DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration

Indications for Use

510(k) Number (if known)

Form Approved: OMB No. 0910-0120 Expiration Date: 06/30/2020

See PRA Statement below.

K163121
Device Name SmartUs EXT-1M/3M
Indications for Use (Describe)
SmartUs EXT-1M/3M ultrasound imaging system is intended to be used for applications in fetal, abdominal, pediatric, small organ (breast, thyroid, testicles), adult cefalic, musculo-skeletal (conventional), musculo-skeletal (superficial), cardiac adult, cardiac pediatric, peripheral vessel (B and M-mode, combined modes imaging, including imaging for needle guidance). It is possible to provide diagnostic information outside of an imaging lab, including at thebedside systems, for navigatedmedical application, in operating rooms/critical care units.
Type of Use (Select one or both, as applicable)
CONTINUE ON A SEPARATE PAGE IF NEEDED.

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Diagnostic Ultrasound Indications for Use Form

System: SmartUs EXT-1M/3M

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Table 1.3-1

Table 1.3-1 Clinical Application			Mode of Operation							
General (Track 1 Only)	Specific (Track 1 & 3)	В	М	PWD	CWD	Color Doppler	Combined (specify)	Other (specify)		
Ophthalmic	Ophthalmic									
	Fetal	N	N	N		N	Note 1	Note 2,3,4		
	Abdominal	N	N	N		N	Note 1	Note 2,3,4		
	Intraoperative (specify)									
	Intraoperative (Neuro)									
	Laparoscopic									
	Pediatric	N	N	N		N	Note 1	Note 2,3,4		
	Small Organ (specify)	N	N	N		N	Note 1	Note 2,3,4		
	Neonatal Cephalic									
Fetal Imaging	Adult Cephalic	N	N	N		N	Note 1	Note 4		
& Other	Trans-rectal									
	Trans-vaginal									
	Trans-urethral									
	Trans-esoph. (Non-Card)									
	Musculo-skeletal (Conventional)	N	N	N		N	Note 1	Note 2,3,4		
	Musculo-skeletal (Superficial)	N	N	N		N	Note 1	Note 2,3,4		
	Intravascular									
	Other (specify)									
	Cardiac Adult	N	N	N		N	Note 1	Note 2,3,4		
Cardiac	Cardiac Pediatric	N	N	N		N	Note 1	Note 4		
	Intravascular (Cardiac)									
	Trans-esoph. (Cardiac)									
	Intra-cardiac									
	Other (specify)									
Peripheral	Peripheral vessel	N	N	N		N	Note 1	Note 2,3,4		
Vessel	Other (specify)									

N= new indication; P= previously cleared by FDA; E= added under Appendix E

 $\label{eq:local_policy} Note \ 1 - Combined \ Modes: \ M(B+M), \ B(B+M), \ B+M, \ B(B+PW), \ PW(B+PW), \ B+PW, \ B(B+CFM/PDI/DPDI), \ CFM/PDI/DPDI, \ B+CFM/PDI/DPDI, \ B(B+CFM/PDI/DPDI+PW), \ CFM/PDI/DPDI+PW), \ B+CFM/PDI/DPDI+PW), \ B+CFM/PDI/DPDI+PW, \ B+CF$

Note 2 - Includes Imaging for Needle Guidance

Note 3 - Small Organs (specifically Breast, Thyroid, Testicles)

Note 4 - Tissue harmonic Imaging (THI)

Note 5 - Intraoperative applications: Include Needle Guidance

Note 4 - Tissue harmonic Imaging (THI)

Diagnostic Ultrasound Indications for Use Form

System: SmartUs EXT-1M/3M Transducer: Convex array C5-2R60HI-5

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Table 1 3-2

Clinical Application			Mode of Operation							
General (Track 1 Only)	Specific (Track 1 & 3)	В	М	PWD	CWD	Color Doppler	Combined (specify)	Other (specify)		
Ophthalmic	Ophthalmic									
	Fetal	N	N	N		N	Note 1	Note 2,3,4		
	Abdominal	N	N	N		N	Note 1	Note 2,3,4		
	Intraoperative (specify)									
	Intraoperative (Neuro)									
	Laparoscopic									
	Pediatric									
	Small Organ (specify) ¹									
	Neonatal Cephalic									
Fetal Imaging	Adult Cephalic									
& Other	Trans-rectal									
	Trans-vaginal									
	Trans-urethral									
	Trans-esoph. (Non-Card)									
	Musculo-skeletal (Conventional)									
	Musculo-skeletal (Superficial)									
	Intravascular									
	Other (specify)									
	Cardiac Adult	N	N	N		N	Note 1	Note 2,3,4		
	Cardiac Pediatric									
Cardiac	Intravascular (Cardiac)									
	Trans-esoph. (Cardiac)									
	Intra-cardiac									
	Other (specify)									
Peripheral	Peripheral vessel									
Vessel	Other (specify)									

