

A. Summary

Produktart	Original abheftbarer USB-Stick Patent 102012006940
Schnittstellen	USB 2.0/3.0
Speicherkapazität	8GB bis 128 GB
Verschluss	Schiebemechanismus
Material	USB Chipset für/mit ABS-Kunststoffgehäuse
Systemvoraussetzungen	Win 2000/XP/Vista/7/8/8.1/10, ab Mac OS 9, ab Linux 2.4
Breite	9,5 cm (Produkt assembliert)
Tiefe	1,5 cm (Produkt assembliert)
Höhe	0,6 cm (Produkt assembliert)
Gewicht	5 g
Herstellergarantie	10 Jahre INDUSTRY LINE (primeStorage©)
Farbe	Weißes Gehäuse, Schwarzes Gehäuse mit schwarzem, rotem, blauem, gelbem und grünem Schieber

B. Features in Detail

1. Compatible with USB specification revision 1.1 and 2.0.
2. Support Windows 2000 SP4 and Windows XP **without** device driver.
3. Support Windows Vista, Windows 7 and Windows 8 **without** device driver.
4. Support MAC OS X and later **without** device driver. (USB 1.1 speed)

5. Support MAC OS 10.2.8 and later *without* device driver. (USB 2.0 speed)
6. Support MAC OS 10.8 and later *without* device driver. (USB 3.0 speed)
7. Support Linux Kernel ver 2.4.0 or above *without* device driver. (USB 1.1 speed)
8. Support Linux Kernel ver 2.4.10 or above *without* device driver. (USB 2.0 speed)
9. Hot Plug & Play.
10. Durable solid-state storage – data retention up to 10 years.
11. No external power is required - DC 4.5V ~ 5.5V from USB port.
12. Transfer rate for USB interface :
 - ◆ NAND Flash is a matter of continuous development
 - ◆ For actual information's contact specs@filerex.com
13. Low Power consumption.
14. Altitude : 80,000 feet (relative to sea level)
15. Acoustic noise : 0 dB (at one meter)
16. Vibration : 15 G peak to peak max
17. Operating temperature : 0°C to 70°C
18. Humidity : 20% to 90%

C. System Power Consumption

Item	Power Consumption (mA)	
	1 * Flash	2 * Flash
Normal	34.25	N/A
Stand-By S1	0.26	N/A
Sleep	0.27	N/A
Read	68.85	N/A
Write	90.93	N/A

The above values are for reference only, it may change according to the flash memory used.

D. Electrical Specifications

Absolute Maximum Rating

Item	Symbol	Parameter	MIN	MAX	Unit
1	$V_{DD}-V_{SS}$	DC Power Supply	-0.3	+5.5	V
2	V_{IN}	Input Voltage	$V_{SS}-0.3$	$V_{DD}+0.3$	V
3	T_a	Operating Temperature	0	+70	°C
4	T_{st}	Storage Temperature	-25	+85	°C

Parameter	Symbol	Min	Typ	MAX	Unit
Operating Temperature	T_a	0	+25	+70	°C
V_{DD} Voltage	V_{DD}	3.0	3.3	3.6	V
		4.5	5.0	5.5	V

E. DC Characters

DC characteristics of 3.3V I/O Cells

Symbol	Parameter	Conditions	MIN	TYP	MAX	Unit
V _{CK}	Core Power Supply	Core Area	1.16	1.23	1.30	V
V _{CC3IO}	Power Supply	3.3V I/O	3.15	3.30	3.45	V
Temp	Junction Temperature		-40	25	125	°C
V _t	Switching threshold	LVTTL		1.5		V
V _{t-}	Schmitt Trigger Negative Going threshold voltage	LVTTL	0.8	1.1		V
V _{t+}	Schmitt Trigger Positive Going threshold voltage			1.6	2.0	V
V _{ol}	Output Low voltage	I _{ol} = 2 ~ 16 mA			0.4	V
V _{oh}	Output High voltage	I _{oh} = 2 ~ 16 mA	V _{CC3IO} - 0.4			V
R _{pu}	Input Pull-Up Resistance	PU=high, PD=low	40	75	190	KΩ
R _{pd}	Input Pull-Down Resistance	PU=low, PD=high	40	75	190	KΩ
I _{in}	Input Leakage Current	V _{in} = V _{CC3I} or 0			10	μA
I _{oz}	Tri-state Output Leakage Current		-10	±1	10	μA

