$$C_{dG}^{i1\_i2\_} \to$$

$$\hbar \left(\frac{1}{12} g_3 c_\gamma \frac{1}{m_\oplus^2} y_d^{pi2} \left(3 s_\gamma^2 \overline{y_d}^{pr} y_d^{i1r} + \overline{y_u}^{pr} y_u^{i1r} \left(c_\gamma^2 - 3 s_\gamma^2 \right) \right) - \frac{1}{2} g_3 c_\gamma s_\gamma^2 y_d^{pi2} \overline{y_u}^{pr} y_u^{i1r} \right.$$
$$LF_{1,2}[m_\oplus] + \frac{1}{18} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,1,0}[m_1, m_{\tilde{d}}^{i2}] - \frac{1}{9} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{3,1,-1}[m_1, m_{\tilde{d}}^{i2}] +$$
$$\frac{1}{18} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{4,1,-2}[m_1, m_{\tilde{d}}^{i2}] + \frac{1}{72} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,1,0}[m_1, m_{\tilde{q}}^{i1}] -$$
$$\frac{1}{36} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{3,1,-1}[m_1, m_{\tilde{q}}^{i1}] + \frac{1}{72} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{4,1,-2}[m_1, m_{\tilde{q}}^{i1}] +$$
$$\frac{3}{8} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{2,1,0}[m_2, m_{\tilde{q}}^{i1}] - \frac{3}{4} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{3,1,-1}[m_2, m_{\tilde{q}}^{i1}] +$$
$$\frac{3}{8} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{4,1,-2}[m_2, m_{\tilde{q}}^{i1}] - \frac{1}{12} c_\gamma g_3^3 y_d^{i1i2} LF_{2,1,0}[m_3, m_{\tilde{d}}^{i2}] -$$
$$\frac{7}{12} c_\gamma g_3^3 y_d^{i1i2} LF_{3,1,-1}[m_3, m_{\tilde{d}}^{i2}] + \frac{2}{3} c_\gamma g_3^3 y_d^{i1i2} LF_{4,1,-2}[m_3, m_{\tilde{d}}^{i2}] -$$
$$\frac{1}{12} c_\gamma g_3^3 y_d^{i1i2} LF_{2,1,0}[m_3, m_{\tilde{q}}^{i1}] - \frac{7}{12} c_\gamma g_3^3 y_d^{i1i2} LF_{3,1,-1}[m_3, m_{\tilde{q}}^{i1}] +$$
$$\frac{2}{3} c_\gamma g_3^3 y_d^{i1i2} LF_{4,1,-2}[m_3, m_{\tilde{q}}^{i1}] + \frac{1}{4} g_3 c_\gamma \overline{y_d}^{pr} y_d^{pi2} y_d^{i1r} LF_{2,1,0}[\tilde{\mu}, m_{\tilde{d}}^{r}] -$$
$$\frac{1}{2} g_3 c_\gamma \overline{y_d}^{pr} y_d^{pi2} y_d^{i1r} LF_{3,1,-1}[\tilde{\mu}, m_{\tilde{d}}^{r}] + \frac{1}{4} g_3 c_\gamma \overline{y_d}^{pr} y_d^{pi2} y_d^{i1r} LF_{4,1,-2}[\tilde{\mu}, m_{\tilde{d}}^{r}] +$$
$$\frac{1}{2} g_3 c_\gamma \overline{y_d}^{pr} y_d^{pi2} y_d^{i1r} LF_{2,1,0}[\tilde{\mu}, m_{\tilde{q}}^{p}] - g_3 c_\gamma \overline{y_d}^{pr} y_d^{pi2} y_d^{i1r} LF_{3,1,-1}[\tilde{\mu}, m_{\tilde{q}}^{p}] +$$
$$\frac{1}{2} g_3 c_\gamma \overline{y_d}^{pr} y_d^{pi2} y_d^{i1r} LF_{4,1,-2}[\tilde{\mu}, m_{\tilde{q}}^{p}] + \frac{1}{4} g_3 c_\gamma y_d^{pi2} \overline{y_u}^{pr} y_u^{i1r} LF_{2,1,0}[\tilde{\mu}, m_{\tilde{u}}^{r}] -$$
