Smart Digital Lock Systems

Transforming security with cutting-edge technology for modern homes and businesses

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Why Choose Digital Lock Systems?

Enhanced Security

Advanced encryption and multi-factor authentication protect against unauthorized access and traditional lock-picking methods.

Keyless Convenience

Eliminate the hassle of physical keys. Access your property using PIN codes, biometrics, or smartphone apps.

Real-Time Monitoring

Track who enters and exits your property with detailed access logs and instant notifications on your mobile device.

Core Features That Make a Difference

Access Control Options

- **PIN Code Entry:** Create unique codes for family members, guests, and service providers
- **Biometric Scanning:** Fingerprint recognition for instant, secure access
- **RFID Cards:** Tap-and-go convenience with programmable key cards
- **Mobile App:** Unlock remotely from anywhere in the world

Smart Integrations

- Compatible with Alexa, Google Home, and Apple HomeKit
- Integrates seamlessly with home security systems
- Automated lighting and climate control triggers

How Digital Locks Work

Authentication

User presents credentials via PIN, fingerprint, card, or app

Verification

System processes and validates credentials against secure database

Communication

Lock communicates with control unit via encrypted wireless protocol

Access Granted

Motorized bolt retracts, door unlocks, and event is logged

All transactions are encrypted using military-grade AES-256 encryption, ensuring your security data remains protected from cyber threats. The system operates on both battery and backup power to maintain functionality during outages.

Installation and Setup Process

01

Assessment and Selection

Our experts evaluate your door type, security needs, and smart home ecosystem to recommend the perfect digital lock solution.

02

Professional Installation

Certified technicians install your lock within 1-2 hours, ensuring proper alignment, connection, and integration with existing systems.

03

Configuration and Testing

We program user codes, connect to your smartphone, configure access permissions, and conduct comprehensive security testing.

04

Training and Support

Receive hands-on training for all features, plus access to 24/7 customer support and our comprehensive user guide.

Security Features You Can Trust

Tamper Alerts

Instant notifications sent to your phone if someone attempts forced entry or tampering with the lock mechanism.

Low Battery Warning

Receive alerts weeks before battery depletion. Emergency backup power port ensures you're never locked out.

Auto-Lock Function

Door automatically locks after a preset time period, eliminating the worry of forgetting to secure your property.

Lockout Protection

System temporarily disables after multiple failed attempts, preventing brute-force attacks while alerting you immediately.

Access History

View detailed logs showing who accessed your property, when, and how—stored securely for up to 12 months.

Encrypted Cloud Backup

All settings and access codes backed up securely to the cloud, enabling easy restoration if needed.

Perfect for Every Application

Residential Homes

Provide family members with personalized access codes and grant temporary access to guests, cleaners, or delivery personnel without compromising security.

Commercial Offices

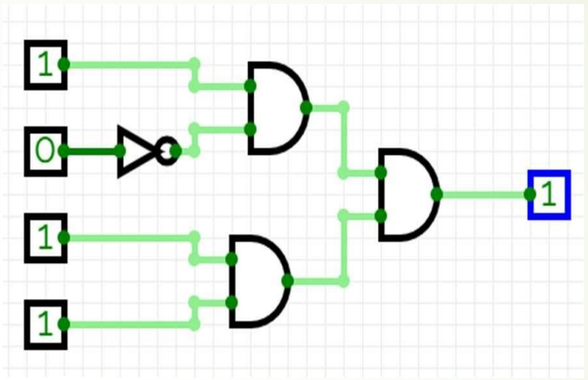
Manage employee access across multiple entry points, track attendance automatically, and restrict access to sensitive areas based on clearance levels.

