

SONY

Interface Connector Electrical Specifications

CLiÉ

<Introduction>

This guide provides information for developing peripherals to work with Sony CLiÉ(TM) handhelds. This guide describes the electrical specification for the devices connected to 18 pin connector of the CLiÉ handhelds.

This specification applies to the following CLiÉ models:

PEG-NX series PEG-NR series PEG-T series PEG-SJ series PEG-SL series

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<Notes>

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Interface Connector Specifications [Table 1]

No.	Signal Name	Function	Specifications	Remarks
1	GND	Ground for signal/power supply		
2	D+	USB Data+ signal		
3	D-	USB Data- signal		
4	SIG_GND	Ground for USB		
5	VBUS	VBUS for USB		Connects to the power supplied by the USB host.
6	Reserved			
7	DC+B	External power supply terminal	DC5.2±0.15V	For peripherals, if power is supplied to the CHARGE pin, it must be supplied to the DC+B pin as well.
8	CHARGE	Charging terminal	DC5.2±0.15V	
9	Reserved			
10	UNREG_OUT	Provide unregulated power supply (no link to the power button of the main unit)	<Models except PEG-SL10> 5.5~3.4V (*Note 1) Max. 100mA	Peripherals communicate with the main unit under a stable power supply with setting UNREG_OUT to 3.2V LDO. Refer to "Serial I/F Schematic Example".
			<PEG-SL10> 3.1±0.2V Max. 80mA	The supply capability decreases when the battery is getting exhausted.
11	HOT_SYNC	HotSync(R) interrupt terminal	active: L(GND) inactive: open	
12	DTR	"H" when UART is in use	0-3.3V CMOS level	Refer to Table2, 3 for the details
13	RXD	UART RXD input		
14	TXD	UART TXD output		
15	CTS	UART CTS output		
16	RTS	UART RTS input		
17	CNT	Peripheral detection	Connect to the resistance between CNT and the GND terminals as is shown in Table 4 .	Do not supply any voltage to this pin from the peripheral side.
18	GND	Ground for signal/power supply		

(*Note) 1. Desired value on design: 3.4 ~ 5.2V with the allowance ±0.3V. 3.4 ~ 4.2V if no AC adaptor is connected. It can drop down to 3.1V when the battery gets exhausted. It remains below 3.4V at the time the "low battery" warning shows up.

2. The actual number of physical pins on the CLIE connector is 20; the two most outside pins are unused.

Input-output behavioral characteristics [Table2]

Symbol	Description	min.	max.	unit	Condition
V _{IH}	H level input voltage	2.6	3.3	V	
V _{IL}	L level input voltage	0.0	0.4	V	
I _{IN}	Input leakage current		100	μA	
V _{OH}	H level output voltage	2.1	3.3	V	I _{OH} =2mA
V _{OL}	L level output voltage	0.0	0.4	V	I _{OL} =-2mA
I _{OH}	H level output current		2	mA	
I _{OL}	L level output current		-2	mA	

Resistance for Connection to CNT [Table 4]

Peripheral	Resistance (Kohm) accuracy±1% or less
UART cable/cradle	22
UART Modem/Cellular	47
USB cable/cradle	220
Undocked	infinite (> 10 Mohm)

