Dongbu Robot iM-U Series (Ethernet)

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Dongbu Robot iM-U Series (Ethernet)		
PLC I/F	Ethernet		
Port no.	9007		

Device Address:

Bit/Word	Device type	Format	Range	Memo
B	STAT1_Bit	Do	0 ~ 27	Channel system status *Read only *Note1
B	STAT2_Bit	Do	0 ~ 27	
B	STAT3_Bit	Do	0 ~ 27	
B	STAT4_Bit	Do	0 ~ 27	
B	STATA1_Bit	DDo	0 ~ 527	Channel axis system status *Read only D: Axis: 0~5 D: Index: 0~2 *Note2
B	STATA2_Bit	DDo	0 ~ 527	
B	STATA3_Bit	DDo	0 ~ 527	
B	STATA4_Bit	DDo	0 ~ 527	
B	SYS_Bit	Do	0 ~ 27	System status information *Read only *Note3
B	JDIR1	D	0 ~ 5	JOG movement execution (CW/CCW) *Write only ON (CW) OFF (CCW)
B	JDIR2	D	0 ~ 5	
B	JDIR3	D	0 ~ 5	
B	JDIR4	D	0 ~ 5	
B	JCW1	D	0 ~ 5	JOG movement execution (CW) *Write only ON (Jog CW direction movement) OFF (Jog stop)
B	JCW2	D	0 ~ 5	
B	JCW3	D	0 ~ 5	
B	JCW4	D	0 ~ 5	
B	JCCW1	D	0 ~ 5	JOG movement execution (CCW) *Write only ON (Jog CCW direction movement) OFF (Jog stop)
B	JCCW2	D	0 ~ 5	
B	JCCW3	D	0 ~ 5	
B	JCCW4	D	0 ~ 5	
B	MPG	D	1 ~ 4	MPG ON/OFF

Bit/Word	Device type	Format	Range	Memo
B	ALM	D	0 ~ 4	Alarm triggering/cancellation *Write only (on triggle)
B	SERVO	D	1 ~ 4	Servo ON/OFF *Write only (on triggle)
B	PALL	D	1 ~ 4	Program full run *Write only (on triggle)
B	PLIN	D	1 ~ 4	Program line run *Write only (on triggle)
B	PSTOP	D	1 ~ 4	Program stop *Write only (on triggle)
B	PNEW	D	1 ~ 4	Program restart *Write only (on triggle)
B	PRES	D	1 ~ 4	Program reset *Write only (on triggle)
B	SEQS	D	0	System sequence execution *Write only ON:execution OFF:stop
B	SEQU	D	0	User sequence execution *Write only (_SEQU_F) ON:execution OFF:stop
B	RSTOP	D	1 ~ 4	Stop robot movement *Write only ON: triggle
B	RORG	D	1 ~ 4	Robot origin run *Write only ON: triggle
B	AMCA	D	1 ~ 4	Coordinate value JOINT-PTP *Write only ON: arm posture right OFF: arm posture left
B	AMCB	D	1 ~ 4	Coordinate value JOINT-LINEAR *Write only ON: arm posture right OFF: arm posture left

Bit/Word	Device type	Format	Range	Memo
B	AMCC	D	1 ~ 4	Coordinate value JOINT-ARC *Write only ON: arm posture right OFF: arm posture left
B	AMCD	D	1 ~ 4	Coordinate value JOINT-CIRCLE *Write only ON: arm posture right OFF: arm posture left
B	AMCE	D	1 ~ 4	Coordinate value XYZ-PTP *Write only ON: arm posture right OFF: arm posture left
B	AMCF	D	1 ~ 4	Coordinate value XYZ-LINEAR *Write only ON: arm posture right OFF: arm posture left
B	AMCG	D	1 ~ 4	Coordinate value XYZ-ARC *Write only ON: arm posture right OFF: arm posture left
B	AMCH	D	1 ~ 4	Coordinate value XYZ-CIRCLE *Write only ON: arm posture right OFF: arm posture left
B	AMLA	D	1 ~ 4	Positional variable PTP *Write only ON: triggle
B	AMLB	D	1 ~ 4	Positional variable LINEAR *Write only ON: triggle
B	AMLC	D	1 ~ 4	Positional variable ARC *Write only ON: triggle
B	AMLD	D	1 ~ 4	Positional variable CIRCLE *Write only ON: triggle

