User's Manual

G3-PLC
Serial Command Timeout Specification

Target Device
R9A06G037

Renesas Electronics
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General Precautions in the Handling of Microprocessing Unit and Microcontroller Unit Products

The following usage notes are applicable to all Microprocessing unit and Microcontroller unit products from Renesas. For detailed usage notes on the products covered by this document, refer to the relevant sections of the document as well as any technical updates that have been issued for the products.

1. Handling of Unused Pins
   Handle unused pins in accordance with the directions given under Handling of Unused Pins in the manual.
   — The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible. Unused pins should be handled as described under Handling of Unused Pins in the manual.
2. Processing at Power-on
   The state of the product is undefined at the moment when power is supplied.
   — The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the moment when power is supplied.
   In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the moment when power is supplied until the reset process is completed.
   In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the moment when power is supplied until the power reaches the level at which resetting has been specified.
3. Prohibition of Access to Reserved Addresses
   Access to reserved addresses is prohibited.
   — The reserved addresses are provided for the possible future expansion of functions. Do not access these addresses; the correct operation of LSI is not guaranteed if they are accessed.
4. Clock Signals
   After applying a reset, only release the reset line after the operating clock signal has become stable. When switching the clock signal during program execution, wait until the target clock signal has stabilized.
   — When the clock signal is generated with an external resonator (or from an external oscillator) during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Moreover, when switching to a clock signal produced with an external resonator (or by an external oscillator) while program execution is in progress, wait until the target clock signal is stable.
5. Differences between Products
   Before changing from one product to another, i.e. to a product with a different part number, confirm that the change will not lead to problems.
   — The characteristics of Microprocessing unit or Microcontroller unit products in the same group but having a different part number may differ in terms of the internal memory capacity, layout pattern, and other factors, which can affect the ranges of electrical characteristics, such as characteristic values, operating margins, immunity to noise, and amount of radiated noise. When changing to a product with a different part number, implement a system-evaluation test for the given product.

Contents

1. Serial Command Timeout Specification

Table 1 shows timeout specification of CPX3 G3-PLC serial command between request command and correspondent confirm command.

Table 1 CPX3 G3-PLC Serial Command Timeout List

SAP	No.	Serial Command Name	Serial Command Timeouts (sec)	
			Typ	Max
SAP of SYSTEM Block	1	SYSTEM-PING	<1	2
	2	SYSTEM-VERSION	<1	2
	3	SYSTEM-CLEARINFO	<1	2
	4	SYSTEM-GETINFO	<1	2
	5	SYSTEM-SROM-READ	Depend on the using Serial ROM specification.	
	6	SYSTEM-SROM-WRITE	Depend on the using Serial ROM specification.	
	7	SYSTEM-SROM-ERASE	Depend on the using Serial ROM specification.	
SAP of G3 Controller	8	G3-INIT	<1	4
	9	G3-DEINIT	<1	4
	10	G3-GETCONFIG	<1	2
	11	G3-SETCONFIG	<1	2
	12	G3-CLEARINFO	<1	2
	13	G3-GETINFO	<1	2
	14	G3-DUMP	-	timeOut of G3-DUMP.request(sec) + 2
	15	G3-DUMP-ABORT	<1	2
SAP of EAP Layer	16	EAPM-RESET	<1	2
	17	EAPM-START	<1	2
	18	EAPM-GET	<1	2
	19	EAPM-SET	<1	2
	20	EAPM-NETWORK *1	-	IB(eapNwkWaittimeSec)
	21	EAPM-SETCLIENTINFO	<1	2
SAP of ADP Layer	22	ADPD-DATA (Bcast)	-	(No.35 + 3) * fragment number
	23	ADPD-DATA (Unicast and existing route to Destination)	-	(No.36 + 3) * fragment number
	24	ADPD-DATA (other case) *1	IB(adpRREPWait)+2	min (300, No.32 + No23)
	25	ADPM-RESET	<1	2
	26	ADPM-DISCOVERY	-	No.40 + 3
	27	ADPM-NETWORK-START	<1	2
	28	ADPM-NETWORK-JOIN *1	-	IB(adpMaxJoinWaitTime)
	29	ADPM-NETWORK-LEAVE	-	Refer No.23 and No.24
	30	ADPM-GET	<1	2
	31	ADPM-SET	<1	2
	32	ADPM-ROTUE-DISCOVERY *1	IB(adpRREPWait)+2	No.35 + IB(adpRREQRERRWait) + IB(adpNetTraversalTime)*2*(IB(adpRREQRetries)+1)
	33	ADPM-PATH-DISCOVERY *1	-	No.36 + IB(adpPathDiscoveryTime)
	34	ADPM-LBP	-	Refer No.23 and No.24
SAP of UMAC Layer	35	MCPS-DATA (Bcast) *1	-	IB(macBroadcastDataTxTimeout)
	36	MCPS-DATA (Unicast) *1	-	IB(macUnicastDataTxTimeout)
	37	MLME-RESET	<1	2

*1 Refer to “G3-PLC CPX3 Serial Command Specification” for details of relevant IB setting.

	38	MLME-GET	<1	2
	39	MLME-SET	<1	2
	40	MLME-SCAN	duration	duration
	41	MLME-START	<1	2

Revision History

Date	Revision	Section	Substance
Oct. 30, 2015	0.10	-	First edition issued.
Nov. 04, 2015	0.11	1	Added annotations in Table 1.
Dec. 01, 2015	0.12	1	Added G3-DEINIT, G3-CLEARINFO, G3-GETINFO command.
Mar. 29, 2016	0.13	-	Changed document title.
		1	Added SYSTEM-CLEARINFO, SYSTEM-GETINFO command.
Aug. 04, 2016	0.14	1	Updated CPX3 G3-PLC Serial Command Timeout List Removed Indication command Updated IB Attribute name Corrected ADPM-DISCOVERY command
Oct. 04, 2016	1.00	1	Modified ADPM-ROTUE-DISCOVERY command's timeout MAX.
Apr 24, 2018	1.01	1	Updated CPX3 G3-PLC Serial Command Timeout List Updated G3-INIT command timeout Max Updated G3-DEINIT command timeout Max Added G3-DUMP command Added G3-DUMP-ABORT command

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