

# SNR EDFA System Simulation Result

## Parameter of the system

Rate of the system: 10Gbps;

CD tolerance: 1600ps/nm;

Receiver Sensitivity: -24dBm;

16ch (8+8), wavelength number:

- Red Band: 1547.72, 1548.51, 1549.32, 1550.12, 1550.92, 1551.72, 1552.52, 1553.33nm;

- Blue Band: 1528.77, 1529.55, 1530.33, 1531.12, 1531.90, 1532.68, 1533.47, 1534.25nm;

## Parameter of the line

IL of the line @1550nm: 0.25dB/km including the splice loss and the IL of the connector;

## Parameter of the passive device

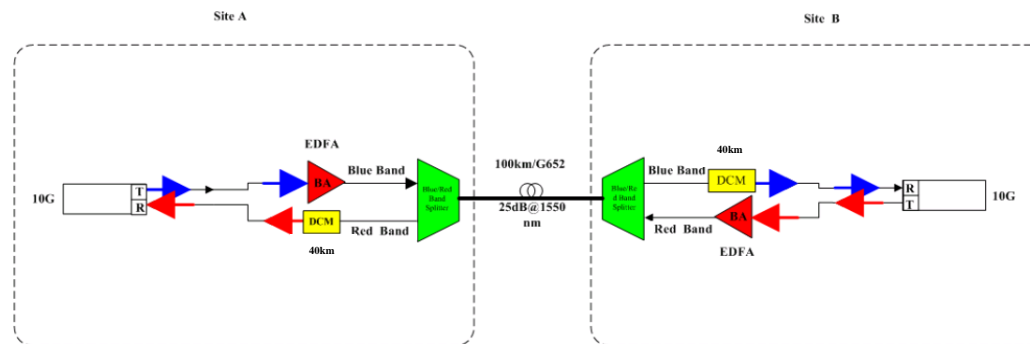
IL of the R/B filter < 1.5dB;

IL of the 4 channels DWDM MUX(DMUX) < 2.5dB;

IL of the 8 channels DWDM MUX(DMUX) < 3.5dB.

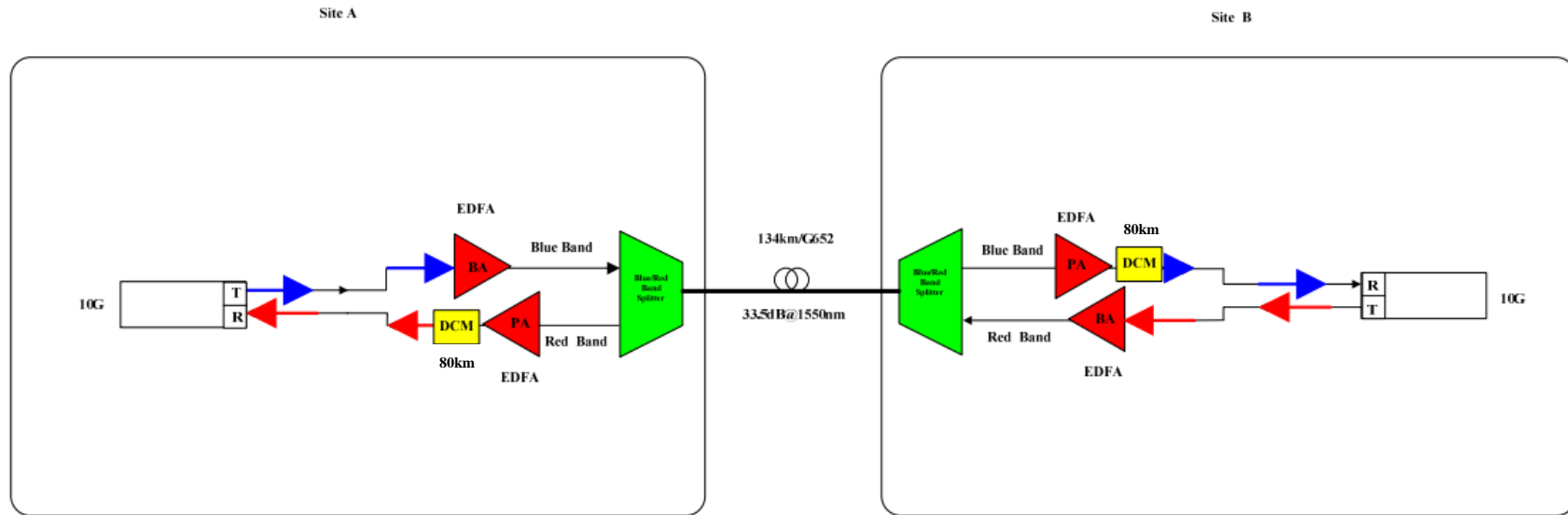
IL of the DCM: 20km<4.0dB, 40km<5.7dB, 60km<7.5dB, 80km< 9.0dB.

