

A-QL Packages Review

OpticalPress.Com

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Package 1: A-QL Labview 2019 (Apr2020)



Package 2: Simplified A-QL LV2019 (Jan2020)

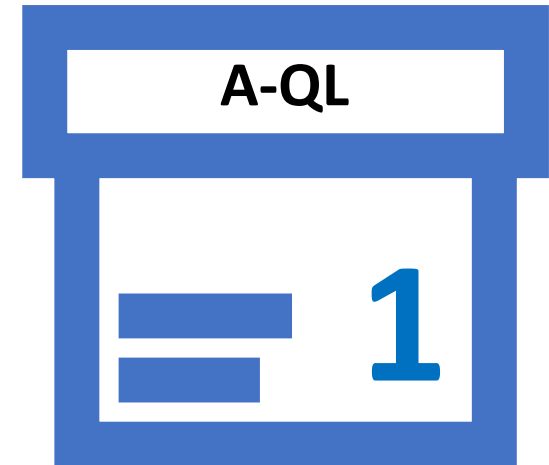


Package 3: Old A-QL LV2013 version



Optical Link Package 1

- ❑ This allows for choosing different modulation modes for Tx, including
 - **16x16** or **32x32**
 - Changeable **TX display size**
- ❑ Configurable RX decoder

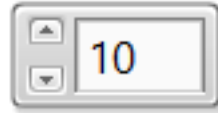


TX – Config TX

loading

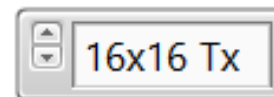


Display Zoom

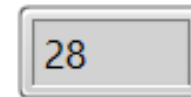


Tx setup | Checking values |

Tx mode



No. subpacks



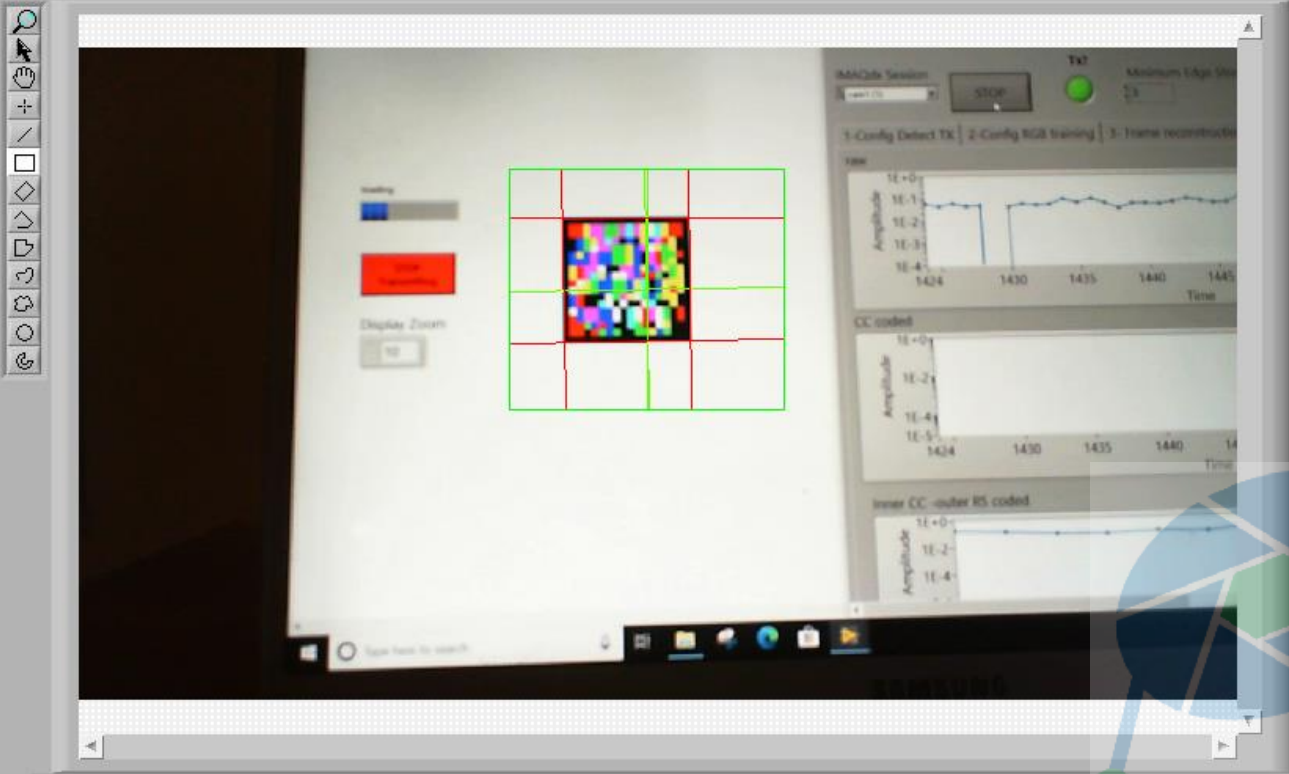
Package 1



RX – Tab 1: Config TX detection and Decoder

IMAQdx Session: cam1 (1) **STOP** TX: Minimum Edge Strength (10): 3

1-Config Detect TX | 2-Config RGB training | 3- Frame reconstruction | 4-Subpacket Count | 5-BER | Debug



Config Decoder

mxn: 16x16

Rotating?

m: 16 n: 16

16x16?

Decoded Text Preview

This paper investigates optical camera communication (OCC) technologies, targeting new spectrum, multiple-input-multiple-output diversity, transmission access, and novel architectures with augmented reality user experience for the extended 5G wireless network. It provides the current OCC st

Package 1



RX – Tab 2: Config threshold and RGB training

1-Config Detect TX | 2-Config RGB training | 3- Frame reconstruction | 4-Subpacket Count | 5-BER | Debug

Config training

auto threshold?

