

GE Discovery MR Series

Revision History

Date / Version	Author	Comments
7/4/2012	Steve Moore	Initial release <ul style="list-style-type: none"><li data-bbox="634 506 1292 535">• Discovery MR750 3.0T (20.0) DOC0464555 Rev. 3
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Introduction

Observations on GE Private Elements

Scanner/Software Versions

Link Name / GE website	Model	Software Version	Document
Discovery MR750 3.0T (20.0) DOC0464555 Rev. 3	Discovery MR750	20.0	DOC0464555 Rev. 3

GEMS_IDEN_01

In the table of private elements in this section and following:

*: Element is listed in the document

X1: Element is listed with a note: No longer supported

DOC0464555 Rev. 3				
Description	Tag	VR	VM	
GEHC Private Creator ID	0x00090010	LO	1	*
Full fidelity	0x00091001	LO	1	X 1
Suite id	0x00091002	SH	1	*
Product id	0x00091004	SH	1	*
Image actual date	0x00091027	SL	1	*
Service id	0x00091030	SH	1	*
Mobile location number	0x00091031	SH	1	*
Equipment UID	0x000910e3	UI	1	*
Genesis Version - now	0x000910e6	SH	1	X 1
Exam Record Checksum	0x000910e7	UL	1	X 1
Actual series data time stamp	0x000910e9	SL	1	*

GEMS_PATI_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00110010	LO	1	*
Patient Status	0x00111010	SS	1	*

GEMS_ACQU_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00190010	LO	1	*
Horiz. Frame of ref.	0x0019100f	DS	1	*
Series contrast	0x00191011	SS	1	*
Last pseq	0x00191012	SS	1	X1
Series plane	0x00191017	SS	1	X1
First scan ras	0x00191018	LO	1	X1
First scan location	0x00191019	DS	1	X1

Last scan ras	0x0019101a	LO	1	X1
Last scan loc	0x0019101b	DS	1	X1
Display field of view	0x0019101e	DS	1	*
Acquisition Duration	0x0019105a	FL	1	*
Second echo	0x0019107d	DS	1	*
Number of echoes	0x0019107e	SS	1	*
Table delta	0x0019107f	DS	1	*
Contiguous	0x00191081	SS	1	*
Peak SAR	0x00191084	DS	1	*
Monitor SAR	0x00191085	SS	1	X1
Cardiac repetition time	0x00191087	DS	1	*
Images per cardiac cycle	0x00191088	SS	1	*
Actual receive gain analog	0x0019108a	SS	1	*
Actual receive gain digital	0x0019108b	SS	1	*
Delay after trigger	0x0019108d	DS	1	*
Swappf	0x0019108f	SS	1	*
Pause Interval	0x00191090	SS	1	*
Pause Time	0x00191091	DS	1	*
Slice offset on freq axis	0x00191092	SL	1	*
(L1) Center Frequency (L2) Auto Prescan Center Frequency	0x00191093	DS	1	(L2)
(L1) Transmit Gain (L2) Auto Prescan Transmit Gain	0x00191094	SS	1	(L2)
(L1) Analog receiver gain (L2) Auto Prescan Analog receiver gain	0x00191095	SS	1	(L2)
(L1) Digital receiver gain (L2) Auto Prescan Digital receiver gain	0x00191096	SS	1	(L2)
Bitmap defining CVs	0x00191097	SL	1	*
Center freq. Method	0x00191098	SS	1	*
Pulse Sequence Mode	0x0019109b	SS	1	*
Pulse Sequence Name	0x0019109c	LO	1	*
Pulse Sequence Date	0x0019109d	DT	1	*
Internal Pulse Sequence Name	0x0019109e	LO	1	*
Transmitting Coil Type	0x0019109f	SS	1	*
Surface Coil Type	0x001910a0	SS	1	*
Extremity Coil flag	0x001910a1	SS	1	*
Raw data run number	0x001910a2	SL	1	*
Calibrated Field strength	0x001910a3	UL	1	*
SAT fat/water/bone	0x001910a4	SS	1	*

