ROBOTICS

7-DoF smart actuator for humanoid robots

This robotics demonstrator showcases an innovative smart actuator concept. Each of the seven individual motors is driven by our latest evaluation platform using CoolGaN™ Drive, XENSIV™ current and position sensors, EiceDRIVER™ gate drivers, OptiMOS™ 8 MOSFETS, and PSOC™ Control C3 MCUs. The arm trajectory is calculated using an Nvidia® IGX™ / Jetson Thor™ platform.

Benefits

- Flexible all-round control solution for 7-degree-of-freedom (DoF) actuator
- End-of-shaft and out-of-shaft position sensing solution onboard
- Operation using multiple MCU architectures possible
- Integrated as well as external current sensing solution allows flexible evaluation
- 100Base-T1 Ethernet extension
- Multiple communication options possible
- MCU support for dual-motor control

Highlight products

- IGJ022H10SA2 (100 V)
- IQD020N10NM5SC
- 1EDL8011
- TLE49781
- TLE9251VLEXUMA1
- TLS4125D0EPV50
- TLS202B1MBV33
- TLE49012-S0001
- TDF10A01BG
- ISZ24DP10LM
- BSZ146N10LS5
- PSC3M5FDS2LHQ1

Applications

- Out-of-the-box motor control solution for 48 V humanoid drives
- Connectors for multiple external position sensing systems
- Scalable solution adjustable to different power classes and to different computational and communication demands

Scan for more information