



GARDNER CONTROLS

Authorized FANUC Systems Integrator · www.gardnercontrols.com

QUOTATION

Quote #: GC-2026-10MLUS

Date: April 12, 2026

Valid Until: May 12, 2026

Chris

Robotic Work Cell — Equipment & Integration Proposal

PREPARED FOR

fdbf

PREPARED BY

Gardner Controls

QUOTE NUMBER

GC-2026-10MLUS

QUOTED TOTAL

\$61,700

CELL SPECIFICATIONS

Process Type	PICK AND PLACE
Payload Weight	0.4 kg
Target Cycle Time	0.9 sec
Required Reach	5000 mm
Robot Mounting	FLOOR
Environment	FOOD GRADE
Cell Footprint	7000 × 9000 mm
EOAT Type	VACUUM
Comm Protocol	ETHERNET IP



END OF ARM TOOLING

ITEM	MFR	PART #	QTY	UNIT	EXTENDED
Schmalz Compact Vacuum Generator VACUUM	Schmalz	SCPSi	1	\$1,063	\$1,063
EOAT Mounting Plate / Adapter Robot wrist to gripper mounting hardware	Custom		1	\$563	\$563
				Subtotal	\$1,625

PLC & I/O

ITEM	MFR	PART #	QTY	UNIT	EXTENDED
Allen-Bradley CompactLogix Safety CPU CPU (Safety Rated)	Allen-Bradley	5069-L320ERMS3	1	\$7,250	\$7,250
Allen-Bradley CompactLogix Digital Input 16 digital inputs	Allen-Bradley	5069-IB16	2	\$475	\$950
Allen-Bradley CompactLogix Digital Output 16 digital outputs	Allen-Bradley	5069-OB16	2	\$525	\$1,050
Allen-Bradley Power Supply PLC chassis power supply	Allen-Bradley	5069-PS5	1	\$363	\$363
				Subtotal	\$9,613

SAFETY EQUIPMENT

ITEM	MFR	PART #	QTY	UNIT	EXTENDED
Keyence GL-R Safety Light Curtain LIGHT CURTAIN	Keyence	GL-R32H	1	\$2,750	\$2,750
Banner SX5 Safety Light Curtain LIGHT CURTAIN	Banner Engineering	SX5-AS	1	\$2,313	\$2,313
Banner Engineering Safety E-Stop E STOP	Banner Engineering	SSA-EB1PLYL-12ED1Q8	1	\$181	\$181
Pilz PNOZ Safety Relay SAFETY RELAY	Pilz	PNOZ s4	1	\$475	\$475
Welded Wire Safety Fence Panel SAFETY FENCE	Folding Guard	Saf-T-Fence 4ft x 8ft	8	\$356	\$2,850
SICK deTec4 Safety Light Curtain LIGHT CURTAIN	SICK	deTec4 Core	1	\$3,063	\$3,063
Omron F3SG-RR Safety Light Curtain LIGHT CURTAIN	Omron	F3SG-4RR1240	1	\$2,475	\$2,475
Allen-Bradley Push Button E-Stop E STOP	Allen-Bradley	800FM-MT44Z02	1	\$206	\$206
Schneider Harmony XB5 E-Stop E STOP	Schneider Electric	XB5AS8442	1	\$156	\$156
Allen-Bradley GuardMaster Safety Relay SAFETY RELAY	Allen-Bradley	440R-S12R2	1	\$531	\$531
SICK Flexi Soft Safety Controller SAFETY RELAY	SICK	FX3-CPU0	1	\$2,313	\$2,313
Siemens SIMATIC HMI Comfort - 12 inch HMI	Siemens	TP1200 Comfort	1	\$6,000	\$6,000
Wirecrafters Wire Mesh Fence Panel SAFETY FENCE	WireCrafters	RG-1A 4ft x 7ft	8	\$306	\$2,450
Procter Machine Guarding Steel Panel SAFETY FENCE	Procter Machine Guarding	PXP 4ft x 8ft	8	\$400	\$3,200
				Subtotal	\$28,963

ANCILLARY & ENGINEERING

ITEM	MFR	PART #	QTY	UNIT	EXTENDED
Control Cabinet NEMA 12 control enclosure with backplane and wireway	Hoffman		1	\$3,500	\$3,500
Cable Tray and Conduit Cell wiring management	Generic		1	\$1,500	\$1,500
Engineering & Integration Labor Mechanical, electrical, programming, commissioning	Gardner Controls		80	\$206	\$16,500
				Subtotal	\$21,500

