# Error Code: -2202

Description: Detected a collision! [STOP%d]

Solution: 产品确认

# Error Code: -2203

Description: Can not follow position cmd! [STOP2]

Solution: Please clear the error and try again. If the issue persists, contact the manufacturer for assistance.

# Error Code: -2204

Description: Can not follow tcp cmd! [STOP1]

Solution: Please clear the error and try again. If the issue persists, contact the manufacturer for assistance.

# Error Code: -2205

Description: During operation, an unexpected joint brake activation occurred! [STOP0]

Solution: Please clear the error and try again. If the issue persists, contact the manufacturer for assistance.

# Error Code: -2206

Description: Joints position is out of extreme range! [STOP1]

Solution: Enter safety handling mode, manually return to within the limit, and try again.

# Error Code: -2207

Description: Robot is in emergency stop state. [STOP0]

Solution: Release the emergency stop button and press the reset button.

# Error Code: -2212

Description: The user's real-time commands exceed the system's response speed, causing the real-time command buffer to overflow! [STOP2]

Solution: Adjust the user code and improve its real-time performance.

# Error Code: -2213

Description: Real-time commands from the user were not received in time! [STOP2]

Solution: Adjust the user code and improve its real-time performance.

# Error Code: -2218

Description: The Conveyor that being enabled is not online. [STOP2]

Solution: Make sure the conveyor that being enabled is online

# Error Code: -2221

Description: Joint count is unmatched! [STOP2]

Solution: Check the algorithm configuration version and ensure it matches the arm model. If the issue persists, contact the manufacturer.

# Error Code: -2222

Description: Robot pose has slopover safe virtualwall! [STOP1]

Solution: Please return to within the virtualwall range.

# Error Code: -2223

Description: Pose has slopover reduce virtualwall! [STOP2]

Solution: Please return to within the virtualwall range.

# Error Code: -2224

Description: SCU has triggered a protective stop! [STOP2]

Solution: Resolve the external error that caused the protective stop and try again.

# Error Code: -2226

Description: The robot is in STO state! [STOP0]

Solution: Resolve the external error that caused the robot to enter the STO state and try again.

# Error Code: -2227

Description: The safety door signal has been triggered! [STOP0]

Solution: Close the safety door, clear the error, and resume operation.

# Error Code: -2228

Description: The robot is in STO emergency stop state! [STOP0]

Solution: ECODE\_STO\_EMGCY\_STOP\_ERROR，软件待补充

# Error Code: -2229

Description: The system's CPU usage is high.! [STOP1]

Solution: Adjust the user program.

# Error Code: -2230

Description: High memory usage! [STOP1]

Solution: Adjust the user program.

# Error Code: -2231

Description: Joint exceed the temperature: Joint [%d] [STOP1]

Solution: ECODE\_EXCEED\_TEMPERATURE，软件待补充

# Error Code: -2232

Description: The robot is in an emergency stop state! [STOP0]

Solution: Release the emergency stop button and press the reset button.

# Error Code: -2234

Description:

Solution: Please refer to the following SCU error codes.

# Error Code: -2235

Description:

Solution: Please refer to the following SCU error codes.

# Error Code: -2236

Description:

Solution: Please refer to the following SCU error codes.

# Error Code: -2238

Description: SCU detected a joint limit exceeded! [STOP1]

Solution: Please return to within the joint range.

# Error Code: -2239

Description: SCU detected a tcp limit exceeded! [STOP1]

Solution: Please return to within the tcp range.

# Error Code: -2240

Description: The robotic arm has experienced self-collision! [STOP2]

Solution: Adjust the robotic arm's movement trajectory to avoid collisions.

# Error Code: -2241

Description: Robot pose has slopover safe workspace limits! [STOP1]

Solution: Please return to within the safe workspace range.

# Error Code: -2242

Description: Pose has slopover reduce workspace limit! [STOP2]

Solution: Please return to within the safe workspace range.

# Error Code: -2301

Description:

Solution:

# Error Code: -2302

Description:

Solution: ECODE\_INTERPOLATE\_POSITION\_ERROR，软件待补充

# Error Code: -2303

Description: \_interpolaterTorque failed! [STOP1]

Solution: ECODE\_INTERPOLATE\_TORQUE\_ERROR，软件待补充

# Error Code: -2304

Description: Singular configuration. [STOP2]

Solution: Infeasible cartesian trajectory or enable singularity avoidance.

