

YASKAWA DX100/DX200/FS100/YRC1000 Robot Controller (Ethernet)

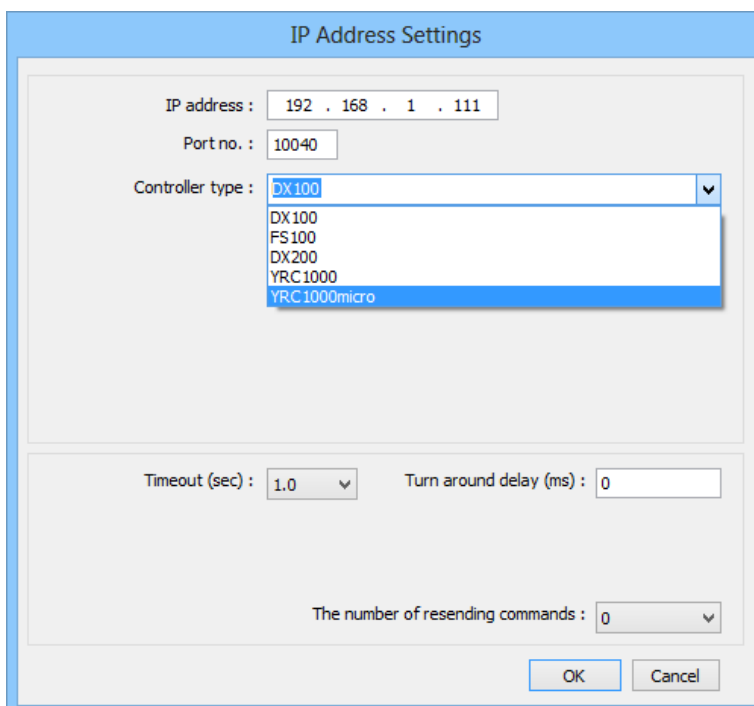
Supported Series: YASKAWA controller type DX100, FS100, DX200, YRC1000, YRC1000micro

Website: <http://www.yaskawa.com/>

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YASKAWA DX100/DX200/FS100/YRC1000 Robot Controller (Ethernet)		
PLC I/F	Ethernet (UDP)		
Port no.	10040		
Controller type	DX100	DX100, FS100, DX200, YRC1000, YRC1000micro	

The address settings may vary according to the controller type selected. Take DX200 as an example, after selecting it as the controller, the window below opens. In this settings window, users may select the **Command** first, and then select the suitable **Instance** and **Attribute** to complete Address setting. Command stands for address type, Instance stands for the content of the Command, and Attribute stands for the attribute of the Instance. Instance and Attribute may have further settings to complete.



The image shows a screenshot of the 'IP Address Settings' dialog box. It contains the following fields and controls:

- IP address :** A text box containing '192 . 168 . 1 . 111'.
- Port no. :** A text box containing '10040'.
- Controller type :** A dropdown menu with 'DX100' selected. The dropdown list is open, showing options: DX100, FS100, DX200, YRC1000, and YRC1000micro.
- Timeout (sec) :** A dropdown menu with '1.0' selected.
- Turn around delay (ms) :** A text box containing '0'.
- The number of resending commands :** A dropdown menu with '0' selected.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

Example 1.

As shown in the settings below, the Command is Administration_Hour, which is used to “Control power ON time”, and its attribute is “Operation start time”.

The screenshot shows a 'Read/Write address' dialog box. The 'Device' dropdown is set to 'YASKAWA Robot Controller'. The 'Address' dropdown is set to 'Administration_Hour' with a value of '0'. A 'Settings...' button is next to the device dropdown. A 'Notification' section with an 'Enab' checkbox is partially visible. A modal dialog box is open over the main dialog, showing 'Command : Administration_Hour'. Inside this modal, the 'Parameters' section has 'Instance : Control power ON time' and 'Attribute : Operation start time'. 'OK' and 'Cancel' buttons are at the bottom of the modal.

Example 2.

As shown in the settings below, the Command is Axis_Composition, which uses R1 of “Robot(Cartesian coordinate)”, and its attribute is “Axis name of the first axis”.