Bit/Word	Device type	Format	Range	Memo
B	AMPA	D	1 ~ 4	Point file PTP *Write only ON: triggle
B	AMPB	D	1 ~ 4	Point file LINEAR *Write only ON: triggle
B	AMPC	D	1 ~ 4	Point file ARC *Write only ON: triggle
B	AMPD	D	1 ~ 4	Point file CIRCLE *Write only ON: triggle
B	RMCA	D	1 ~ 4	Coordinate value JOINT-PTP *Write only ON: arm posture right OFF: arm posture left
B	RMCB	D	1 ~ 4	Coordinate value JOINT-LINEAR *Write only ON: arm posture right OFF: arm posture left
B	RMCE	D	1 ~ 4	Coordinate value XYZ-PTP *Write only ON: arm posture right OFF: arm posture left
B	RMCF	D	1 ~ 4	Coordinate value XYZ-LINEAR *Write only ON: arm posture right OFF: arm posture left
B	RMLA	D	1 ~ 4	Positional variable PTP *Write only ON: triggle
B	RMLB	D	1 ~ 4	Positional variable LINEAR *Write only ON: triggle
B	RMPA	D	1 ~ 4	Point file PTP *Write only ON: triggle

Bit/Word	Device type	Format	Range	Memo
B	RMPB	D	1 ~ 4	Point file LINEAR *Write only ON: triggle
B	IO_Bit	DDDo	0 ~ 9987	I/O contact
B	FDLT	D	0	Delete File execution *Write only ON: triggle
B	FCPY	D	0	Copy file ID execution *Write only ON: triggle
W	STAT1	D	0 ~ 2	Channel system status *Read only
W	STAT2	D	0 ~ 2	
W	STAT3	D	0 ~ 2	
W	STAT4	D	0 ~ 2	
W	STATA1	DD	0 ~ 52	Channel axis system status *Read only D: Axis: 0~5 D: Index: 0~2
W	STATA2	DD	0 ~ 52	
W	STATA3	DD	0 ~ 52	
W	STATA4	DD	0 ~ 52	
W	SYS	D	0 ~ 2	System status information *Read only
W	ERR	D	1 ~ 4	Channel error code *Read only
W	ERRSUB	D	1 ~ 4	Channel error code (auxiliary) *Read only
W	JMOV	D	1 ~ 4	JOG move 0 : Continuous jog 1 : Inch jog
W	JMOT	D	1 ~ 4	JOG motion 0 : XY 1 : Joint
W	JSPD	D	1 ~ 4	JOG speed 0~3
W	JMSPD	D	1 ~ 4	JOG movement speed 1~100
W	MPGA	D	1 ~ 4	MPG connecting axis 0~5
DW	ARCH	D	1 ~ 4	ARCH

Bit/Word	Device type	Format	Range	Memo
DW	MECD1	D	0 ~ 5	Motor current position (Encoder) *Read only
DW	MECD2	D	0 ~ 5	
DW	MECD3	D	0 ~ 5	
DW	MECD4	D	0 ~ 5	
DW	MJIT1	D	0 ~ 5	Motor current position (Joint) *Read only
DW	MJIT2	D	0 ~ 5	
DW	MJIT3	D	0 ~ 5	
DW	MJIT4	D	0 ~ 5	
DW	MXY1	D	0 ~ 5	Motor current position (XY) *Read only
DW	MXY2	D	0 ~ 5	
DW	MXY3	D	0 ~ 5	
DW	MXY4	D	0 ~ 5	
DW	MSPD1	D	0 ~ 5	Motor current speed
DW	MSPD2	D	0 ~ 5	
DW	MSPD3	D	0 ~ 5	
DW	MSPD4	D	0 ~ 5	
W	PID	D	1 ~ 4	Driving file ID
W	_SEQU_F	D	0	User sequence file ID Local (SEQU)
W	SEQUID	D	0	User sequence file ID *Read only
W	RSPD	D	1 ~ 4	Robot movement speed 1~100
W	_AMC1	D	0 ~ 5	Reference coordinate value Local (AMCA~AMCH) _AMC1 for joint _AMC2 for XYZ
W	_AMC2	D	0 ~ 5	
W	_AML	D	1 ~ 2	Reference positional variable Local (AMLA~ AMLD)
W	_AMP	D	1 ~ 2	Reference point number Local (AMPA~ AMPD)
W	_AMP_F	D	0	Reference point file ID Local (AMPA~ AMPD)
W	_RMC	D	0 ~ 5	Reference coordinate value Local (RMCA~ RMCF)
W	_RML	D	0	Reference positional variable Local (RMLA~ RMLB)

