FUJIFILM

DICOM Conformance Statement

Fujifilm Sonosite, Inc.
Sonosite iLOOK

Revision 1.1

1 Table of Contents

2 Conformance Statement Overview

This ultrasound modality product Sonosite iLOOK (hereafter referred to as "this product") supports the DICOM services that are necessary for the following functions.

- Downloads work lists from an information System.
- Saves acquired images to an archive System.

Table 2-1 provides an overview of the network services supported by this product.

Table 2-1 Network Services

SOP Classes	User of Service (SCU)	Provider of Service (SCP)
Transfer		
Ultrasound Image Storage	Yes	No
Ultrasound Multi-frame Image Storage	Yes	No
Modality Management		
Modality Worklist	Yes	No

Note

Verification SOP (C-Echo) is not included in the table above because it is required for any Acceptor of an Association. The Verification SCU details are covered in the details of the conformance statement.

3 Introduction

3.1 Revision history

Table 3-1 revision history

Document Version	Date of Issue	Author	Description
1.0	March, 2025	FUJIFILM Sonosite	Initial release.
1.1	March, 2026	FUJIFILM Sonosite	Supported additional DICOM attributes for VA/DoD.

3.2 Audience

This document is intended for hospital staff, health system integrators, software developers. It is assumed that the reader has a working understanding of DICOM.

3.3 Remarks

The scope of this DICOM Conformance Statement is to facilitate integration between Sonosite iLOOK and other DICOM products. The Conformance Statement should be read and understood in conjunction with the DICOM Standard. DICOM by itself does not guarantee interoperability. The Conformance Statement does, however, facilitate a first-level comparison for interoperability between different applications supporting compatible DICOM functionality.

This Conformance Statement is not supposed to replace validation with other DICOM equipment to ensure proper exchange of intended information. In fact, the user should be aware of the following important issues:

The comparison of different Conformance Statements is just the first step towards assessing interconnectivity and interoperability between the product and other DICOM conformant equipment.

Test procedures should be defined and executed to validate the required level of interoperability with specific compatible DICOM equipment, as established by the healthcare facility.

3.4 Definitions

AE	Application Entity
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
IE	Information Entity
IOD	Information Object Definition
LUT	Look Up Table
MWL	Modality Worklist
RGB	Red, Green, Blue
SCU	Service Class User (Client)
SCP	Service Class Provider (Server)
SOP	Service – Object Pair
TCP/IP	Transmission Control Protocol/Internet Protocol
TLS	Transport Layer Security
UID	Unique Identifier
US	Ultrasound
USB	Universal Serial Bus
VOI	Value Of Interest
VR	Value Representation

4 Networking

4.1 Implementation Model

4.1.1 Application Data Flow Diagram

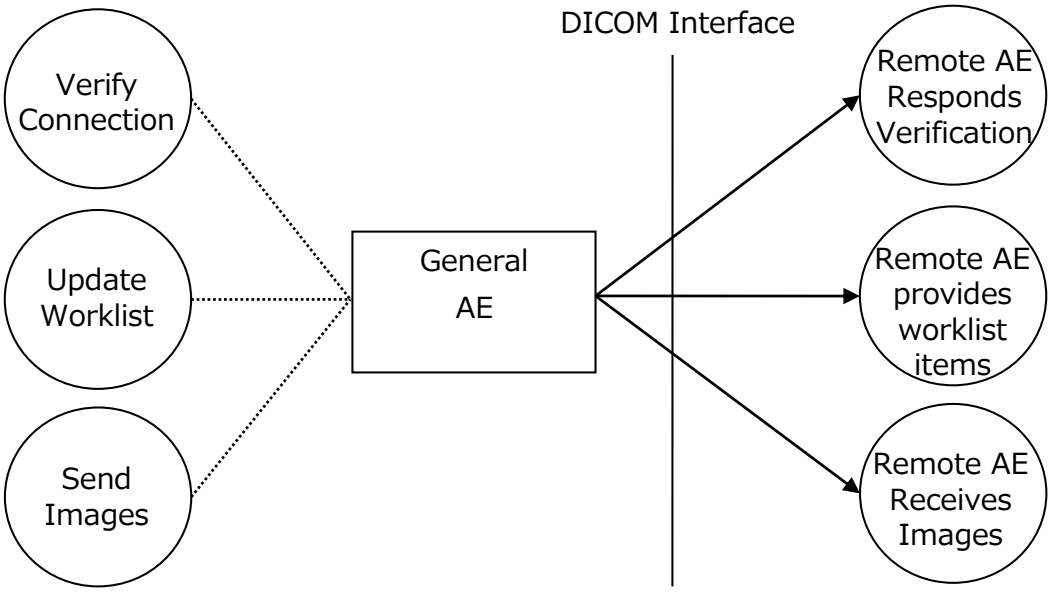

Figure 4-1 Data flow diagram

The General AE is the only application entity provided by this product. It is associated with the local real-world activities “Verify Connection”, “Update Worklist” and “Send Images”.

4.1.2 Functional Definition of AEs

4.1.2.1 **Functional Definition of General AE**

The General Application Entity has the following functions.

- ✓ Verification Connection
  The General AE verifies that a remote AE is awaked and listening.
- ✓ Update Worklist
  The General AE acquires worklist items from a remote AE.
- ✓ Send Images
  The General AE sends images to a remote AE.