The screenshot shows a 'Read/Write address' dialog box. The 'Command' dropdown is set to 'Axis_Composition'. The 'Parameters' section has 'Instance : Robot(cartesian coordinate)' and 'R1' selected. The 'Attribute' dropdown is set to 'Axis name of the first axis'. 'OK' and 'Cancel' buttons are at the bottom.

After setting, the following result is shown.

The screenshot shows the 'Read/Write address' dialog box. The 'Device' dropdown is 'YASKAWA Robot Controller'. The 'Address' dropdown is 'Axis_Composition' with a value of '1010100'. A 'Settings...' button is next to the device dropdown.

The number shown near Address drop-down list is automatically generated and cannot be changed by users. Users may skip it.

The details on Address parameters are explained below.

1.Command : Administration_Hour

Function: Management Time Acquiring Command (0x88)

Instances (DX100/FS100/DX200/YRC1000):

Instance	Sub Instance	Details
Control power ON time		
Servo power ON time	(TOTAL)	
	(R1 to R8)	
	(S1 to S24)	
Play back time	(TOTAL)	
	(R1 to R8)	
	(S1 to S24)	
Motion time	(TOTAL)	
	(R1 to R8)	
	(S1 to S24)	
Operation time	(application 1 to 8)	

Instances (YRC1000micro):

Instance	Sub Instance	Details
Control power ON time		
Servo power ON time	(TOTAL)	
	(R1 to R2)	
	(S1 to S3)	
Play back time	(TOTAL)	
	(R1 to R2)	
	(S1 to S3)	
Motion time	(TOTAL)	
	(R1 to R2)	
	(S1 to S3)	
Operation time	(application 1 to 2)	

Attributes:

Attribute	Sub Attribute	Details
Operation start time		8 Words Ex. 2019/02/22 15:11
Elapse time		6 Words Ex. 000000:00'00

2.Command : Alarm

Function: Alarm Data Reading Command (0x70)

Instances:

Instance	Details
The latest alarm	Up to four alarms are displayed on the P.P display at the same time
The second alarm from the latest	
The third alarm from the latest	
The fourth alarm from the latestt	

Attributes:

Attribute	Details
Alarm code	Range is from 0x0001 to 0x270F(decimal value: 1~9999)
Alarm data	Setting values vary in accordance with the contents of the alarm type. Also, some alarms are not displayed with the sub code. In this case, the value is zero (0x0).
By alarm type	0 : No alarm 1 : Decimal UNSIGNED SHORT type (display example: [1]) 2 : UNSIGNED CHAR bit pattern (display example: [0000_0001]) 3 : User axis type (display example: [SLURBT]) 4 : Spacial coordinate type (display example: [XYZ]) 5 : Robot coordinate type (display example: [XYZRxRyRz]) 6 : Conveyor characteristic file (display example: [123]) 8 : Control group type (display example: [R1R2S1S2]) robot & station 9 : Decimal SHORT type (display example: [-1]) 10 : UNSIGNED SHORT bit pattern (display example: [0000_0000_0000_0001]) 11 : Control group type (display example:

Attribute	Details
	[R1]) for robot only 12 : Control group type (display example:[R1S1B1]) for robot, station and base 20 : Control group LOW/HIGH logical axis (display example: [R1:LOW SLURBT, HIGH SLURBT]) 21 : Control group MIN/MAX logical axis (display example: [R1: MIN SLURBT, MAX SLURBT]) 22 : Control group MIN/MAX spacial coordinate (display example: [R1: MIN XYZ, MAX XYZ]) 23 : Logical axis of both control group 1 and control group 2 (display example: [R1: SLURBT, R2: SLURBT]) 24 : Logical axis 1 and 2 of the control group (display example: [R1: SLURBT, SLURBT]) 25 : Logical axis of the control group and UNSIGNED CHAR type (display example: [R1: SLURBT, 1]) 27 : Control group and UNSIGNED CHAR type (display example: [R1: 1])
Alarm occurring time	8 Words
Alarm character string name	16 Words

3.Command : Alarm_Detailed

Function: Alarm Data Reading Command (0x30A)

Instances:

Instance	Details
The latest alarm	Up to four alarms are displayed on the P.P display at the same time. Specify one out of them.
The second alarm from the latest	
The third alarm from the latest	
The fourth alarm from the latest	

Attributes:

