RENESAS TECHNICAL UPDATE

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Product Category	System LSI	Document No.	TN-RIN-A022	A/E Rev. 1.00				
Title	R-IN32 Series User's Manual (CC-Link station) (Rev. 1.00 to Rev. 1.01) Revised contents: Corrections and new		Information Category	Technical Notifi	cation			
		Lot No.		R-IN32 Series User's Manual				
Applicable Product	See following	All lots	Reference Document	(CC-Link Remote device station) R-IN32M3-EC R-IN32M3-CL R-IN32M3-CL2 Rev.1.01 (R18UZ0056EJ0101)				

R-IN32 Series User's Manual (CC-Link remote device station) R-IN32M3-EC, R-IN32M3-CL, R-IN32M4-CL2 (R18UZ0056EJ0101) has been released on Renesas website. This technical update follows revision 1.00 and includes the entirety of revised items. For details, refer to "2. Documentation Updates" given below.

1 Applicable Product

Product Type	Model Marking	Product Code				
	MC-10287F1	MC-10287F1-HN4-A				
R-IN32M3-EC	WIC-10287F1	MC-10287F1-HN4-M1-A				
R-IN32IVI3-EC	MC-10287BF1	MC-10287BF1-HN4-A				
	WIC-10207 BF 1	MC-10287BF1-HN4-M1-A				
	D60510F1	UPD60510F1-HN4-A				
R-IN32M3-CL	DOUSTOFT	UPD60510F1-HN4-M1-A				
R-IN32IVI3-CL	D60510BF1	UPD60510BF1-HN4-A				
	D00510BF1	UPD60510BF1-HN4-M1-A				
R-IN32M4-CL2	R9J03G019	R9J03G019GBG				

2 Documentation Updates

No	Applicable Item (Rev. 1.01 Section)	Applicable Page (Rev. 1.01)	Contents
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9	14.2 software (6)Questions and answers related to reception data read processing	78	Error correction



No.1 Figure 4.1 How to R-IN32 Series Initialization

Add description for speed setting by software

	V1.00		V1.01
Page	Description	Page	Description
5	Port Setting Set multiplexed pins Main Pox PMOx PMDox PMF0Exx RPxx RPMox, RPMCox, RPMF0Exx RPxx RPMox, RPMF0exx RPMF0Exx	5	Port Setting Set multiplexed pins New I Pox PMox PMC PMC PMFCExx RPxx RPMox RPMC RPMFCExx
	Bridge Setting Set CO-Link bus bridge registers Nam2 COBSC (DC-Link bus size control register) :0x0000_5575 COSMC1 (CC-Link bus bridge control register0):0x0000_1131		Bridge Setting COBSC (CC-Link bus bridge registers Main2 COBSC (CC-Link bus size control register) :0x0000,5575 CCSMC1 (CC-Link bus bridge control register0):0x0000,1131
	Protection Release •••• Protection release the write-protected registers.************************************		Protection Release Protection Release SYSPOMD (System Protect Command Register):0x0000_00A5 SYSPOMD (System Protect Command Register):0x0000_0001 SYSPOMD (System Protect Command Register):0x0000_FFFE SYSPOMD (System Protect Command Register):0x0000_0001
	Pin Setting CC-Link remote device station pins New2 CCSMD (CC-Link remote device operating mode setting register)In case of reading the transmission speed by software, It's should be read after 54.2 us from resetting.		Pin Setting CO-Link remote device station pins Mar2 COSMD (CO-Link remote device operating mode setting register)
	Reset Release Release CO-Link remote device station from the reset state.New2 Set up time (76.76us) requires before reset released. COSRES (CO-Link Reset Register) :0x0000_0001		Reset Release
	Protect Setting Protect set the write-protected registers.New2 SYSPOMD (System Protect Command Register):0x0000_0000		Protect Setting Protect set the write-protected registers N===2 SYSPCMD (System Protect Command Register):0x0000_0000
	Figure 4.1 How to R-IN32 Series Initialization.		Figure 4.1 How to R-IN32 Series Initialization <r></r>



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No.2 Table 5.1 Correspondence between CC-Link Remote Device Station Pins and R-IN32M3 Series Pins

