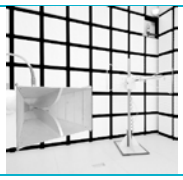
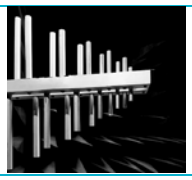
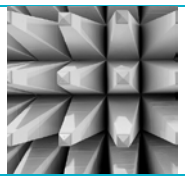

CTC advanced
member of RWTÜV group

Bundesnetzagentur

BNetzA-CAB-02/21-102

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12076-01-04

Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-1515/20-01-04 MPE (FCC)

Certification numbers and labeling requirements	
FCC ID	UN6-DTRHFKQ21

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

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EUT technologies:

Technologies:	Max. power [dBm]		Antenna gain max.: [dBi] **
	conducted	EIRP	
RFID 13.56 MHz	27.0 dBm	-30.0 dBm	--

NOTE: information taken from 20220520_Block_Diagram_Operational_Description_DTI51x_ANT51x_en.pdf

Prediction of MPE limit at given distance - FCC

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S = PG / 4\pi R^2$

where: S = Power density
P = Power input to the antenna
G = Antenna gain
R = Distance to the center of radiation of the antenna
PG = Output Power including antenna gain

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled "Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure"

According to: CFR47, Subpart I - §1.1310 Radiofrequency radiation exposure limits				
Frequency Range (MHz)	**Electric Field** (V/m)	**Magnetic Field** (A/m)	**Power density** (mW/cm^2)	**Averaging time** (minutes)
Occupational / Controlled Exposure				
0.3-3.0	614	1.63	100	6
3.0-30	1842/f	4.89/ *f*	$900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100000	--	--	5	6
General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	100	30
1.34-30	824/f	2.19/f	**$180/f^2$**	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100000	--	--	1.0	30

where f = Frequency (MHz)

Prediction: worst case

	Technologies:	RFID	
	Frequency (MHz)	13.56	
PG	Declared max power (worst case)	27	dBm
R	Distance	20	cm
S	MPE limit for uncontrolled exposure	0.98	mW/cm^2
	Calculated Power density:	0.0998	mW/cm^2
	Calculated percentage of Limit:	10.19%	

This prediction demonstrates the following:

The power density levels for FCC at a distance of 20 cm are below the maximum levels allowed by regulations.