Bit/Word	Device type	Format	Range	Memo
W	_RMP	D	0	Reference point number Local (RMPA~ RPMB)
W	_RMP_F	D	0	Reference point file ID Local (RMPA~ RPMB)
W	IO	DDD	0 ~ 998	I/O contact
DW	GINT	DDD	0 ~ 998	Integer variable
DW	GFLT	DDD	0 ~ 998	Real variable
DW	POSA0	DDD	0 ~ 998	Position type variable (axis/position)
DW	POSA1	DDD	0 ~ 998	
DW	POSA2	DDD	0 ~ 998	
DW	POSA3	DDD	0 ~ 998	
DW	POSA4	DDD	0 ~ 998	
DW	POSA5	DDD	0 ~ 998	
DW	POSA6	DDD	0 ~ 998	
DW	PNTA0	DDD	0 ~ 999	Point file (Axis/position)
DW	PNTA1	DDD	0 ~ 999	
DW	PNTA2	DDD	0 ~ 999	
DW	PNTA3	DDD	0 ~ 999	
DW	PNTA4	DDD	0 ~ 999	
DW	PNTA5	DDD	0 ~ 999	
DW	PNTA6	DDD	0 ~ 999	
W	_PNTA_F	D	0	Point file file ID
W	_PNTA_CH	D	0	Point file channel
W	_FDLT_F	D	0	Delete File File ID
W	_FCPY_SF	D	0	Copy file ID Source file id
W	_FCPY_CH	D	0	Copy file ID Destination channel
W	_FCPY_DF	D	0	Copy file ID Destination file id
DW	PAR	DDDD	0 ~ 9999	Parameter DD: Filed DD: Index Fill up all field by 0
DW	PARV	D	0	Parameter version *Read only

*Note1: It means the bit-by-bit contents of the information index as follows.

Index	Bit pos	Contents	Comment
0	0	Active	indicates channel activation status
	1	Run	indicates that it is running (motion, origin, jog, etc.)
	2	Pgmload	Indicates that motion program compilation was successfully executed and loaded.
	3	PgmAbStop	Indicates that the motion program was abnormally terminated.
	4	Undefined	
	5	ServoOn	Indicates the servo On/Off status of the axis
	6	OriginOK	Indicates that origin execution is complete
	7	Error	Indicates that a warning has occurred in the channel.
1	0	InPosition	All axes of the channel are within range of the parameter InposRange.
	1	InRange	All axes of the channel are within the range of parameters InRangeL and InRangeR
	2	PgmRun	Indicates that motion program operation is in progress.
	3	StepRun	It indicates that the motion program is executing step operation
	4	DmoveRun	Indicates that motion movement is in progress.
	5	OriginRun	Indicates that the nuclear power plant is running.
	6	JogRun	Jog driving
	7	Undefined	
2	0	Undefined	
	1	Undefined	
	2	Undefined	
	3	Undefined	
	4	Undefined	
	5	Undefined	
	6	Undefined	
	7	Undefined	

*Note2: It means the bit-by-bit contents of the information index as follows.

Index	Bit pos	Contents	Comment
0	0	Ready	It indicates that the axis motion is ready.
	1	Undefined	
	2	Undefined	
	3	CAP	It indicates that the c-phase signal of Amp has been caught.
	4	BreakOn	Indicates the magnetic break On/Off status of the axis
	5	DBreakOn	It shows the electric brake On/Off status of the shaft.
	6	ServoOn	Indicates the servo On/Off status of the axis.
	7	Fault	Indicates whether an error has occurred in the axis module.
1	0	DesirVel0	Indicates that the command velocity is 0. Stationary state.
	1	InPosition	Indicates that the axis is within range of the parameter InposRange.
	2	InRange	It indicates that the axis is within the range of InRangeL and InRange of parameters.
	3	Undefined	
	4	Undefined	
	5	Undefined	
	6	Undefined	
	7	Undefined	
2	0	FLS(soft)	Indicates whether the forward limit sensor set by software is detected.
	1	RLS(soft)	Indicates whether the reward limit sensor set by the software is detected.
	2	ORG(soft)	Indicates whether orgin sensor set in software is detected.
	3	Undefined	
	4	Undefined	
	5	FLS(hard)	Indicates whether the limit sensor in the direction of encoder increase is detected.
	6	RLS(hard)	Indicates whether the limit sensor in the direction of encoder decrease is detected.
	7	ORG(hard)	Indicates whether orgin sensor on hardware is detected.

*Note3: It means the bit-by-bit contents of the information index as follows.

Index	Bit pos	Contents	Comment
0	0	FromEMG	It shows the emergency stop input attached to the front panel of the controller.
	1	TboxEMG	It indicates the emergency stop input of the teaching pendant.
	2	OP EMG	Indicates emergency stop input of Operating Box
	3		
	4		
	5		
	6	UserSeqRun	Indicates that a user sequence program is running.
	7	SysSeqRun	Indicates that the system sequence program is running.
1	0	FrontKeyR	Displays the input of the STOP/RST SW attached to the front panel of the controller.
	1	FrontKeyG	The input of START/ORG SW attached to the front panel of the controller is displayed.
	2	FrontKey3	Undefined
	3	FrontKey4	Undefined
	4	FrontKey5	Undefined
	5	FrontKey6	Undefined
	6	Undefined	
	7	Undefined	
2	0	Undefined	
	1	Undefined	
	2	Undefined	
	3	Undefined	
	4	Undefined	
	5	Undefined	
	6		
	7		

Wiring Diagram:

Ethernet cable: