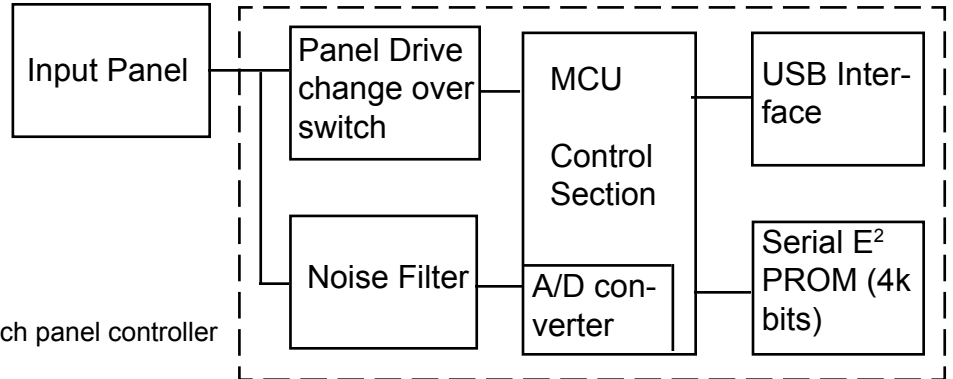


# STANDARD Micro Controller Specification

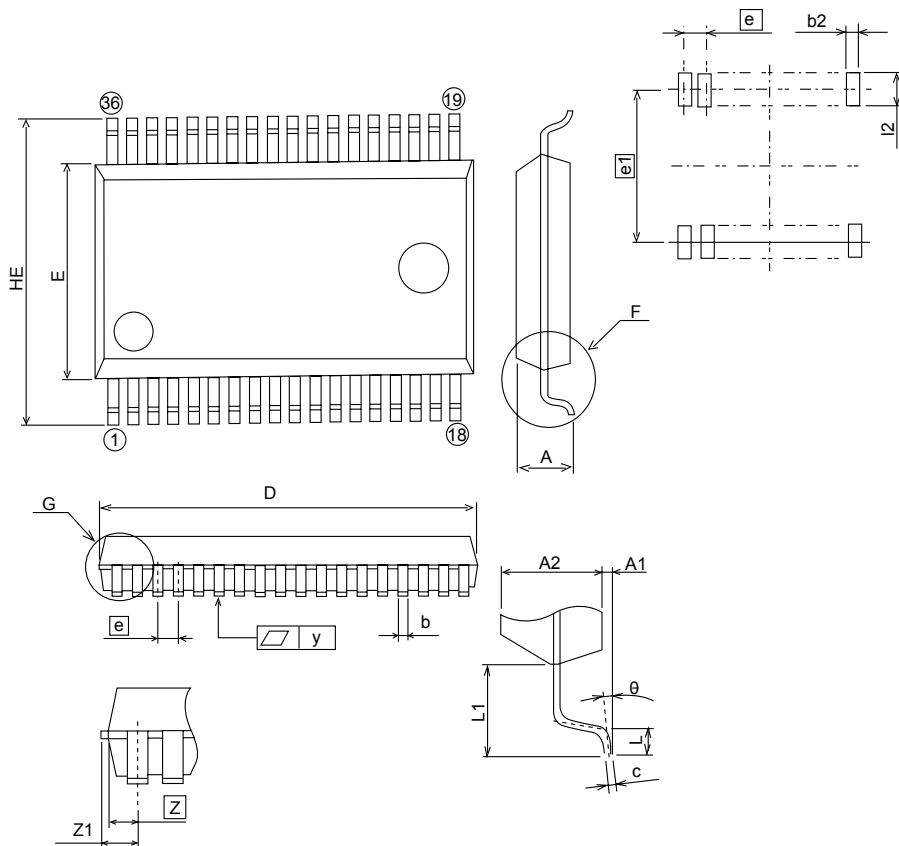
## NC41120-0017 USB Interface Controller Chip

### 7- Wire Summary Sheet



- High quality and reliability touch panel controller
- USB 1.1 Interface
- Used to control the 7-Wire resistive touch panels
- RoHS compliant