4.1.2.2 **Sequencing of Real-World Activities**

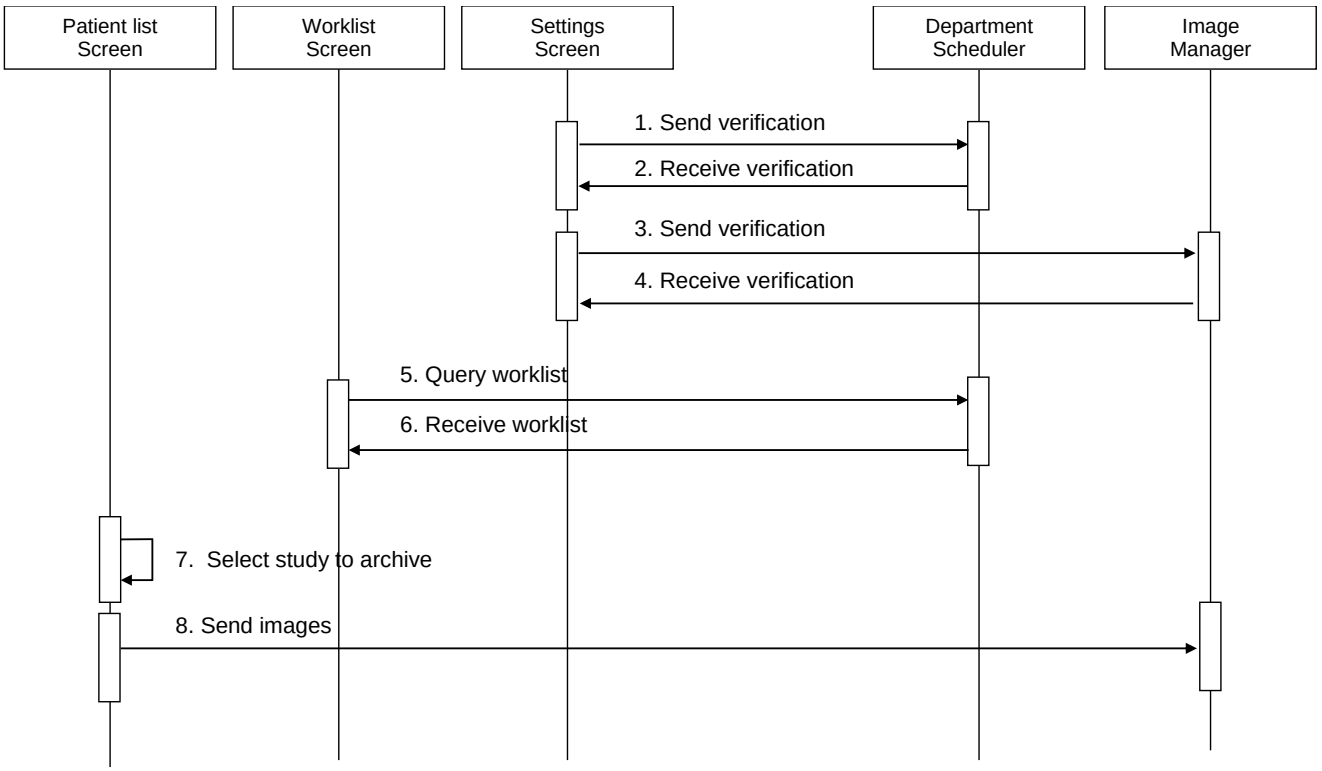

Figure 4-2 Sequencing

A possible sequence of interactions between the functions of this product and the network nodes (e.g. Department Scheduler, Image Manager) is illustrated in the Figure above:

- ✓ Sequence number 1-4: This product sends verification message to the department scheduler or image manager. It is performed on the settings screen.
- ✓ Sequence number 5-6: This product sends query message with key attributes and received matching worklist items from the department scheduler. It is performed on the worklist screen.
- ✓ Sequence number 7-8: This product sends images to the image manager to archive images. It is performed on the patient list screen.

4.2 AE Specifications

4.2.1.1 General AE Specification

4.2.1.2 SOP Classes

General AE provides Standard Conformance to the following SOP classes.

Table 4-1 SOP Class for General AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification			
Verification	1.2.840.10008.1.1	Yes	No
Transfer			
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Yes	No
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Yes	No
Modality Management			
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	Yes	No

4.2.1.3 Association Policies

4.2.1.3.1 General

In the DICOM standard application context name for DICOM 3.0 is always proposed:

Table 4-2 DICOM Application Context

Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.3.2 Number of Associations

This product establishes only one association at a time. The sequence does not allow a transfer of multiple communications at a time.

Table 4-3 Number of Associations Initiated

Maximum number of simultaneous Associations	1

4.2.1.3.3 Asynchronous Nature

This product does not support asynchronous communication (multiple outstanding transactions over a single association).

Table 4-4 Asynchronous Nature as a SCU

Maximum number of outstanding asynchronous transactions	1

4.2.1.3.4 Implementation Identifying Information

The implementation identifying information for this Application Entity is:

Table 4-5 DICOM Implementation Class and Version

Implementation Class UID	1.2.276.0.7230010.3.0.3.6.8
Implementation Version Name	OFFIS_DCMTK_368

4.2.1.4 Association Initiation Policy

4.2.1.4.1 Activity – Verify Connection

4.2.1.4.1.1. Description and Sequencing of Activities

Verify Connection activity is initiated by user operation of DICOM verification on the DICOM Setup screen.

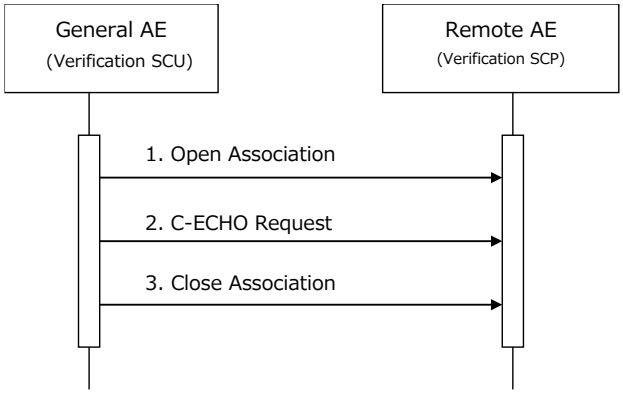

Figure 4-3 Sequencing of Activity – Verify Connection

A possible sequence of interactions between the General AE (Verification SCU) and the Remote AE (Verification SCP) is illustrated in the Figure above:

1. The General AE opens an association with Remote AE.
2. The General AE sends a C-ECHO request to Remote AE, and the Remote AE returns a C-ECHO response (status success).
3. The General AE closes the association.