Equipment & Labor Subtotal	\$61,700
Tax	(applicable at PO)
Freight	FOB Origin

QUOTE TOTAL

\$61,700



GARDNER CONTROLS

Cell I/O Map

Auto-generated signal list — 24 signals total. Final numbering subject to change at commissioning.

```

=====
ROBOT CELL I/O MAP
=====
Process Type:    PICK AND PLACE
Generated:       2026-04-12 (Gardner Controls / ASI Tool)

-----
HANDSHAKE
-----
ADDRESS  TAG NAME          DIR      DESCRIPTION
-----
DI[1]    CycleStart        •PLC     Cycle Start
DI[2]    CycleStop         •PLC     Cycle Stop
DI[3]    Reset             •PLC     Reset / Clear Faults
DI[4]    AutoMode          •PLC     Auto Mode Selected
DI[5]    SafetyOK          •PLC     Safety Circuit Healthy
DI[6]    AirPressureOK    •PLC     Air Pressure OK
DO[1]    RobotReady        ' PLC    Robot Ready for Cycle
DO[2]    RobotRunning      ' PLC    Robot Cycle Running
DO[3]    RobotFaulted     ' PLC    Robot Faulted
DO[4]    RobotAtHome      ' PLC    Robot At Home Position
DO[5]    CycleComplete    ' PLC    Cycle Complete (pulse)
DO[6]    Heartbeat        ' PLC    Robot Heartbeat (1Hz)

-----
PROCESS
-----
ADDRESS  TAG NAME          DIR      DESCRIPTION
-----
DI[10]   PartPresentPick  •PLC     Part Present at Pick Station
DI[11]   PlaceClear       •PLC     Place Station Clear
DO[10]   PickComplete    ' PLC    Pick Complete
DO[11]   PlaceComplete    ' PLC    Place Complete

-----
SAFETY
-----
ADDRESS  TAG NAME          DIR      DESCRIPTION
-----
DI[40]   GateClosed       •PLC     Safety Gate Closed
DI[41]   LightCurtainOK  •PLC     Light Curtain Clear

-----
EOAT
-----
ADDRESS  TAG NAME          DIR      DESCRIPTION
-----
RO[1]    VacuumOn         EOAT     Vacuum Generator On
RO[2]    VacuumBlowoff   EOAT     Blow-Off Pulse
RI[1]    VacuumSensed    EOAT     Vacuum Achieved (part held)

-----
HMI
-----
ADDRESS  TAG NAME          DIR      DESCRIPTION
-----
DI[50]   HmiCycleStart    •PLC     HMI Cycle Start Pushbutton
DI[51]   HmiPause         •PLC     HMI Pause Request
DI[52]   HmiHome          •PLC     HMI Send Robot Home

=====
Total signals: 24
=====

```



GARDNER CONTROLS

Fanuc TP Program (MAIN.LS)

