



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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This report relates only to items tested.



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

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TABLE OF CONTENTS

1	GENERAL INFORMATION	4
1.1	Administrative Information	4
1.2	List of Accreditations	5
1.3	Product Description	6
1.4	Test Methodology	6
1.5	Test Facility	6
1.6	Measurement Uncertainty	6
2	SYSTEM TEST CONFIGURATION	7
2.1	Justification	7
2.2	EUT Exercise Software	7
2.3	Special Accessories	7
2.4	Equipment Modifications	7
2.5	Configuration of Tested System	8
3	TEST SET-UP PHOTOS	10
4	RF POWER OUTPUT	13
4.1	Test Specification	13
4.2	Test Procedure	13
4.3	Test Limit	13
4.4	Test Results	13
4.5	Test Equipment Used; RF Power Output	44
5	OCCUPIED BANDWIDTH	45
5.1	Test Specification	45
5.2	Test Procedure	45
5.3	Test Limit	45
5.4	Test Results	45
5.5	Test Equipment Used; Occupied Bandwidth	106
6	SPURIOUS EMISSIONS AT ANTENNA TERMINALS	107
6.1	Test Specification	107
6.2	Test Procedure	107
6.3	Test Limit	107
6.4	Test Results	107
6.5	Test Equipment Used; Spurious Emissions at Antenna Terminals	156
7	SPURIOUS RADIATED EMISSION	157
7.1	Test Specification	157
7.2	Test Procedure	157
7.3	Test Limit	158
7.4	Test Results	158
7.5	Test Instrumentation Used; Radiated Measurements	159
8	APPENDIX A - CORRECTION FACTORS	160
8.1	Correction factors for RF OATS Cable 35m	160
8.2	Correction factors for RF OATS Cable 10m	161
8.3	Correction factors for Horn Antenna	162
8.4	Correction factors for Horn Antenna	163
8.5	Correction factors for Log Periodic Antenna	164
8.6	Correction factors for Biconical Antenna	165
8.7	Correction factors for ACTIVE LOOP ANTENNA	166



