
PHILIPS

Inter - Integrated

Circuit

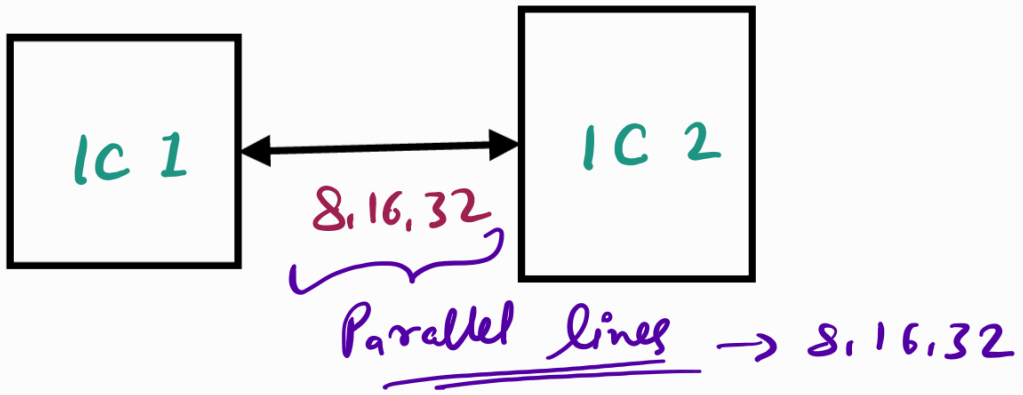
AGENDA: I2C Protocol → Write & Read Operation

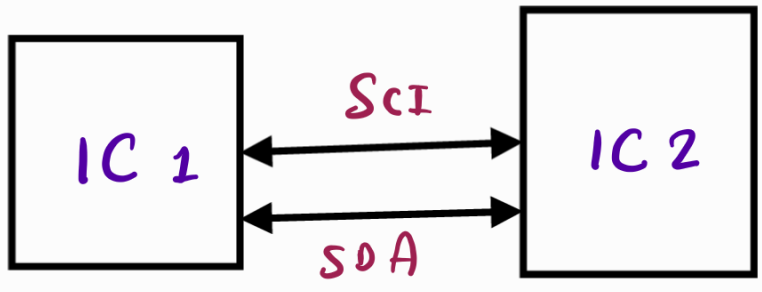
Implementation of MASTER & SLAVE

Clock Stretching

Implementation of MASTER & SLAVE with Clock Stretching

Bit Banging




with → only two lines

# Several Modes of I2C:

- Synchronous
- Multi - Master
- Multi - Slave

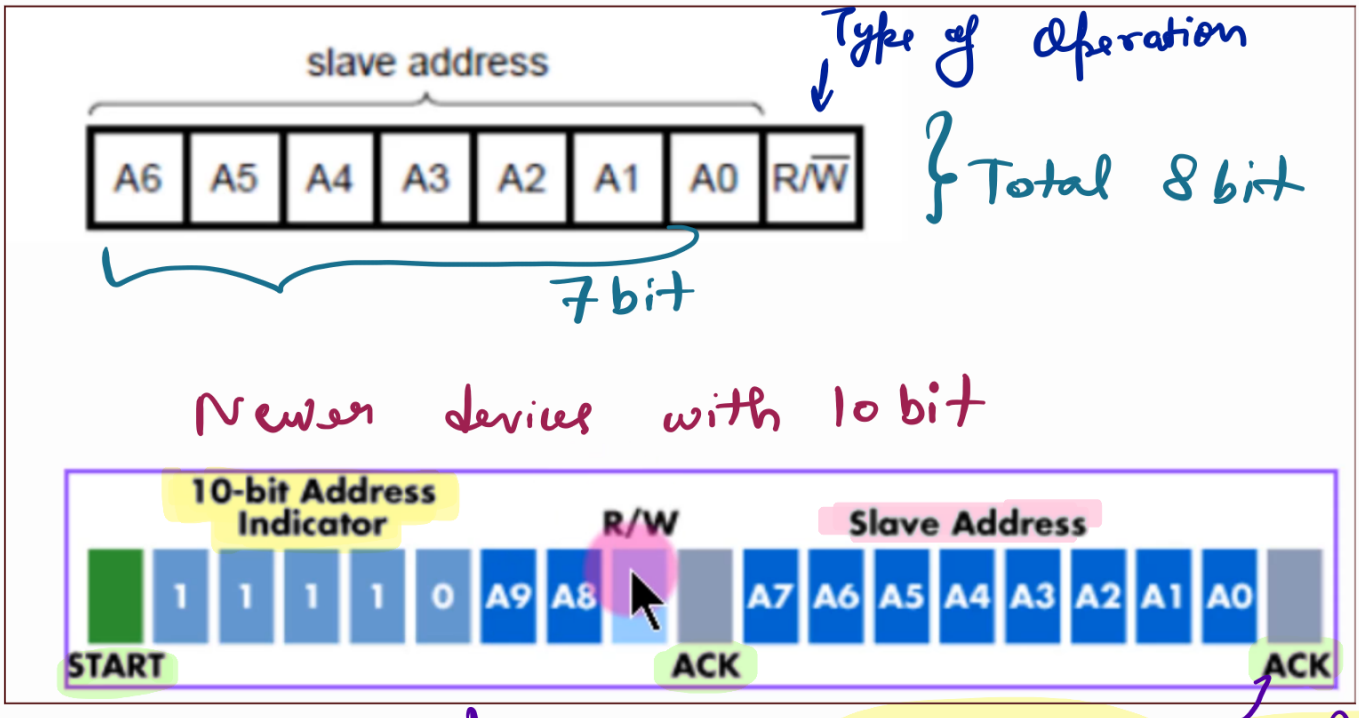
*Standard mode*: 100-kHz SCL frequency, transferring data between devices at 100 kbit/sec

*Fast mode*: 400-kHz SCL frequency, transferring data between the controller and peripherals at 400 kbit/sec // Common Mode

*Fast mode plus*: 1-MHz SCL frequency, transferring data between the controller and peripherals at 1 Mbit/sec

*High-speed mode*: Up to 3.4-MHz SCL frequency, transferring data between the controller and peripherals at up to 3.4 Mbit/sec

*Ultra-fast mode*: 5-MHz SCL frequency, though data transmission is unidirectional only



# Open - Drain Interface

I2C support multiple Master