

Manufacturer Disclosure Statement for Medical Device Security – MDS ²			
DEVICE DESCRIPTION			
Device Category	Manufacturer	Document ID	Document Release Date
IVD Class II	BioFire Diagnostics, LLC	FLM2-PRT-0268-01	
Device Model	Software Revision	Software Release Date	
FilmArray® 2.0	Version 2	1/8/2015	
Manufacturer or Representative Contact Information	Company Name	Manufacturer Contact Information	
	Representative Name/Position	www.biofiredx.com/support	
	Customer Support		
<p>Intended use of device in network-connected environment:</p> <p>The FilmArray 2.0 System is an automated in vitro diagnostic (IVD) device intended for use with FDA cleared or approved IVD FilmArray panels. The FilmArray 2.0 System is intended for use in combination with assay specific reagent pouches to detect multiple nucleic acid targets contained in clinical specimens. The FilmArray 2.0 instrument interacts with the reagent pouch to both purify nucleic acids and amplify targeted nucleic acid sequences using nested multiplex PCR in a closed system. The resulting PCR products are evaluated using DNA melting analysis. The FilmArray Software automatically determines the results and provides a test report.</p> <p>The FilmArray 2.0 System is composed of one to eight FilmArray 2.0 instruments connected to a computer running FilmArray Software. The FilmArray Software controls the function of each instrument and collects, analyzes, and stores data generated by each instrument.</p> <p>The intended use of the FilmArray Link Software with the FilmArray 2.0 System (referred to as "the System" throughout the document) in a network-connected environment is restricted to interfacing with a laboratory information system (LIS). The interface is used to transfer test results from the System to the LIS (unidirectional communication). A wired Ethernet connection from the System to the local area network (LAN) at the facility is required. Data is transferred using either shared folder protocol or file transfer protocol (FTP).</p>			
MANAGEMENT OF PRIVATE DATA			
Refer to Section 2.3.2 of this standard for the proper interpretation of information requested in this form.			Yes, No, N/A, or See Note
			Note #
A	Can this device display, transmit, or maintain private data (including electronic Protected Health Information [ePHI])?	Yes	1
B	Types of private data elements that can be maintained by the device :		
	B.1 Demographic (e.g., name, address, location, unique identification number)?	No	
	B.2 Medical record (e.g., medical record #, account #, test or treatment date, device identification number)?	Yes	1
	B.3 Diagnostic/therapeutic (e.g., photo/radiograph, test results, or physiologic data with identifying characteristics)?	Yes	1
	B.4 Open, unstructured text entered by device user/operator ?	Yes	
	B.5 Biometric data ?	No	
	B.6 Personal financial information?	No	
C	Maintaining private data - Can the device :		
	C.1 Maintain private data temporarily in volatile memory (i.e., until cleared by power-off or reset)?	Yes	
	C.2 Store private data persistently on local media?	Yes	
	C.3 Import/export private data with other systems?	Yes	2
	C.4 Maintain private data during power service interruptions?	Yes	
D	Mechanisms used for the transmitting, importing/exporting of private data – Can the device :		
	D.1 Display private data (e.g., video display, etc.)?	Yes	1
	D.2 Generate hardcopy reports or images containing private data ?	Yes	
	D.3 Retrieve private data from or record private data to removable media (e.g., disk, DVD, CD-ROM, tape, CF/SD card, memory stick, etc.)?	Yes	
	D.4 Transmit/receive or import/export private data via dedicated cable connection (e.g., IEEE 1073, serial port, USB, FireWire, etc.)?	No	
	D.5 Transmit/receive private data via a wired network connection (e.g., LAN, WAN, VPN, intranet, Internet, etc.)?	Yes	2
	D.6 Transmit/receive private data via an integrated wireless network connection (e.g., WiFi, Bluetooth, infrared, etc.)?	No	
	D.7 Import private data via scanning?	No	
	D.8 Other?	No	
Management of Private Data notes:	<p>Note 1: The System contains and displays the sample/container ID, date, instrument serial number, and results for each test.</p> <p>Note 2: The System is capable of exporting data to an LIS.</p>		

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SECURITY CAPABILITIES				
Refer to Section 2.3.2 of this standard for the proper interpretation of information requested in this form.			Yes, No, N/A, or See Note	# Note
1	AUTOMATIC LOGOFF (ALOF)			
	The device's ability to prevent access and misuse by unauthorized users if device is left idle for a period of time.			