4.2.1.4.1.2. Proposed Presentation Contexts

The General AE proposes the following presentation contexts in the table. Extended negotiation is not supported.

Table 4-6 Proposed Presentation Contexts for Activity Verify Connection

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Verification	1.2.840.10008.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.4.1.3. SOP Specific Conformance for Verification SOP Class

The behavior of the General AE in response to C-ECHO status is shown in the table below.

Table 4-7 C-ECHO Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	Verification operation has been successfully completed. The result is displayed on the screen.
*	*	Any other status code	Verification operation has failed. The result is displayed on the screen.

The behavior of General AE at the time of communication failure is summarized in the table below.

Table 4-8 Verification Connection Failure Behavior

Exception	Behavior
Timeout	The result is displayed on the screen and the detail information is logged.
Association aborted by the SCP or network layers	The result is displayed on the screen and the detail information is logged.

4.2.1.4.2 Activity – Update Worklist

4.2.1.4.2.1. Description and Sequencing of Activities

Update Worklist activity is initiated by user operation of worklist search on the Worklistscreen.

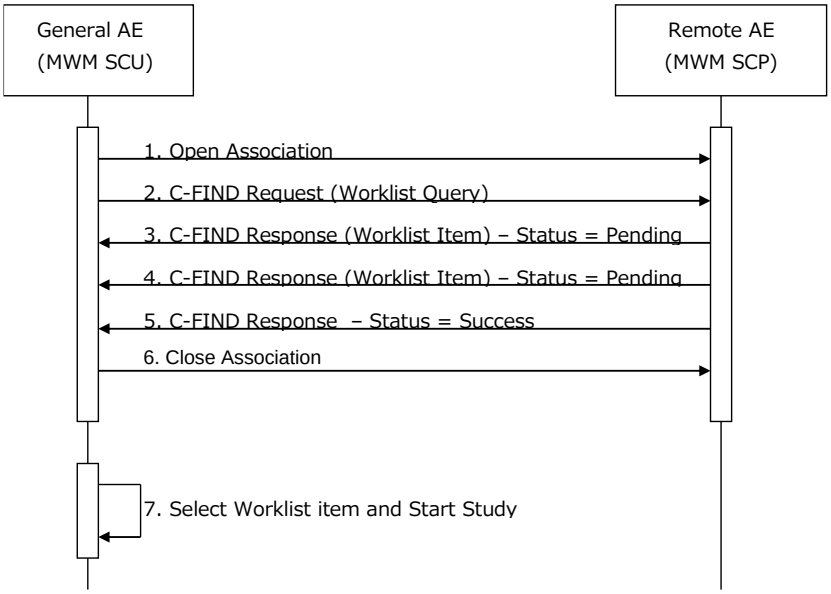

Figure 4-4 Sequencing of Activity – update worklist

A possible sequence of interactions between the General AE (MWL SCU) and the Remote AE (MWL SCP) is illustrated in the Figure above:

1. The General AE opens an association with the Department Scheduler.
2. The General AE sends a C-FIND request to the Remote AE with the Worklist Query attributes.
3. The Remote AE returns a C-FIND response containing the requested attributes of the first the matching worklist item.
4. The Remote AE returns another C-FIND response containing the requested attributes of the second matching Worklist Item.
5. The Remote AE returns another C-FIND response with status Success indicating that no further matching worklist items exist. This example assumes that only 2 worklist items match the Worklist Query.
6. The General AE closes the association with the Remote AE.
7. The user selects a worklist item for the worklist and start study.

4.2.1.4.2.2. Proposed Presentation Contexts

The General AE proposes the following presentation contexts in the table. Extended negotiation is not supported.

Table 4-9 Proposed Presentation Contexts for Activity Update Worklist

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.4.2.3. SOP Specific Conformance for Modality worklist information Model-FIND SOP Class

The behavior of the General AE in response to C-FIND status is shown in the table below.

Table 4-10 Worklist C-FIND Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	Update worklist operation has been successfully completed. The result is displayed on the screen.
*	*	Any other status code	Update worklist operation has failed. The result is displayed on the screen.

The behavior of General AE at the time of communication failure is summarized in the table below.

Table 4-11update worklist Failure Behavior

Exception	Behavior
Timeout	The result is displayed on the screen and the detail information is logged.
Association aborted by the SCP or network layers	The result is displayed on the screen and the detail information is logged.

For information on the Worklist Request Identifier and Attributes, refer to Table 8-1.

4.2.1.4.3 Activity – Send Images

4.2.1.4.3.1. Description and Sequencing of Activities

Send Images activity is initiated by user operation of image transfer on the patient list screen.

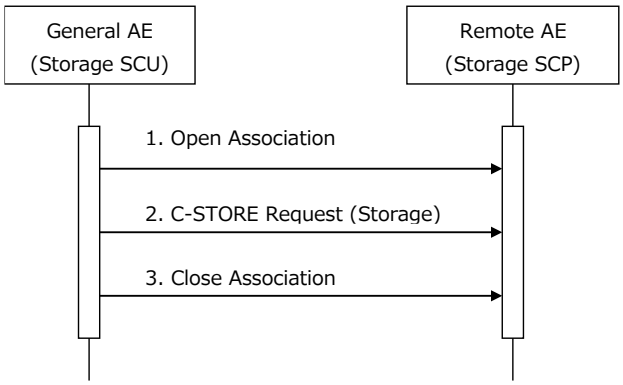

Figure 4-5 Sequencing of Activity – Send Images

A possible sequence of interactions between the General AE (Storage SCU) and the Remote AE (Storage SCP) is illustrated in the Figure above:

1. The General AE opens an association with the Remote AE.
2. An acquired image is transmitted to Remote AE using a C-STORE request.
   (When transferring multiple images over one association) The next acquired image is transmitted to Remote AE using a C-STORE request.
3. The General AE closes the association.