# Error Code: -2307

Description: Joint position or torque limit exceeded. [STOP2]

Solution: Adjust way-points or reduce trajectory speed/acceleration.

# Error Code: -2308

Description: Joint position limit exceeded. [STOP2]

Solution: Adjust way-points or modify the trajectory path.

# Error Code: -2309

Description: Joint torque limit exceeded. [STOP2]

Solution: Reduce trajectory acceleration or speed or both.

# Error Code: -2310

Description: Joint speed limit exceeded. [STOP2]

Solution: Reduce trajectory speed.

# Error Code: -2311

Description: Joint acceleration limit exceeded. [STOP2]

Solution: Reduce trajectory acceleration or speed(cartesian trajectory).

# Error Code: -2312

Description: Joint jerk limit exceeded. [STOP2]

Solution: Reduce trajectory jerk

# Error Code: -2313

Description: Motion limit exceeded. [STOP2]

Solution: Reduce trajectory speed or acceleration or both.

# Error Code: -2314

Description: Inverse kinematics failed. [STOP2]

Solution: Infeasible cartesian trajectory.

# Error Code: -2315

Description: Inverse position kinematics failed. [STOP2]

Solution: Change the target or adjust the initial joint configuration.

# Error Code: -2316

Description: Illegal input values for trajectory planning. [STOP2]

Solution: Input appropriate values for trajectory planning.

# Error Code: -2317

Description: MoveJ trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(path/speed/acceleration/etc.).

# Error Code: -2318

Description: MoveL trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(path/speed/acceleration/etc.).

# Error Code: -2319

Description: MoveC trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(path/speed/acceleration/etc.).

# Error Code: -2320

Description: Trajectory blend planning failed. [STOP2]

Solution: Modify blend positions/speeds/accelerations.

# Error Code: -2321

Description: SpeedJ trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(speed/acceleration/duration).

# Error Code: -2322

Description: SpeedL trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(speed/acceleration/duration).

# Error Code: -2323

Description: ServoJ trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(command/gain/lookahead/duration).

# Error Code: -2324

Description: ServoL trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(command/gain/lookahead/duration).

# Error Code: -2325

Description: Unknown move type. [STOP2]

Solution: Specify an existing move type.

# Error Code: -2326

Description: Unplanned trajectory. [STOP2]

Solution: Plan the trajectory successfully before moving.

# Error Code: -2327

Description: Illegal input values for trajectory interpolation. [STOP2]

Solution: Input allowable values for trajectory interpolation.

# Error Code: -2328

Description: Trajectory interpolation failed. [STOP2]

Solution: Modify the trajectory.

# Error Code: -2339

Description: Singular configuration during self-motion. [STOP2]

Solution: Self-motion cannot proceed further.

# Error Code: -2340

Description: Unable to execute self motion. [STOP2]

Solution: Self-motion is unavailable from current configuration.

# Error Code: -2341

Description: Joint position limit exceeded during self-motion. [STOP2]

Solution: Reverse the moving direction.

# Error Code: -2342

Description: Joint speed limit exceeded during self-motion. [STOP2]

Solution: Reduce the moving speed.

# Error Code: -2343

Description: Self-motion interpolation failed. [STOP2]

Solution: Self-motion cannot proceed further.

# Error Code: -2344

Description: Joint torque limit exceeded during self-motion. [STOP2]

Solution: Reduce the moving speed/acceleration.

# Error Code: -2349

Description: Conveyor track planning failed. [STOP2]

Solution: Modify conveyor track planning inputs.

# Error Code: -2350

Description: Successive joint position commands differ too much. [STOP2]

Solution: Infeasible trajectory.

# Error Code: -2351

Description: Cartesian speed limit exeeded. [STOP2]

Solution: Reduce trajectory speed.

# Error Code: -2352

Description: Cartesian acceleration limit exeeded. [STOP2]

Solution: Reduce trajectory acceleration.

# Error Code: -2353

Description: Power limit exceeded. [STOP2]

Solution: Reduce trajectory speed/acceleration.

# Error Code: -2354

Description: Inverse kinematics failed due to joint position limits. [STOP2]

Solution: Infeasible cartesian trajectory.