$$\frac{1}{2} g_3 c_\gamma y_d^{pi2} \overline{y_u}^{pr} y_u^{i1r} LF_{3,1,-1}[\tilde{\mu}, m_{\tilde{u}}^{r}] + \frac{1}{4} g_3 c_\gamma y_d^{pi2} \overline{y_u}^{pr} y_u^{i1r} LF_{4,1,-2}[\tilde{\mu}, m_{\tilde{u}}^{r}] +$$
$$\frac{1}{18} g_3 m_1 g_1^2 \left(c_\gamma a_d^{i1i2} - s_\gamma \tilde{\mu} y_d^{i1i2} \right) LF_{2,1,1,0}[m_1, m_{\tilde{d}}^{i2}, m_{\tilde{q}}^{i1}] +$$
$$\frac{1}{18} g_3 m_1 g_1^2 \left(- c_\gamma a_d^{i1i2} + s_\gamma \tilde{\mu} y_d^{i1i2} \right) LF_{3,1,1,-1}[m_1, m_{\tilde{d}}^{i2}, m_{\tilde{q}}^{i1}] +$$
$$\frac{1}{6} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{1,1,1,0}[m_1, m_{\tilde{d}}^{i2}, \tilde{\mu}] - \frac{1}{3} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,1,1,-1}[m_1, m_{\tilde{d}}^{i2}, \tilde{\mu}] -$$
$$\frac{1}{6} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{2,1,1,0}[m_1, m_{\tilde{d}}^{i2}, \tilde{\mu}] + \frac{1}{6} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{3,1,1,-2}[m_1, m_{\tilde{d}}^{i2}, \tilde{\mu}] +$$
$$\frac{1}{6} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{3,1,1,-1}[m_1, m_{\tilde{d}}^{i2}, \tilde{\mu}] + \frac{1}{12} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{1,1,1,0}[m_1, m_{\tilde{q}}^{i1}, \tilde{\mu}] -$$
$$\frac{1}{6} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,1,1,-1}[m_1, m_{\tilde{q}}^{i1}, \tilde{\mu}] - \frac{1}{12} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{2,1,1,0}[m_1, m_{\tilde{q}}^{i1}, \tilde{\mu}] +$$
$$\frac{1}{12} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{3,1,1,-2}[m_1, m_{\tilde{q}}^{i1}, \tilde{\mu}] + \frac{1}{12} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{3,1,1,-1}[m_1, m_{\tilde{q}}^{i1}, \tilde{\mu}] +$$
$$\frac{1}{6} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,2,1,-2}[m_1, \tilde{\mu}, m_{\tilde{d}}^{i2}] + \frac{1}{6} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{2,2,1,-1}[m_1, \tilde{\mu}, m_{\tilde{d}}^{i2}] +$$
$$\frac{1}{12} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,2,1,-2}[m_1, \tilde{\mu}, m_{\tilde{q}}^{i1}] + \frac{1}{12} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{2,2,1,-1}[m_1, \tilde{\mu}, m_{\tilde{q}}^{i1}] +$$
$$\frac{3}{4} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{1,1,1,0}[m_2, m_{\tilde{q}}^{i1}, \tilde{\mu}] - \frac{3}{2} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{2,1,1,-1}[m_2, m_{\tilde{q}}^{i1}, \tilde{\mu}] -$$
$$\frac{3}{4} g_3 m_2 s_\gamma \tilde{\mu} g_2^2 y_d^{i1i2} LF_{2,1,1,0}[m_2, m_{\tilde{q}}^{i1}, \tilde{\mu}] + \frac{3}{4} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{3,1,1,-2}[m_2, m_{\tilde{q}}^{i1}, \tilde{\mu}] +$$