Receive bandwidth	0x001910a5	DS	1	X 1
User data 0	0x001910a7	DS	1	*
User data 1	0x001910a8	DS	1	*
User data 2	0x001910a9	DS	1	*
User data 3	0x001910aa	DS	1	*
User data 4	0x001910ab	DS	1	*
User data 5	0x001910ac	DS	1	*
user data 6	0x001910ad	DS	1	*
User data 7	0x001910ae	DS	1	*
User data 8	0x001910af	DS	1	*
User data 9	0x001910b0	DS	1	*
User data 10	0x001910b1	DS	1	*
User data 11	0x001910b2	DS	1	*
User data 12	0x001910b3	DS	1	*
User data 13	0x001910b4	DS	1	*
User data 14	0x001910b5	DS	1	*
User data 15	0x001910b6	DS	1	*
User data 16	0x001910b7	DS	1	*
User data 17	0x001910b8	DS	1	*
User data 18	0x001910b9	DS	1	*
User data 19	0x001910ba	DS	1	*
User data 20	0x001910bb	DS	1	*
User data 21	0x001910bc	DS	1	*
User data 22	0x001910bd	DS	1	*
Projection angle	0x001910be	DS	1	*
Saturation planes	0x001910c0	SS	1	*
Surface coil intensity	0x001910c1	SS	1	X 1
SAT location R	0x001910c2	SS	1	*
SAT location L	0x001910c3	SS	1	*
SAT location A	0x001910c4	SS	1	*
SAT location P	0x001910c5	SS	1	*
SAT location H	0x001910c6	SS	1	*
SAT location F	0x001910c7	SS	1	*
SAT thickness R/L	0x001910c8	SS	1	*
SAT thickness A/P	0x001910c9	SS	1	*
SAT thickness H/F	0x001910ca	SS	1	*
(L1) Prescribed flow axis (L2) Phase Contrast flow axis	0x001910cb	SS	1	(L2)
Velocity encoding	0x001910cc	SS	1	*
Thickness disclaimer	0x001910cd	SS	1	*
Prescan type	0x001910ce	SS	1	*
Prescan status	0x001910cf	SS	1	*

Raw data type	0x001910d0	SH	1	*
Projection Algorithm	0x001910d2	SS	1	*
(L1) Projection algorithm (L2) Projection Algorithm Name	0x001910d3	SH	1	(L2)
Fractional echo	0x001910d5	SS	1	*
Prep pulse	0x001910d6	SS	1	X1
Cardiac phase number	0x001910d7	SS	1	*
Variable echoflag	0x001910d8	SS	1	*
(L1) Concatenated SAT (L2) Concatenated SAT {# DTI Diffusion Dir., release 9.0 & below}	0x001910d9	DS	1	(L2)
(L1) User data 23 (L2) User data 23 {#DTI Diffusion Dir., release 9.0 & below}	0x001910df	DS	1	(L2)
(L1) User data 24 (L2) User data 24 {# DTI Diffusion Dir., release 10.0 & above}	0x001910e0	DS	1	(L2)
Velocity Encode Scale	0x001910e2	DS	1	*
Fast phases	0x001910f2	SS	1	*
Transmit gain	0x001910f9	DS	1	*

GEMS_RELA_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00210010	LO	1	*

Series from which Prescribed	0x00211003	SS	1	X 1
Genesis Version - now	0x00211005	SH	1	X 1
Series Record checksum	0x00211007	UL	1	X 1
Genesis version - Now	0x00211018	SH	1	X 1
Acq recon record checksum	0x00211019	UL	1	X 1
Table start location	0x00211020	DS	1	X 1
Series from which prescribed	0x00211035	SS	1	*
Image from which prescribed	0x00211036	SS	1	*
Screen Format	0x00211037	SS	1	*
Locations in acquisition	0x0021104f	SS	1	*
Graphically prescribed	0x00211050	SS	1	*
Rotation from source x rot	0x00211051	DS	1	*
Rotation from source y rot	0x00211052	DS	1	*
Rotation from source z rot	0x00211053	DS	1	*
Image position	0x00211054	SH	3	X 1
Image orientation	0x00211055	SH	6	X 1
Num 3D slabs	0x00211056	SL	1	*
Locs per 3D slab	0x00211057	SL	1	*
Overlaps	0x00211058	SL	1	*
(L1) Image Filtering (L2) Image Filtering 0.5/0.2T	0x00211059	SL	1	(L2)
Diffusion direction	0x0021105a	SL	1	*
(L1) lhtagfa (L2) Tagging Flip Angle	0x0021105b	DS	1	(L2)
(L1) lhtagor (L2) Tagging Orientation	0x0021105c	DS	1	(L2)
(L1) lhbspti (L2) Tag Spacing	0x0021105d	DS	1	(L2)
RTIA_timer	0x0021105e	DS	1	*
Fps	0x0021105f	DS	1	*
Auto window/level alpha	0x00211081	DS	1	X1
Auto window/level beta	0x00211082	DS	1	X1
Auto window/level window	0x00211083	DS	1	*
Auto window/level level	0x00211084	DS	1	*

