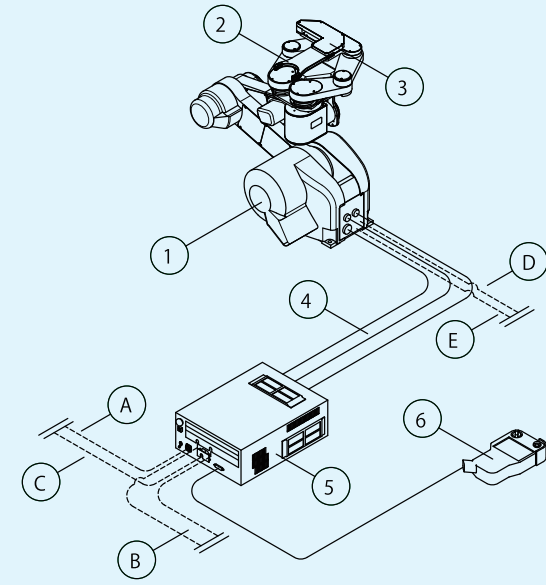


Standard Configuration Diagram



Component	Standard Components	Optional Accessories	Compatibility Option
① Manipulator	○	○	—
② End effectors	○	○	Choose either no E/E or an E/E equipped with clamp, suction, load sensor or mapping sensor.
③ E/E bases	○	○	—
④ Connection cable	○ 2m	○	1m to 20m, in 1-m increments
⑤ Controller	○	○	CE compliant Additional fieldbus
⑥ Teach pendant	○ 4m	○	5-m or 10-m extension cable
⑦ Manipulator fixing jig	○	○	—
⑧ Instruction manual	○	○	Choose either no manual or a manual printed on plain paper, clean paper or CD.

To be supplied by customer	
A	Primary-side power cable
B	Safety signal cable
C	Interface cable
D	Grounding cable
E	Air tubing for piping system

Manipulator Specifications *

Specification	
Model	UTM-R3700F
Manipulator type	6-axis vertical articulated
Operation range	X, A-axis 590mm θ-axis 332° Z-axis 310-703.8mm Y-axis ±767.5mm
Max. operation speed	1600mm/sec. 540°/sec. 1500mm/sec. 1500mm/sec.
Cycle time**	0.9sec./590mm 1.0sec./332° 0.8sec./703.8mm 1.4sec./1535mm
Repeatability	X θ Y directions (composite): ±0.1mm; Z direction: ±0.1mm
Payload	0.5kg/arm (including E/E weight)
Cleanliness ***	Edge clamp E/E type ISO Class 3 (ISO-14644) Vacuum E/E type ISO Class 1 (ISO-14644)
Mass	74kg 0.3 MpaG min.
Facilities	Power 3-phase AC [200-230V ± 10%], 50 / 60Hz Vacuum (for purging) -80 kPaG max, 10 NL/min total Temperature 0-40°C Humidity 20-70% (noncondensing)

* Transfer performance differs from the standard when options are added. ** Time required for full stroke in each axis (Theoretical calculated value; not guaranteed).
*** Refers to cleanliness around the wafer transfer surface.

