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TESTING Cert No.1152.01

DATE: 03 June 2020

I.T.L. (PRODUCT TESTING) LTD.

FCC Radio Test Report

For

Corning Optical Communication Wireless

Equipment under test:

ONE - Optical Network Evolution Wireless Platform

MXU (Mid Power Remote Unit) Add-on

(TDD Section 2496-2690MHz Band)

Tested by: _____
M. Zohar

Approved by: _____
D. Shidlowsky

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Measurement/Technical Report for
Corning Optical Communication Wireless

ONE - Optical Network Evolution Wireless Platform

MXU (Mid Power Remote Unit) Add-on

(TDD Section 2496-2690MHz Band)

FCC ID: OJF1MXU25

This report concerns:	Original Grant: Class II change: X Class I change:
Equipment type:	B21 - Part 20 Industrial Booster (CMRS)
Limits used:	47CFR Parts 2; 27

Measurement procedure used is KDB 935210 D05 v01r03 April 2019 and ANSI IEEE C63.26-2015

Substitution Method used as in ANSI TIA-603-E-2016

Application for Certification prepared by:

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Applicant for this device:
(different from "prepared by")

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1 General Information

1.1 Administrative Information

Manufacturer:	Corning Optical Communication Wireless
Manufacturer's Address:	8253 1st Street Vienna, VA 22812 U.S.A. Tel: +1-703 855-1773
Manufacturer's Representative:	Isaac Nissan
Equipment Under Test (E.U.T):	ONE - Optical Network Evolution Wireless Platform
Equipment Model No.:	MXU (Mid Power Remote Unit) Add-on
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	February 02, 2020
Start of Test:	February 06, 2020
End of Test:	March 18, 2020
Test Laboratory Location:	I.T.L (Product Testing) Ltd. 1 Batsheva St, Lod, Israel 7116002
Test Specifications:	FCC Parts 2; 27

1.2 List of Accreditations

The EMC laboratory of I.T.L. is accredited by/registered with the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), FCC Designation Number is IL1005.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-20025, R-2729, T-20028, G-20068.
5. Department of Innovation, Science and Economic Development (ISED) Canada, CAB identifier: IL1002.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

1.3 Product Description

The mid-power remote expansion unit (MxU) is a new addition to the Corning® optical network evolution (ONE™) solution mid-power product line which enables medium power transmission for the 2.5 GHz band (TDD). The MxU is a 1U add-on unit that enhances the scalable multiservice MRU solution, adding additional service support at a relatively low cost.
The MxU expands the MRUs service distribution at remote locations to include the 2.5 GHz LTE (TDD) band, enabling up to eight operator services (with the MRU) to be distributed over a single broadband infrastructure.

The MxU interfaces to the MRU, providing broadband frequency support over UL/DL RF expansion ports. It supports the 2.5 GHz frequency band in a single enclosure and includes a future option for connecting additional add-on units for even more band support. All eight services are distributed over the same infrastructure: routed to the MRU over a single optic fiber, distributed over the same footprint and managed as a single element via a web session to the headend control module (HCM) — as the MRU.

1.4 Test Methodology

Both conducted and radiated testing were performed according to the procedures in KDB 935210 D05 v01r03 April 2019 and ANSI/TIA-603-E-2016. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.5 Test Facility

Both conducted and radiated emissions tests were performed at I.T.L.'s testing facility in Lod, Israel. I.T.L.'s EMC Laboratory is accredited by A2LA, certificate No. 1152.01 and its FCC Designation Number is IL1005.

1.6 Measurement Uncertainty

Conducted Emission (CISPR 11, EN 55011, CISPR 32, EN 55032, ANSI C63.4)
0.15 – 30 MHz:
Expanded Uncertainty (95% Confidence, K=2):
± 3.44 dB

Radiated Emission (CISPR 11, EN 55011, CISPR 32, EN 55032, ANSI C63.4) for open site 30-1000MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 4.98 dB

2 System Test Configuration

2.1 Justification

The E.U.T. was previously tested for FCC certification as follows:
The E.U.T. has been fully tested receiving signals from the RAU5x.
The test setup was configured to closely resemble the standard installation.
All source signals are represented in the setup by appropriate signal generators.
An "Exercise" SW on the computer was used to enable / disable transmission of the RAU5x, while the EUT output was connected to the spectrum analyzer.
All channels transmitted during the testing.
There is neither an intermediate amplified nor donor antenna in the uplink.
All components included in the UL path are connected by cables.
Presently the following tests were performed in order to allow the use of 5G:
RF output power, occupied bandwidth, and spurious emissions.

2.2 EUT Exercise Software

SW version - 3.7 build 50
Firmware version - mxu_db64_37_50.bin

2.3 Special Accessories

No special accessories were needed in order to achieve compliance.

2.4 Equipment Modifications

No modifications were necessary in order to achieve compliance.

