service experience.

PWAP consists of a Motherboard, Bluetooth Module, and a WAP Module.

- The Motherboard has a Thompson Aerospace DO-326 complainant security engine. This security engine has TPM/ECC hardware to allow local generation of keys and stowage of certificates. The security engine is updated by use an external keyline, Bluetooth dongle and/or user approval.

- The Bluetooth Module is a Bluetooth 4.0 Long Range module transmitting at 2.4 GHz and is capable of connecting at up 450 meters.

- WAP Module is a generic Cisco WAP capable of 802.11a/g/n with two 2.4 GHz radios and one 5 GHz radio. The WAP Module is capable of 3 x 3 multiple-input multiple-output (MIMO) at 20 or 40MHz 802.11n connection giving you up to 300 Mbps. The latest security protocols are implemented by the WAP board i.e. 802.1X, 802.11i, WPA2, WPA, AES, and TKIP. Meets commercial safety standards UL 60950-1, CAN/CSA-C22.2 No. 60950-1, UL 2043, IEC 60950-1, and EN 60950-1.

The PWAP can connect mobile users in or around the aircraft. The 1Net v2 System is designed to have a PWAP module with antennas inside the aircraft as well as a PWAP with an external antenna. Users can also offload data to Thompson Aerospace Cloud services via Gatelink, or allow the server to collect all the data.

The unit has a Gigabit PoE port to provide simple connection to CSUv2 or ESPUs. The unit has (4) input Keylines and (1) output keyline that are controlled by the internal configuration file..

While the PWAP has been designed in accordance with the 1Net System Specification TA-SS1001, the unit is design to work with any third party equipment thru usage of our Key Manager Software tool on our 1Net v2 System server. The server allows configuration of all data ports for each application.

The unit is certified in accordance with DO-178, DO-254, and DO-326.

Arinc 834 message when used with a CSUv2 for data source.

The unit is a part of 1Net Airborne Local Area Network and designed to work with Thompson Cloud Computing services that provide real time credit processing, real-time monitoring, aircraft location and alerts, OTA software updates, maintenance and crew data tracking, and trend analytics.