1-1	Can the device be configured to force reauthorization of logged-in user(s) after a predetermined length of inactivity (e.g., auto-logoff, session lock, password protected screen saver)?		See Note	1
1-1.1	Is the length of inactivity time before auto-logoff/screen lock user or administrator configurable? (Indicate time [fixed or configurable range] in notes.)		N/A	
1-1.2	Can auto-logoff/screen lock be manually invoked (e.g., via a shortcut key or proximity sensor, etc.) by the user ?		N/A	
ALOF notes:	Note 1: Automatic logoff is disabled in the default configuration of the System computer. The System computer configuration (operating system and software) was validated and the validated configuration was cleared by the FDA. BioFire Diagnostics does not recommend making any changes related to automatic logoff to the System computer. The System computer is pre-configured with Windows user accounts.			
2	AUDIT CONTROLS (AUDT)			
	The ability to reliably audit activity on the device .			
2-1	Can the medical device create an audit trail ?		No	1
2-2	Indicate which of the following events are recorded in the audit log:			
2-2.1	Login/logout		N/A	
2-2.2	Display/presentation of data		N/A	
2-2.3	Creation/modification/deletion of data		N/A	
2-2.4	Import/export of data from removable media		N/A	
2-2.5	Receipt/transmission of data from/to external (e.g., network) connection		N/A	
2-2.5.1	Remote service activity		N/A	
2-2.6	Other events? (describe in the notes section)		N/A	
2-3	Indicate what information is used to identify individual events recorded in the audit log:			
2-3.1	User ID		N/A	
2-3.2	Date/time		N/A	
AUDT notes:	Note 1: The standard Windows event viewer logs are accessible on the System computer. If the System is interfaced with an LIS, transmission events are recorded in the software. Operator ID and the date/time that the test was performed are also recorded in the software. If a sample/container ID is modified after the test is complete, the operator ID is recorded and displayed on the final report.			
3	AUTHORIZATION (AUTH)			
	The ability of the device to determine the authorization of users.			
3-1	Can the device prevent access to unauthorized users through user login requirements or other mechanism?		No	1
3-2	Can users be assigned different privilege levels within an application based on 'roles' (e.g., guests, regular users , power users , administrators, etc.)?		No	
3-3	Can the device owner/ operator obtain unrestricted administrative privileges (e.g., access operating system or application via local root or admin account)?		Yes	2
AUTH notes:	Note 1: The System computer is pre-configured to automatically log on to the Windows OS with the FilmArray user account. The FilmArray user account is a Windows Standard User. Note 2: The owner/operator can obtain administrative privileges with the pre-configured LabAdmin user account and password. The System will not operate as intended if the pre-configured users and groups are removed.			

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4	CONFIGURATION OF SECURITY FEATURES (CNFS)			
	The ability to configure/re-configure device security capabilities to meet users' needs.			
4-1	Can the device owner/operator reconfigure product security capabilities ?	Yes	1	
CNFS notes:	Note 1: If security modifications need to be made to the System, it is the owner's/operator's responsibility to make the changes and verify proper functionality of the system.			
5	CYBER SECURITY PRODUCT UPGRADES (CSUP)			
	The ability of on-site service staff, remote service staff, or authorized customer staff to install/upgrade device's security patches.			
5-1	Can relevant OS and device security patches be applied to the device as they become available?	No	1	
	5-1.1 Can security patches or other software be installed remotely?	N/A		
CSUP notes:	Note 1: The System is pre-configured to not automatically install Windows OS updates.			
