ABRACON

Home Security System Market

Forecasted growth from $60.5 Bn in 2023 to $111.4 Bn in 2030. A CAGR of 9.2%.

Description

- Home Security Systems have the primary purpose to keep the family, home, and contents safe. Providing protection from burglaries, fire, smoke, and carbon monoxide.
- Systems typically consist of various sensors, cameras, video doorbells, and a control panel or keypad.
- Each device has a microprocessor for control and processing data, power supply, and connectivity via an RF transceiver (868/915/433MHz, Wi-Fi, Zigbee etc.) or Ethernet.
- Advanced features using the camera is possible with the use of video processing for movement detection, object identification (i.e. pet or human), and facial recognition for example.
- Power over Ethernet (PoE) is often used to power the unit.

Drivers

- Increasing awareness of home security systems.
- Technologies such as IoT connectivity, Artificial Intelligence (AI), and Smart Home integration are adding more features which are popular with consumers.

Customer Challenges & Opportunities

- System complexity from multiple connected devices.
- Internet connection for cloud storage and cloud storage of data presents the need for Wi-Fi or cellular connectivity.
- Abracon has one of the industry's broadest range of Antennas

Abracon Series to Consider for Home Security Systems

ABRACON
Innovation For Tomorrow's Designs®

Description & Requirements	Frequency & Timing Control	RF & Antenna	Power & Magnetics
Cameras	MHz Crystals ABM12W (1.6 x 1.2mm)	N/A	RJ45 Connectors ARJM11C7 (10/100/1G/5G) RF Inductors AIMC (Ceramic Chip) AIML (Ferrite Chip) Power Inductors ASMPH (SMD Chip) ASMPL (SMD Low Profile) ASMPM (High Power Chip Inductor)
Cellular Connectivity (IoT)	Continuous Voltage TCXOs ATX-12 (2.5 x 2.0mm) MHz Crystals ABM12 (1.6 x 1.2mm) ABM11 (2.0 x 1.6mm) kHz Crystals ABS07 (3.2 x 1.5mm)		
Controller	Continuous Voltage TCXOs ATX-12 (2.5 x 2.0mm) MHz Crystals ABM12 (1.6 x 1.2mm) ABM11 (2.0 x 1.6mm) kHz Crystals ABS07 (3.2 x 1.5mm)	N/A	RF Inductors AISC (Wirewound unshielded) AISR (Drum Core)
Driver Board	32.768kHz Crystal ABS07 (3.2 x 1.5mm) MHz Crystal ABM10 (2.5 x 2.0mm) ABM11 (2.0 x 1.6mm)	N/A	Power Inductors ASPI (Shielded Molded Round Wire)
IP Connectivity	32.768kHz Crystal ABS07 (3.2 x 1.5mm) MHz Crystal ABM10 (2.5 x 2.0mm) ABM11 (2.0 x 1.6mm)	N/A	RJ45 connectors ARJ-139 (10/100/1000 Base-T) ARJE-0034 (10/100 Base-TX, SMD) ARJM11 (Through-hole) LAN Transformers ALAN110001 (POE 10/100/1G) ALAN210001 (POE+ 10/100/1G) ALAN310001 (POE++ 10/100/1G)
Microprocessor	Ceramic Resonators AWSCR ABM11W (2.0 x 1.6mm)	N/A	N/A

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Description & Requirements	Frequency & Timing Control	RF & Antenna	Power & Magnetics
Security Door	32.768kHz Crystal ABS07 (3.2 x 1.5mm) MHz Crystal ABM10 (2.5 x 2.0mm) ABM11 (2.0 x 1.6mm)	ISM band ARRCN5 (Passive Patch) Various Bands APAE (Passive Patch)	Mid-high Power AMPLA (Molded Power Inductor) AMDLA (Molded Power Inductor) ASPI-F (Molded SMD Power Inductor) ASPIAIG-F (Auto Power Inductor)
Sensors/monitoring	Real Time Clocks AB0815	N/A	Power Inductors ASMPH (Metal Alloy Multilayer) ASMPL (SMD Low Profile) RF Inductors AIMC (Ceramic Chip) AIML (Ferrite Chip) ATFC (Thin Film Multilayer) AISC (RF Wirewound)
Wireless Connectivity	Continuous Voltage TCXOs ATX-12 (2.5 x 2.0mm) MHz Crystals ABM12 (1.6 x 1.2mm) ABM11 (2.0 x 1.6mm)	WiFi/ Bluetooth Antennas ACAG0801 (Chip) APAGM2525 (Patch, 25 x 25 x 4mm)	RF Inductors AIMC (Ceramic Chip) AIML (Ferrite Chip) AISC (Wirewound unshielded) ATFC (Thin Film Shielded)