## 1. 1CH BOOSTER AMPLIFIER CONFIGURATION



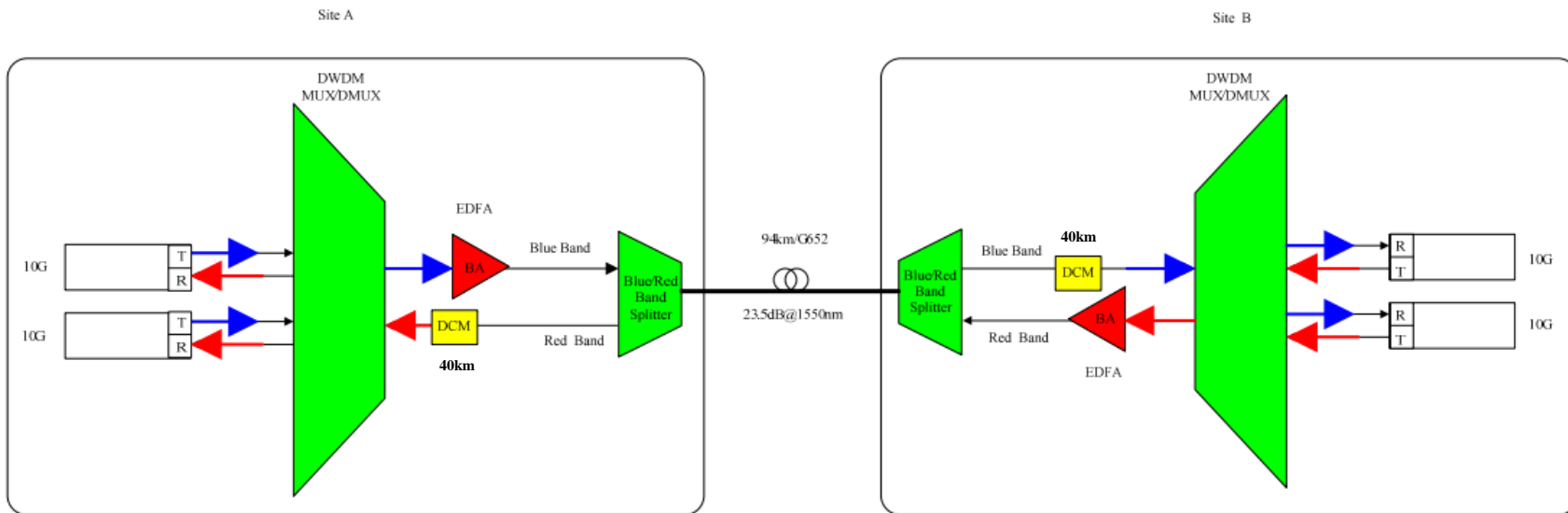
Support 100km (maximum) the margin of the system is 3dB