6	HEALTH DATA DE-IDENTIFICATION (DIDT)			
	The ability of the device to directly remove information that allows identification of a person.			
6-1	Does the device provide an integral capability to de-identify private data ?	Yes		
DIDT notes:	N/A			
7	DATA BACKUP AND DISASTER RECOVERY (DTBK)			
	The ability to recover after damage or destruction of device data, hardware, or software.			
7-1	Does the device have an integral data backup capability (i.e., backup to remote storage or removable media such as tape, disk)?	Yes	1	
DTBK notes:	Note 1: The System is not configured to automatically backup the hard drive. The System has the ability to archive test data to removable media. This process must be initiated and completed manually by the operator.			
8	EMERGENCY ACCESS (EMRG)			
	The ability of device users to access private data in case of an emergency situation that requires immediate access to stored private data .			
8-1	Does the device incorporate an emergency access ("break-glass") feature?	No		
EMRG notes:	N/A			
9	HEALTH DATA INTEGRITY AND AUTHENTICITY (IGAU)			
	How the device ensures that data processed by the device has not been altered or destroyed in an unauthorized manner and is from the originator.			
9-1	Does the device ensure the integrity of stored data with implicit or explicit error detection/correction technology?	N/A		
IGAU notes:	N/A			

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10 MALWARE DETECTION/PROTECTION (MLDP)			
The ability of the device to effectively prevent, detect and remove malicious software (malware).			
10-1	Does the device support the use of anti-malware software (or other anti-malware mechanism)?	Yes	1
10-1.1	Can the user independently re-configure anti-malware settings?	Yes	1
10-1.2	Does notification of malware detection occur in the device user interface?	Yes	1
10-1.3	Can only manufacturer-authorized persons repair systems when malware has been detected?	See Note	1
10-2	Can the device owner install or update anti-virus software ?	Yes	1
10-3	Can the device owner/ operator (technically/physically) update virus definitions on manufacturer-installed anti-virus software ?	See Note	1
MLDP notes:	Note 1: The System is not pre-configured with specific antimalware/antivirus software. If antimalware/antivirus software needs to be installed on the System, it is the owner's/operator's responsibility to install the software and verify proper functionality of the System.		
11 NODE AUTHENTICATION (NAUT)			
The ability of the device to authenticate communication partners/nodes.			
11-1	Does the device provide/support any means of node authentication that assures both the sender and the recipient of data are known to each other and are authorized to receive transferred information?	No	
NAUT notes:	N/A		
12 PERSON AUTHENTICATION (PAUT)			
Ability of the device to authenticate users			
12-1	Does the device support user/operator -specific username(s) and password(s) for at least one user ?	No	1
12-1.1	Does the device support unique user/operator -specific IDs and passwords for multiple users?	N/A	
12-2	Can the device be configured to authenticate users through an external authentication service (e.g., MS Active Directory, NDS, LDAP, etc.)?	No	
12-3	Can the device be configured to lock out a user after a certain number of unsuccessful logon attempts?	N/A	1
12-4	Can default passwords be changed at/prior to installation?	Yes	2
12-5	Are any shared user IDs used in this system?	Yes	1
12-6	Can the device be configured to enforce creation of user account passwords that meet established complexity rules?	Yes	2
12-7	Can the device be configured so that account passwords expire periodically?	No	
PAUT notes:	Note 1: All operators access the System through the same Windows user account. Note 2: BioFire Diagnostics recommends the owner/operator change the default password to the LabAdmin administrator account. The System is pre-configured to enforce complexity rules for administrative access.		
13 PHYSICAL LOCKS (PLOK)			
Physical locks can prevent unauthorized users with physical access to the device from compromising the integrity and confidentiality of private data stored on the device or on removable media .			
13-1	Are all device components maintaining private data (other than removable media) physically secure (i.e., cannot remove without tools)?	No	
PLOK notes:	N/A		

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14 ROADMAP FOR THIRD PARTY COMPONENTS IN DEVICE LIFE CYCLE (RDMP)				
Manufacturer's plans for security support of 3rd party components within device life cycle.				