Attribute	Details
Alarm code	Range is from 0x0001 to 0x270F(decimal value:0 ~ 9999)
Alarm data	Setting values vary in accordance with the contents of the alarm type. Also, some alarms are not displayed with the sub code. In this case, the value is zero (0x0).
By alarm type	0 : No alarm 1 : Decimal UNSIGNED SHORT type (display example: [1]) 2 : UNSIGNED CHAR bit pattern (display example: [0000_0001]) 3 : User axis type (display example: [SLURBT]) 4 : Spacial coordinate type (display example: [XYZ]) 5 : Robot coordinate type (display example: [XYZRxRyRz]) 6 : Conveyor characteristic file (display example: [123]) 8 : Control group type (display example: [R1R2S1S2]) robot & station 9 : Decimal SHORT type (display example: [-1]) 10 : UNSIGNED SHORT bit pattern (display example: [0000_0000_0000_0001]) 11 : Control group type (display example: [R1]) for robot only

Attribute	Details
	<p>12 : Control group type (display example:[R1S1B1]) for robot, station and base</p> <p>20 : Control group LOW/HIGH logical axis (display example: [R1:LOW SLURBT, HIGH SLURBT])</p> <p>21 : Control group MIN/MAX logical axis (display example: [R1: MIN SLURBT, MAX SLURBT])</p> <p>22 : Control group MIN/MAX spacial coordinate (display example: [R1: MIN XYZ, MAX XYZ])</p> <p>23 : Logical axis of both control group 1 and control group 2 (display example: [R1: SLURBT, R2: SLURBT])</p> <p>24 : Logical axis 1 and 2 of the control group (display example: [R1: SLURBT, SLURBT])</p> <p>25 : Logical axis of the control group and UNSIGNED CHAR type (display example: [R1: SLURBT, 1])</p> <p>27 : Control group and UNSIGNED CHAR type (display example: [R1: 1])</p>
Alarm occurring time	8 Words
Alarm character string name	16 Words
Sub code data additional information character strings	8 Words
Sub code data character strings	48 Words
Sub code data character strings	48 Words

Attribute	Details
reverse display information	

4.Command : Alarm_History

Function: Alarm History Reading Command (0x71)

Instances:

Instance	Sub Instance	Details
Major failure		
Monitor alarm		
User alarm	system	
	user	
OFF line alarm		

Attributes:

Attribute	Details
Alarm code	Range is from 0x0001 to 0x270F(decimal value: 9999)
Alarm data	Setting values vary in accordance with the contents of the alarm type. Also, some alarm are not displayed with the sub code. In this case, the value is 0 :0x0).
Alarm type	0 : No alarm 1 : Decimal UNSIGNED SHORT type (display example: [1]) 2 : UNSIGNED CHAR bit pattern (display example: [0000_0001]) 3 : User axis type (display example: [SLURBT]) 4 : Spacial coordinate type (display example: [XYZ]) 5 : Robot coordinate type (display example: [XYZRxRyRz]) 6 : Conveyor characteristic file (display example: [123]) 8 : Control group type (display example: [R1R2S1S2]) robot & station 9 : Decimal SHORT type (display example:

Attribute	Details
	<p>[-1])</p> <p>10 : UNSIGNED SHORT bit pattern (display example: [0000_0000_0000_0001])</p> <p>11 : Control group type (display example: [R1]) for robot only</p> <p>12 : Control group type (display example:[R1S1B1]) for robot, station and base</p> <p>20 : Control group LOW/HIGH logical axis (display example: [R1: LOW SLURBT, HIGH SLURBT])</p> <p>21 : Control group MIN/MAX logical axis (display example: [R1: MIN SLURBT, MAX SLURBT])</p> <p>22 : Control group MIN/MAX spacial coordinate (display example: [R1: MIN XYZ, MAX XYZ])</p> <p>23 : Logical axis of both control group 1 and control group 2 (display example: [R1: SLURBT, R2: SLURBT])</p> <p>24 : Logical axis 1 and 2 of the control group (display example: [R1:SLURBT, SLURBT])</p> <p>25 : Logical axis of the control group and UNSIGNED CHAR type (display example: [R1: SLURBT, 1])</p> <p>27 : Control group and UNSIGNED CHAR type (display example: [R: 1])</p>
Alarm occurring time	8 Words
Alarm character strings name	16 Words