$$\frac{3}{4} g_3 m_2 s_\gamma \tilde{\mu} g_2^2 y_d^{i1i2} LF_{3,1,1,-1}[m_2, m_{\tilde{q}}^{i1}, \tilde{\mu}] + \frac{3}{4} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{2,2,1,-2}[m_2, \tilde{\mu}, m_{\tilde{q}}^{i1}] +$$
$$\frac{3}{4} g_3 m_2 s_\gamma \tilde{\mu} g_2^2 y_d^{i1i2} LF_{2,2,1,-1}[m_2, \tilde{\mu}, m_{\tilde{q}}^{i1}] + \frac{1}{6} m_3 g_3^3 \left(c_\gamma a_d^{i1i2} - s_\gamma \tilde{\mu} y_d^{i1i2} \right)$$
$$LF_{2,1,1,0}[m_3, m_{\tilde{d}}^{i2}, m_{\tilde{q}}^{i1}] + \frac{4}{3} m_3 g_3^3 \left(c_\gamma a_d^{i1i2} - s_\gamma \tilde{\mu} y_d^{i1i2} \right) LF_{3,1,1,-1}[m_3, m_{\tilde{d}}^{i2}, m_{\tilde{q}}^{i1}] -$$
$$\frac{1}{3} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,1,1,-1}[\tilde{\mu}, m_1, m_{\tilde{d}}^{i2}] - \frac{1}{6} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{2,1,1,0}[\tilde{\mu}, m_1, m_{\tilde{d}}^{i2}] +$$
$$\frac{1}{6} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{3,1,1,-2}[\tilde{\mu}, m_1, m_{\tilde{d}}^{i2}] + \frac{1}{6} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{3,1,1,-1}[\tilde{\mu}, m_1, m_{\tilde{d}}^{i2}] -$$
$$\frac{1}{6} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{2,1,1,-1}[\tilde{\mu}, m_1, m_{\tilde{q}}^{i1}] - \frac{1}{12} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{2,1,1,0}[\tilde{\mu}, m_1, m_{\tilde{q}}^{i1}] +$$
$$\frac{1}{12} g_3 c_\gamma g_1^2 y_d^{i1i2} LF_{3,1,1,-2}[\tilde{\mu}, m_1, m_{\tilde{q}}^{i1}] + \frac{1}{12} g_3 m_1 s_\gamma \tilde{\mu} g_1^2 y_d^{i1i2} LF_{3,1,1,-1}[\tilde{\mu}, m_1, m_{\tilde{q}}^{i1}] -$$
$$\frac{3}{2} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{2,1,1,-1}[\tilde{\mu}, m_2, m_{\tilde{q}}^{i1}] - \frac{3}{4} g_3 m_2 s_\gamma \tilde{\mu} g_2^2 y_d^{i1i2} LF_{2,1,1,0}[\tilde{\mu}, m_2, m_{\tilde{q}}^{i1}] +$$
$$\frac{3}{4} g_3 c_\gamma g_2^2 y_d^{i1i2} LF_{3,1,1,-2}[\tilde{\mu}, m_2, m_{\tilde{q}}^{i1}] + \frac{3}{4} g_3 m_2 s_\gamma \tilde{\mu} g_2^2 y_d^{i1i2} LF_{3,1,1,-1}[\tilde{\mu}, m_2, m_{\tilde{q}}^{i1}] +$$
$$\frac{1}{2} g_3 \tilde{\mu} y_d^{pi2} y_u^{i1r} \left(s_\gamma \overline{a_u}^{pr} - \tilde{\mu} c_\gamma \overline{y_u}^{pr} \right) LF_{2,1,1,0}[\tilde{\mu}, m_{\tilde{q}}^{p}, m_{\tilde{u}}^{r}] +$$
$$\left. \frac{1}{2} g_3 \tilde{\mu} y_d^{pi2} y_u^{i1r} \left(- s_\gamma \overline{a_u}^{pr} + \tilde{\mu} c_\gamma \overline{y_u}^{pr} \right) LF_{3,1,1,-1}[\tilde{\mu}, m_{\tilde{q}}^{p}, m_{\tilde{u}}^{r}] \right)$$