ImageWriter

STMicroelectronics ST7FMC2S6 Device Support Detail & Setup

ImageWriter Support Hierarchy

Manufacturer: STMicro

Device: ST7FMC2S6

Objects for ST7FMC2S6

Flow Object Name:	*Program / Execute*	*Verify*	*Load*	*Object Size (Bytes)*
Flash 0x8000 – 0xFFFF	●	●	●	0x8000
Option Bytes OptByte0 & OptByte1 [2])	●	●	●	0x0002
Erase Flash 0x8000 – 0xFFFF	●			0x00

[2]) Option Byte programming will erase and program the option byte. For a protected device it is required to “unlock” the device by programming the OptionByte without the FMT-bit set. An erase is required afterwards.

Physical Layer Connector Setup for ST7FMC2S6

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	VPP – ICCSEL (Note 4)
8	RST	RESET
9	SCL	PA6 – ICCCLK
10	SDA	PA5 – ICCDATA
11	GND	GND
12	GND	GND
13	VPP/EXT_IN	Supply 12 V
14	VPP/EXT_OUT	VPP – ICCSEL
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. **An external blocking Diode is required to protect this pin from 12V. Failure to provide a blocking diode may permanently damage the Pin7 driver.**

Customer Notice:

Please be aware of the following limitation in using the Data I/O ImageWriter to program the ST7 devices in-circuit. The ImageWriter must only be used to program the ST7 device when the target-board is operating at, or tolerant to, 5V DC levels. Do not program the ST7 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.