# Error Code: -2355

Description: Screw mechanism kinematics failed. [STOP2]

Solution: Infeasible trajectory.

# Error Code: -2356

Description: Trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs(path/speed/acceleration/etc.).

# Error Code: -2357

Description: SpeedJ/SpeedL trajectory planning failed. [STOP2]

Solution: Modify trajectory inputs.

# Error Code: -2358

Description: Fail to switch control mode.

Solution: Control mode switching is forbidden.

# Error Code: -2359

Description: Array size mismatched. [STOP2]

Solution: Reallocate a correct size.

# Error Code: -2360

Description: Array index out of range. [STOP2]

Solution: Input an index within range.

# Error Code: -2361

Description: Incorrect parameter set. [STOP2]

Solution: Set the parameter with right type and size.

# Error Code: -2362

Description: Singularity avoidance planning failed. [STOP2]

Solution: Infeasible cartesian trajectory.

# Error Code: -2363

Description: Inverse kinematics during avoiding singularity failed. [STOP2]

Solution: Infeasible cartesian trajectory.

# Error Code: -2364

Description: Inverse kinematics for null-space motion failed. [STOP2]

Solution: Infeasible null-space motion.

# Error Code: -2365

Description: Joint torque limit exceeded. [STOP2]

Solution: Reduce torque commands.

# Error Code: -2366

Description: Successive joint torque commands differ too much. [STOP2]

Solution: Reduce the rate of change of torque commands.

# Error Code: -2367

Description: Real-time joint torque generation planning failed. [STOP2]

Solution: Increase the duration of command generation.

# Error Code: -2368

Description: interp. error: torque nodiff. [STOP2]

Solution: The Torque need to reduce to zero.

# Error Code: -6002

Description: interp. error: max goal pose deviation. [STOP2]

Solution: Change the goal pose or Increase the max goal pose deviation.

# Error Code: -6003

Description: interp. error: max path pose deviation. [STOP2]

Solution: Modify the trajectory path or Increase the max path pose deviation.

# Error Code: -6004

Description: interp. error: cart. vel. profile. [STOP2]

Solution: Replan the cartesian velocity profile.

# Error Code: -6005

Description: interp. error: joint motion start pose. [STOP2]

Solution: Change the first joint command position.

# Error Code: -6006

Description: interp. error: joint motion position limit. [STOP2]

Solution: Modify the joint path.

# Error Code: -6007

Description: interp. error: joint motion vel. limit. [STOP2]

Solution: Reduce the speed of the joint trajectory.

# Error Code: -6008

Description: interp. error: joint motion vel. disc. [STOP2]

Solution: Reduce the acceleration of the joint trajectory.

# Error Code: -6009

Description: interp. error: joint motion acc. disc. [STOP2]

Solution: Reduce the jerk of the joint trajectory.

# Error Code: -6010

Description: interp. error: cart. motion start pose. [STOP2]

Solution: Change the first cartesian command pose.

# Error Code: -6011

Description: interp. error: cart. motion elbow limit. [STOP2]

Solution: Reduce the speed of the elbow trajectory.

# Error Code: -6012

Description: interp. error: cart. motion vel. limit. [STOP2]

Solution: Reduce the velocity of the cartesian trajectory.

# Error Code: -6013

Description: interp. error: cart. motion vel. disc. [STOP2]

Solution: Reduce the acceleration of the cartesian trajectory.

# Error Code: -6014

Description: interp. error: cart. motion acc. disc. [STOP2]

Solution: Reduce the jerk of the cartesian trajectory.

# Error Code: -6015

Description: interp. error: cart. motion elbow sign. [STOP2]

Solution: Determine the flip direction of the elbow.

# Error Code: -6016

Description: interp. error: cart. motion start elbow. [STOP2]

Solution: Change the first command elbow position.

# Error Code: -6017

Description: interp. error: cart. motion joint pos limit. [STOP2]

Solution: Modify the cartesian path.

# Error Code: -6018

Description: interp. error: cart. motion joint vel. limit. [STOP2]

Solution: Reduce the velocity of the cartesian trajectory.

# Error Code: -6019

Description: interp. error: cart. motion joint vel. disc. [STOP2]

Solution: Reduce the acceleration of the cartesian trajectory.