## 2. 1CH BOOSTER AMPLIFIER + PREAMPLIFIER CONFIGURATION



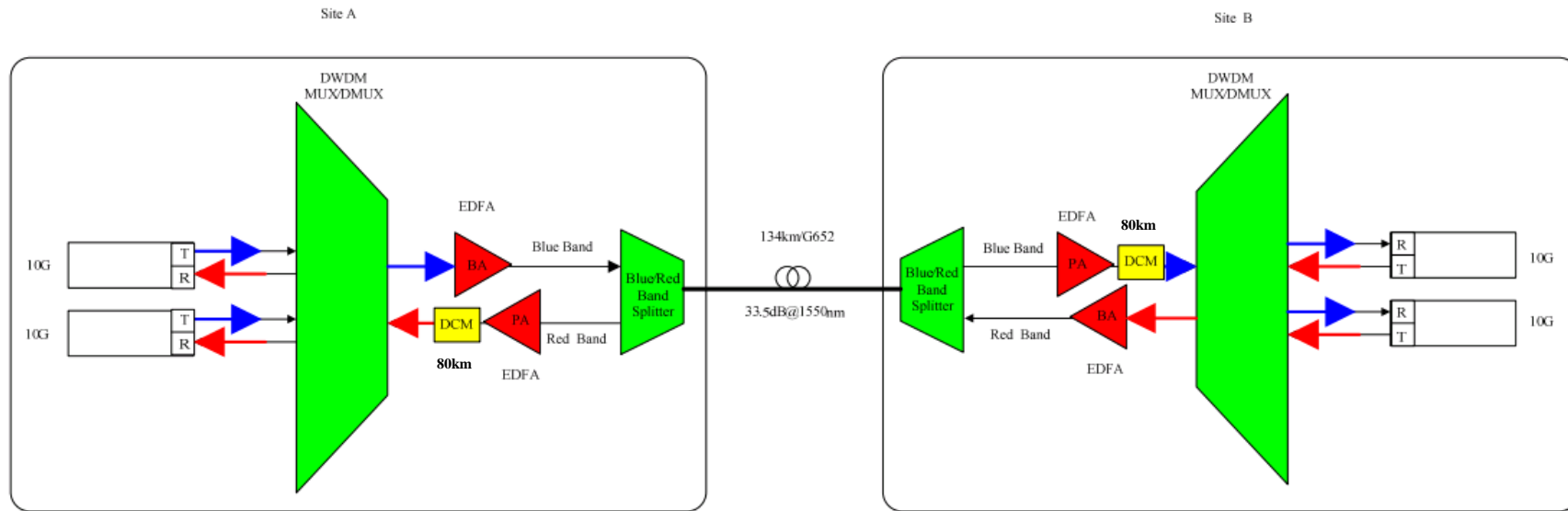
Support 134km (maximum) the margin of the system is 3dB

## 3. 2CH BOOSTER AMPLIFIER CONFIGURATION



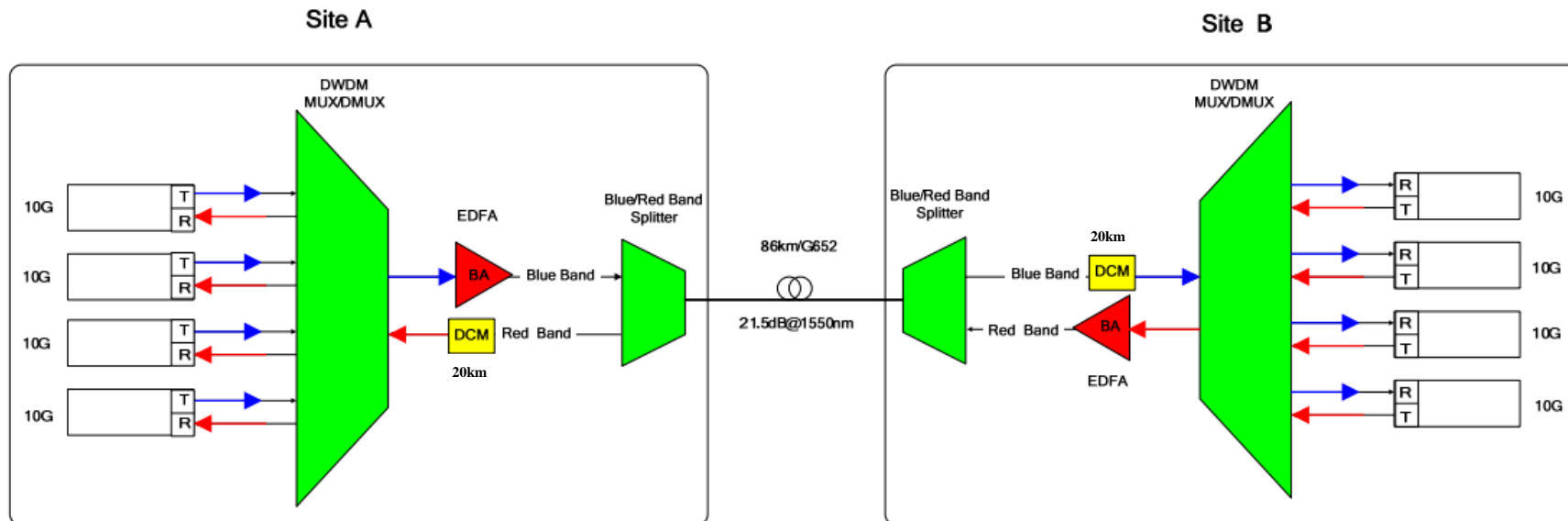
Support 94km (maximum) the margin of the system is 3dB