Add PIN name and description for each function

		V1.00	0				V1.01	I	
Page		De	scription		Page		De	scription	
6					6				
	CC-Link Pin Name	R-IN32M3 Pin Name	Shared Port	Description		 Table 5.1 Correspondence 	e between CC-Link Remo	ote Device Stat	ion Pins and R-IN32M3 Series Pins <r></r>
	SD	CCS_SD	P54	Communications circuit data transmission pin		CC-Link Pin Name	R-IN32M3 Pin Name.	Shared Port.	Description.
	RD1	CCS_RD	P53	Communications circuit data reception pin		SD.,	CCS_SD.,	P54.1	Communications circuit data transmission pin.
	SDGATEON	CCS_SDGATEON	P52	Communications circuit transmit data & gate		RD1.1	CCS_RD.	P53.1	Communications circuit data reception pin.
				control pin		SDGATEON.	CCS_SDGATEON.	P52.1	Communications circuit transmit data & gate
	RUN	CCS_LNKRUNZ	P50	Link RUN LED control output					control pin.
	ERRL	CCS_ERRZ	P25	Operation check LED		RUN.,	CCS_LNKRUNZ	P50.1	Link RUN LED control output.
	SDLED	CCS_SDLEDZ	RP00	Operation check LED					RUN (CCS_LNKRUNZ)= [L RUN] .
	RDLED	CCS_RDLEDZ	P51	Receive data LED control output		ERRL	CCS_ERRZ.	P25.1	Operation check LED.
	IOTENSU	CCS_IOTENSU	P22	Initial setting pin					ERRL (CCS_ERRZ)= [LERR] a
	SENYU0	CCS_SENYU0	P23	Initial setting pin		SDLED.	CCS_SDLEDZ.	RP00.1	Operation check LED.
	SENYU1	CCS_SENYU1	P24	Initial setting pin					SDLED (CCS_SDLEDZ) = [SD] .
	BS1, 2, 4, 8	CCS_BS1, 2, 4, 8	RP02-RP05	Baud rate setting switch input pin		RDLED.	CCS_RDLEDZ.	P51.1	Receive data LED control output. RDLED (CCS RDLEDZ) = [RD]
		CCS_STATION_NO_0-7	P70-P77	Station no. setting switch input pins		IOTENSU.	CCS IOTENSU	P22.1	Initial setting pin.
	REFSTB	CCS_REFSTB	P10	Interrupt signal		SENYU0,	CCS_IOTENSU.	P22.1 P23.1	Initial setting pin.
						SENYUL,	CCS_SENYUU.	P23.1 P24.1	Initial setting pin.
						BS1, 2, 4, 8.	CCS_BS1, 2, 4, 8,	RP02-RP05	Baud rate setting switch input pin.
						SW1, 2, 4, 8, 10, 20, 40, 80.		P70-P77.	Station no. setting switch input pins.
						REFSTB.	CCS_STATION_NO_0-73	P10.	Interrupt signal.
						WDTZ.	CCS WDTZ	P13.	Please connect when alarm is necessary
						FUSEZ,	CCS_FUSEZ	P36.	Please connect when external fuse is
									necessary. 4
									If there is no external fuse, input High.



No.3 6.2 Setting the Station Number and Baud Rate

Modify from "setting number" to "baud rate"

9 Baud Rate 0 1 2 3 4 5Note2 6Note2 9Note2 9Note2			Baud Rate012345Note26Note27Note28Note2TerminalBS8HHHHHHHLLLLHBS4HHHHLLLLLHHBS2HHLLHHLHHHBS1HLHLHLHH											V1.01										
Terminal I <thi< th=""> I<!--</th--><th>Page</th><th></th><th></th><th></th><th></th><th>Desc</th><th>ription</th><th></th><th></th><th></th><th></th><th></th><th>Page</th><th colspan="10">Description</th></thi<>	Page					Desc	ription						Page	Description										
BS4 H H H L L L L H H BS2 H H L L H H H H H L L L H H BS1 H L H L H L H H L L L H H Note1. The settings result in error. Station number setting value 1 to 64: Station number (normal) Note1. The settings result in error. Station number setting value 1 to 64: Station number (normal) Note1. The settings result in error. Station number setting value 1 to 64: Station number (normal) Note1. H H H H H L L L H H H H H L L L H H H H L L L L L H H H H L L L L L H H H H L L L L L L H L H L L L L H L L	9		0	1	2	3	4	5 ^{Note2}	6 ^{Note2}	7 ^{Note2}	8 ^{Note2}	9 ^{Note2}	9				2.5 Mbps	5 Mbps		Note2	Note2	Note2	Note2	Note2
BS2 H H L L H H B			Н	Н	Н	Н	Н	Н	Н	н	L	L			Н	Н	Н	Н	Н	Н	Н	Н	L	L
BS1 H L			Н	Н	Н	н	L	L	L	L		н			Н	н	н	Н	L	L	L	L	Н	н
Note1. The settings result in error. Station number setting value 1 to 64: Station number (normal)									н		BS2	Н	Н	L	L	н	Н	L	L	Н	Н			
Station number setting value 1 to 64: Station number (normal) Station number setting value 1 to 64: Station number (normal)		BS1	н	L	н	L	н	L	н	L	н	L		BS1	н	L	н	L	н	L	н	L	н	L
		Note1. The settings result in error.																						
		5 to 9: Resu	lts in a	baud rate	e switch	setting	error. The	e L ERR. I	LED t urr	ns on.				Results in a	baud rat	te switch	n setting	error. Th	ne L ERR	. LED t u	irns on.			



