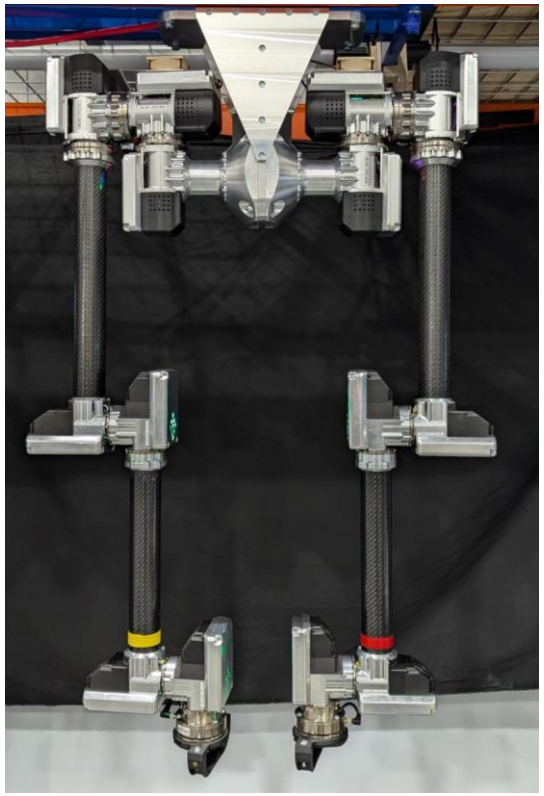


Exonetik arm technical specification

Exonetik robotic arms are designed as a high-force haptic collaborative robot allowing physical interaction with humans.

Specification

Payload	5 kg
Reach	1293 mm
Degrees of freedom	7 per arm
Maximum power consumption	750 W
Average power consumption	300 W
Operating temperature range	0-50 °C

Physical

Materials	Aluminium, carbon fiber, steel
Tool flange	6X M5x0.8, DIAM 71.12 mm (see ATI AXIA80)
Arm weight	10 kg

Performance

J1 maximal torque	150 Nm
J2 maximal torque	150 Nm
J3 maximal torque	150 Nm
J4 maximal torque	50 Nm
J5 maximal torque	25 Nm
J6 maximal torque	25 Nm
J7 maximal torque	25 Nm

Controller interface

Controller development environment	Matlab/Simulink
Communication interface (internal)	EtherCAT
Communication interface (external)	TCP/UDP
Controller	Speedgoat UNIT
Controller input commands	6-axis cartesian F/T
Controller outputs	6-axis cartesian F/T Cartesian position Cartesian velocities
Controller loop frequency	1000 Hz
Joint internal control loop frequency	5000 Hz

Movement

Maximal rated TCP speed	3.0 m/s
J1 maximal speed	553 °/s
J2 maximal speed	553 °/s
J3 maximal speed	1083 °/s
J4 maximal speed	1276 °/s
J5 maximal speed	2496 °/s
J6 maximal speed	2496 °/s
J7 maximal speed	2496 °/s

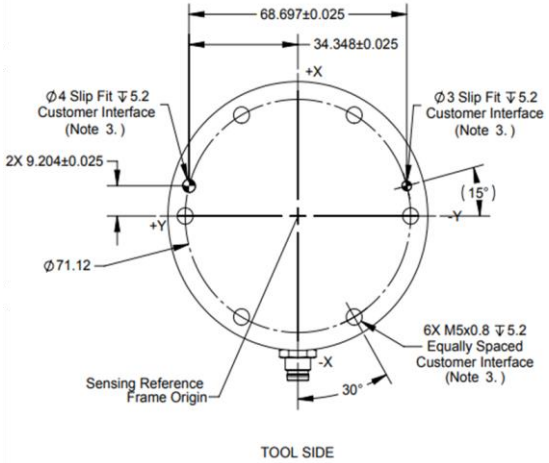
Features

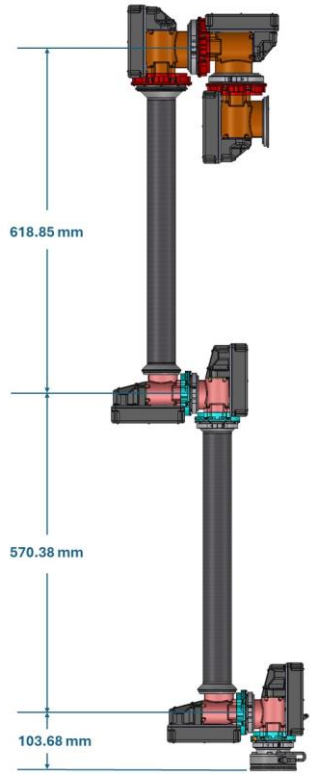
End-of-arm tool power supply voltage (low power)	5 / 12 / 24 V
End-of-arm tool power supply current (low power)	2 / 1 / 0.5 A
End-of-arm tool power supply voltage (high power)	48 V
End-of-arm tool power supply current (high power)	3 A

Haptic

Backdriving force (RMS)	3.5 N
Backdriving torque (RMS)	0.5 Nm
Maximal end-effector virtual linear stiffness	20000 N/m