#### 4. 2CH BOOSTER AMPLIFIER + PREAMPLIFIER CONFIGURATION



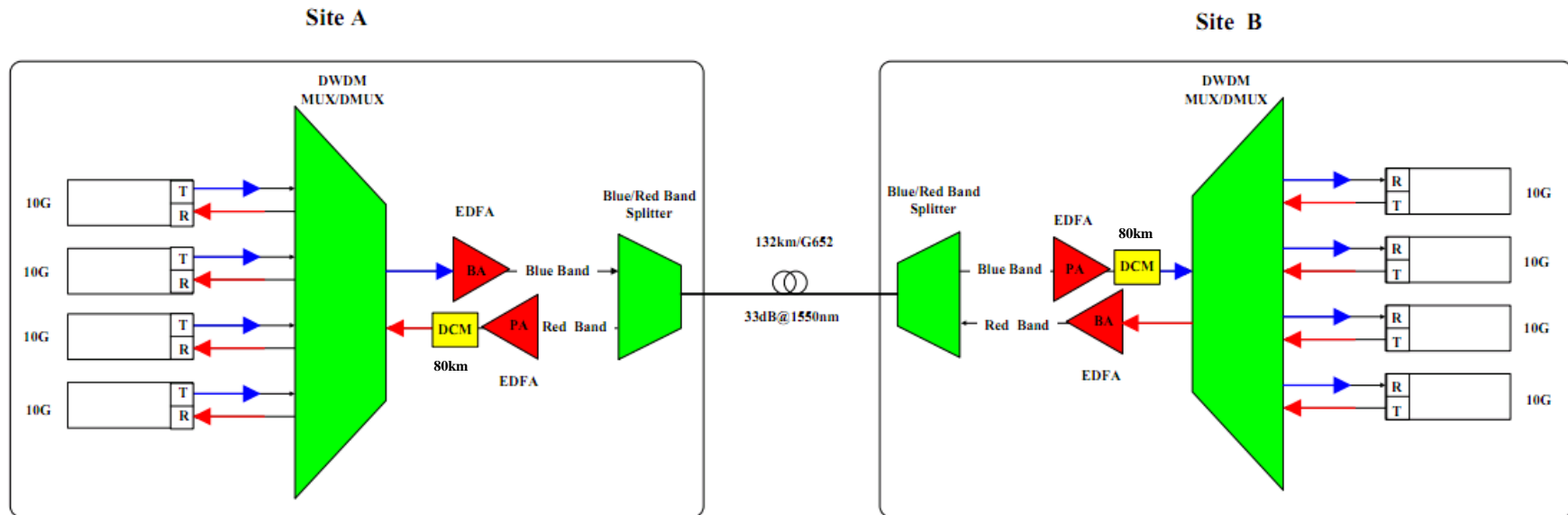
Support 134km (maximum) the margin of the system is 3dB