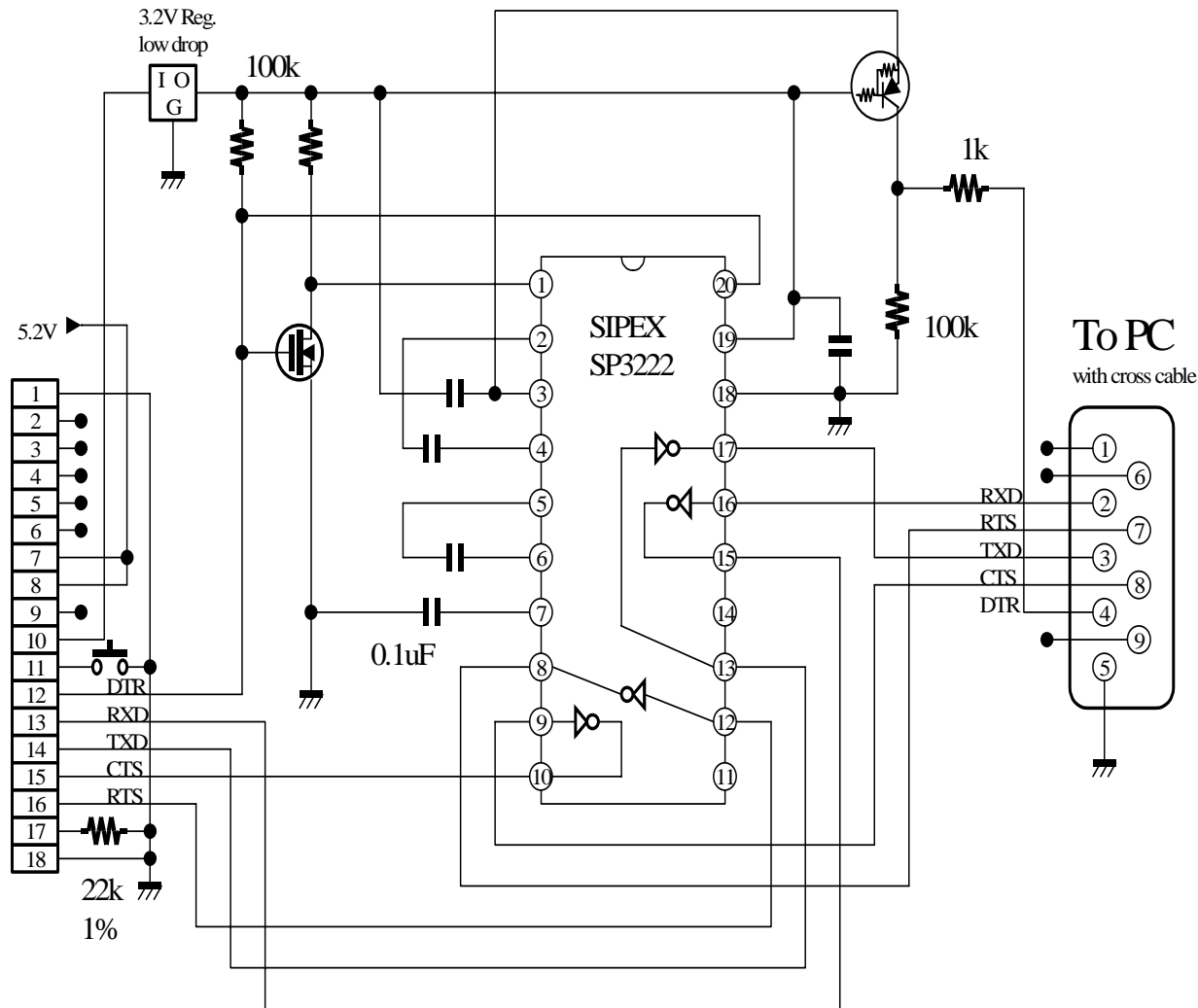
*Notes

Use only the resistance values shown in this table.

UART Signals SpecificationsUART [Table3]

Number	Signal Name	Direction	Function	Specifications	For the case of Sleeping and/or UART not in use	Remarks
12	DTR	Out	Indicates that UART is opened.	H: open L: close	The main unit drives to L.	
13	RXD	In	Receive Data	Pulls up inside main unit		At the side of peripherals, set RXD to "Hi-Z" if DTR=L. As it is connected to IrDA as well, main unit may drive if DTR=L.. Peripherals are to be driven by push/pull output.
14	TXD	Out	Transmit data		The main unit drives to L.	As it is connected to IrDA as well, it may drive to H even if DTR=L.
15	CTS	In	Hand Shaking	Pulls up or pull down inside main unit		At the side of peripherals, set CTS to "Hi-Z" if DTR=L. Peripherals are to be driven by push/pull output.
16	RTS	Out	Hand Shaking		The main unit drives to L.	

Serial I/F Schematic Example



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All the capacity of Capacitor without the notation is 0.1uF(s).

*All Capacitors which aren't mentioned are 0.1uF.