No.4 Table 6.3 Light ON/OFF/BLINK conditions

Add explanation for Table 6.3

			V1.00					V1.01
ge			Description		Page			Description
	6.3 Transmis	sion Monitor Se	ction Terminals (for LED)، ا		11	6.3 Transmis	ssion Monitor Se	ction Terminals (for LED)
	(1) Light ON/OF					(1) Light ON/OF Each LED is autom	natically set ON / OFF	/ BLINK under the following conditions <r></r>
	LED name.	Status	Condition	Ð		LED name.	Status	Condition.
	L RUN <r> (ON: "L" output)</r>	ON.,	When the refresh signal or the refresh signal and polling signal are normally received after network entry. (see Figure 6.1).	ę.		L RUN. (ON: "L" output).	ON.	When the refresh signal or the refresh signal and polling signal are normally received after network entry. (see Figure 6.1).
	(OFF.,	Before network entry (see Figure 6.1). Channel carrier detection failed. Timeout.	¢			OFF.a	1. Before network entry (see Figure 6.1). ₽ 2. Channel carrier detection failed. 3. 3. Timeoutl. 4. 4. During hardware reset. 4.
		Blinking	4. During hardware reset.	تھ تو		Blinking.	s. 40	
	L ERR (ON: "L" output).,	ON.	1. CRC error. 2. Station number switch setting error at reset release (0 or 65 stations or more including the number of occupied stations). 3. Baud rate switch setting error at reset release (a setting of 5 or	ę		L ERR (ON: "L" output).,	ON.	 CRC error Station number switch setting error at reset release (0 or 65 stations or more including the number of occupied stations) Baud rate switch setting error at reset release (a setting of 5 or higher)
		OFF.	higher).	2			OFF.,	1. Normal communication. 4 ³ 2. During hardware reset. 4 ³
			2. During hardware reset.				Blinking.	The switch setting changed from the setting at reset release. (0.4s blinking).
		Blinking	The switch setting changed from the setting at reset release. (0.4s blinking).	÷		SD.	ON.1	During transmission or +0.41ms $\times 2^{(n-1)}$ after transmission (n = 1 to 8).
	SD.,	ON.,	During transmission or +0.41ms $\times 2^{(n-1)}$ after transmission (n = 1 to 8).	÷		(ON: "L" output).,	OFF.,	1. Other than the above 2. 2. During hardware reset 2.
	(ON: "L" output).	OFF.1	1. Other than the above.	¢			Blinking	
			2. During hardware reset.			RD.	ON.1	During channel carrier detection.
		Blinking		φ 		(ON: "L" output).,	OFF.s	1. Channel carrier detection failed.
	RD.	ON.1	During channel carrier detection.	-				2. During hardware reset.
	(ON: "L" output).	OFF.,	Channel carrier detection failed. During hardware reset.	41		-	Blinking.	
		Blinking	1	¢,				



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No.5 8.2.2 Station number switch information, Number of occupied stations information and Baud rate switch information

Modify from "setting number" to "baud rate"