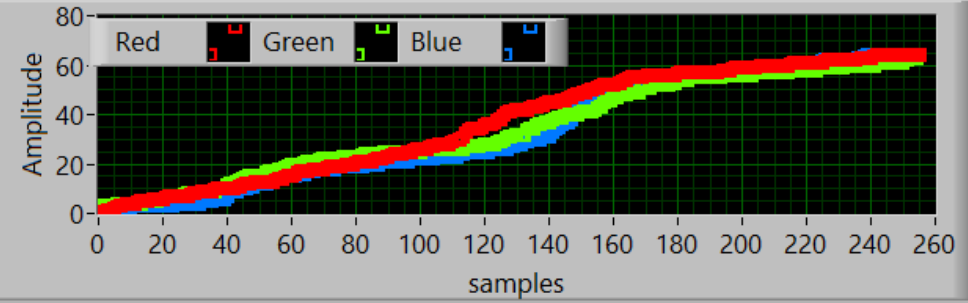


30 Manual Threshold 0-1

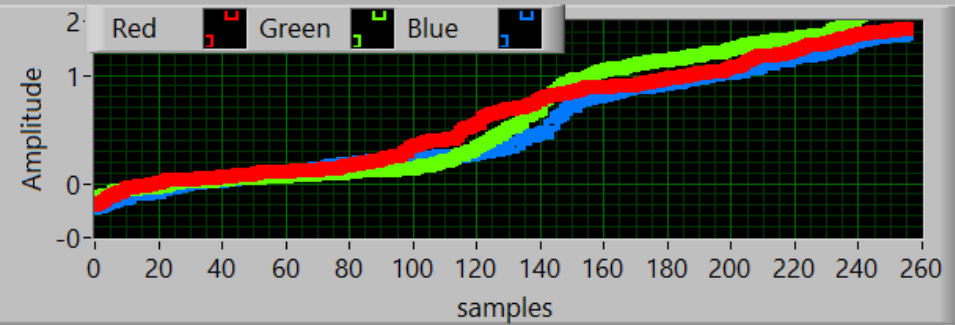
RGB training



R-G-B



Walsh training

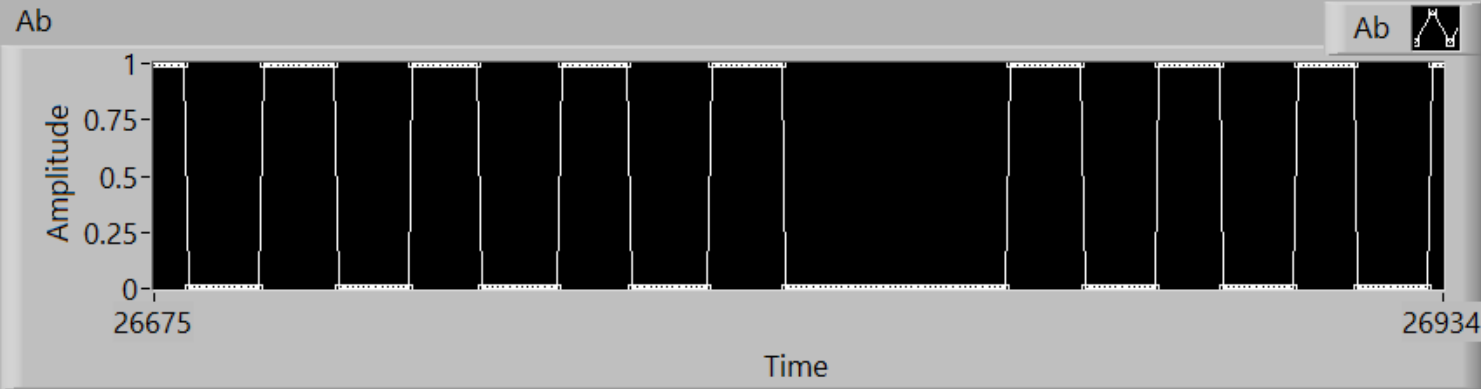


Package 1



RX – Tab 3: Data Frame Reconstruction

1-Config Detect TX | 2-Config RGB training | 3- Frame reconstruction | 4-Subpacket Count | 5-BER | Debug