#### 5. 4CH BOOSTER AMPLIFIER CONFIGURATION



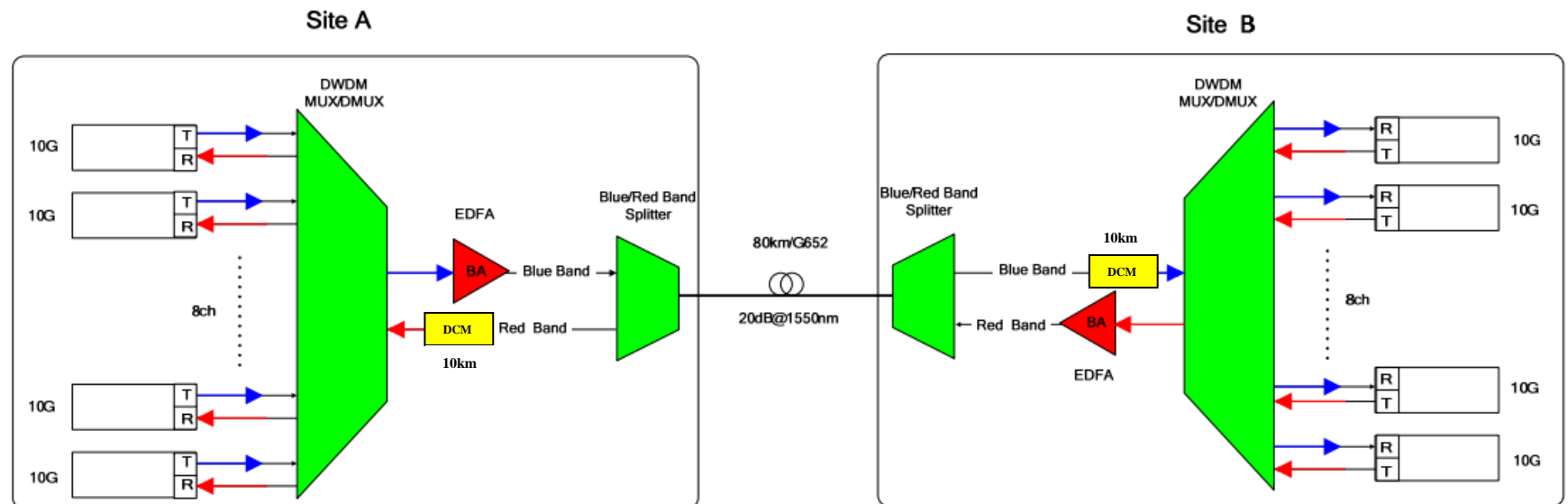
Support 86km (maximum) the margin of the system is 3dB

## 6. 4CH BOOSTER AMPLIFIER + PREAMPLIFIER CONFIGURATION



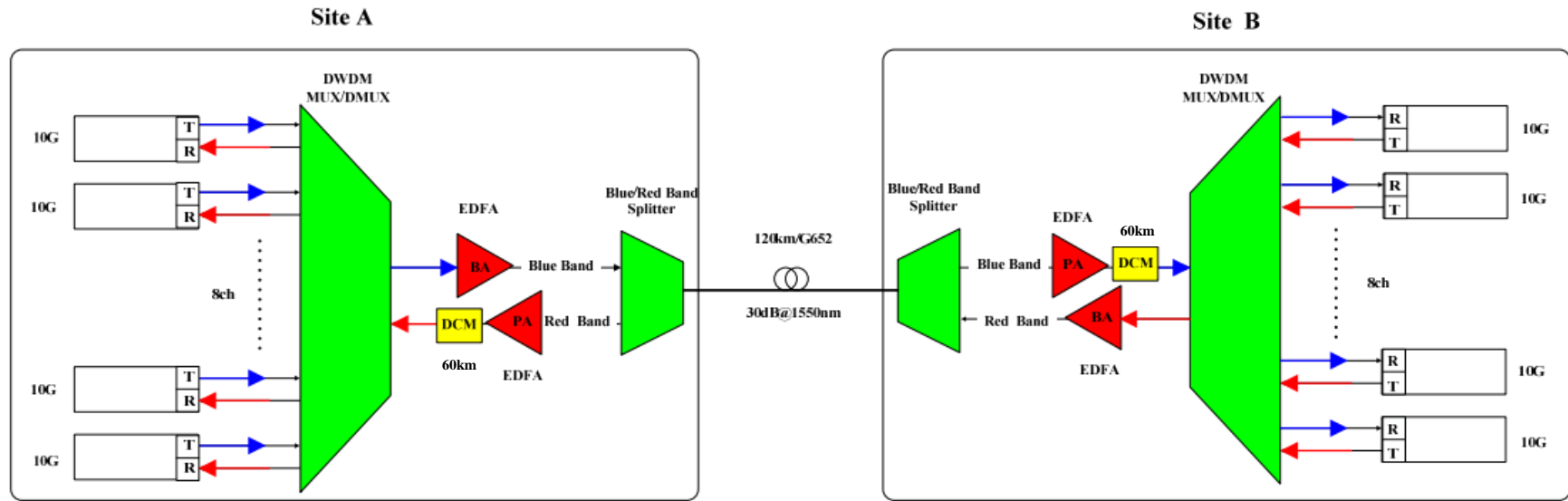
Support 132km (maximum) the margin of the system is 3dB

## 7. 8CH BOOSTER AMPLIFIER CONFIGURATION



Support 80km (maximum) the margin of the system is 3dB

# 8. 8CH BOOSTER AMPLIFIER + PREAMPLIFIER CONFIGURATION



Support 120km (maximum) the margin of the system is 3dB