The steps 1 to 3 are performed separately for activities of Ultrasound Image Storage and Ultrasound Multi-frame Image Storage.

4.2.1.4.3.2. Proposed Presentation Contexts

The General AE proposes the following presentation contexts in the table. Extended negotiation is not supported.

Table 4-12 Proposed Presentation Contexts for Activity Send Image

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Implicit VR Little Endian JPEG Baseline (Process 1)	1.2.840.10008.1.2 1.2.840.10008.1.2.4.50	SCU	None
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian JPEG Baseline (Process 1)	1.2.840.10008.1.2 1.2.840.10008.1.2.4.50	SCU	None

The behavior of General AE in response to C-STORE status is shown in the table below.

Table 4-13 Storage C-STORE Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	Storage operation has been successfully completed. When the all images included in the study are sent successfully, the output status on the patient list is marked as Completed.
*	*	Any other status code	Storage operation has failed. When even one image included in the study has failure, the output status on the patient list is marked as Not Completed.

The behavior of General AE at the time of communication failure is summarized in the table below.

Table 4-14 Send Image Failure Behavior

Exception	Behavior
Timeout	The result is displayed on the screen and the detail information is logged.
Association aborted by the SCP or network layers	The result is displayed on the screen and the detail information is logged.

For information on the contents of each SOP classe, refer to the tables below.

- ✓ Ultrasound Image Storage Table 8-2
- ✓ Ultrasound Multi-frame Image Storage Table 8-3

4.2.1.5 **Association Acceptance Policy**

The General AE does not accept associations.

4.3 Network Interfaces

4.3.1.1 Physical Network Interface

The supporting network interface of this product is described below.

Wi-Fi IEEE802.11a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax

4.3.1.2 Additional Protocols

This product uses the TCP/IP stack of the installed OS and supports DIMSE TLS. See section 7.

4.3.1.3 IPv4 and IPv6 Support

This product supports both IPv4 and IPv6 connections.

4.4 Configuration

4.4.1.1 AE Title/Presentation Address Mapping

The AE Title, port number, and the parameters related to DICOM communication are configurable by the user from a DICOM setting menu.

4.4.1.2 Local AE Titles

Up to eight Local AEs can be registered.

Table 4-15 Local AE Title Configuration

Application Entity	Default AE Title	Default TCP/IP Port
General AE	“New_AE_Title”	Not Applicable

Other configuration parameters are described in the table below.

Table 4-16 Configuration Parameters

Parameter	Configurable (Yes/No)	Default Value
Institution Name	Yes	No default value
Department Name	Yes	No default value

4.4.1.3 Remote AE Titles

4.4.1.3.1 MWL SCP AE

Up to eight MWL SCP AEs can be registered.

Table 4-17 Remote AE Title Configuration

Application Entity	Default AE Title	Default TCP/IP Port
MWL AE	“New_AE_Title”	104

Other configuration parameters are described in the table below.

Table 4-18 Configuration Parameters

Parameter	Configurable (Yes/No)	Default Value
Alias	Yes	Alias_1
AE title	Yes	New_AE_Title
IP address	Yes	No default value
TLS	Yes	Disable
Client certificate (If TLS is enabled)	Yes	No default value
Private key (If TLS is enabled)	Yes	No default value
Private key password (If TLS is enabled)	Yes	No default value
Certification authority (If TLS is enabled)	Yes	No default value
Maximum number of studies the AE can receive at one search	No	200
Modality	Yes	US
Extended Specific Character Set	No	ISO-IR 100
Scheduled Station AE Title used by C-FIND Request	Yes	Any

4.4.1.3.2 Storage SCP AEs

Up to eight Storage SCP AEs can be registered.

Table 4-19 Remote AE Title Configuration

Application Entity	Default AE Title	Default TCP/IP Port
Storage AE	“New_AE_Title”	104

Other configuration parameters are described in the table below.

Table 4-20 Configuration Parameters

Parameter	Configurable (Yes/No)	Default Value
AE title	Yes	No default value
Network	Yes	No default value
IP address	Yes	No default value
TLS	Yes	Disable
Client certificate (If TLS is enabled)	Yes	No default value
Private key (If TLS is enabled)	Yes	No default value
Private key password (If TLS is enabled)	Yes	No default value
Certification authority (If TLS is enabled)	Yes	No default value
Transfer Syntax	Yes	JPEG Baseline (Process 1)
Extended Specific Character Set	No	ISO-IR 100

5 Media Interchange

Media Interchange is not supported.

6 Support of Character Sets

This product supports the following character set encodings.

- ISO_IR 6 (ASCII)
- ISO_IR 100 (Latin-1)

7 Security

This product is intended to be used in a safe environment. Take security measures on the device on which this product is installed, and the network connected to the device.

7.1 Security Profiles

Sonosite iLOOK supports DIMSE TLS and below defines supported profiles.
For security reasons, Sonosite iLOOK does not allow TLS less than version 1.2.

