

Barrel Time-of-Flight

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Assembling options

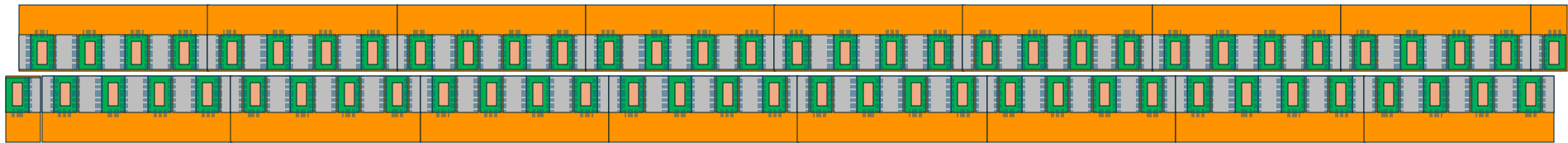
- **We have 2 options:**
 - **Opt1: Divide interposer into smaller pieces, but remain long FPC**
 - **Opt2: Divide interposer and FPC into smaller pieces**

Stave Design (Opt2)

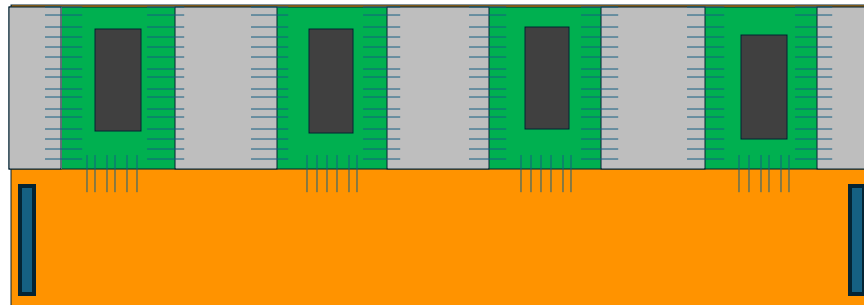
$$\text{Half-Stave} = 1375.5 \text{ [mm]} = 1344 \text{ [mm]} + 31.5 \text{ [mm]}$$

Front-side

Back-side

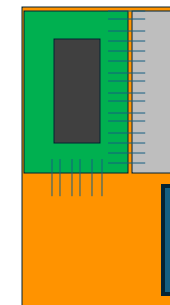


$$\text{Module (Stavelet)} = 168 \text{ [mm]}$$



$$\begin{matrix} \times 8 & \times 2 & \times 288 \\ =4608 \end{matrix}$$

$$\text{Mini-Module} = 31.5 \text{ [mm]}$$

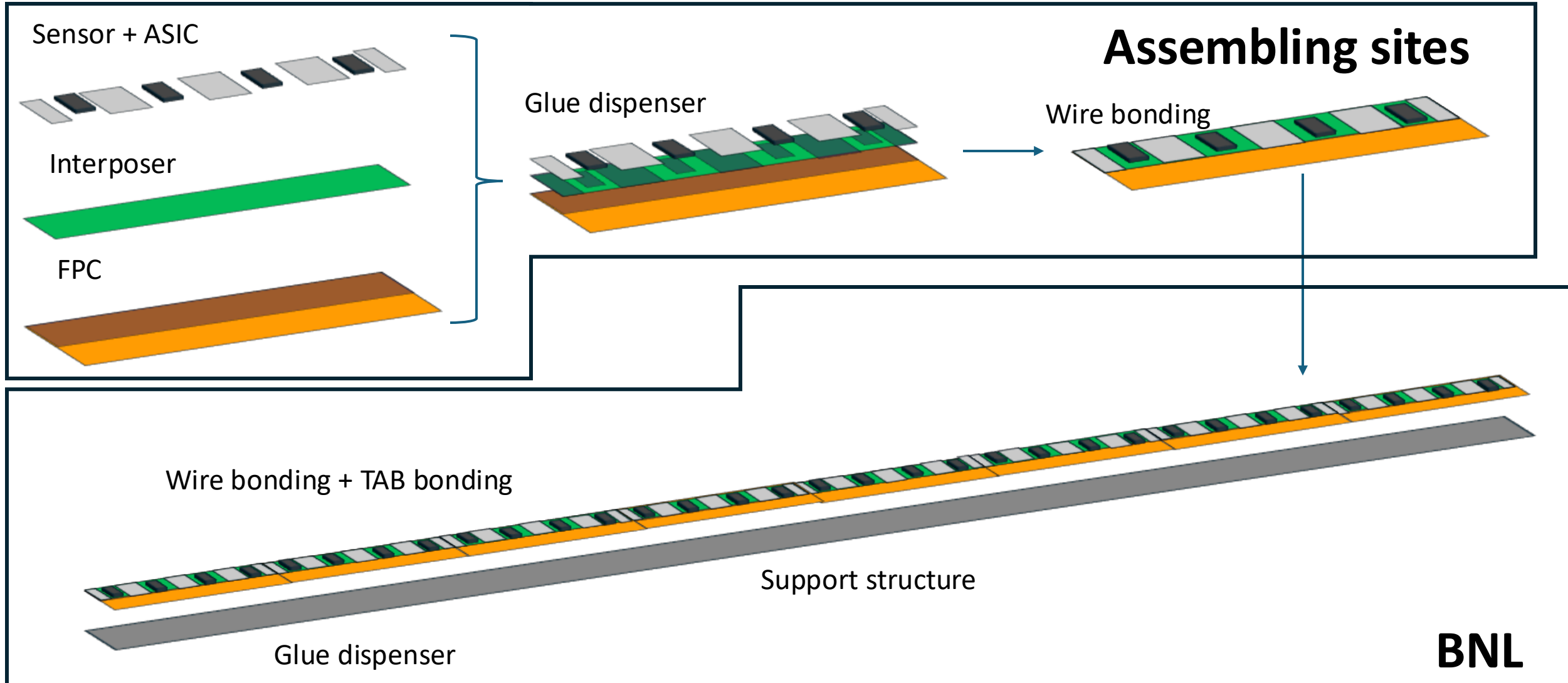


$$\begin{matrix} \times 1 & \times 2 & \times 288 \\ =576 \end{matrix}$$

$$\begin{matrix} \text{Grey rectangle} & \times 8 & \times 3 & \times 2 & \times 288 \\ =13824 \end{matrix}$$

$$\begin{matrix} \text{Grey rectangle} & (2 \times 8 + 2) & \times 2 & \times 288 \\ =10368 \end{matrix}$$

Stave Assembling Process (Case1)



Stave Assembling Process (Case2)