					V1	00.1										V	1.01			
Page					ļ	Descript	ion			Page							Descrip	otion		
18	11-8	BSW8-BSW1	B	aud rate s	witch infor	mation			 1	18	11-	-8	BSW8-BSW1	B	aud rate s	witch infor	nation			 1
				BSW8	BSW4	BSW2	BSW1	Switch Setting							BSW8	BSW4	BSW2	BSW1	Baud rate	
				0	0	0	0	0							0	0	0	0	156kbps	
				0	0	0	1	1							0	0	0	1	625kbps	
				0	0	1	0	2							0	0	1	0	2.5Mbps	
				0	0	1	1	3							0	0	1	1	5Mbps	
			[0	1	0	0	4							0	1	0	0	10Mbps	



No.6 Figure 9.1 Initial Processing

Modify software setting item





No.7 14.2 software (1) Questions and answers related to initial processing

Delete the undescribed annotation "note3"

			V1.00				V1.01	
Page			Description	Page			Description	
74	(1)	Questions and answers related to initia	I processing	74	(1)) Questions and answers related to initia	al processing	
		Question We have a question about the initial setting in the sample flow <mark>chart (Note 3). S</mark> hould the RS485 reception enable signal be set to H only at initialization?	Answer Set it to "H" at initialization, and keep it high afterwards.		1	Question We have a question about the initial setting in the sample flowchart. Should the RS485 reception enable signal be set to H only at initialization?	Answer Set it to "H" at initialization, and keep it high afterwards.	

No.8 14.2 software (2) Questions and answers related to reception enable

		V	1.00				Y	V1.01
age			Description		Page			Description
75	(5)	Questions and answers related to rece	ption enable-		75	(5)	Questions and answers related to rece	ption enable <r>↩</r>
	±	Question.	Answer.	л		.1	Question.,	Answer.
	1.	What does reception enable mean? Are there any operations necessary for the CCS?.	Reception enable means allowing RS485 to receive data. There are no operations necessary for the CCS	л		1.,	What does reception enable mean? Are there any operations necessary for the CCS?.,	Reception enable means allowing RS485 to receive data. There are no operations necessary for the CCS.,
	2.1	The specifications describe a precaution on RS485 transceiver reception as "the receive enable pin of the RS485 transceiver is controlled." Are there any <u>particular points</u> to note, such as timing?	Enable the transceiver reception after enabling transmission during the initial settings. It can be kept enabled afterwards	.1		2.,	The specifications describe a precaution on RS485 transceiver reception as "the receive enable pin of the RS485 transceiver is controlled." Are there any <u>particular points</u> to note, such as timing?.	Enable the transceiver reception after enabling transmission during the initial settings. It can be kept enabled afterwards
	3.1	In the circuit example in the specifications, ne MPU port output is connected to the RDENL line connected to the RS485 transceiver. Under what circumstances might the communication input be disconnected? If it is not necessary to disconnect it, we would like to connect the MPU port output to GND	Data reception from the master station should be disabled until the initial processing is completed (the communication input is disconnected) The reception should then be enabled after the initial processing is completed. After that, it is not necessary to disable the reception Since it is necessary to disable the reception before the initial processing is performed, make sure to use the MPU port output; do not connect the MPU port output to GND	a		3.1	The MPU port output is connected to the RDENL line connected to the RS485 transceiver. Under what circumstances might the communication input be disconnected? If it is not necessary to disconnect it, we would like to connect the MPU port output to GND	Data reception from the master station should be disabled until the initial processing is completed (the communication input is disconnected) The reception should then be enabled after the initial processing is completed. After that, it is not necessary to disable the reception Since it is necessary to disable the reception before the initial processing is performed, make sure to use the MPU port output; do not connect the MPU port output to GND



No.9 14.2 software (6) Questions and answers related to reception data read processing

Modify mistakes from "one byte (half word)" to "byte (half word)"

		V1.00				V1.01	
Page		Description	Page			Description	
78	2	The specification indicates, upon reading the reception data, that the DRDREQ bit of CCS_M3SDOK_RDRQ should be set to 1; and upon completing the read operation, it should be reset to 0. Is this operation necessary when reading one byte (words)? Is it possible to read multiple bytes (words)?	78	2	The specification indicates, upon reading the reception data, that the DRDREQ bit of CCS_M3SDOK_RDRQ should be set to 1; and upon completing the read operation, it should be reset to 0. Is this operation necessary when reading one byte (half word)? Is it possible to read multiple bytes (words)?	The number of data points read can be any number of bytes. The DRDREQ bit is a flag used in the reception data separation prevention processing. Data transfer between the double receive buffers within the CCS is prevented when it is set to 1.	