GEMS_STDY_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00230010	LO	1	*
Number of series in Study	0x00231001	SL	1	X 1
Number of unarchived Series	0x00231002	SL	1	X 1
Reference image field	0x00231010	SS	1	X1
Summary image	0x00231050	SS	1	X1
Start time(secs) in first axial	0x00231070	FD	1	X1
No. of updates to header	0x00231074	SL	1	X1
Indicates study has complete info (DICOM/genesis)	0x0023107d	SS	1	X1

GEMS_SERS_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00250010	LO	1	*
Last pulse sequence used	0x00251006	SS	1	X1
Images in Series	0x00251007	SL	1	*
Landmark Counter	0x00251010	SL	1	*
Number of Acquisitions	0x00251011	SS	1	*
Indicates no. of updates to header	0x00251014	SL	1	X1
Series Complete Flag	0x00251017	SL	1	X1
Number of images archived	0x00251018	SL	1	X1
Last image number used	0x00251019	SL	1	*
Primary Receiver Suite and Host	0x0025101a	SH	1	*
Protocol Data Block (compressed)	0x0025101b	OB	1	*

GEMS_IMAG_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00270010	LO	1	*
Image archive flag	0x00271006	SL	1	X1
Scout Type	0x00271010	SS	1	X1
Foreign Image Revision	0x00271030	SH	1	X1
Imaging Mode	0x00271031	SS	1	*
Pulse Sequence	0x00271032	SS	1	*
Imaging Options	0x00271033	SL	1	*
Plane Type	0x00271035	SS	1	*
Oblique Plane	0x00271036	SL	1	X 1
RAS letter of image location	0x00271040	SH	1	*
Image location	0x00271041	FL	1	*
Center R coord of plane image	0x00271042	FL	1	X 1
Center A coord of plane image	0x00271043	FL	1	X 1
Center S coord of plane image	0x00271044	FL	1	X 1
Normal R coord	0x00271045	FL	1	X 1
Normal A coord	0x00271046	FL	1	X 1
Normal S coord	0x00271047	FL	1	X 1
R Coord of Top Right Corner	0x00271048	FL	1	X 1
A Coord of Top Right Corner	0x00271049	FL	1	X 1
S Coord of Top Right Corner	0x0027104a	FL	1	X 1
R Coord of Bottom Right Corner	0x0027104b	FL	1	X 1
A Coord of Bottom Right Corner	0x0027104c	FL	1	X 1
S Coord of Bottom Right Corner	0x0027104d	FL	1	X 1
Image dimension - X	0x00271060	FL	1	*
Image dimension - Y	0x00271061	FL	1	*
Number of Excitations	0x00271062	FL	1	*

GEMS_IMPS_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00290010	LO	1	*
Lower range of Pixels1	0x00291015	SL	1	*
(L1) Lower range of Pixels1 (L2) Upper range of Pixels 1	0x00291016	SL	1	(L2)
Lower range of Pixels2	0x00291017	SL	1	X1
Upper range of Pixels2	0x00291018	SL	1	X1
Len of tot hdr in bytes	0x0029101a	SL	1	X 1
Version of the hdr struct	0x00291026	SS	1	X1
Advantage comp. Overflow	0x00291034	SL	1	X1
Advantage comp. Underflow	0x00291035	SL	1	X1

Note: (L1) Lower range of Pixels1 for 0x00291016 seems to be a typo.

