[Your Name] [Your Address] [City, State, Zip Code] [Email Address] [Phone Number] [Date] [Recipient Name] [Recipient Title] [Company/Organization Name] [Company Address] [City, State, Zip Code] Dear [Recipient Name], Subject: XNOR Gate Report I hope this letter finds you well. I am writing to present the findings of our recent analysis on the XNOR gate, a fundamental building block in digital logic design. 1. **Introduction** The XNOR gate, or exclusive NOR gate, is a digital logic gate that outputs true or high only when the number of true inputs is even. 2. **Key Features** - **Truth Table**: | A | B | Output (A XNOR B) | |---|---| 0 0 1 | 0 | 1 | 0 | | 1 | 0 | 0 | | 1 | 1 | 1 | - **Logical Expression**: The logical expression of the XNOR gate can be represented as: A XNOR B = (A AND B) OR (NOT A AND NOT B) 3. **Applications** The XNOR gate is extensively used in digital circuits for equality checking, error detection, and correction algorithms. 4. **Conclusion** The insights gathered from this report underscore the importance of the XNOR gate in modern digital systems. For further details, please refer to the attached documentation. Thank you for your attention to this report. I look forward to your feedback. Sincerely, [Your Name] [Your Job Title] [Your Company/Organization Name] [Attachment: XNOR Gate Report]