F. AC Characters

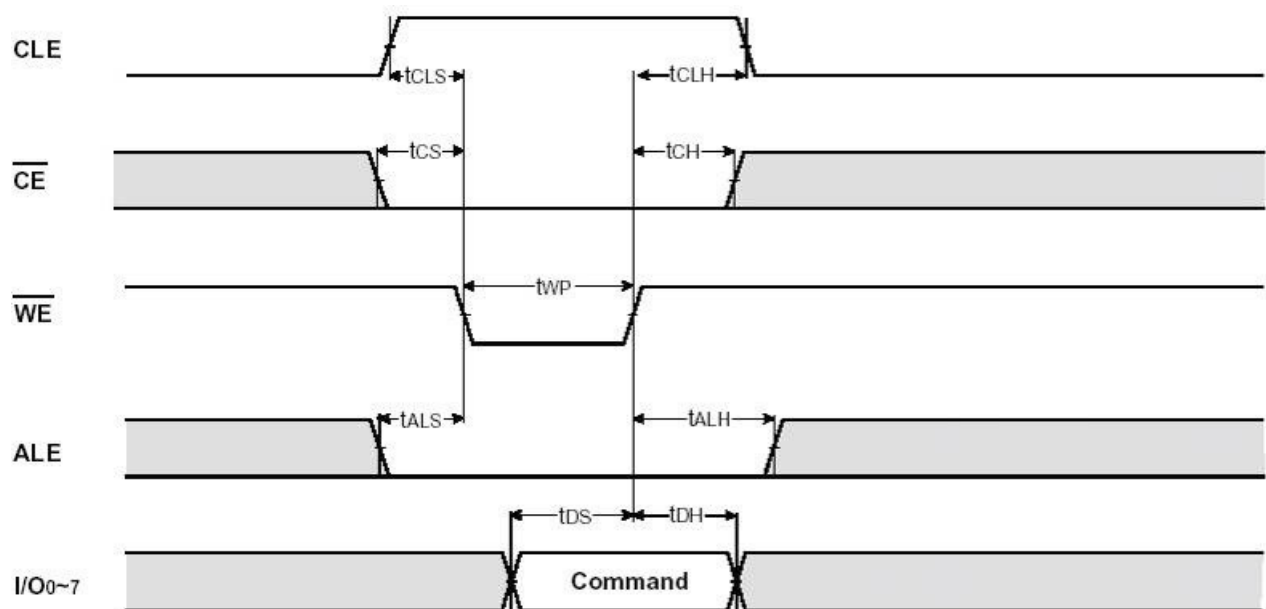
F1. Flash Memory Interface Timing

Below information are for reference and example use only. The actual timing, please refer to the related flash spec.

