ImageWriter

STMicroelectronics ST7FLiteS2 Device Support Detail & Setup

ImageWriter Support Hierarchy

Manufacturer: STMicro

Device: ST7FLiteS2

Objects for ST7FLiteS2

Flow Object Name:	*Program / Execute*	*Verify*	*Load*	*Object Size (Bytes)*
Flash 0xFC00 – 0xFFDD	●	●	●	0x03DE
Vectors 0xFFE0 – 0xFFFF	●	●	●	0x0020
Option Bytes OptByte0 & OptByte1	●	●	●	0x0002
all Flash 0xFC00 – 0xFFFF [1])			●	0x0400

[1]) RCCR0 and RCCR1 will be also read by the programmer.

Physical Layer Connector Setup for ST7FLiteS2

ImageWriter:		Target:
Connector Pin #	***Pin Name***	***Connections***
1	GND	GND
2	GND	GND
3	TXD (MOSI/TDO)	NOCONN
4	RXD (MISO/TDI)	NOCONN
5	RTS (TMS)	NOCONN
6	CTS	NOCONN
7	XCLK	NOCONN
8	RST	RESET
9	SCL	PA6 - ICCCLK
10	SDA	PA5 - ICCDATA
11	GND	GND
12	GND	GND
13	VPP/EXT_IN	NOCONN
14	VPP/EXT_OUT	NOCONN
15*	Target V+ (7.0V max)	Supply 4.5-5.5 V
16*	Target V+ (7.0V max)	Supply 4.5-5.5 V
17	GND	GND
18	GND	GND
19	ImageWriter Power	Supply 9-24 VDC
20	ImageWriter Power	Supply 9-24 VDC

*Maximum Pin-Driver output voltage = 4.2V.

Support Notes:

1. Onboard programming is supported via ICC interface only.
2. ST7 is starting up with Option Byte settings. Board must provide external Clock on CLKIN if internal Clock is not used.
3. A post-programming Verify operation is highly recommended to ensure data integrity.
4. **FMP_W FLASH** write protection: **Warning**: Once this bit is set to “1” the program memory and option bit itself can never be erased or programmed again.

Customer Notice:

Please be aware of the following limitation in using the Data I/O ImageWriter to program the ST7LITES2 devices in-circuit. The ImageWriter must only be used to program the ST7LITES2 device when the target-board is operating at, or tolerant to, 5V DC levels. Do not program the ST7LITES2 in cases where the target-board is not 5V tolerant. Failure to comply with this notice could damage the non-5V tolerant devices on the target-board resulting in failures either immediately or pre-maturely.

For further information, please contact Data I/O at 425-882-4368

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.