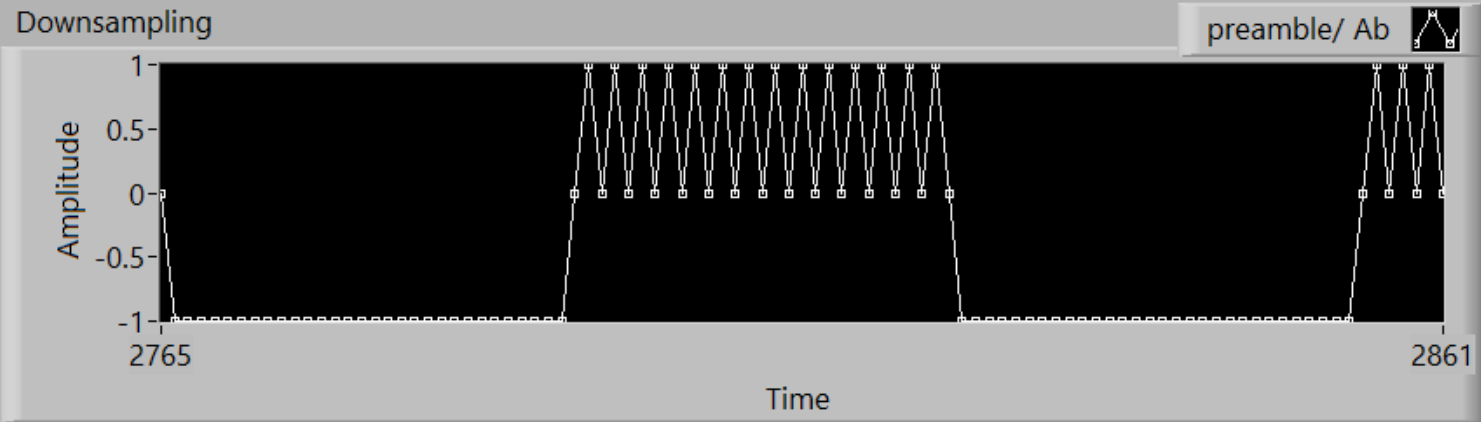


PSDU

2044

No. Subpacket

28



Package 1



RX – Tab 4: Monitor Data Subpackets

1-Config Detect TX

2-Config RGB training

3- Frame reconstruction

4-Subpacket Count

5-BER

Debug