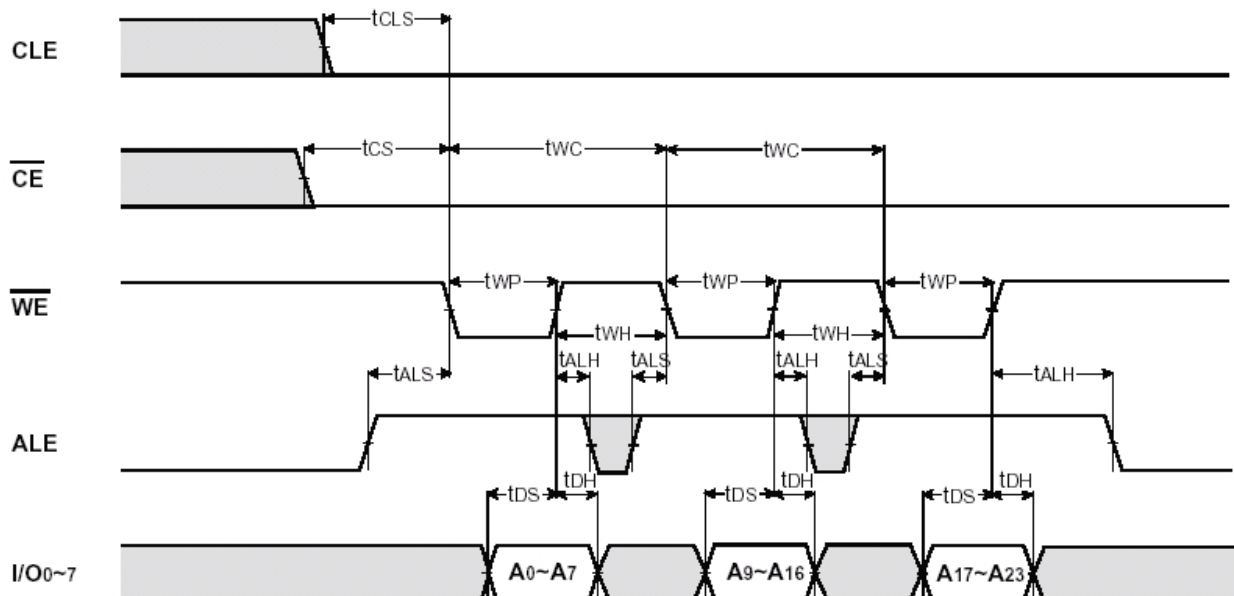
F1.1 NAND Flash Memory Interface Timing

Parameter	Symbol	Min	Max	Unit
CLE Set-up Time	t_{CLS}	0	-	ns
CLE Hold Time	t_{CLH}	10	-	ns
CE Setup Time	t_{CS}	0	-	ns
CE Hold Time	t_{CH}	10	-	ns
WE Pulse Width	t_{WP}	25	-	ns
ALE Setup Time	t_{ALS}	0	-	ns
ALE Hold Time	t_{ALH}	10	-	ns
Data Setup Time	t_{DS}	20	-	ns
Data Hold Time	t_{DH}	10	-	ns
Write Cycle Time	t_{WC}	45	-	ns
WE High Hold Time	t_{WH}	15	-	ns
Read Cycle Time	t_{RC}	50	-	ns
/RE Pulse Width	t_{RP}	25	-	ns
/RE High Hold Time	t_{REH}	15	-	ns
Ready to /RE Low	t_{RR}	60	-	ns

