Operational description

UDOO X86 Advanced Plus is a single board computer powered by 12V DC external power adapter.

The product provides radio connectivity via Bluetooth Low Energy transmission, developed following standard 4.0 rules and working at 2.402 – 2.480 GHz frequency range.

Radio communication and other functions were realized using Intel® Curie™ chip, named U51 in the schematic; this radio module uses the Frequency-Hopping Spread Spectrum (FHSS) channels management and realizes a GFSK type modulation on transmitted signal.

UDOO X86 uses an smd antenna code ANT016008LCD2442MA1 characterized by a maximum gain of 2,3 dBi @ 2,442 GHz.
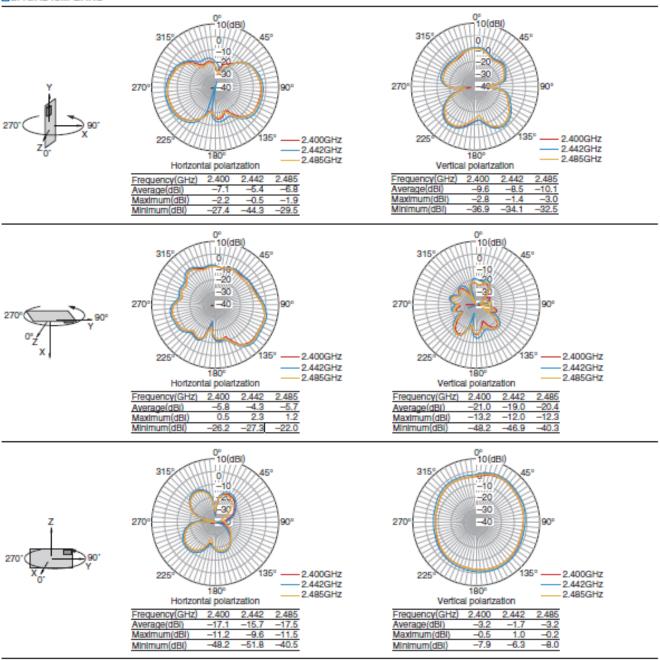
SECO S.p.A.

ANT016008LCD2442MA1

■ **RADIATION PATTERNS**

□ **2.4GHz ISM BAND**

Horizontal polarization

Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	−7.1	−5.4	−6.8
Maximum(dBi)	−2.2	−0.5	−1.9
Minimum(dBi)	−27.4	−44.3	−29.5

Vertical polarization

Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	−9.6	−8.5	−10.1
Maximum(dBi)	−2.8	−1.4	−3.0
Minimum(dBi)	−36.9	−34.1	−32.5

Horizontal polarization

Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	−5.8	−4.3	−5.7
Maximum(dBi)	0.5	2.3	1.2
Minimum(dBi)	−26.2	−27.3	−22.0

Vertical polarization

Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	−21.0	−19.0	−20.4
Maximum(dBi)	−13.2	−12.0	−12.3
Minimum(dBi)	−48.2	−46.9	−40.3

Horizontal polarization

Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	−17.1	−15.7	−17.5
Maximum(dBi)	−11.2	−9.6	−11.5
Minimum(dBi)	−48.2	−51.8	−40.5

Vertical polarization

Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	−3.2	−1.7	−3.2
Maximum(dBi)	−0.5	1.0	−0.2
Minimum(dBi)	−7.9	−6.3	−8.0

• Tested antenna has been soldered. Evaluation board size is 120×65×1 mm.