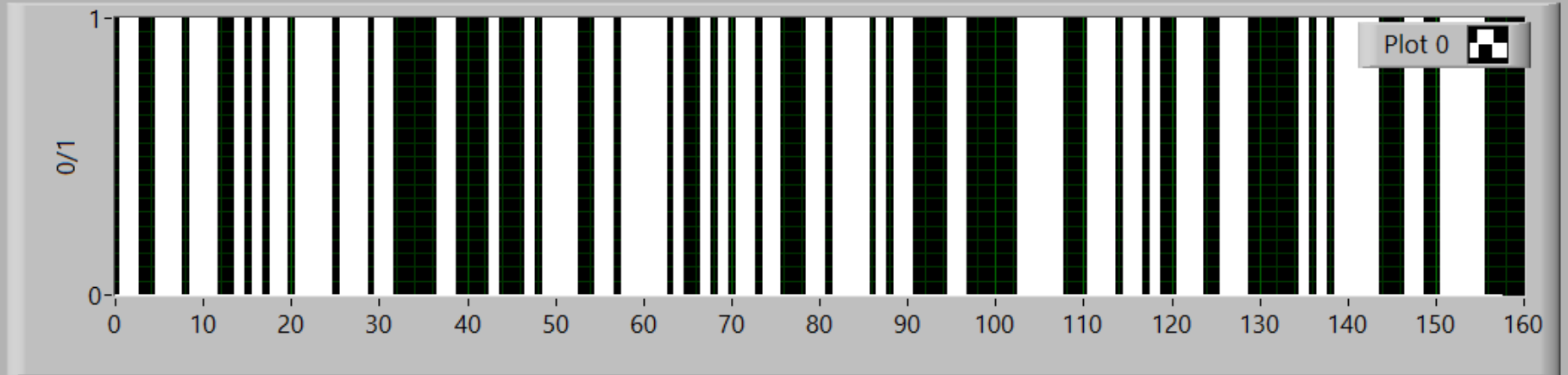
Received DS count

6

PSDU size

4424

Data per Subpacket

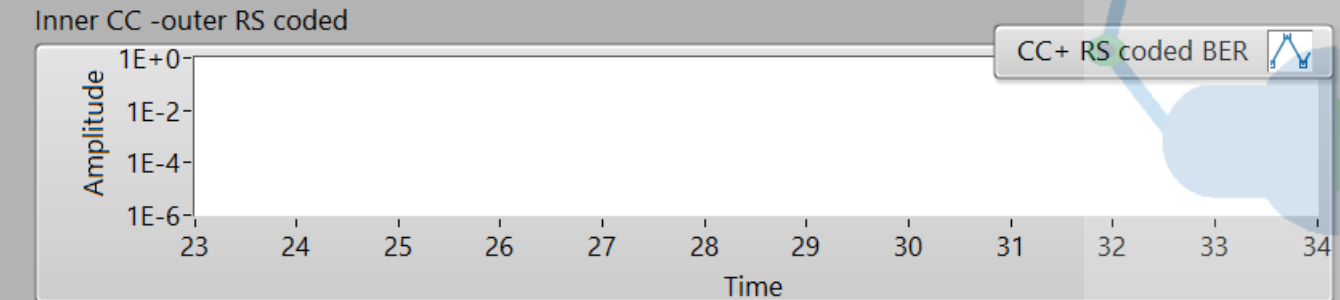
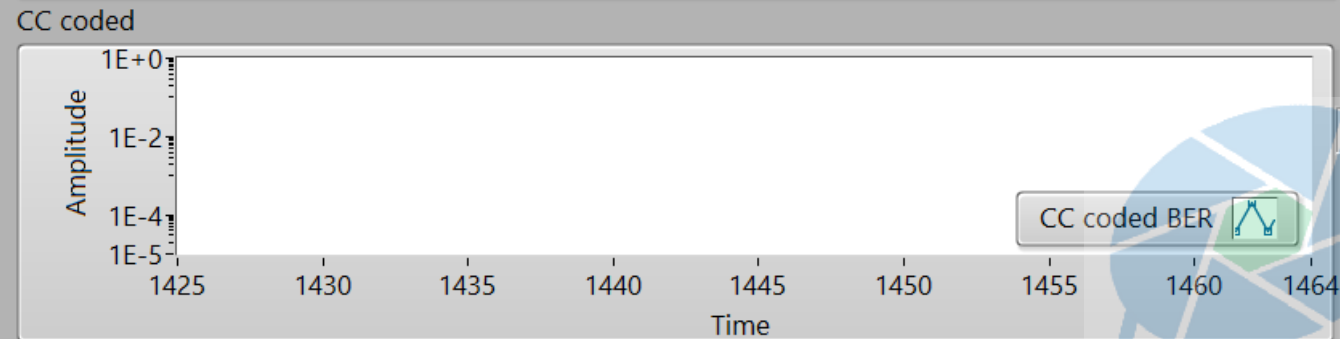
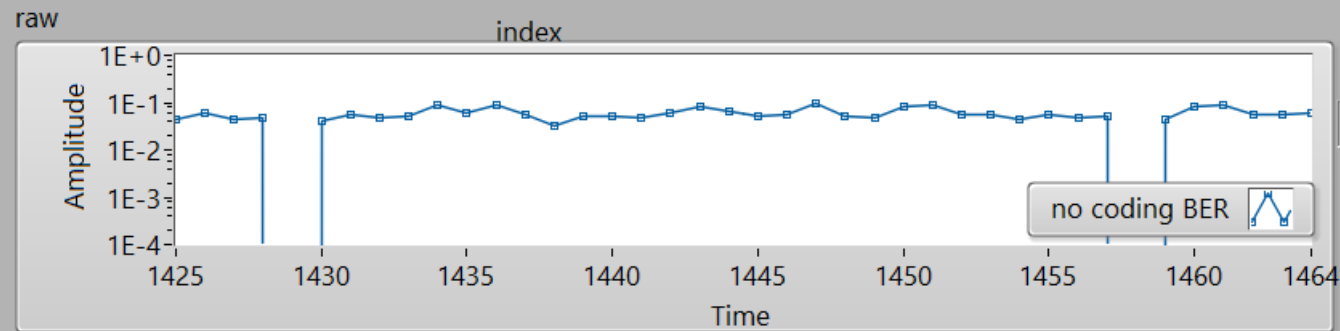