2.5 Configuration of Tested System

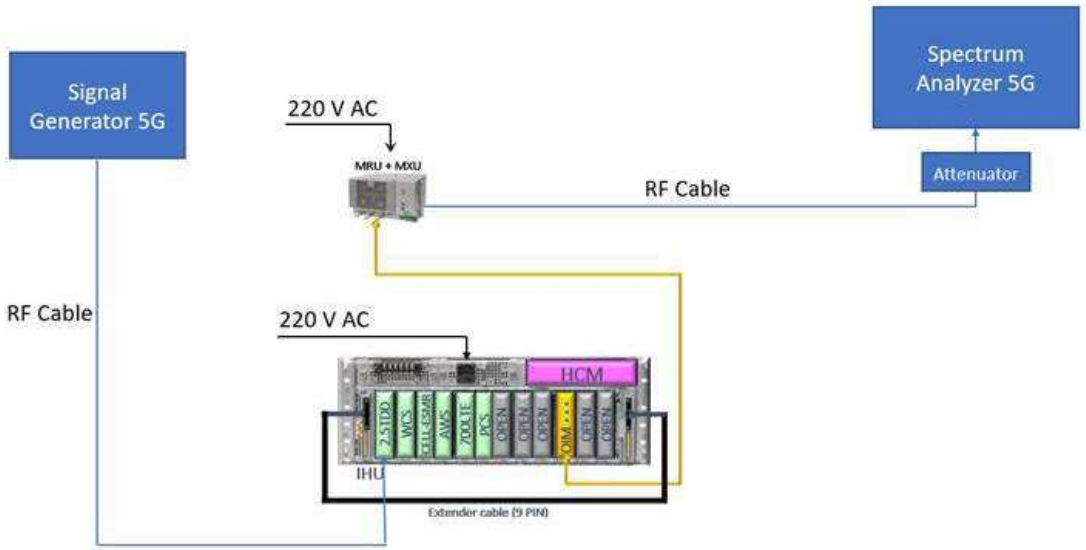

Figure 1. Conducted Test Set-Up

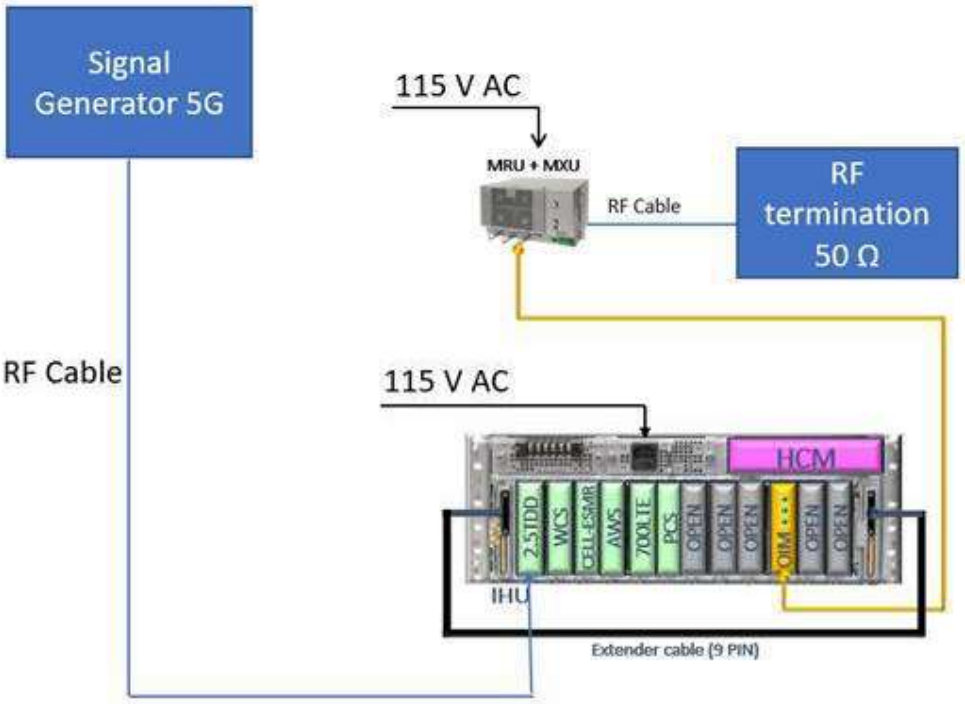

Figure 2. Radiated Test Set-Up

3 Test Set-Up Photos

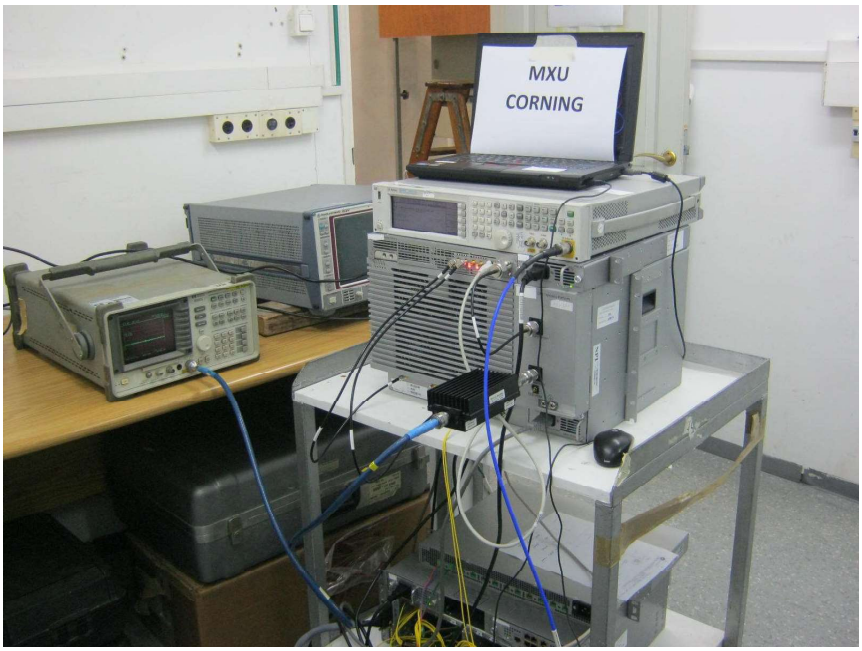

Figure 3. Conducted Emission From Antenna Port Tests

