(Excerpt from Test Report)

5.8. RF Safety evaluation

The Wireless Consecutive Point to Point Millimeter-Wave Transceiver models TNS-28-SNP-03-100, -200, -300, -400, -500 and -600 are stationary, fixed-mounted units with a maximum EIRP of 36 dBW or 3981 Watt effective radiated power in the main lobe of the antenna. This is more than the 1640 W EIRP threshold established by the FCC for RF safety evaluation, therefore the transmitter is not categorically excluded from MPE evaluation.

Based on the following physical characteristics:

Conducted antenna power 1 Watt
Antenna Gain 3981.1
Maximum antenna dimension 34.5 cm

and the theoretical formulas FCCC OET 65, the following RF safety parameters can be calculated for operation on 28 GHz:

1. Transition between near and far field; 0.5D^2 /. is 5.55 meters
2. Maximum near field power; 4P/A is 42.79 W/m^2
3. Power density at the far field transition point; S=PG/(4pi .R^2) is 10.28 W/m^2
4. Distance for power density to equal 10 W/m^ 2; PG/(4pi .R^2) is 5.63 meters.

Experimentally we determined that the field strength as measured with a broadband E-field probe closely followed the theoretical predictions. The results are tabulated below:

Distance(m)	E-field (V/m)	Calculated EIRP (W/m^2)	Theoretical far field (W/m^2)
5.0	71	13.37	na
5.3	63	10.52	na
6.8	50	6.63	6.85

From the above, the following conclusions can be reached:
• The Triton TNS 28 series transceivers comply with the 50 W/m^ 2 RF safety limits for occupational RF workers.
• A safety zone in front of the unit of at least 6 meters for the protection of the general public needs to be established.
• A RF safety-warning label needs to be present on the transceiver. The user/installation manual needs to provide information on the proper mounting such that the safety zone is maintained.
• When multiple antennas are installed in the same location, a RF exposure assessment will have to be made at the time of installation.