Package 1



RX – Tab 5: BER Count

1-Config Detect TX | 2-Config RGB training | 3- Frame reconstruction | 4-Subpacket Count | 5-BER | Debug



Received Packets

19

total bits received

3.9E+4

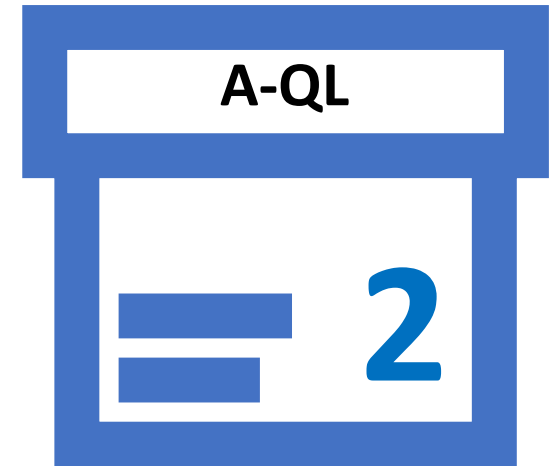
Accumulated BER

85.822E-3

Package 1

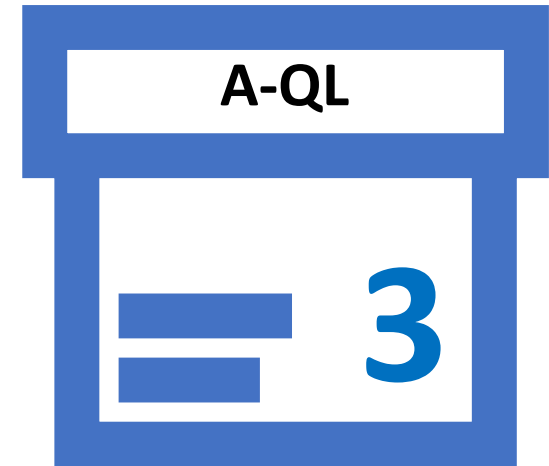


Optical Link Package 2



- ❑ This package is a simplified version, so that user can begin and easily understand the A-QL operation.

Optical Link Package 3



- ❑ This LV2013 version also allows for choosing different modulation modes for Tx, including
 - **16x16** or **32x32**
 - Changeable **TX display size**
- ❑ Configurable RX decoder