$$K^1_{110} = \begin{bmatrix}
\frac{\mathbf{i}}{2}\sqrt{3} & \frac{\frac{-\mathbf{i}}{2}\sqrt{3}\,U}{t} & 0 & 0 & 0 & 0 & \frac{-\left(-3\,\mathbf{i}+\sqrt{3}\right)}{2\sqrt{2}} & 0 & 0 & \frac{-3\left(\mathbf{i}+\sqrt{3}\right)}{2\sqrt{2}} & \frac{\frac{-3}{2}\mathbf{i}\,U}{t} & \frac{-\sqrt{3}}{2} \\
\frac{\frac{-\mathbf{i}}{2}\sqrt{3}\,U}{t} & \frac{\mathbf{i}}{2}\sqrt{3} & 0 & 0 & 0 & -\sqrt{\frac{3}{2}} & 0 & \frac{3\,\mathbf{i}+\sqrt{3}}{2\sqrt{2}} & \sqrt{\frac{3}{2}} & 0 & \frac{-3\,\mathbf{i}}{2} & \frac{-\left(\sqrt{3}\,U\right)}{2\,t} \\
0 & 0 & 0 & 0 & 0 & \frac{1+\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & -\sqrt{2} & \sqrt{2} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & \frac{\sqrt{2}\,U}{t} & \frac{1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & 0 & 0 & -2 \\
0 & 0 & 0 & 0 & -\mathbf{i}\sqrt{3} & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & \sqrt{\frac{3}{2}} & \frac{\mathbf{i}\left(\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & -\left(\frac{\sqrt{2}\,U}{t}\right) & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)U}{t} & 0 & 0 & \frac{-\mathbf{i}}{2}\,\left(-\mathbf{i}+\sqrt{3}\right) & 1 & 0 & -\left(\frac{1}{\sqrt{2}}\right) & 0 \\
\frac{3\,\mathbf{i}+\sqrt{3}}{2\sqrt{2}} & 0 & 0 & \frac{-1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & 0 & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & \frac{U-\mathbf{i}\sqrt{3}\,U}{2\,t} & -1 & 0 & \frac{3-\mathbf{i}\sqrt{3}}{2\sqrt{2}} \\
0 & \frac{-\left(-3\,\mathbf{i}+\sqrt{3}\right)}{2\sqrt{2}} & \sqrt{2} & 0 & 0 & \frac{1-\mathbf{i}\sqrt{3}}{2} & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)U}{t} & 0 & \frac{1-\mathbf{i}\sqrt{3}}{2} & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & \frac{\sqrt{2}-\mathbf{i}\sqrt{6}}{4} & 0 \\
0 & -\sqrt{\frac{3}{2}} & -\sqrt{2} & 0 & 0 & -1 & \frac{-\left(U+\mathbf{i}\sqrt{3}\,U\right)}{2\,t} & \frac{-\mathbf{i}}{2}\,\left(-\mathbf{i}+\sqrt{3}\right) & 0 & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{1}{\sqrt{2}} & 0 \\
\frac{3\left(-\mathbf{i}+\sqrt{3}\right)}{2\sqrt{2}} & 0 & 0 & 0 & 0 & 0 & 1 & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & 0 & 0 & \frac{\sqrt{2}+\mathbf{i}\sqrt{6}}{4} \\
\frac{\frac{-3}{2}\mathbf{i}\,U}{t} & \frac{-3\,\mathbf{i}}{2} & 0 & 0 & 0 & \frac{1}{\sqrt{2}} & 0 & \frac{\frac{-\mathbf{i}}{2}\left(-\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & -\left(\frac{1}{\sqrt{2}}\right) & 0 & \frac{-\mathbf{i}}{2}\sqrt{3} & \frac{U}{2\,t} \\
\frac{\sqrt{3}}{2} & \frac{\sqrt{3}\,U}{2\,t} & 0 & 2 & 0 & 0 & \frac{\frac{-\mathbf{i}}{2}\left(-3\,\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & 0 & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & \frac{-U}{2\,t} & \frac{\mathbf{i}}{2}\sqrt{3}
\end{bmatrix}$$