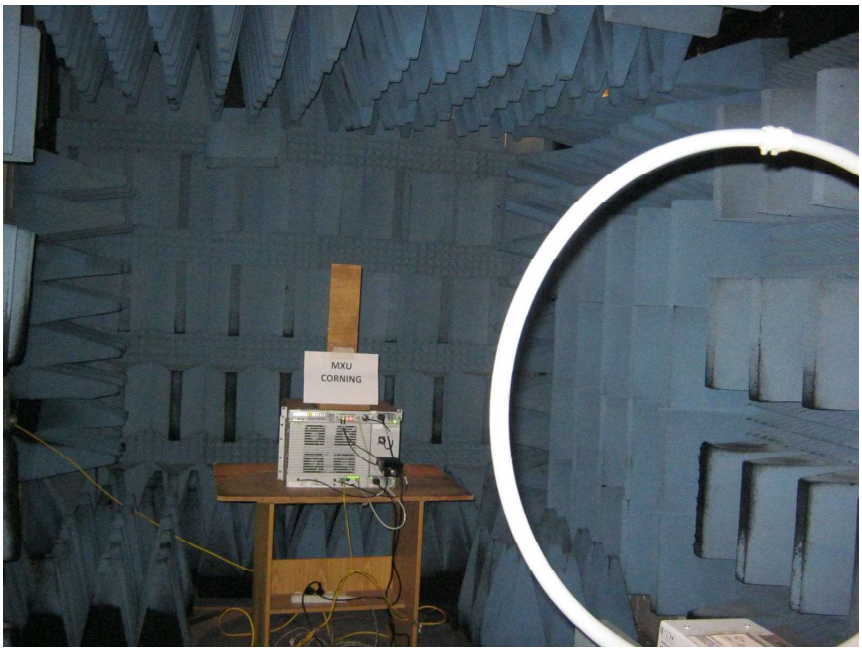

Figure 4. Radiated Emission Test 9kHz - 30MHz

Figure 5. Radiated Emission Test 30 - 200 MHz

Figure 6. Radiated Emission Test 200 - 1000MHz

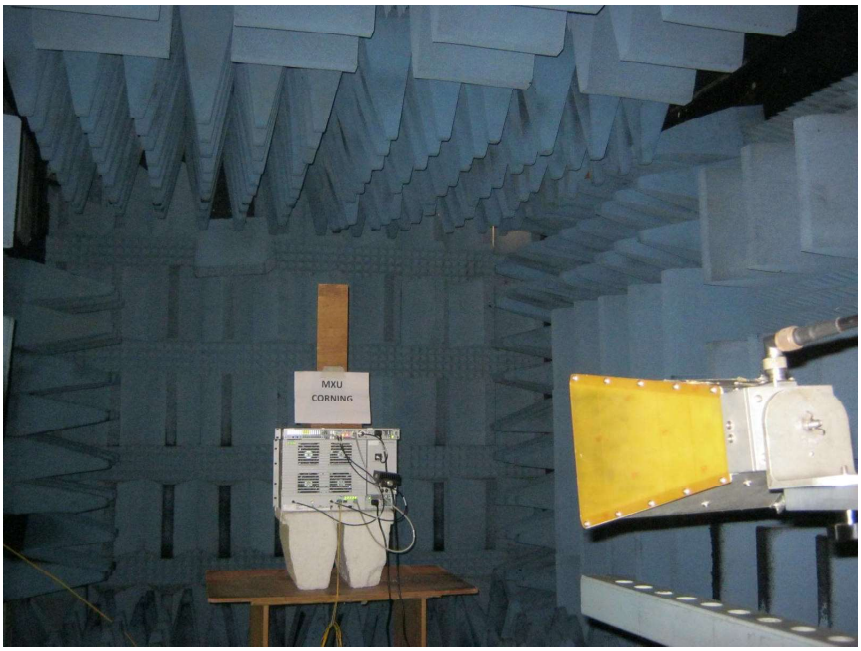

Figure 7. Radiated Emission Test Above 1GHz