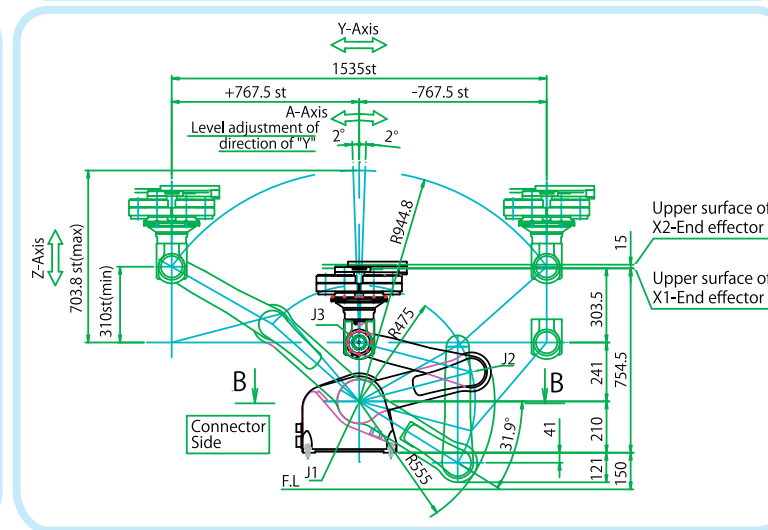
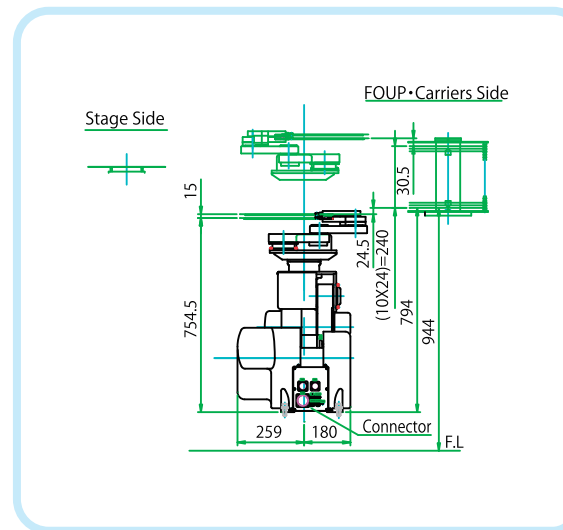
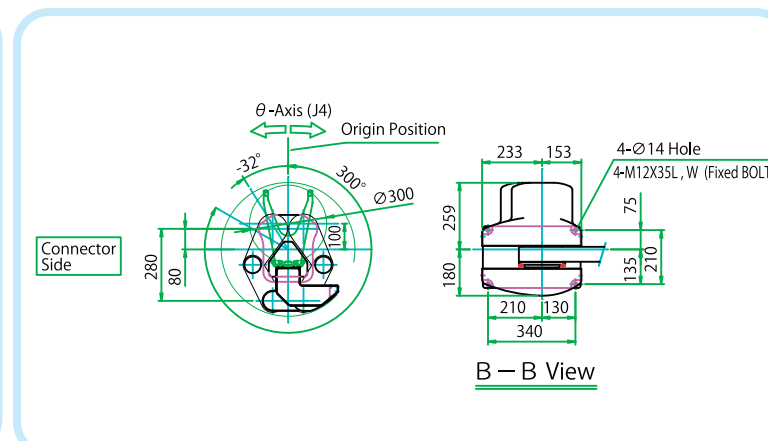
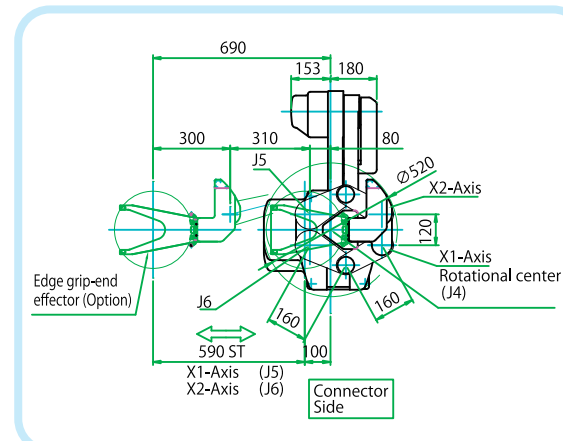
Robot Controller Specifications

Specification		Specification	
Controllable axis	6 axes (Optionally expandable up to 7 axes within panel.) Maximum control capacity of 32 axes (However, dimensions of controllers with 8 or more axes differ. *)	External data storage interface	USB data storage (optional)
Safety performance	PLd (category 3)	Cooling method	Indirect cooling system
Driving method	AC servomotor	Environmental conditions	Temperature: 0-40°C, Humidity: 20-85% RH (noncondensing)
Position feedback	Absolute encoder	Primary side voltage	3-phase AC [200-230V ± 10%]
Teaching method	Teaching playback	Power consumption	0.4kVA***
Connection cable	Standard cable length 2 m	Grounding	Class D or better dedicated robot grounding
Input/output signal to external equipment **	I/O terminals	Dimensions	W369 × D490 × H173 (mm)
	Input specification	Weight	About 19 kg
	Output specification	Paint color	Munsell N 1.5 (black) matte finish
	LAN	Standards compliance	Semi S2, Semi F47, RoHS, KCs, CE (optional)

* If you require more than 32 controlled axes, contact your sales representative.
** Optional fieldbuses (DeviceNet, CC-Link, EtherNet/IP, etc.) are available.
*** Varies with application and operation pattern.