Tool flange





Exonetik

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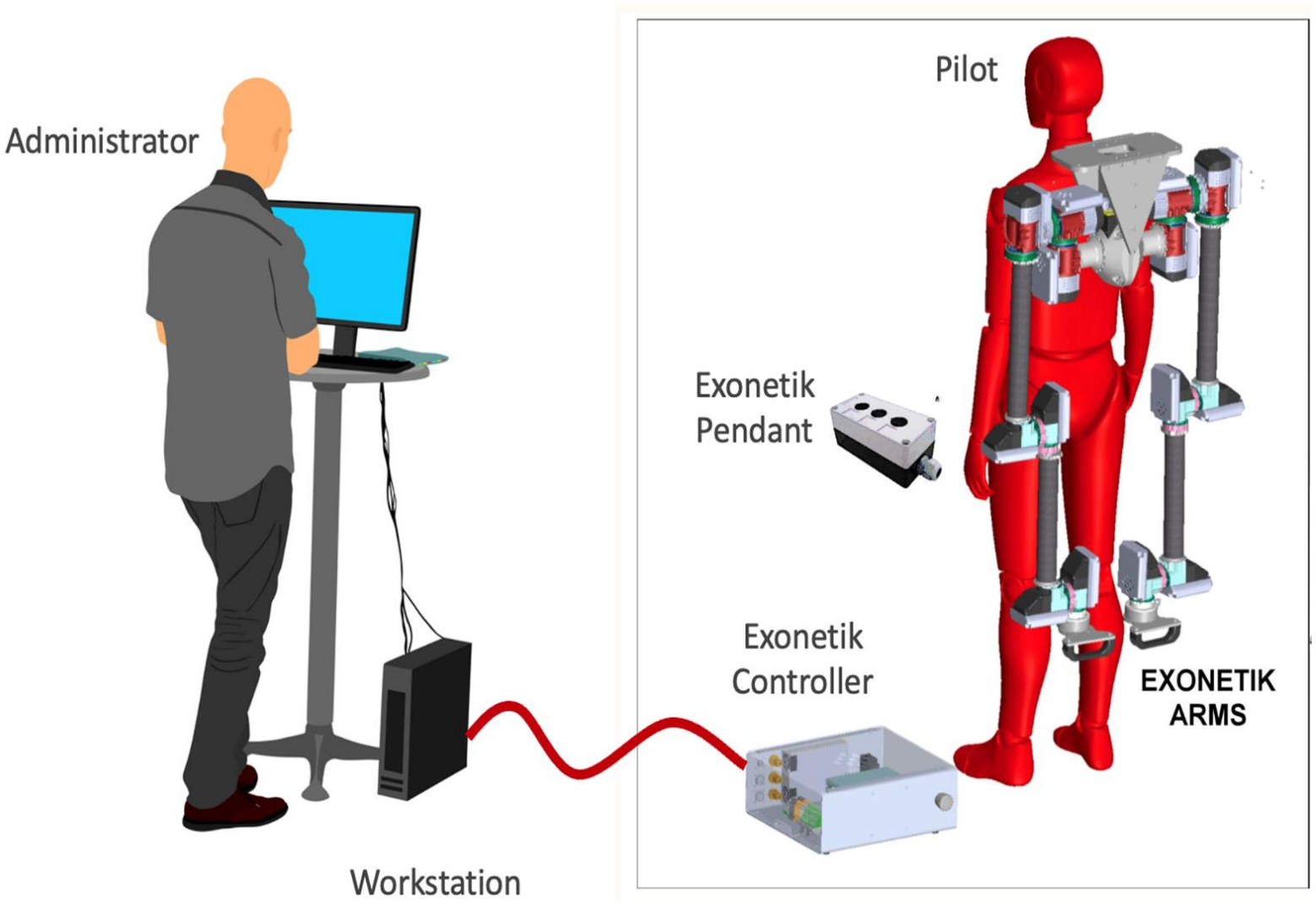

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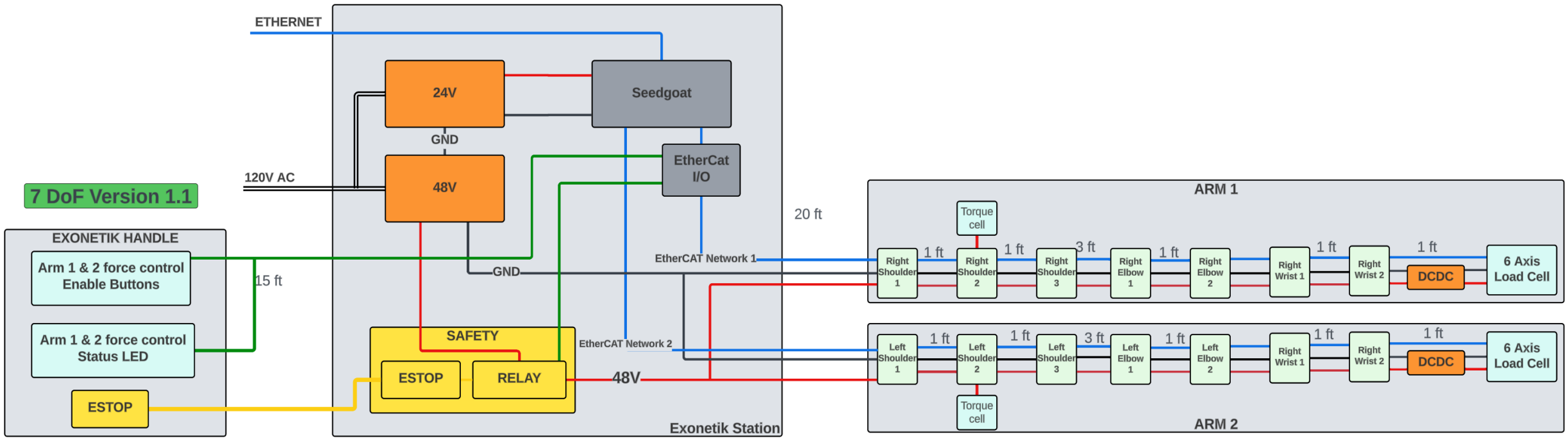

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