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

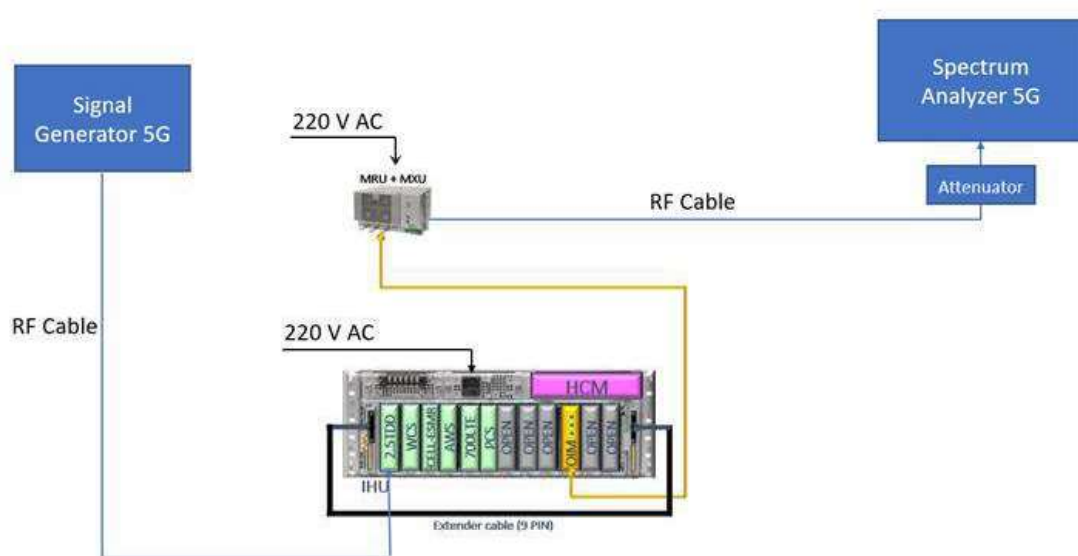


Figure 1. Conducted Test Set-Up

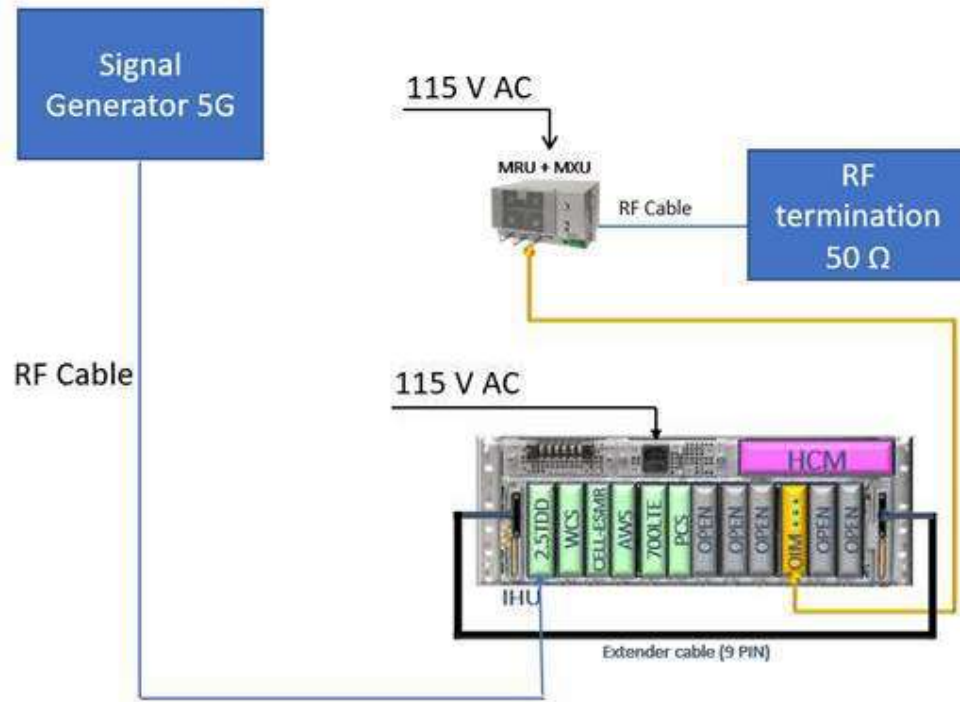


Figure 2. Radiated Test Set-Up

3 Test Set-Up Photos

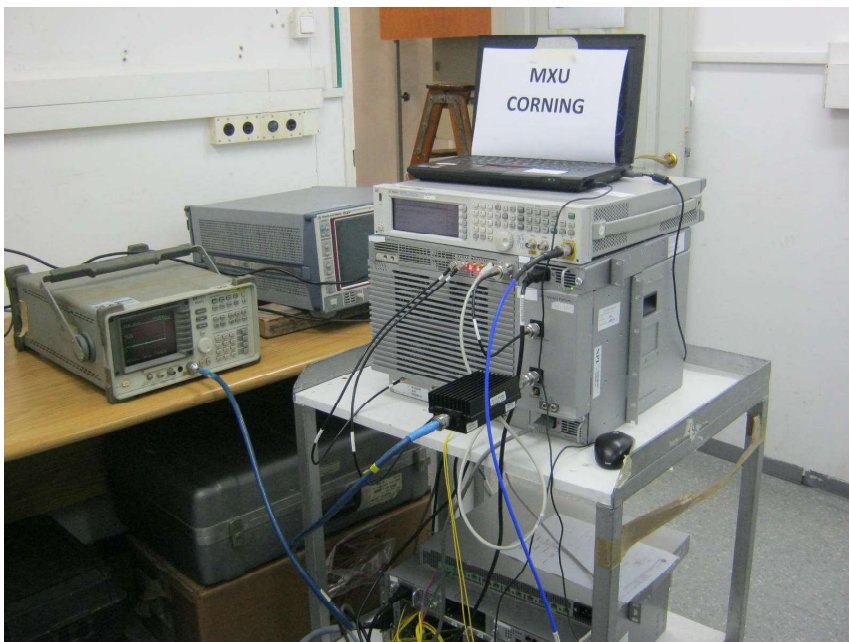


Figure 3. Conducted Emission From Antenna Port Tests

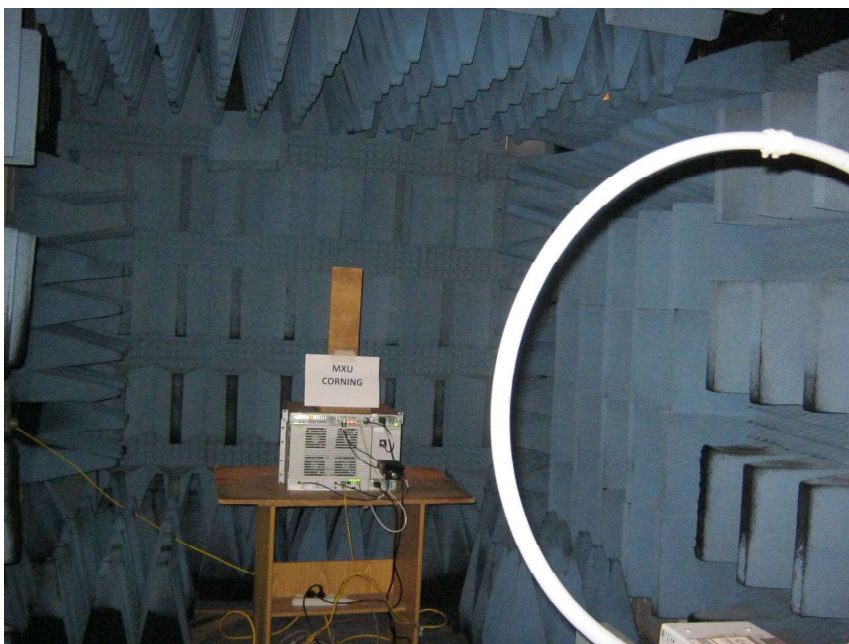


Figure 4. Radiated Emission Test 9kHz - 30MHz



Figure 5. Radiated Emission Test 30 - 200 MHz



Figure 6. Radiated Emission Test 200 - 1000MHz



Figure 7. Radiated Emission Test Above 1GHz