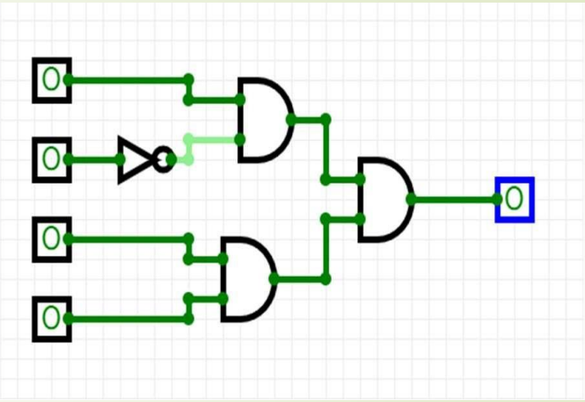
Hotels and Rentals

Generate unique temporary codes for each guest, eliminate key card costs, enable remote check-in, and automatically expire access after checkout.

VHDL CODE & CIRCUIT DIAGRAM

```
CODE (VHDL)
library IEEE; use IEEE.STD_LOGIC_1164.ALL;
use IEEE.STD_LOGIC_ARITH.ALL;
use IEEE.STD_LOGIC_UNSIGNED.ALL;
entity dlg is     Port(          clk   : in  STD_LOGIC;
pass : in  STD_LOGIC_VECTOR(3 downto 0);
unl  : out STD_LOGIC;
unln : out STD_LOGIC
    );
end dlg; architecture Behavioral of
dlg is     signal d :
STD_LOGIC;     signal q :
STD_LOGIC;
begin
d <= pass(3) and (not pass(2)) and pass(1) and pass(0);
process(clk)
begin
if rising_edge(clk) then
q <= d;
end if;
end process;
unl  <= q;
unln <= not q; end Behavioral;
```





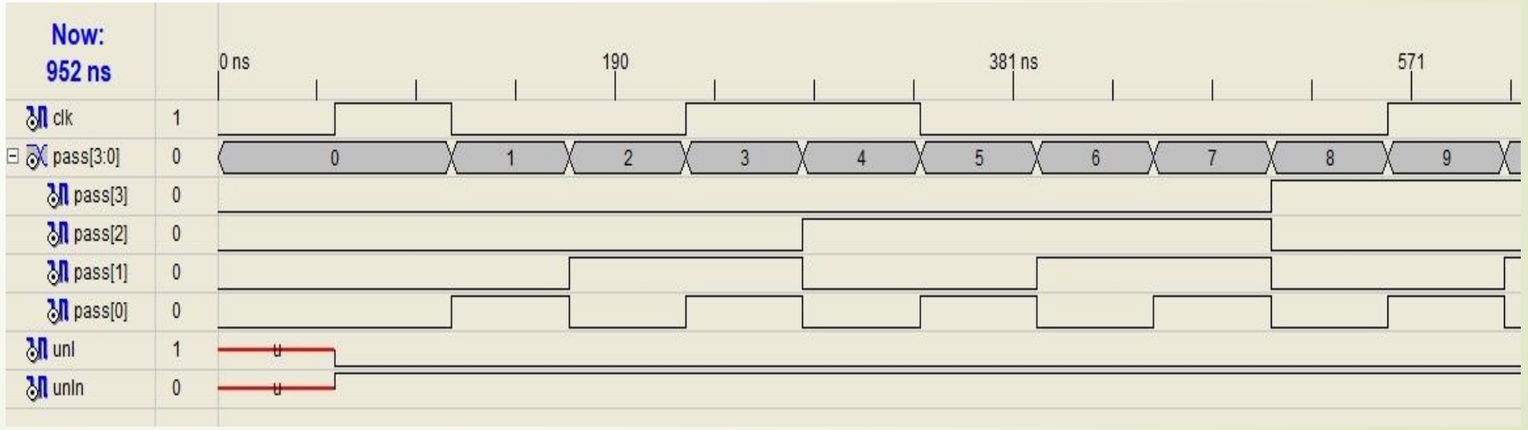
TRUTH TABLE , K-MAP & TEST BENCH

TRUTH TABLE

A	B	C	D	Y
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

K-MAP SIMPLICATION

AB\CD	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	0	0
10	0	0	1	0



Thank You!!