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# ABBREVIATIONS - The Car Hacker's Handbook: A Guide for the Penetration Tester

5-7 minutes

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## ABBREVIATIONS

|      |   |
|------|---|
| ACM  | airbag control module                   |
| ACN  | automated crash notification (systems)  |
| AES  | Advanced Encryption Standard            |
| AGL  | Automotive Grade Linux                  |
| ALSA | Advanced Linux Sound Architecture       |
| AMB  | automotive message broker               |
| ASD  | aftermarket safety device               |
| ASIC | application-specific integrated circuit |
| ASIL | Automotive Safety Integrity Level       |
| ASK  | amplitude-shift keying                  |

|          |                                     |
|----------|-------------------------------------|
| ACM      | airbag control module               |
| AUD      | Advanced User Debugger              |
| AVB      | Audio Video Bridging standard       |
| BCM      | body control module                 |
| BCM      | broadcast manager (service)         |
| BGE      | Bus Guardian Enable                 |
| binutils | GNU Binary Utilities                |
| BMEP     | brake mean effective pressure       |
| c0f      | CAN of Fingers                      |
| CA       | certificate authority               |
| CAM      | cooperative awareness message       |
| CAMP     | Crash Avoidance Metrics Partnership |
| CAN      | controller area network             |
| CANH     | CAN high                            |
| CANL     | CAN low                             |
| CARB     | California Air Resources Board      |
| CC       | CaringCaribou                       |

|        |  |
|--------|--|
| ACM    | airbag control module  |
| CDR    | crash data retrieval   |
| CKP    | crankshaft position  |
| COB-ID | communication object identifier  |
| CRL    | certificate revocation list  |
| CVN    | calibration verification number  |
| CVSS   | common vulnerability scoring system  |
| DENM   | decentralized environmental notification message   |
| DIP    | dual in-line package   |
| DLC    | data length code   |
| DLC    | diagnostic link connector  |
| DLT    | diagnostic log and trace   |
| DoD    | Department of Defense  |
| DREAD  | damage potential, reproducibility, exploitability, affected users, discoverability (rating system) |
| DSRC   | dedicated short-range communication  |
| DTC    | diagnostic trouble code  |

|            |   |
|------------|---|
| ACM        | airbag control module                           |
| DUT        | device under test                               |
| ECU        | electronic control unit or engine control unit  |
| EDR        | event data recorder                             |
| ELLSI      | Ethernet low-level socket interface             |
| EOD        | end-of-data (signal)                            |
| EOF        | end-of-frame (signal)                           |
| ETSI       | European Telecommunications Standards Institute |
| FIBEX      | Field Bus Exchange Format                       |
| FPGA       | field-programmable gate array                   |
| FSA<br>PoC | fuel stop advisor proof-of-concept              |
| FSK        | frequency-shift keying                          |
| GRC        | GNU Radio Companion                             |
| GSM        | Global System for Mobile Communications         |
| HMI        | human-machine interface                         |
| HS-CAN     | high-speed CAN                                  |

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|--------|----------------------------------|
| ACM    | airbag control module            |
| HSI    | high-speed synchronous interface |
| IC     | instrument cluster               |
| ICSim  | instrument cluster simulator     |
| IDE    | identifier extension             |
| IFR    | in-frame response                |
| IVI    | in-vehicle infotainment (system) |
| KES    | key fob                          |
| LF     | low-frequency                    |
| LIN    | Local Interconnect Network       |
| LNA    | low-noise amplifier              |
| LOP    | location obscurer proxy          |
| LS-CAN | low-speed CAN                    |
| LTC    | long-term certificate            |
| MA     | misbehavior authority            |
| MAF    | mass air flow                    |
| MAP    | manifold pressure                |

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|--------|--|
| ACM    | airbag control module                          |
| MCU    | microcontroller unit                           |
| MIL    | malfunction indicator lamp                     |
| MOST   | Media Oriented Systems Transport (protocol)    |
| MS-CAN | mid-speed CAN                                  |
| MUL    | multiply (instruction)                         |
| NAD    | node address for diagnostics                   |
| NHTSA  | National Highway Traffic Safety Administration |
| NLFSR  | non-linear feedback shift register             |
| NOP    | no-operation instruction                       |
| NSC    | node startup controller                        |
| NSM    | node state manager                             |
| OBE    | onboard equipment                              |
| OEM    | original equipment manufacturer                |
| OOK    | on-off keying                                  |
| OSI    | Open Systems Interconnection                   |

|      |                                 |
|------|---------------------------------|
| ACM  | airbag control module           |
| PC   | pseudonym certificate           |
| PCA  | Pseudonym Certificate Authority |
| PCM  | powertrain control module       |
| PID  | parameter ID                    |
| PKES | passive keyless entry and start |
| PKI  | public key infrastructure       |
| POF  | plastic optical fiber           |
| PRF  | pseudorandom function           |
| PRNG | pseudorandom number generator   |
| PWM  | pulse width modulation          |
| QoS  | quality of service              |
| RA   | Registration Authority          |
| RCM  | restraint control module        |
| RFID | radio-frequency identification  |
| ROS  | rollover sensor module          |
| RPM  | revolutions per minute          |

|       |  |
|-------|--|
| ACM   | airbag control module  |
| RSE   | roadside equipment   |
| RTR   | remote transmission request  |
| SCMS  | security credentials management system                                     |
| SDK   | software development kit   |
| SDM   | sensing and diagnostic module  |
| SDR   | software-defined radio   |
| SIM   | subscriber identity module   |
| SNS   | service not supported  |
| SRR   | substitute remote request  |
| SWD   | Serial Wire Debug  |
| TCM   | transmission control module  |
| TCU   | transmission control unit  |
| TDMA  | time division multiple access  |
| TPMS  | tire pressure monitor sensor   |
| TREAD | Transportation Recall Enhancement, Accountability, and Documentation (Act) |



|             |   |
|-------------|---|
| ACM         | airbag control module   |
| UDS         | Unified Diagnostic Services   |
| UHF         | ultra-high-frequency  |
| USRP        | Universal Software Radio Peripheral                                   |
| UTP         | unshielded twisted-pair   |
| V2I, C2I    | vehicle-to-infrastructure, carto-infrastructure (Europe)              |
| V2V,<br>C2C | vehicle-to-vehicle, car-to-car (Europe)                               |
| V2X,<br>C2X | vehicle-to-everything, car-to-everything (Europe)                     |
| VAD         | vehicle awareness device  |
| VDS         | Vehicle Descriptor Section  |
| VI          | vehicle interface   |
| VII, ITS    | vehicle infrastructure integration, intelligent transportation system |
| VIN         | vehicle identification number   |
| VM          | virtual machine   |
| VoIP        | voice over IP   |

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|------|--|
| ACM  | airbag control module                    |
| VPW  | variable pulse width                     |
| VSC3 | Vehicle Safety Consortium                |
| WAVE | wireless access for vehicle environments |
| WME  | WAVE management entity                   |
| WMI  | World Manufacturer Identifier            |
| WSA  | WAVE service announcement                |
| WSMP | WAVE short-message protocol              |