Teach Pendant Specifications

Specification	
Display	5.7-inch color LCD touch panel (640 × 480 pixels, backlight, 65,536 colors)
Enable switch	One-hand 3-position enable switch (installed on left side)
Operation function	Axis operation keys, numerical value input keys, selection/function keys Operation ready key, emergency stop button
External data storage interface	USB port
Cable length	4 m Optional 5-m and 10-m extension cables available.
Enclosure rating	IP65
Dimensions	175 × 326 × 81 (Excludes emergency stop button.)
Weight	0.96 kg (excluding cables)



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ISO 9001 Registered
We have acquired certification of registration with ISO 9001, the international standard for quality management systems.



We have implemented a number of environmental protection initiatives and are focused on developing environment-friendly products. This green label clearly indicates that the associated product meets or exceeds the Daihen Group's voluntary Eco Product Accreditation Criteria.
*Please visit our website for more details.
<http://www.daihen.co.jp/csr/eco/>

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For inquiries regarding the content of this catalog, please contact the dealer below or Daihen Technos directly.

Information in this catalog is accurate as of August 2017. Specifications are subject to change without notice.

CAT. NO. HF L17-0005A-E



6-Axis Vertical Articulated Robot



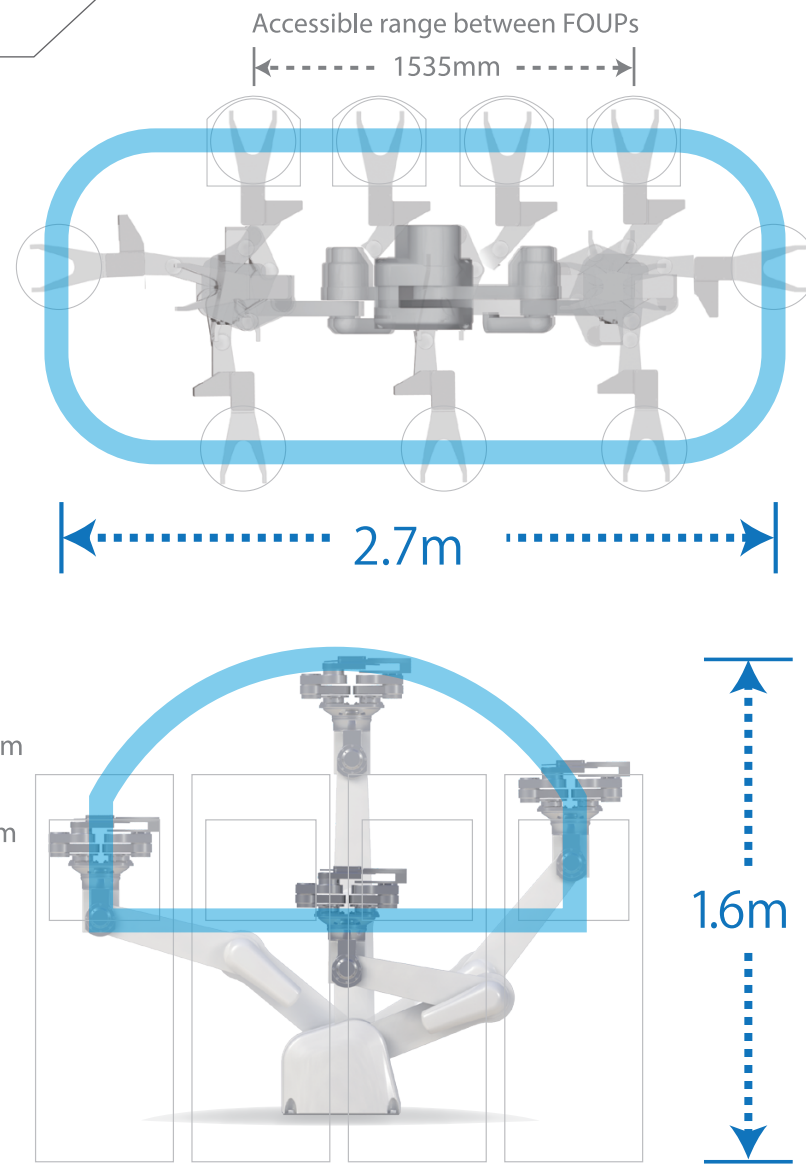
UTM-R3700F

Wide range operation without Y-axis track



DAIHEN Corporation

Wide range access



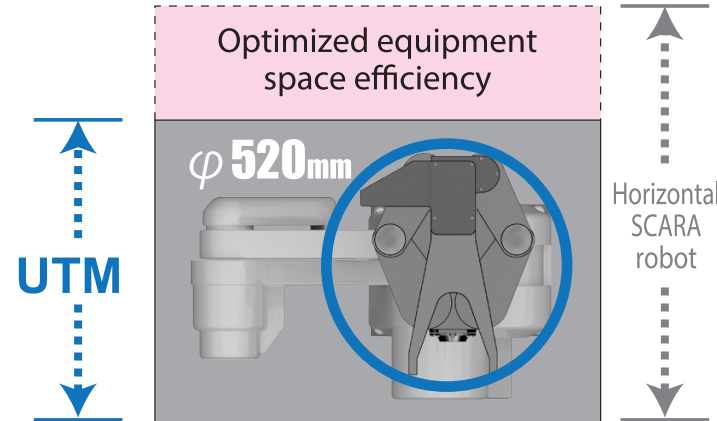