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Note 1 - Combined Modes: M(B+M), B(B+M), B+M, B(B+PW), PW(B+PW), B+PW, B(B+CFM/PDI/DPDI), CFM/PDI/DPDI (B+CFM/PDI/DPDI), B+CFM/PDI/DPDI, B(B+CFM/PDI/DPDI+PW), CFM/PDI/DPDI (B+CFM/PDI/DPDI+PW), PW(B+CFM/PDI/DPDI+PW), B+CFM/PDI/DPDI+PW,

Note 2 - Includes Imaging for Needle Guidance

Note 3 - Small Organs (specifically Breast, Thyroid, Testicles)

Note 4 - Tissue harmonic Imaging (THI)

Note 5 - Intraoperative applications: Include Needle Guidance

Note 4 - Tissue harmonic Imaging (THI)

Diagnostic Ultrasound Indications for Use Form

System: SmartUs EXT-1M/3M Transducer: Linear array L15-7L40HI-5

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Table 1.3-3

Clinical Application			Mode of Operation							
General (Track 1 Only)	Specific (Track 1 & 3)	В	М	PWD	CWD	Color Doppler	Combined (specify)	Other (specify)		
Ophthalmic	Ophthalmic									
	Fetal									
	Abdominal									
	Intraoperative (specify)									
	Intraoperative (Neuro)									
	Laparoscopic									
	Pediatric	N	N	N		N	Note 1	Note 2,3,4		
l	Small Organ (specify)	N	N	N		N	Note 1	Note 2,3,4		
	Neonatal Cephalic									
Fetal Imaging	Adult Cephalic									
& Other	Trans-rectal									
	Trans-vaginal									
	Trans-urethral									
	Trans-esoph. (Non-Card)									
	Musculo-skeletal (Conventional)	N	N	N		N	Note 1	Note 2,3,4		
	Musculo-skeletal (Superficial)	N	N	N		N	Note 1	Note 2,3,4		
	Intravascular									
	Other (specify)									
	Cardiac Adult									
Cardiac	Cardiac Pediatric									
	Intravascular (Cardiac)									
	Trans-esoph. (Cardiac)									
	Intra-cardiac									
	Other (specify)									
Peripheral	Peripheral vessel	N	N	N		N	Note 1	Note 2,3,4		
Vessel	Other (specify)									

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Note 1 - Combined Modes: M(B+M), B(B+M), B+M, B(B+PW), PW(B+PW), B+PW, B(B+CFM/PDI/DPDI), CFM/PDI/DPDI (B+CFM/PDI/DPDI), B+CFM/PDI/DPDI, B(B+CFM/PDI/DPDI+PW), CFM/PDI/DPDI (B+CFM/PDI/DPDI+PW), PW(B+CFM/PDI/DPDI+PW), B+CFM/PDI/DPDI+PW,

Note 2 - Includes Imaging for Needle Guidance

Note 3 - Small Organs (specifically Breast, Thyroid, Testicles)

Note 4 - Tissue harmonic Imaging (THI)

Note 5 - Intraoperative applications: Include Needle Guidance

Note 4 - Tissue harmonic Imaging (THI)

Diagnostic Ultrasound Indications for Use Form

System: SmartUs EXT-1M/3M Transducer: Phased array P5-1L15SI-6

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Table 1.3-4

Clinical Application			Mode of Operation								
General (Track 1 Only)	Specific (Track 1 & 3)	В	М	PWD	CWD	Color Doppler	Combined (specify)	Other (specify)			
Ophthalmic	Ophthalmic										
	Fetal										
	Abdominal	N	N	N		N	Note 1	Note 4			
	Intraoperative (specify)										
	Intraoperative (Neuro)										
	Laparoscopic										
	Pediatric										
	Small Organ (specify)										
	Neonatal Cephalic										
Fetal Imaging	Adult Cephalic	N	N	N		N	Note 1	Note 4			
& Other	Trans-rectal										
	Trans-vaginal										
	Trans-urethral										
	Trans-esoph. (Non-Card)										
	Musculo-skeletal (Conventional)										
	Musculo-skeletal (Superficial)										
	Intravascular										
	Other (specify)										
	Cardiac Adult	N	N	N		N	Note 1	Note 4			
	Cardiac Pediatric	N	N	N		N	Note 1	Note 4			
Cardiac	Intravascular (Cardiac)										
Cardiac	Trans-esoph. (Cardiac)					<u>-</u>					
	Intra-cardiac										
	Other (specify)										
Peripheral	Peripheral vessel										
Vessel	Other (specify)										

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Note 1 - Combined Modes: M(B+M), B(B+M), B+M, B(B+PW), PW(B+PW), B+PW, B(B+CFM/PDI/DPDI), CFM/PDI/DPDI (B+CFM/PDI/DPDI), B+CFM/PDI/DPDI, B(B+CFM/PDI/DPDI+PW), CFM/PDI/DPDI (B+CFM/PDI/DPDI+PW), PW(B+CFM/PDI/DPDI+PW), B+CFM/PDI/DPDI+PW,

Note 2 - Includes Imaging for Needle Guidance

Note 3 - Small Organs (specifically Breast, Thyroid, Testicles)

Note 4 - Tissue harmonic Imaging (THI)