Table 7-1 Remote AE Title Configuration

Profiles	Sender	Receiver
BCP 195 RFC 8996 TLS Secure Transport Connection	Y	N

Sonosite iLOOK communicates with any of the following cipher suites for encrypting the data sent across the network:

Table 7-2 Available cipher suites

TLS_AES_256_GCM_SHA384
TLS_CHACHA20_POLY1305_SHA256
TLS_AES_128_GCM_SHA256
TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384
TLS_DHE_RSA_WITH_AES_256_GCM_SHA384
TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256
TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256
TLS_DHE_RSA_WITH_CHACHA20_POLY1305_SHA256
TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
TLS_DHE_RSA_WITH_AES_128_GCM_SHA256
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384
TLS_DHE_RSA_WITH_AES_256_CBC_SHA256
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256
TLS_DHE_RSA_WITH_AES_128_CBC_SHA256
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA
TLS_DHE_RSA_WITH_AES_256_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA
TLS_DHE_RSA_WITH_AES_128_CBC_SHA
TLS_RSA_WITH_AES_256_GCM_SHA384
TLS_RSA_WITH_AES_128_GCM_SHA256
TLS_RSA_WITH_AES_256_CBC_SHA256
TLS_RSA_WITH_AES_128_CBC_SHA256
TLS_RSA_WITH_AES_256_CBC_SHA
TLS_RSA_WITH_AES_128_CBC_SHA
TLS_EMPTY_RENEGOTIATION_INFO_SCSV

7.1.1 TCP port configuration

All TCP ports for each DICOM SCU are configurable by users and determined by external servers.

7.1.2 Key Management

Sonosite iLOOK does not provide a function to generate or distribute certificates, but it allows users to import certificates or private keys, whose file format is PEM, from an external USB storage device. If the TLS option is enabled, whether to conduct peer authentication is optional and can be enabled by users.

7.2 Association Level Security

None Supported.

7.3 Application Level Security

None Supported.

8 ANNEXES

8.1 MWL Request Identifier

The table below provides a description of the Worklist Request Identifier and specifies the attributes that are copied into the images. Unexpected attributes returned in a C-FIND response are ignored.

Table 8-1 MWL request identifier

Module Name Attribute Name	Tag	VR	M	R	D	IOD
SOP Common						
Specific Character Set	(0008,0005)	CS				x
Scheduled Procedure Step						
Scheduled Procedure Step Sequence	(0040,0100)	SQ		x		
>Scheduled Procedure Step ID	(0040,0009)	SH		x		x
>Scheduled Station AE Title	(0040,0001)	AE	S	x		
>Scheduled Procedure Step Start Date	(0040,0002)	DA	S/R	x	x	
>Scheduled Procedure Step Start Time	(0040,0003)	TM		x		
>Scheduled Procedure Step Description	(0040,0007)	LO		x	x	X
>Scheduled Protocol Code Sequence	(0040,0008)	SQ		x		x
>>Code Value	(0008,0100)	SH		x		x
>>Coding Scheme Designator	(0008,0102)	SH		x		x
>>Coding Scheme Version	(0008,0103)	SH		x		x
>>Code Meaning	(0008,0104)	LO		x		x
>Modality	(0008,0060)	CS	S	x	X	x
Requested Procedure						
Requested Procedure ID	(0040,1001)	SH	S	x	x	x
Requested Procedure Code Sequence	(0032,1064)	SQ		x		
>Code Value	(0008,0100)	SH		x		
>Coding Scheme Designator	(0008,0102)	SH		x		
>Coding Scheme Version	(0008,0103)	SH		x		
>Code Meaning	(0008,0104)	LO		x	x	
Study Instance UID	(0020,000D)	UI		x	x	x
Referenced Study Sequence	(0008,1110)	SQ		x		
>Referenced SOP Class UID	(0008,1150)	UI		x		
>Referenced SOP Instance UID	(0008,1155)	UI		x		
Requested Procedure Description	(0032,1060)	LO		x	x	
Names of Intended Recipients of Results	(0040,1010)	PN		x		
Requested Procedure Comments	(0040,1400)	LT		x	x	

Module Name Attribute Name	Tag	VR	M	R	D	IOD
Imaging Service Request						
Referring Physician's Name	(0008,0090)	PN		x		
Requesting Physician	(0032,1032)	PN		x	x	x
Requesting Service	(0032,1033)	LO		x		
Accession Number	(0008,0050)	SH	S	x	x	X
Placer Order Number / Imaging Service Request Attribute (*1)	(0040,2016)	LO		x		
Visit Identification						
Institution Name	(0008,0080)	LO		x		
Institution Address	(0008,0081)	ST		x		
Institutional Department Name	(0008,1040)	LO		x		
Admission ID	(0038,0010)	LO		x		
Visit Status						
Patient's Institution Residence	(0038,0400)	LO		x		
Visit Relationship						
Referenced Patient Sequence	(0008,1120)	SQ		x		
>Referenced SOP Class UID	(0008,1150)	UI		x		
>Referenced SOP Instance UID	(0008,1155)	UI		x		
Visit Admission						
Admitting Diagnoses Description	(0008,1080)	LO		x		
Patient Relationship						
Patient Identification						
Patient's Name	(0010,0010)	PN	S/*	x	x	x
Patient ID	(0010,0020)	LO	S	x	x	x
Issuer of Patient ID	(0010,0021)	LO		x		
Other Patient IDs	(0010,1000)	LO		x		
Patient Demographic						
Patients Birth Date	(0010,0030)	DA		x	x	x
Patient's Sex	(0010,0040)	CS		x	x	x
Ethnic Group	(0010,2160)	SH		x		
Patient Comments	(0010,4000)	LT		x		x
Patient's Size	(0010,1020)	DS		x		
Patient's Weight	(0010,1030)	DS		x		
Patient’s Age	(0010,1010)	AS		x		
Occupation	(0010,2180)	SH		x		

Module Name Attribute Name	Tag	VR	M	R	D	IOD
Patient Medical						
Medical Alerts	(0010,2000)	LO		x	x	
Allergies	(0010,2110)	LO		x	x	
Patient State	(0038,0500)	LO		x		
Pregnancy Status	(0010,21C0)	US		x	x	
Additional Patient History	(0010,21B0)	LT		x	x	
Last Menstrual Date	(0010,21D0)			x		

The above table should be read as follows:

Module Name: The name of the associated module for supported worklist attributes.