#### ■ CONSTRUCTION



Symbol	Dimension in Millimeters		
	Min.	Nom	Max
A	—	—	2.4
A1	0.05	—	—
A2	—	2.0	—
b	0.35	0.4	0.5
c	0.13	0.15	0.2
D	14.8	15.0	15.2
E	8.2	8.4	8.6
e	—	0.8	—
HE	11.62	11.93	12.23
L	0.3	0.5	0.7
L1	—	1.765	—
Z	—	0.7	—
Z1	—	—	0.8
y	—	—	0.15
$\theta$	0°	—	10°
b2	—	0.5	—
e1	—	11.43	—
l2	1.27	—	—

# USB Interface Controller Chip

## ■ INPUT / OUTPUT TERMINAL SUMMARY

No.	Name	I/O	Function
1	Wheel right	I	Right button
2	Wheel left	I	Left button
3	CNTR0	I	Connect to 4 pins
4	EMSR0/PMSR	I	Panel voltage measurement
5	EMSR1/EMSR0	I	Panel voltage measurement
6	EMSR2/EMSR1	I	Panel voltage measurement
7	EMSR2/EMSR2	I	Panel voltage measurement
8	JPHID/EMSR3	I	Select HID class/ panel voltage measurement
9	PID1	O	PID select terminal
10	PID2	O	PID select terminal
11	PID3	O	PID select terminal
12	Vref	-	A/D converter standard voltage input pin
13	Reset	I	Reset input pin
14	CNVss	-	Connect to Vss
15	Vcc	-	Digital power supply pin (5V)
16	Xin	I	Input pin for oscillation
17	Xout	O	Input pin for oscillation
18	Vss	-	Digital power supply pin (0V)
19	OS3	I	Pin for original point selection
20	OS2	I	Pin for original point selection
21	OS1	I	Pin for original point selection
22	WheelUP	I	Upper scroll button
23	WheelDOWN	I	Down scroll button
24	JPMODE	I	Select 4-wire or 7-wire
25	Module Disable	I	Disconnection operate simulation term
26	USBVref	O	USB standard voltage output pin
27	PSW3	O	Output pin for panel drive switch control
28	PSW4	O	Output pin for panel drive switch control
29	PSW1	O	Output pin for panel drive switch control
30	PSW2	O	Output pin for panel drive switch control
31	PSW0	O	Output pin for panel drive switch control
32	ButtonLeft	I	Left Button
33	ButtonRight	I	Right Button
34	ButtonMiddle	I	Center Button
35	USB D-	I/O	USB input/output terminal
36	USB D+	I/O	USB input/output terminal

# USB Interface Controller Chip

## ■ PART NUMBER OF COMPLETE CHIP SPECIFICATION

Complete specification document is available on request for customers with whom we have an approved NDA in place.

## Fujitsu Components International Headquarter Offices

### Japan

Fujitsu Component Limited  
Gotanda-Chuo Building  
3-5, Higashigotanda 2-chome, Shinagawa-ku  
Tokyo 141, Japan  
Tel: (81-3) 5449-7010  
Fax: (81-3) 5449-2626  
Email: [promothq@ft.ed.fujitsu.com](mailto:promothq@ft.ed.fujitsu.com)  
Web: [www.fcl.fujitsu.com](http://www.fcl.fujitsu.com)

### North and South America

Fujitsu Components America, Inc.  
250 E. Caribbean Drive  
Sunnyvale, CA 94089 U.S.A.  
Tel: (1-408) 745-4900  
Fax: (1-408) 745-4970  
Email: [components@us.fujitsu.com](mailto:components@us.fujitsu.com)  
Web: <http://www.fujitsu.com/us/services/edevice/components/>

### Europe

Fujitsu Components Europe B.V.  
Diamantlaan 25  
2132 WV Hoofddorp  
Netherlands  
Tel: (31-23) 5560910  
Fax: (31-23) 5560950  
Email: [info@fceu.fujitsu.com](mailto:info@fceu.fujitsu.com)  
Web: [emea.fujitsu.com/components/](http://emea.fujitsu.com/components/)

### Asia Pacific

Fujitsu Components Asia Ltd.  
102E Pasir Panjang Road  
#01-01 Citilink Warehouse Complex  
Singapore 118529  
Tel: (65) 6375-8560  
Fax: (65) 6273-3021  
Email: [fcalfcal.fujitsu.com](mailto:fcalfcal.fujitsu.com)  
Web: <http://www.fujitsu.com/sg/services/micro/components/>

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