- ✓ This unit accommodates various device layouts thanks to its range of 2.7 m horizontally and 1.6 m vertically without requiring Y-axis track.
- ✓ A single robot can access from 4 FOUPs to a maximum of 8 FOUPs.

Can be installed in a confined area

Robot rotation diameter

General horizontal SCARA robot
Approx. ϕ 1000

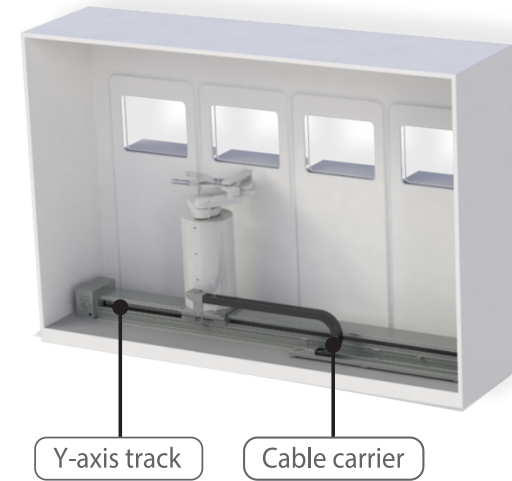
UTM-R3700F ϕ 520



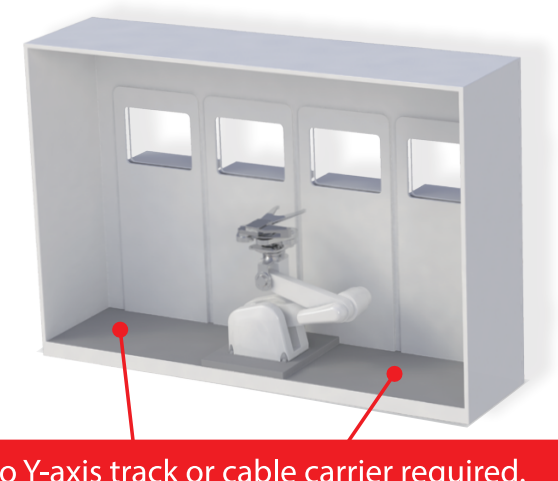
- ✓ The compact rotation diameter contributes to minimized equipment design.
- ✓ Reducing the size of the equipment results in overall reduced material costs.

Elimination of Y-axis track improves reliability

Conventional type



UTM-R3700F



- ✓ Eliminating Y-axis track and cable carrier reduces the risk of disconnection.
- ✓ Particle source reduction.
- ✓ Available space on the floor can be utilized.

Contributes to high-speed operation

Edge clamp E/E	220 WPH
Vacuum E/E	320 WPH
Vacuum E/E without aligner	450 WPH *

Note: With FOUP → Aligner → Stage → FOUP operation

(* Theoretical calculated value; not guaranteed.)

- ✓ Reduces takt time and improves equipment throughput.

Multifunctional controller

- Function 1** Quick-draw/stacking function reduces takt time. Two coordinated motions reduces the takt time.
- Function 2** Supports most common fieldbus technologies. Accommodates DeviceNet, EtherNet/IP, CC-Link and others.
- Function 3** Variable-speed function reduces risk of collision. The speed of the robot can be changed during block operation while teaching. This reduces the collision risk of the robot.
- Function 4** Operation log facilitates troubleshooting. The operation log provides data that contributes to faster and easier troubleshooting.