Attribute Name: Attributes supported to build the MWL-SCU AE Worklist Request Identifier.

Tag: DICOM tag for this attribute.

VR: DICOM VR for this attribute.

M: Matching keys for (automatic) Worklist Update. An "S" will indicate that the MWL-SCU AE will supply an attribute value for Single Value Matching, an “R” will indicate Range Matching and a “*” will denote wildcard matching.

R: Return keys. An "x" will indicate that the MWL-SCU AE will supply this attribute as Return Key with zero length for Universal Matching.

D: Displayed keys. An “x” indicates that this worklist attribute is displayed to the user during a patient registration.

IOD: An "x" indicates that this worklist attribute is included into all Object Instances created during performance of the related Procedure Step

*1: Placer Order Number / Imaging Service Request Attribute is included if the user enable “Include Placer Order Number” setting on the device.

8.2 Storage IOD CONTENTS

8.2.1 Created SOP Instances

Table 8-2 specifies the attributes of an Ultrasound Image Storage transmitted by this product.

Table 8-3 specifies the attributes of an Ultrasound Multi-frame Image Storage transmitted by this product.

The following table uses a number of abbreviations.

The abbreviations used in the “Presence of Module or Value” column:

VNAP: Value Not Always Present (attribute sent zero length if no value is present)

ANAP: Attribute Not Always Present

ALWAYS: Always Present

EMPTY: Attribute is sent without a value

NONE: Attribute is not sent

The abbreviations used in the “Source” column:

USER: The attribute value source is from User input

MWL: The attribute value is received using Modality Worklist

AUTO: The attribute value is generated automatically

CONFIG: The attribute value source is a configurable parameter

MFG: The attribute value is set at the product manufacturing and users cannot change it.

Please interpret as follows in the table:

0 length Attribute will be sent as 0 length

8.2.2 Ultrasound Image IOD

Table 8-2 IOD of Created US Image SOP Instances

IE	Module	Reference	Presence of Module
Patient	Patient	Table 8-4	ALWAYS
	Clinical Trial Subject		NONE
Study	General Study	Table 8-5	ALWAYS
	Patient Study	Table 8-6	ALWAYS
	Clinical Trial Study		NONE
Series	General Series	Table 8-7	ALWAYS
	Clinical Trial Series		NONE
Frame of Reference	Frame of Reference		NONE
	Synchronization		NONE
Equipment	General Equipment	Table 8-8	ALWAYS
Image	General Image	Table 8-9	ALWAYS
	Image Pixel	Table 8-10	ALWAYS
	Contrast/Bolus		NONE
	Palette Color Lookup Table		NONE
	Device		NONE
	Specimen		NONE
	US Region Calibration		NONE
	US Image	Table 8-14	ALWAYS
	Overlay Plane		NONE
	VOI LUT		NONE
	ICC Profile		NONE
	SOP Common	Table 8-11	ALWAYS
	Common Instance Reference		NONE
-	Optional Order Information	Table 8-15	ANAP

8.2.3 Multi-frame Ultrasound Image IOD

Table 8-3 IOD of Created Multi-frame Image SOP Instances

IE	Module	Reference	Presence of Module
Patient	Patient	Table 8-4	ALWAYS
	Clinical Trial Subject		NONE
Study	General Study	Table 8-5	ALWAYS
	Patient Study	Table 8-6	ALWAYS
	Clinical Trial Study		NONE
Series	General Series	Table 8-7	ALWAYS
	Clinical Trial Series		NONE
Frame of Reference	Frame of Reference		NONE
	Synchronization		NONE
Equipment	General Equipment	Table 8-8	ALWAYS
Image	General Image	Table 8-9	ALWAYS
	Image Pixel	Table 8-10	ALWAYS
	Contrast/Bolus		NONE
	Cine	Table 8-12	ALWAYS
	Multi-frame	Table 8-13	ALWAYS
	Frame Pointers		NONE
	Palette Color Lookup Table		NONE
	Device		NONE
	Specimen		NONE
	US Region Calibration		NONE
	US Image	Table 8-14	ALWAYS
	Overlay Plane		NONE
	VOI LUT		NONE
	ICC Profile		NONE
	SOP Common	Table 8-11	ALWAYS
	Common Instance Reference		NONE
-	Optional Order Information	Table 8-15	ANAP

8.2.4 Modules

Table 8-4 Patient Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Patient's Name	(0010,0010)	PN	From Modality Worklist or user input. If the de-identification when export setting is ON, "xx_YYYYMMDD_hhmmss" is set. (YYYYMMDD_hhmmss is date and time when its exam started.)	VNAP	USER/ MWL
Patient ID	(0010,0020)	LO	From Modality Worklist or user input. Auto generated by this product, if not input. If the de-identification when export setting is ON, "xx_YYYYMMDD_hhmmss" is set. (YYYYMMDD_hhmmss is date and time when its exam started.)	ALWAYS	USER/ AUTO/ MWL
Patient's Birth Date	(0010,0030)	DA	From Modality Worklist or user input. If the de-identification when export setting is ON, no value is set.	VNAP	USER/ MWL
Patient's Sex	(0010,0040)	CS	From Modality Worklist or user input.	VNAP	USER/ MWL
Patient Comments	(0010,4000)	LT	From Modality Worklist.	ANAP	MWL
Other Patient IDs	(0010,1000)	LO	From Modality Worklist. Copied from the tag (0010,1000).	ANAP	MWL
Issuer of Patient ID	(0010,0021)	LO	From Modality Worklist. Copied from the tag (0010,0021).	ANAP	MWL
Patient Identity Removed	(0012,0062)	CS	"YES" only if the de-identification when export setting is ON. Otherwise, this attribute is not present.	ANAP	AUTO
De-identification Method	(0012,0063)	LO	"HIPPA Privacy Rule; 164.514(b)(2)(i)" if the de-identification when export setting is ON. Otherwise, this attribute is not present.	ANAP	AUTO