5.Command : Alarm_History_Detailed

Function: Alarm History Reading Command (0x30B)

Instances:

Instance	Sub Instance	Details
Major failure		
Monitor alarm		
User alarm	System	
	User	
OFF line alarm		

Attributes:

Attribute	Details
Alarm code	Range is from 0x0001 to 0x270F(decimal value: 9999)
Alarm data	Setting values vary in accordance with the contents of the alarm type. Also, some alarms are not displayed with the sub code. In this case, the value is zero (0x0).
Alarm type	0 : No alarm 1 : Decimal UNSIGNED SHORT type (display example: [1]) 2 : UNSIGNED CHAR bit pattern (display example: [0000_0001]) 3 : User axis type (display example: [SLURBT]) 4 : Spacial coordinate type (display example: [XYZ]) 5 : Robot coordinate type (display example: [XYZRxRyRz]) 6 : Conveyor characteristic file (display example: [123]) 8 : Control group type (display example: [R1R2S1S2]) robot & station 9 : Decimal SHORT type (display example: [-1]) 10 : UNSIGNED SHORT bit pattern

Attribute	Details
	<p>(display example: [0000_0000_0000_0001])</p> <p>11 : Control group type (display example: [R1]) for robot only</p> <p>12 : Control group type (display example:[R1S1B1]) for robot, station and base</p> <p>20 : Control group LOW/HIGH logical axis (display example: [R1:LOW SLURBT, HIGH SLURBT])</p> <p>21 : Control group MIN/MAX logical axis (display example: [R1: MIN SLURBT, MAX SLURBT])</p> <p>22 : Control group MIN/MAX spacial coordinate (display example: [R1: MIN XYZ, MAX XYZ])</p> <p>23 : Logical axis of both control group 1 and control group 2 (display example: [R1: SLURBT, R2: SLURBT])</p> <p>24 : Logical axis 1 and 2 of the control group (display example: [R1: SLURBT, SLURBT])</p> <p>25 : Logical axis of the control group and UNSIGNED CHAR type (display example: [R1: SLURBT, 1])</p> <p>27 : Control group and UNSIGNED CHAR type (display example: [R1: 1])</p>
Alarm occurring time	8 Words
Alarm character strings name	16 Words
Sub code data additional information character strings	8 Words

Attribute	Details
Sub code data character strings	48 Words
Sub code data character strings reverse display information	48 Words

6.Command : Axis_Composition

Function: Axis Configuration Information Reading Command (0x74)

Instances(DX100/FS100/DX200/YRC1000):

Instance	Sub Instance	Details
Robot (pulse value)	R1~R8	
Base (pulse value)	B1~B8	
Station (pulse value)	S1~S24	
Robot (cartesian coordinate)	R1~R8	
Base (cartesian coordinate)	B1~B8	

Instances(YRC1000Micro):

Instance	Sub Instance	Details
Robot (pulse value)	R1~R2	
Base (pulse value)	B1~B2	
Station (pulse value)	S1~S3	
Robot (cartesian coordinate)	R1~R2	
Base (cartesian coordinate)	B1~B2	

Attributes:

Attribute	Details
First coordinate name	2 Words
Second coordinate name	
Third coordinate name	
Fourth coordinate name	
Fifth coordinate name	
Sixth coordinate name	
Seventh coordinate name	
Eighth coordinate name	

7.Command : B

Function: Byte Variable (B) Reading / Writing Command (0x7A)

Instances:

Data type: 8 bit

Instance	Sub Instance	Details
	0~99	

Attributes:

Attribute	Details
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8.Command : BP

Function: Base Position Type Variable (Bp) Reading / Writing Command(0x80)

Instances:

Instance	Sub Instance	Details
	0~127	

Attributes:

Attribute	Details
Data type	0 : Pulse value 16: Base coordinated value
Coordinated data" of the first axis	2 Words
Coordinated data" of the second axis	
Coordinated data" of the third axis	
Coordinated data" of the fourth axis	
Coordinated data" of the fifth axis	
Coordinated data" of the sixth axis	
Coordinated data" of the seventh axis	
Coordinated data" of the eighth axis	