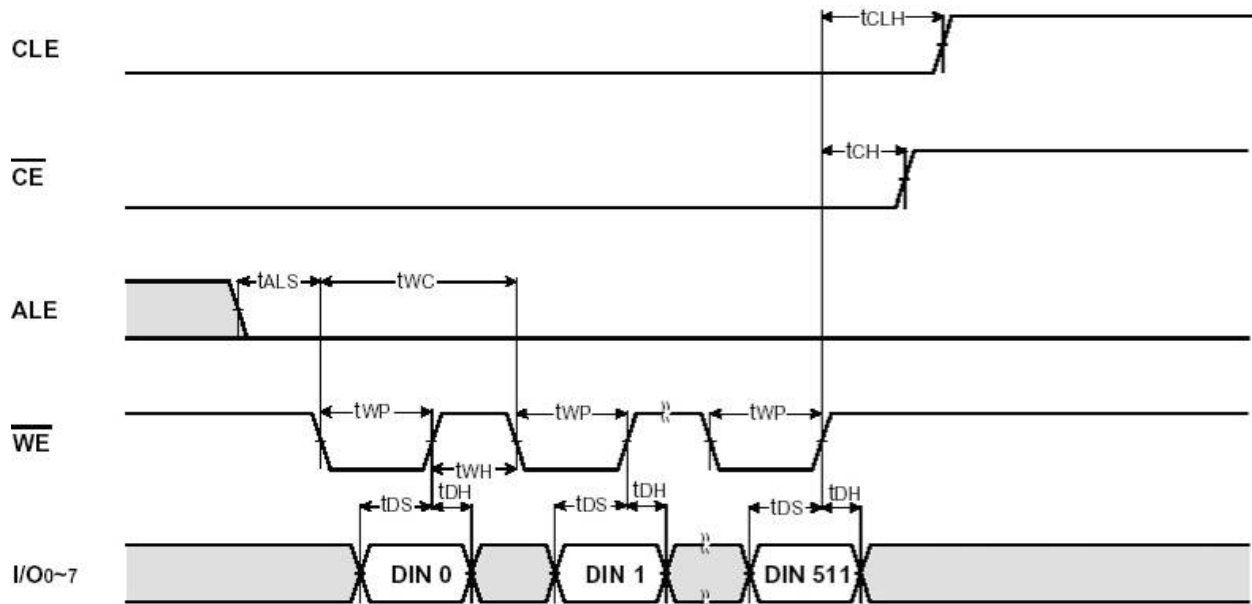
F.1.1.1 Command Latch Cycle



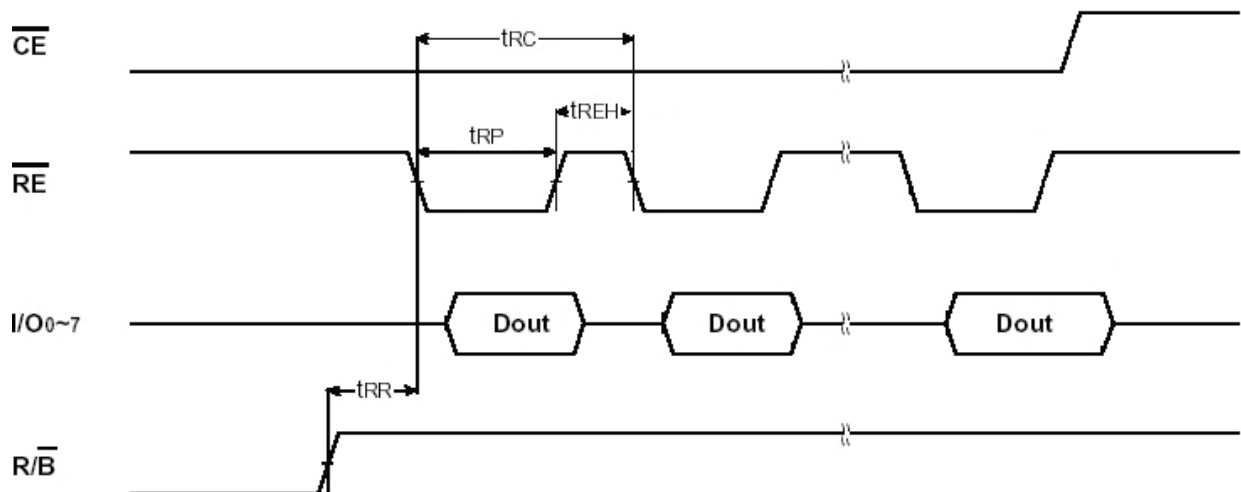
F.1.1.2 Address Latch Cycle



F.1.1.3 Input Data Latch Cycle



F.1.1.4 Sequential Out Cycle after Read (CLE=L, /WE=H, ALE=L)



Disclaimer: Spezifikationen ändern sich mit der technischen Entwicklung und fortlaufenden Produktion und können zu Abweichungen führen, die kein Qualitätsmangel darstellen, sondern in der Natur der technischen Entwicklung und Fertigung liegen.