ImageWriter

STMicroelectronics M45PE Family Device Support Detail & Setup

ImageWriter Support Hierarchy

Manufacturer: STMicro **Library:** SPI-Serial_Memory.cab

Device: M45PE10, M45PE20, M45PE40, M45PE80

Objects for M45PE Family

Flow Object Name:	*Program / Execute*	*Verify*	*Load*	*Object Size (Bytes)*	
FLASH[1]	•	•	•	M45PE10	0x20000
				M45PE20	0x40000
				M45PE40	0x80000
				M45PE80	0x100000
FLASH PAGEWRITE	•	•	•	M45PE10	0x20000
				M45PE20	0x40000
				M45PE40	0x80000
				M45PE80	0x100000
ERASE PAGE	•			M45PE10	0x20000
				M45PE20	0x40000
				M45PE40	0x80000
				M45PE80	0x100000
SECTOR ERASE	•			M45PE10	0x20000
				M45PE20	0x40000
				M45PE40	0x80000
				M45PE80	0x100000
DEVICE ID			•	0x3	
Status Register	•	•	•	0x01	
p_SPI[1]	•		•	0x8	

[1] Paged based programming.

[2] Default SPI clock frequency = 8 MHz

Physical Layer Connector Setup for M45PE Family

ImageWriter:		Target:
Connector Pin #	***Pin Name***	***Connections***
1	GND	GND
2	GND	GND
3	TXD (MOSI/TDO)	D
4	RXD (MISO/TDI)	Q
5	RTS (TMS)	NOCONN
6	CTS	NOCONN
7	XCLK	C
8	RST	!S
9	SCL	NOCONN
10	SDA	NOCONN
11	GND	GND
12	GND	GND
13	VPP/EXT_IN	NOCONN
14	VPP/EXT_OUT	NOCONN
15*	Target V+	Supply 2.7 - 3.6V
16*	Target V+	Supply 2.7 - 3.6V
17	GND	GND
18	GND	GND
19	Pod Power	Supply 9-24 VDC
20	Pod Power	Supply 9-24 VDC

Support Notes:

1. A post-programming Flash Verify operation is highly recommended to ensure data integrity.
2. Erase & Program operations are dependent on Block Protect Bit settings in the Status Register. See manufacturer documentation for more details.
3. Sector ERASE will erase the addressed sector (See note 2.)
4. PAGE ERASE will erase the addressed page (See note 2.)
5. FLASH PAGEWRITE will erase the page, and then program the page. The normal FLASH object requires an ERASE function to be called separately before it will execute properly.
6. !W and !HOLD must be tied to VCC.

Disclaimer

Typical implementation of **ImageWriter** includes but is not limited to external power provision to **ImageWriter**, device access restrictions on the target board, external hardware on the target board, or software changes created by the user affecting timing, device erasure, programming, or verification. Data I/O warranty coverage applies only when the product is used in conformance with technical specifications put forth by Data I/O and by the semiconductor device manufacturer.

In the interest of achieving the highest levels of safety and quality, Data I/O recommends that all programming processes be tested and documented in a prototype project prior to transition to volume manufacturing. For additional information see In-System Programming Design Guidelines (http://www.dataio.com/isp).

ImageWriter programs semiconductor devices through the use of circuits designed precisely to operate in accordance with specifications outlined by the device manufacturer. Provision and calibration of power supplies are critical for proper operation. **ImageWriter** has been fully tested by Data I/O Corporation for quality performance.