9.Command : D

Function: Double Precision Integer Type Variable (D) Reading / Writing Command (0x7C)

Data type: 32 bit

Instances:

Instance	Sub Instance	Details
	0 ~ 99	

Attributes:

Attribute	Details
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10.Command : Axis_Position_Deflection

Function: Position Error Reading Command (0x76)

Instances(DX100/FS100/DX200/YRC1000):

Instance	Sub Instance	Details
Robot axis	R1~R8	
Base axis	B1~B8	
Station axis	S1~S24	

Instances(YRC1000micro):

Instance	Sub Instance	Details
Robot axis	R1~R2	
Base axis	B1~B2	
Station axis	S1~S3	

Attributes:

Attribute	Details
First axis data	Position variable data of each axis can be read out
Second axis data	
Third axis data	
Fourth axis data	
Fifth axis data	
Sixth axis data	
Seventh axis data	
Eighth axis data	

11.Command: Each_Shift_Torque

Function: Torque Data Reading Data (0x77)

Instances(DX100/FS100/DX200/YRC1000):

Instance	Sub Instance	Details
Robot axis	R1~R8	
Base axis	B1~B8	
Station axis	S1~S24	

Instances(YRC1000micro):

Instance	Sub Instance	Details
Robot axis	R1~R2	
Base axis	B1~B2	
Station axis	S1~S3	

Attributes:

Attribute	Details
First axis data	Torque data of each axis can be read out
Second axis data	
Third axis data	
Fourth axis data	
Fifth axis data	
Sixth axis data	
Seventh axis data	
Eighth axis data	

12.Command: EX

Function: External Axis Type Variable (Ex) Reading / Writing Command (0x81)

Data type: 32 bit

Instances:

Instance	Sub Instance	Details
	0~127	

Attributes:

Attribute	Details
Data type	0: Pulse value
Coordinated data" of the first axis	
Coordinated data" of the second axis	
Coordinated data" of the third axis	
Coordinated data" of the fourth axis	
Coordinated data" of the fifth axis	
Coordinated data" of the sixth axis	
Coordinated data" of the seventh axis	
Coordinated data" of the eighth axis	

13.Command : I

Function: Integer Type Variable (I) Reading / Writing Command (0x7B)

Data type: 16 bit

Instances:

Instance	Sub Instance	Details
	0~99	

Attributes:

Attribute	Details
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14.Command : IO_Data

Function: I/O Data Reading / Writing Command (0x78)

Data type: 8 bit

Instances:

Instance	Details
Robot user input signal	
Robot user output signal	
External input signal	
Network input signal	Only net work input signal is writable
External output signal	
Network output signal	
Robot system input signal	
Robot system output signal	
Interface panel input signal	
Auxiliary relay signal	
Robot control status signal	
Pseudo input signal	

Attributes:

Attribute	Details
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15.Command: Job_Information

Function: Executing Job Information Reading Command (0x73)

Instances:

Instance	Details
Master task	
Sub task 1~15	

Attributes:

Attribute	Details
Job name	16 Words
Line number	0~9999
Step number	1~9998
Speed override value	

16.Command : Job_Select

Function: Job Select Command (0x87)

Instances:

Instance	Details
Set the executing job	
Set the master job (task 0~15)	

Attributes:

Attribute	Details
Job name	16 Words
Line number	2 Words (0~9999)

*16 words job name + 2 words line number = 18 words need to be written together.

17.Command : On_Off

Write only, 1 = ON, 2 = OFF

Function: Hold / Servo On/off Command (0x83)

Instances:

Instance	Details
HOLD	
Servo ON	
HLOCK	

Attributes:

Attribute	Details
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18.Command: P

Function: Robot Position Type Variable (P) Reading / Writing Command(0x7f)

Instances:

Instance	Sub Instance	Details
	0~127	

Attributes:

Attribute	Details
Data type	0: Pulse value 16: Base coordinated value 17: Robot coordinated value 18: User coordinated value 19: Tool coordinated value
Form	For the form, refer to “Details of data”.
Tool number	
User coordinate number	
Extended form	For the extended form, refer to “Details of data”.
Coordinated data” of the first axis	
Coordinated data” of the second axis	
Coordinated data” of the third axis	
Coordinated data” of the fourth axis	
Coordinated data” of the fifth axis	
Coordinated data” of the sixth axis	
Coordinated data” of the seventh axis	
Coordinated data” of the eighth axis	