14-1	In the notes section, list the provided or required (separately purchased and/or delivered) operating system(s) - including version number(s).			See Note 1
14-2	Is a list of other third party applications provided by the manufacturer available?			Yes
RDMP notes: Note 1: The System computer is delivered with Windows 7 Embedded 64-bit operating system pre-installed.				
15 SYSTEM AND APPLICATION HARDENING (SAHD)				
The device's resistance to cyber attacks and malware .				
15-1	Does the device employ any hardening measures? Please indicate in the notes the level of conformance to any industry-recognized hardening standards.			No
15-2	Does the device employ any mechanism (e.g., release-specific hash key, checksums, etc.) to ensure the installed program/update is the manufacturer-authorized program or software update?			No
15-3	Does the device have external communication capability (e.g., network, modem, etc.)?			Yes
15-4	Does the file system allow the implementation of file-level access controls (e.g., New Technology File System (NTFS) for MS Windows platforms)?			Yes
15-5	Are all accounts which are not required for the intended use of the device disabled or deleted, for both users and applications?			Yes
15-6	Are all shared resources (e.g., file shares) which are not required for the intended use of the device , disabled?			No
15-7	Are all communication ports which are not required for the intended use of the device closed/disabled?			No
15-8	Are all services (e.g., telnet, file transfer protocol [FTP], internet information server [IIS], etc.), which are not required for the intended use of the device deleted/disabled?			No
15-9	Are all applications (COTS applications as well as OS-included applications, e.g., MS Internet Explorer, etc.) which are not required for the intended use of the device deleted/disabled?			No
15-10	Can the device boot from uncontrolled or removable media (i.e., a source other than an internal drive or memory component)?			Yes
15-11	Can software or hardware not authorized by the device manufacturer be installed on the device without the use of tools?			Yes
SAHD notes: N/A				
16 SECURITY GUIDANCE (SGUD)				
The availability of security guidance for operator and administrator of the system and manufacturer sales and service.				
16-1	Are security-related features documented for the device user ?			No
16-2	Are instructions available for device /media sanitization (i.e., instructions for how to achieve the permanent deletion of personal or other sensitive data)?			Yes
SGUD notes: N/A				

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17	HEALTH DATA STORAGE CONFIDENTIALITY (STCF)			
The ability of the device to ensure unauthorized access does not compromise the integrity and confidentiality of private data stored on device or removable media .				
17-1	Can the device encrypt data at rest?		No	
STCF	N/A			
notes:				
18	TRANSMISSION CONFIDENTIALITY (TXCF)			
The ability of the device to ensure the confidentiality of transmitted private data .				
18-1	Can private data be transmitted only via a point-to-point dedicated cable?		No	
18-2	Is private data encrypted prior to transmission via a network or removable media ? (If yes, indicate in the notes which encryption standard is implemented.)		No	
18-3	Is private data transmission restricted to a fixed list of network destinations?		See Note 1	
TXCF	Note 1: If the System is configured to transmit test results to an LIS using the shared folder protocol, a network destination can be restricted to the system computer and the LIS.			
notes:				
19	TRANSMISSION INTEGRITY (TXIG)			
The ability of the device to ensure the integrity of transmitted private data .				
19-1	Does the device support any mechanism intended to ensure data is not modified during transmission? (If yes, describe in the notes section how this is achieved.)		No	
TXIG	N/A			
notes:				
20	OTHER SECURITY CONSIDERATIONS (OTHR)			
Additional security considerations/notes regarding medical device security.				
20-1	Can the device be serviced remotely?		No	
20-2	Can the device restrict remote access to/from specified devices or users or network locations (e.g., specific IP addresses)?		Yes	
20-2.1	Can the device be configured to require the local user to accept or initiate remote access?		No	
OTHR	N/A			
notes:				