Table 8-5 General Study Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Study Instance UID	(0020,000D)	UI	From Modality Worklist or auto generated by this product.	ALWAYS	AUTO/ MWL
Study Date	(0008,0020)	DA	Auto generated by this product.	ALWAYS	AUTO
Study Time	(0008,0030)	TM	Auto generated by this product.	ALWAYS	AUTO
Referring Physician's Name	(0008,0090)	PN	From Modality Worklist or user input.	ANAP	USER/ MWL
Study ID	(0020,0010)	SH	0 length.	VNAP	AUTO
Accession Number	(0008,0050)	SH	From Modality Worklist or 0 length.	VNAP	AUTO/ MWL
Study Description	(0008,1030)	LO	From Modality Worklist or user input. If from Modality worklist, Copied from: Case1: Copied from the tag (0040,0100)>(0040,0008) > (0008,0104) if this tag is valid. Case 2: Copied from the tag (0032,1064)>(0008,0104) if this tag is valid and the case 1 is not applied. Case 3: Copied from the tag (0040,0100)>(0040,0007) if this tag is valid and case 1 and 2 are not applied. Case 4: Copied from the tag (0032,1060) if this tag is valid and case 1, 2, and 3 are not applied. Case 5: Otherwise, "Unknown" is set.	ANAP	USER/ MWL/ AUTO
Procedure Code Sequence	(0008,1032)	SQ	From Modality Worklist. Copied from the sequence (0032,1064) and its subordinate tags.	ANAP	MWL
>Code Value	(0008,0100)	SH	Same as above.	ANAP	MWL
>Coding Scheme Designator	(0008,0102)	SH	Same as above.	ANAP	MWL
>Coding Scheme	(0008,0103)	SH	Same as above.	ANAP	MWL

Version					
>Code Meaning	(0008,0104)	LO	Same as above.	ANAP	MWL

Table 8-6 Patient Study Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Patient's Age	(0010,1010)	AS	Calculated from Patient Birthdate which user inputs or Modality Worklist sends.	ANAP	USER /MWL
Additional Patient's History	(0010,21B0)	LT	From Modality Worklist or user input. If from Modality worklist, Copied from (0010,21B0).	ANAP	USER/ MWL
Medical Alerts	(0010,2000)	LO	From Modality Worklist or user input. If from Modality worklist, Copied from (0010,2000).	ANAP	USER/ MWL
Allergies	(0010,2110)	LO	From Modality Worklist or user input. If from Modality worklist, Copied from (0010,2110).	ANAP	USER/ MWL
Pregnancy Status	(0010,21C0)	US	From Modality Worklist or user input. If from Modality worklist, Copied from (0010,21C0).	ANAP	USER/ MWL
Admitting Diagnoses Description	(0008,1080)	LO	From Modality Worklist. Copied from (0008,1080)	ANAP	MWL

Table 8-7 General Series Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Modality	(0008,0060)	CS	"US"	ALWAYS	AUTO
Series Instance UID	(0020,000E)	UI	Auto generated by this product.	ALWAYS	AUTO
Series Number	(0020,0011)	IS	Auto generated by this product.	ALWAYS	AUTO
Series Date	(0008,0021)	DA	Auto generated by this product.	ALWAYS	AUTO
Series Time	(0008,0031)	TM	Auto generated by this product.	ALWAYS	AUTO
Performing Physicians' Name	(0008,1050)	PN	From user input.	ANAP	USER
Series Description	(0008,103E)	LO	Same as Study Description attribute in Table 8-5.	ANAP	USER/ MWL/ AUTO
Request Attributes Sequence	(0040,0275)	SQ	Auto generated by this product. If only Modality Worklist used.	ANAP	MWL
>Requested Procedure ID	(0040,1001)	SH	From Modality Worklist. Copied from the tag (0040, 1001).	ANAP	MWL
>Scheduled Procedure Step ID	(0040,0009)	SH	From Modality Worklist. Copied from the tag (0040, 0100) > (0040, 0009).	ANAP	MWL
>Scheduled Procedure Step Description	(0040,0007)	LO	From Modality Worklist. Copied from the tag (0040, 0100) > (0040, 0007).	ANAP	MWL
Performed Procedure Step ID	(0040,0253)	SH	From Modality Worklist. Copied from the tag (0040, 0100) > (0040, 0009).	ANAP	MWL
Performed Procedure Step Description	(0040,0254)	LO	From Modality Worklist. Copied from the tag (0040, 0100) > (0040, 0007).	ANAP	MWL
Performed Protocol Code Sequence	(0040,0260)	SQ	From Modality Worklist. Copied from the sequence (0040,0100) > (0040,0008) and its subordinate tags.	ANAP	MWL
>Code Value	(0008,0100)	SH	Same as above.	ANAP	MWL
>Coding Scheme Designator	(0008,0102)	SH	Same as above.	ANAP	MWL
>Coding Scheme Version	(0008,0103)	SH	Same as above.	ANAP	MWL
>Code Meaning	(0008,0104)	LO	Same as above.	ANAP	MWL
Operators' Name	(0008,1070)	PN	From user input.	ANAP	USER

Table 8-8 General Equipment Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Manufacturer	(0008,0070)	LO	“SonoSite, Inc.”	ALWAYS	AUTO
Institution Name	(0008,0080)	LO	From Modality Worklist or user input. If from Modality Worklist, Copied from the tag (0008,0080).	ANAP	CONFIG/ MWL
Institution Address	(0008,0081)	ST	From Modality Worklist or user input. If from Modality Worklist, Copied from the tag (0008,0081).	ANAP	CONFIG/ MWL
Institutional Department Name	(0008,1040)	LO	From Modality Worklist or user input. If from Modality Worklist, Copied from the tag (0008,1040).	ANAP	CONFIG/ MWL
Manufacturer’s Model Name	(0008,1090)	LO	“Sonosite iLOOK”	ALWAYS	AUTO
Device Serial Number	(0018,1000)	LO	Unique device serial number that is set when a product is released.	ALWAYS	MFG
Software Version	(0018,1020)	LO	Auto generated by this product.	ALWAYS	AUTO