Details of data

Form

Bit0	0 : Front	1 : Back
Bit1	0: Upper arm	1: Lower arm
Bit2	0: Flip	1:No flip
Bit3	0: $\theta_R < 180$	1: $\theta_R \geq 180$
Bit4	0: $\theta_T < 180$	1: $\theta_T \geq 180$
Bit5	0: $\theta_S < 180$	1: $\theta_S \geq 180$
Bit6	0: Redundant front	1: Redundant back
Bit7	0: Previous step regarded	1: Form regarded reverse

Extend Form

Bit0	0: $\text{eL} < 180$	1: $\text{eL} \geq 180$
Bit1	0: $\text{eU} < 180$	1: $\text{eU} \geq 180$
Bit2	0: $\text{eB} < 180$	1: $\text{eB} \geq 180$
Bit3	0: $\text{eE} < 180$	1: $\text{eE} \geq 180$
Bit4	0: $\text{eW} < 180$	1: $\text{eW} \geq 180$
Bit5	Reserve	
Bit6		
Bit7		

19.Command: R

Function: Real Type Variable (R) Reading / Writing Command (0x7D)

Instances:

32 bit Data

Instance	Sub Instance	Details
	0~99	

Attributes:

Attribute	Details
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20.Command : Register_Data

Function: Register Data Reading / Writing Command (0x79)

Instances:

16 bit Data

Instance	Sub Instance	Details
	0~999	

Attributes:

Attribute	Details
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21.Command : Reset_Cancellation

Write only write 1 to reset

Function: Alarm Reset / Error Cancel Command (0x82)

Instances:

Instance	Details
Resetting of alarm	
Cancelling of error	

Attributes:

Attribute	Details
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22.Command : Robot_Position

Function: Robot Position Data Reading Command (0x75)

Instances (DX100/FS100/DX200/YRC1000):

Instance	Sub Instance	Details
Robot (pulse value)	R1~R8	
Base (pulse value)	B1~B8	
Station (pulse value)	S1~S24	
Robot (cartesian coordinate)	R1~R8	

Instances (YRC1000micro):

Instance	Sub Instance	Details
Robot (pulse value)	R1~R2	
Base (pulse value)	B1~B2	
Station (pulse value)	S1~S3	
Robot (cartesian coordinate)	R1~R2	

Attributes:

Attribute	Details
Data type	0: pulse value/16: base coordinate value
Form	For the form, refer to "Details of data".
Tool number	
User coordinate number	
Extended form	For the extended form, refer to "Details of data".
First axis data	
Second axis data	
Third axis data	
Fourth axis data	
Fifth axis data	
Sixth axis data	
Seventh axis data	
Eighth axis data	

Details of data

Form

Bit0	0 : Front	1 : Back
Bit1	0: Upper arm	1: Lower arm
Bit2	0: Flip	1: No flip
Bit3	0: $\theta R < 180$	1: $\theta R \geq 180$
Bit4	0: $\theta T < 180$	1: $\theta T \geq 180$
Bit5	0: $\theta S < 180$	1: $\theta S \geq 180$
Bit6	0: Redundant front	1: Redundant back
Bit7	0: Previous step regarded reverse conversion specified	1: Form regarded reverse conversion specified

Extend Form

Bit0	0: $\theta L < 180$	1: $\theta L \geq 180$
Bit1	0: $\theta U < 180$	1: $\theta U \geq 180$
Bit2	0: $\theta B < 180$	1: $\theta B \geq 180$
Bit3	0: $\theta E < 180$	1: $\theta E \geq 180$
Bit4	0: $\theta W < 180$	1: $\theta W \geq 180$
Bit5	Reserve	
Bit6		
Bit7		

23.Command : S

Function: 16 Byte Character Type Variable (S) Reading Writing Command (0x7e)

8 Words

Instances:

Instance	Sub Instance	Details
	0~99	

Attributes:

Attribute	Details
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24.Command :Start

Write only write 1 to start

Function: Start-up (Job Start) Command (0x86)

25.Command : State_Switch

Write only 1: STEP/2: 1 CYCLE/3:CONTINUE

Function: Step / Cycle / Continuous Switching Command (0x84)

