PowerVision

Datalink DL01- Specification

19 May 2017

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1. Description

Datalink DL01 supports Wi-Fi technology IEEE 802.11b/g/n standards for single-band 2.4GHz two stream MIMO, including functionalities such as Space Time Block Code (STBC), Low-Density Parity Check (LDPC), maximum likelihood (ML) MIMO receiver, maximum ratio combining (MRC) and Orthogonal frequency-division multiplexing (OFDM). Modulation schemes include BPSK, QPSK, 16-QAM, 64-QAM and forward error correction coding with rates of 1/2, 2/3, 3/4, 5/6.

DL01 is based on Qualcomm QCA4531 SoC (system-on-a-chip) that is programmable Linux OS access point/router IC. It embeds OpenWRT QSDK Linux OS and open source ATH9K Wi-Fi drivers and have MIPS 24Kc CPU with 650MHz clock.

Transceiver includes two RF spatial stream paths, and four antenna connectors of which two are active simultaneously. External RF FEM's (front end-module) are used for transmitter PA (power amplifier) and receiver LNA (low noise amplifier).

2. Specification

Technology	WiFi 802.11b/g/n standards for single-band 2.4GHz two stream MIMO
Interfaces	Power supply and data: 42+11pin SMT Antenna: 4pcs U.FL RF antenna connectors (of which 2pcs active simultaneously)
Channels for CE area	1 – 13
Frequency for CE area	2412 – 2472 MHz
Channels for FCC area	1 – 11
Frequency for FCC area	2412 – 2462 MHz
Channel bandwidth	20MHz
Guardian interval	Long 800ns
Maximum TX output power for CE area	+20dBm @EIRP
Maximum TX output power for FCC area	+28dBm @conductive
Input voltage and current	Digital Voltage: 3.3V RF Voltage: 5.0V
Operating temperature	-10°C … +55°C
PCB (Printed circuit board)	HDI, 8 layer, 3-2b-3, FR4, thickness 0.815mm

Declaration of Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement Caution: To maintain compliance with the FCC's RF exposure guidelines, place the product at least 20cm from nearby persons.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition au rayonnement du CI établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

Host labeling requirement:"Contains transmitter module FCC ID：2AJTNDL01"

Host labeling requirement:"Contains transmitter module IC：22057-DL01"

Antenna information used during testing:

Manufacturer: ZHONGTIAN XUN Communication Technology Co., Ltd.

Antenna type: PCB Layout antenna

Antenna gain: 2.2 dBi for each antenna

Refer to antenna specification for details.

Note: If difference antenna types are used, C2PC should be applied.