# Error Code: -6020

Description: interp. error: cart. motion joint acc. disc. [STOP2]

Solution: Reduce the jerk of the cartesian trajectory.

# Error Code: -6021

Description: interp. error: cart. frame invalid. [STOP2]

Solution: Change the cartesian pose to homogeneous transformation matrix.

# Error Code: -6022

Description: interp. error: desforce violation. [STOP2]

Solution: Reduce the desired force to the safety thresholds.

# Error Code: -6023

Description: interp. error: torque discontinuity. [STOP2]

Solution: Reduce the torque rate.

# Error Code: -6024

Description: interp. error: power limit. [STOP2]

Solution: Reduce the speed/acceleration of the trajectory or the load

# Error Code: -6025

Description: interp. error: instalbility detetcted. [STOP2]

Solution: ERR\_INSTALBILITY\_DETETCTED.

# Error Code: -6026

Description: interp. error: joint move direction. [STOP2]

Solution: change the direction of joint motion.

# Error Code: -6027

Description: interp. error: cart. motion generator violation. [STOP2]

Solution: Modify the cartesian external generartor.

# Error Code: -6028

Description: interp. error: joint motion generator violation. [STOP2]

Solution: Modify the joint external generartor.

# Error Code: -6029

Description: interp. error: base acceleration init. [STOP2]

Solution: Change the acceleration of base to acceleration of gravity.

# Error Code: -6030

Description: interp. error: base acceleration invalid. [STOP2]

Solution: Change the acceleration of base to acceleration of gravity.

# Error Code: -1001

Description: Socket initialization failed.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1002

Description: Socket initialization failed.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1003

Description: Socket port binding failed. The local port may be in use.

Solution: Modify the user program, change the socket port, and try again.

# Error Code: -1004

Description: Socket read failed.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1005

Description: Socket timeout.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1006

Description: Socket reception failed.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1007

Description: Socket transmission failed.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1008

Description: Socket lost heartbeat.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1009

Description: The socket lost the robot status.

Solution: Check the network configuration or try using a different computer before retrying.

# Error Code: -1010

Description: Failed to obtain DH parameters via the socket.

Solution: Please check the DH configuration parameters or network communication.

# Error Code: -1011

Description: ECODE\_RELEASE\_BRAKE\_FAILED，API错误码，软件待补充

Solution: ECODE\_RELEASE\_BRAKE\_FAILED，API错误码，软件待补充

# Error Code: -1012

Description: ECODE\_HOLD\_BRAKE\_FAILED，API错误码，软件待补充

Solution: ECODE\_HOLD\_BRAKE\_FAILED，API错误码，软件待补充

# Error Code: -1013

Description: ECODE\_IP\_ADDRESS\_NOT\_REGISTER，API错误码，软件待补充

Solution: ECODE\_IP\_ADDRESS\_NOT\_REGISTER，API错误码，软件待补充

# Error Code: -1014

Description: ECODE\_ROBOTARM\_OVERNUMBER，API错误码，软件待补充

Solution: ECODE\_ROBOTARM\_OVERNUMBER，API错误码，软件待补充

# Error Code: -1015

Description: ECODE\_SOCKET\_OTHER\_ERROR，API错误码，软件待补充

Solution: ECODE\_SOCKET\_OTHER\_ERROR，API错误码，软件待补充

# Error Code: -2001

Description: Joint register error: %s [STOP%d]

Solution: ECODE\_JOINT\_REGIST\_ERROR，硬件错误码，硬件待补充

# Error Code: -2023

Description:

Solution: ECODE\_HVD\_JCU\_ERROR，硬件错误码，待补充

# Error Code: -2024

Description:

Solution: ECODE\_HVD\_BCU\_ERROR，硬件错误码，待补充

# Error Code: -2101

Description: A communication error occurred between the control box and the arm or between the arm's joints! [STOP0]

Solution: Check the connection between the control box and the robotic arm. If no issues are found, contact the manufacturer.

# Error Code: -3008

Description: Tcp speed is over limit! [STOP1]

Solution: Please reduce TCP speed.

# Error Code: -3009

Description: Joint speed is over limit! [STOP1]

Solution: Please reduce joint speed.

# Error Code: -3010

Description: Free Driving Joint or Tcp speed is over limit! [STOP1]

Solution: Please reduce speed during free driving.