26.Command :Status

Function: Status Information Reading Command (0x72)

Instances:

Instance	Sub Instance	Details
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Attributes:

Attribute	Details
Data 1	Specify the status data number. For the details of Data1 and Data 2, refer to "Details of data".
Data 2	

Details of data

Data1

Bit0	Step
Bit1	1 cycle
Bit2	Automatic and continuous
Bit3	Running
Bit4	In-guard safe operation
Bit5	Teach
Bit6	Play
Bit7	Command remote

Data2

Bit0	
Bit1	In hold status (by programming pendant)
Bit2	In hold status (externally)
Bit3	In hold status (by command)
Bit4	Alarming
Bit5	Error occurring
Bit6	Servo ON
Bit7	

27.Command :String_Display_To_Pendant

Write only

Function: Character String Display Command To The Programming Pendant(0x85)

15 words

28.Command :System_Information

Function: System Information Acquiring Command (0x89)

Instances(DX100/FS100/DX200/YRC1000):

Instance	Sub Instance	Details
Type information	R1~R8	
Type information	S1~S24	
Application information	1~8	

Instances(YRC1000micro):

Instance	Sub Instance	Details
Type information	R1~R2	
Type information	S1~S3	
Application information	1~2	

Attributes:

Attribute	Details
System software version	12 Words
Model name / application	8 Words
Parameter version	4 Words

29.Command :S_32BYTE

Function: 32 Byte Character Type Variable (S) Reading Writing Command (0x8E)

16 words

Instances:

Instance	Sub Instance	Details
	0~99	

30.Command :Move_Instruction_Cartesian

Write only, data must be written all at once. See Data Part below.

Function: Move instruction command (Type Cartesian coordinates)(0x8A)

Instances:

Instance	Sub Instance	Details
Link absolute position operation		
Straight absolute position operation		
Straight increment value operation		

Data	Details
Specifying control group (Robot)	1 to 8 (Robot No.)
Specifying control group (Station)	1 to 24 (Station No.)
Specifying the classification in speed	Specify the classification of operations 0: % (Link operation) 1: V (Cartesian operation) 2: VR (Cartesian operation)
Specifying a speed	Specify the rate Link operation : 0.01% Cartesian operation V speed : 0.1 mm/s Cartesian operation VR speed : 0.1 degree/s
Specifying the operation coordinate	Specify the operation coordinate 16: Base coordinate 17: Robot coordinate 18: User coordinate 19: Tool coordinate
X coordinate value	
Y coordinate value	
Z coordinate value	
Tx coordinate value (unit: 0.0001 degree)	
Ty coordinate value (unit: 0.0001 degree)	
Tz coordinate value (unit: 0.0001 degree)	
Reservation	

Data	Details
Reservation	Only support in YRC1000micro
Type	Refer to following data at the next page for details
Expanded type	
Tool No. (0 to 63)	
User coordinate No. (1 to 63)	
Base 1st axis position	
Base 2nd axis position	
Base 3rd axis position	
Station 1st axis position	
Station 2nd axis position	
Station 3rd axis position	
Station 4th axis position	
Station 5th axis position	
Station 6th axis position	

Details of data

Form

Bit0	0 : Front	1: Back
Bit1	0: Upper arm	1: Lower arm
Bit2	0: Flip	1: No flip
Bit3	0: $\theta R < 180$	1: $\theta R \geq 180$
Bit4	0: $\theta T < 180$	1: $\theta T \geq 180$
Bit5	0: $\theta S < 180$	1: $\theta S \geq 180$
Bit6	Reserve	
Bit7		

Extend Form

Bit0	0: $\theta L < 180$	1: $\theta L \geq 180$
Bit1	0: $\theta U < 180$	1: $\theta U \geq 180$
Bit2	0: $\theta B < 180$	1: $\theta B \geq 180$
Bit3	0: $\theta E < 180$	1: $\theta E \geq 180$
Bit4	0: $\theta W < 180$	1: $\theta W \geq 180$
Bit5	Reserve	
Bit6		
Bit7		

31.Command :Move_Instruction_Pluse

Write only, data must be written all at once. See Data Part below 該 command 為 Move Instruction Command (Type Pulse) (0x8B)

