

Date: 7 Nov 2023

TO: Federal Communications Commission  
7435 Oakland Mills Road  
Columbia MD 21046

Subject: FCC Certification - Section 74.795(b) information

FCC ID: 2AUUC-YOGA40W00

To Whom It May Concern:

This attestation pertains to YOGA40W00, a 40Watt ATSC3.0 Digital LPTV Transmitter.  
The intended use of this digital transmitter is to broadcast ATSC 3.0 Digital television signal.

The YOGA40W00 meets the requirements specified in 74.795(b), that are listed below.

- (1) The transmitter is designed to produce digital television signals that can be satisfactorily viewed on consumer receiving equipment based on the digital broadcast television transmission standard in § 73.682(f)(2) of this chapter. § 73.682(d) is not applicable for this product as it refers to ATSC 1.0 standard.
- (2) Emissions on frequencies outside the authorized channel, measured at the output terminals of the transmitter meets the requirements of § 74.794, as applicable. For details, refer the Test report.
- (3) Every unit of YOGA40W00 must be provisioned in a cloud based application, called Element management system (EMS\*). Without provisioning in the EMS\*, the unit cannot be operational. This EMS application displays the status of RF transmission, output power & channel number of a particular unit as shown in Figure 1. Further, the BRH device, being a closed loop system, ensures the output power stays within the specified range +/-1 dB at all conditions. In case, the output power exceeds the higher threshold, the RF output will be switched OFF.

**Fronthaul Link**

**Pipeline Scheduler**

Current Sampling Rate (Msps)	9216
Last Pkt Proc Latency ( $\mu$ Sec)	59.0000
STL-Out Rate (Frames/Sec)	773
Emission Rate (Frames/Sec)	651
Buffered Jitter Frame Count	952

**Transmitter Status**

Transmission Power	40W
Transmission Frequency (MHz)	538.0
BB Board TX Gain (dB)	-8.95
RF Transmission	On

Figure 1. Screenshot of the EMS\* display showing the Transmitter status

- (4) When subjected to variations in ambient temperature between 0 and 40 degrees Centigrade and variations in power main voltage between 85% and 115% of the rated power supply voltage, the frequency stability of the local oscillator in the RF channel upconverter will be maintained within 10 kHz of the nominal value. For details, refer the test report.
- (5) There is a provision in the EMS\* application to monitor the real time voltage and current of the BRH unit. Figure 2 shows the screenshot containing the system voltages and currents across various sections of the unit.

System Voltage and Currents

PA 50V Current (A)	2.3031
PA 50V Voltage (V)	50.6000
PROC 12V Current (A)	0.8811
PROC 12V Voltage (V)	12.3471
PROC 6V Current (A)	0.7339
PROC 6V Voltage (V)	6.3063
Forward Power Voltage (V)	1.6475
Reverse Power Voltage (V)	1.6369

Figure 2. Screenshot of the EMS\* display showing the Voltage and current

(6) The BRH device is designed / programmed in such a way that when the STL-TP input signal is not received, it will automatically switch OFF the RF output transmission.

(7) Wiring, shielding, and construction of the BRH device are in accordance with accepted principles of good engineering practice.

Note:

EMS\* - Element Management system is a cloud based application that manages a network of BRH devices. The management consists of the functions such as Fault Monitoring, Configuration, Accounting, Provisioning and Security.

Sincerely,



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