$$\frac{1}{f_1}\dot{z}_1 = z_1\left(\alpha_1 + \mathrm{i}2\pi + \left(\beta_{1_1} + \mathrm{i}\delta_{1_1}\right)|z_1|^2 + \frac{\epsilon_1\left(\beta_{1_2} + \mathrm{i}\delta_{1_2}\right)|z_1|^4}{1-\epsilon_1|z_1|^2}\right) + x$$

$$\frac{1}{f_2}\dot{z}_2 = z_2\left(\alpha_2 + \mathrm{i}2\pi + \left(\beta_{2_1} + \mathrm{i}\delta_{2_1}\right)|z_2|^2 + \frac{\epsilon_2\left(\beta_{2_2} + \mathrm{i}\delta_{2_2}\right)|z_2|^4}{1-\epsilon_2|z_2|^2}\right) + c_{21}z_1$$