Instance

Instance	Sub Instance	Details
Link absolute position operation		
Straight absolute position operatio		

Data	Details
Specifying control group (Robot)	1 to 8 (Robot No.)
Specifying control group (Station)	1 to 24 (Station No.)
Specifying the classification in speed	Specify the classification of operations 0: % (Link operation) 1: V (Cartesian operation) 2: VR (Cartesian operation)
Specifying a speed	Specify the rate Link operation : 0.01% Cartesian operation V speed : 0.1 mm/s Cartesian operation VR speed : 0.1 degree/s
Robot 1st axis pulse value	
Robot 2nd axis pulse value	
Robot 3rd axis pulse value	
Robot 4th axis pulse value	
Robot 5thaxis pulse value	
Robot 6th axis pulse value	
Robot 7th axis pulse value	
Robot 8th axis pulse value	
Tool No. (0 to 63)	
Base 1st axis position (Pulse value) Up to three axes	
Base 2nd axis position (Pulse value)	
Base 3rdaxis position (Pulse value)	
Station 1st axis position (pulse value)	
Station 2nd axis position (pulse value)	
Station 3rdaxis position (pulse value)	

Data	Details
Station 4th axis position (pulse value)	
Station 5th axis position (pulse value)	
Station 6th axis position (pulse value)	

Device Address:

Bit/Word	Device type (Command)	Format	Range
B	Status_Bit	DDDDDDDDdd	0 ~ 163836331
B	Robot_Position_Bit	DDDDDDDDdd	0 ~ 163836331
B	IO_Data_Bit	DDDDDDdo	0 ~ 163837
B	Register_Data_Bit	DDDDDDdd	0 ~ 1638315
B	B_Bit	DDDDDDdo	0 ~ 163837
B	I_Bit	DDDDDDdd	0 ~ 1638315
B	D_Bit	DDDDDDdd	0 ~ 1638331
B	R_Bit	DDDDDDdd	0 ~ 1638331
B	P_Bit	DDDDDDDDdd	0 ~ 163836331
W	Administration_Hour	DDDDDDDDDD	0 ~ 163836300
W	Alarm	DDDDDDDDDD	0 ~ 163836300
W	Alarm_Detailed	DDDDDDDDDD	0 ~ 163836300
W	Alarm_History	DDDDDDDDDD	0 ~ 163836300
W	Alarm_History_Detailed	DDDDDDDDDD	0 ~ 163836300
W	Axis_Composition	DDDDDDDDDD	0 ~ 163836300
W	B	DDDDDD	0 ~ 16383
W	BP	DDDDDDDD	0 ~ 163363
W	D	DDDDDD	0 ~ 16383
W	Axis_Position_Deflection	DDDDDDDD	0 ~ 1638363
W	Each_Shift_Torque	DDDDDDDD	0 ~ 1638363
W	EX	DDDDDDDD	0 ~ 1638363
W	I	DDDDDD	0 ~ 16383
W	IO_Data	DDDDDD	0 ~ 16383
W	Job_Information	DDDDDDDDDD	0 ~ 163836300
W	Job_Select	DDDDDDDDDD	0 ~ 163836300
W	On_Off	DDDDDD	0 ~ 16383
W	P	DDDDDDDD	0 ~ 1638363
W	R	DDDDDD	0 ~ 16383

Bit/Word	Device type (Command)	Format	Range
W	Register_Data	DDDDDD	0 ~ 16383
W	Reset_Cancellation	DDDDDD	0 ~ 16383
W	Robot_Position	DDDDDDDD	0 ~ 1638363
W	S	DDDDDDDD	0 ~ 1638300
W	Start	DDDDDDDD	0 ~ 1638363
W	State_Switch	DDDDDD	0 ~ 16383
W	Status	DDDDDDDD	0 ~ 1638363
W	String_Display_To_Pendant	DDDDDDDD	0 ~ 1638300
W	System_Information	DDDDDDDDDD	0 ~ 163836300
W	S_32BYTE	DDDDDDDD	0 ~ 1638300
W	Move_Instruction_Cartesian	DDDDDDDD	0 ~ 1638300
W	Move_Instruction_Pluse	DDDDDDDD	0 ~ 1638300

Wiring Diagram:

Ethernet cable