Auto-generated skeleton — 50 instructions. All taught positions zeroed; integrator teaches at commissioning.

```
/PROG MAIN
/ATTR
OWNER      = MNEDITOR;
COMMENT    = "Pick and Place M";
PROG_SIZE  = 0;
CREATE     = DATE 26-04-12 TIME 07:30:05;
MODIFIED   = DATE 26-04-12 TIME 07:30:05;
FILE_NAME  = ;
VERSION    = 0;
LINE_COUNT = 50;
MEMORY_SIZE = 0;
PROTECT    = READ_WRITE;
TCD: STACK_SIZE= 0,
TASK_PRIORITY= 50,
TIME_SLICE= 0,
BUSY_LAMP_OFF= 0,
ABORT_REQUEST= 0,
PAUSE_REQUEST= 0;
DEFAULT_GROUP= 1,*,*,*,*;
CONTROL_CODE= 00000000 00000000;
/APPL
/MN
1: ! PICK & PLACE MAIN ;
2: ! Generated by Gardner Controls ASI Tool ;
3: ;
4: UFRAME_NUM=0 ;
5: UTOOL_NUM=1 ;
6: OVERRIDE=100% ;
7: ;
8: ! Register seeds (from questionnaire) ;
9: R[1:Payload kg]=0.4 ;
10: R[5:Cycle Target ds]=9 ;
11: ;
12: ! Initial state ;
13: DO[1:Robot Ready for Cycle]=ON ;
14: DO[3:Robot Faulted]=OFF ;
15: CALL HOME ;
16: ;
17: LBL[100] ;
18: ! Wait for cycle start from PLC ;
19: WAIT DI[1:Cycle Start]=ON ;
20: WAIT DI[10:Part Present at Pick Station]=ON ;
21: DO[2:Robot Cycle Running]=ON ;
22: DO[4:Robot At Home Position]=OFF ;
23: ;
24: ! Move to pick approach ;
25: J P[1:Pick Approach] 100% FINE ;
26: L P[2:Pick] 200mm/sec FINE ;
27: CALL GRIP_ON ;
28: L P[1:Pick Approach] 500mm/sec CNT50 ;
29: ;
30: ! Move to place approach ;
31: WAIT DI[11:Place Station Clear]=ON ;
32: J P[3:Place Approach] 100% CNT50 ;
33: L P[4:Place] 200mm/sec FINE ;
34: CALL GRIP_OFF ;
35: L P[3:Place Approach] 500mm/sec CNT50 ;
36: ;
37: ! Cycle complete handshake ;
38: DO[10:Pick Complete]=PULSE,0.3(sec) ;
39: DO[11:Place Complete]=PULSE,0.3(sec) ;
40: DO[5:Cycle Complete (pulse)]=PULSE,0.5(sec) ;
41: DO[2:Robot Cycle Running]=OFF ;
42: ;
43: ! Loop or exit ;
44: IF DI[2:Cycle Stop]=ON,JMP LBL[200] ;
45: JMP LBL[100] ;
46: ;
47: LBL[200] ;
48: CALL HOME ;
49: DO[1:Robot Ready for Cycle]=OFF ;
50: END ,
```

```
/POS
P[1:"Pick Approach"]{
GP1:
UF : 0, UT : 1,CONFIG : 'N U T, 0, 0, 0',
X = 2500.000 mm,Y = -700.000 mm,Z = 600.000 mm,
W = 0.000 deg,P = 0.000 deg,R = 0.000 deg
};
P[2:"Pick"]{
GP1:
UF : 0, UT : 1,CONFIG : 'N U T, 0, 0, 0',
X = 2350.000 mm,Y = -1100.000 mm,Z = 350.000 mm,
W = 0.000 deg,P = 0.000 deg,R = 0.000 deg
};
P[3:"Place Approach"]{
GP1:
UF : 0, UT : 1,CONFIG : 'N U T, 0, 0, 0',
X = -3250.000 mm,Y = 0.000 mm,Z = 600.000 mm,
W = 0.000 deg,P = 0.000 deg,R = 0.000 deg
};
P[4:"Place"]{
GP1:
UF : 0, UT : 1,CONFIG : 'N U T, 0, 0, 0',
X = -3250.000 mm,Y = 0.000 mm,Z = 350.000 mm,
W = 0.000 deg,P = 0.000 deg,R = 0.000 deg
};
/END
```



GARDNER CONTROLS

1. VALIDITY & PRICING

- This quote is valid for thirty (30) days from the date of issue.
- All pricing is in U.S. dollars and is subject to change based on supplier costs, material market fluctuations, and currency exchange rates.
- Quoted pricing assumes purchase of the complete scope as listed; partial scope may require re quoting.

2. PAYMENT TERMS

- Standard payment terms: Net 30 days from invoice date.
- Projects exceeding \$50,000 USD require a 30% deposit at PO, 60% at equipment ship, balance Net 30 from final commissioning.
- Late payments accrue interest at 1.5% per month.

3. DELIVERY & INSTALLATION

- Lead times confirmed at PO acceptance and depend on supplier availability.
- Equipment shipped FOB Origin unless otherwise specified.
- Customer is responsible for receiving, unloading, and providing safe access to the install location.
- Site readiness (utilities, foundations, environmental conditions) is the customer's responsibility unless explicitly included in the scope of work.

4. WARRANTY

- Gardner Controls warrants integrated equipment to be free of defects in workmanship for one (1) year from commissioning.
- OEM equipment carries its manufacturer's warranty terms (typically 1–2 years).
- Warranty does not cover damage from misuse, unauthorized modification, or environmental conditions outside specification.

5. EXCLUSIONS

Unless explicitly listed in the Scope of Work above, this quote excludes: facility electrical service, compressed air supply, building modifications, permits, end-customer operator training beyond commissioning handover, ongoing maintenance contracts, and tooling for parts not specified in the questionnaire.

6. ACCEPTANCE

By signing below or issuing a purchase order referencing this quote number, the customer accepts the scope, pricing, and terms set forth in this document.

Customer Signature

Gardner Controls Authorized

Printed Name & Title

Printed Name & Title

Date

Date