Table 8-9 General Image Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Instance Number	(0020,0013)	IS	Auto generated by this product.	ALWAYS	AUTO
Patient Orientation	(0020,0020)	CS	0 length.	VNAP	AUTO
Content Date	(0008,0023)	DA	Auto generated by this product.	ALWAYS	AUTO
Content Time	(0008,0033)	TM	Auto generated by this product.	ALWAYS	AUTO
Image Type	(0008,0008)	CS	See Table 8-14	ALWAYS	AUTO
Acquisition Date	(0008,0022)	DA	Auto generated by this product.	ALWAYS	AUTO
Acquisition Time	(0008,0032)	TM	Auto generated by this product.	ALWAYS	AUTO
Lossy Image Compression	(0028,2110)	CS	“01” (Only if JPEG lossy image)	ANAP	AUTO
Lossy Image Compression Method	(0028,2114)	CS	"ISO_10918_1" (Only if JPEG lossy image)	ANAP	AUTO

Table 8-10 Image Pixel Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Samples per Pixel	(0028,0002)	US	Auto generated by this product.	ALWAYS	AUTO
Photometric Interpretation	(0028,0004)	CS	"RGB" (if RAW image) "YBR_FULL_422" (if JPEG lossy Image)	ALWAYS	AUTO
Planar Configuration	(0028,0006)	US	Auto generated by this product.	ALWAYS	AUTO
Rows	(0028,0010)	US	Depends on captured image size.	ALWAYS	AUTO
Columns	(0028,0011)	US	Depends on captured image size.	ALWAYS	AUTO
Bits Allocated	(0028,0100)	US	Auto generated by this product.	ALWAYS	AUTO
Bits Stored	(0028,0101)	US	Auto generated by this product.	ALWAYS	AUTO
High Bit	(0028,0102)	US	Auto generated by this product.	ALWAYS	AUTO
Pixel Representation	(0028,0103)	US	Auto generated by this product.	ALWAYS	AUTO
Pixel Data	(7FE0,0010)	OB	Pixel values	ALWAYS	AUTO

Table 8-11 SOP Common Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Specific Character Set	(0008,0005)	CS	"ISO_IR 100"	ALWAYS	AUTO
SOP Class UID	(0008,0016)	UI	Auto generated by this product.	ALWAYS	AUTO
SOP Instance UID	(0008,0018)	UI	Auto generated by this product.	ALWAYS	AUTO
Instance Number	(0020,0013)	IS	Auto generated by this product.	ALWAYS	AUTO
Instance Creation Date	(0008,0012)	DA	Auto generated by this product.	ALWAYS	AUTO
Instance Creation Time	(0008,0013)	TM	Auto generated by this product.	ALWAYS	AUTO

Table 8-12 CINE Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Frame Time	(0018,1063)	DS	Only if multi-frame. Auto generated by this product.	ANAP	AUTO

Table 8-13 Multi-frame Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Number of Frames	(0028,0008)	IS	Only if multi-frame. Auto generated by this product.	ANAP	AUTO
Frame Increment Pointer	(0028,0009)	AT	Only if multi-frame. Auto generated by this product.	ANAP	AUTO

Table 8-14 US Image Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Samples Per Pixel	(0028,0002)	US	See Table 8-10	ALWAYS	AUTO
Photometric Interpretation	(0028,0004)	CS	See Table 8-10	ALWAYS	AUTO
Bits Allocated	(0028,0100)	US	See Table 8-10	ALWAYS	AUTO
Bits Stored	(0028,0101)	US	See Table 8-10	ALWAYS	AUTO
High Bit	(0028,0102)	US	See Table 8-10	ALWAYS	AUTO
Planar Configuration	(0028,0006)	US	See Table 8-10	ALWAYS	AUTO
Pixel Representation	(0028,0103)	US	See Table 8-10	ALWAYS	AUTO
Frame Increment Pointer	(0028,0009)	AT	See Table 8-13	ANAP	AUTO
Image Type	(0008,0008)	CS	“ORIGINAL¥PRIMARY”	ALWAYS	AUTO
Lossy Image Compression	(0028,2110)	CS	See Table 8-10	ANAP	AUTO
Transducer Data	(0018,5010)	LO	"L-15-5¥(Serial Number)”	ANAP	AUTO
Transducer Type	(0018,6031)	CS	“LINEAR"	ANAP	AUTO

Table 8-15 Optional Order Information Module of Created SOP Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source
Referenced Request Sequence	(0040,A370)	SQ	Auto generated by this product. If the following Placer Order Number / Imaging Service Request Attributes has a valid value.	ANAP	AUTO
Placer Order Number / Imaging Service Request	(0040,2016)	LO	From Modality Worklist. Copied from the tag (0040,2016).	ANAP	MWL

Note: This module is optional. All attributes in this module are present if MWL returns a valid Placer Order Number / Imaging Service Request attribute. Please see the *1 in Section 8.1 , that describes how to include Placer Order Number / Imaging Service Request attribute in C-FIND request.

8.3 Data Dictionary of Private Attributes

This product does not support private attributes.

8.4 Grayscale Image Consistency

This product does not support DICOM Grayscale Standard Display Function.

8.5 Standard Extended / Specialized / Private Sop Classes

This product does not support specialized/private SOP classes.

8.6 Private Transfer Syntaxes

This product does not support private Transfer Syntaxes.