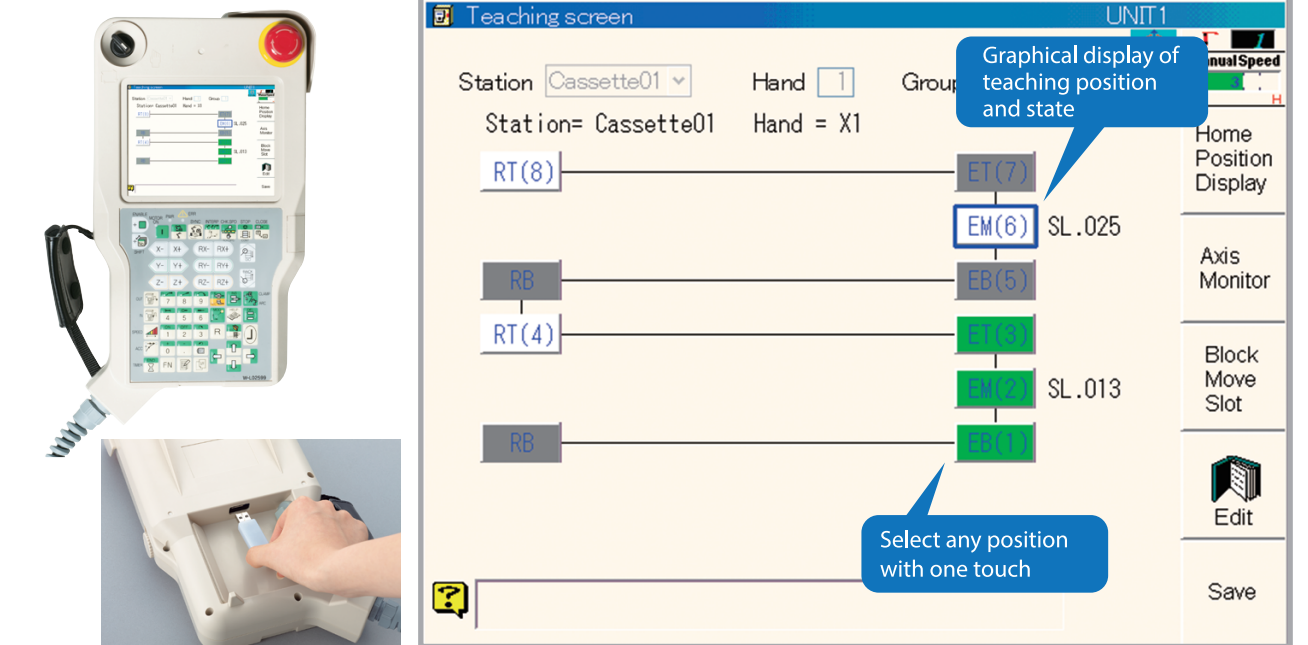


Teaching Pendant provides extensive programming functions for simpler teaching process

ACTRANS
UTM-R3700F

Feature 1

Large 5.7-inch touch panel for easier teaching

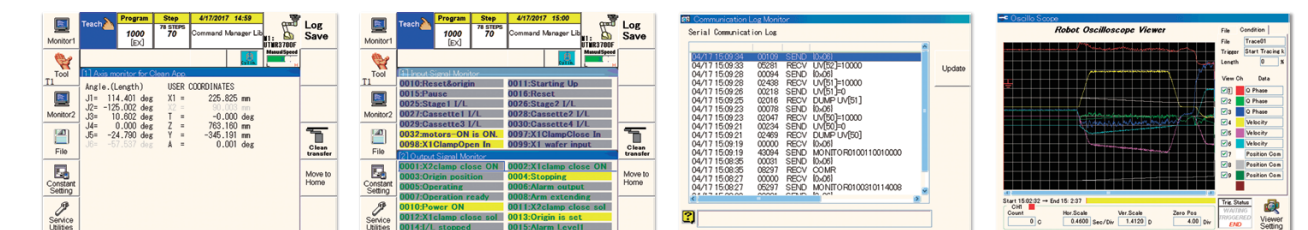


(Actual size of LCD)

- ✓ Change position with one touch for reduced teaching time.
- ✓ The resistive touch panel performs seamlessly even through rubber gloves.
- ✓ A USB port is included for expanded data storage. Teaching data and other information can easily be stored & retrieved.

Feature 2

Enhanced array of monitor functions



Axes monitor General-purpose input/output monitor Communication log monitor Oscilloscope function

- ✓ Monitor functions supports field operation.

Feature 3

Easy Troubleshooting



- ✓ The easy-to-understand help function incorporates images and illustrations that greatly reduce the time required for troubleshooting.