GEMS_PARM_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00430010	LO	1	*
Bitmap of prescan options	0x00431001	SS	1	*
Gradient offset in X	0x00431002	SS	1	*
Gradient offset in Y	0x00431003	SS	1	*
Gradient offset in Z	0x00431004	SS	1	*
Img is original or unoriginal	0x00431005	SS	1	X 1
Number of EPI shots	0x00431006	SS	1	*
Views per segment	0x00431007	SS	1	*
Respiratory rate, bpm	0x00431008	SS	1	*
Respiratory trigger point	0x00431009	SS	1	*
Type of receiver used	0x0043100a	SS	1	*
(L1) Peak rate of change of gradient field (L2) DB/dt Peak rate of change of gradient field	0x0043100b	DS	1	(L2)
(L1) Limits in units of percent (L2) dB/dt Limits in units of percent	0x0043100c	DS	1	(L2)
PSD estimated limit	0x0043100d	DS	1	*
PSD estimated limit in tesla per second	0x0043100e	DS	1	*
Saravghead	0x0043100f	DS	1	X1
Window value	0x00431010	US	1	X1
GE image integrity	0x0043101c	SS	1	*
Level value	0x0043101d	SS	1	X1
Unique image iden	0x00431028	OB	1	X1
Histogram tables	0x00431029	OB	1	*
User defined data	0x0043102a	OB	1	*
Private Scan Options	0x0043102b	SS	4	X 1
Effective echo spacing	0x0043102c	SS	1	*

Filter Mode (String slop field 1 in legacy GE MR images)	0x0043102d	SH	1	*
String slop field 2	0x0043102e	SH	1	*
Image Type (real, imaginary, phase, magnitude)	0x0043102f	SS	1	*
Vas collapse flag	0x00431030	SS	1	*
RA cord of target recon center	0x00431031	DS	2	X1
Vas flags	0x00431032	SS	1	*
Neg_scanspacing	0x00431033	FL	1	*
Offset Frequency	0x00431034	IS	1	*
User_usage_tag	0x00431035	UL	1	*
User_fill_map_MSW	0x00431036	UL	1	*
User_fill_map_LSW	0x00431037	UL	1	*
(L1) User data 25...User data 48 (L2) User data 25...User data 48 {User48=Effective Resolution for spiral}	0x00431038	FL	24	(L2)
slop_int_6... slop_int_9 6: b_value 7: private imaging options 2 8: ihtagging 9: ihtagspc	0x00431039	IS	4	*
(L1) Slop_int_10... slop_int_17 10: ihfcineim 11: ihfcinent 12: Reserved 13: optarr 14: averages 15: Current Station # 16: Total # of Stations 17: Reserved (L2) Slop_int_10... slop_int_17 10: ihfcineim 11: ihfcinent 12: Reserved 13: optarr 14: averages 15: Current Station # 16: Total # of Stations 17: private imaging options 3	0x00431060	IS	8	(L2)
Scanner Study Entity UID	0x00431061	UI	1	X1
Scanner Study ID	0x00431062	SH	1	X1

(L1) Scanner Table Entry (single gradient coil systems only) Scanner Table Entry + Gradient Coil Selected				(L2)
(L2) Scanner Table Entry (single gradient coil systems only); Scanner table Entry + Gradient Coil Selected 1: table entry, 2: table swing angle, 3: table lateral offset, 4: gradient coil selected (multiple gradient systems only)	0x0043106f	DS	3,4	
Paradigm Name	0x00431070	LO	1	*
Paradigm Description	0x00431071	ST	1	*
Paradigm UID	0x00431072	UI	1	*
Experiment Type	0x00431073	US	1	*
#rest volumes	0x00431074	US	1	*
#active volumes	0x00431075	US	1	*
#dummy scans	0x00431076	US	1	*
Application Name	0x00431077	SH	1	*
Application Version	0x00431078	SH	1	*
Slices Per Volume	0x00431079	US	1	*
Expected Time Points	0x0043107a	US	1	*
Regressor Values	0x0043107b	FL	1-n	*
Delay after slice group	0x0043107c	FL	1	*
Recon mode flag word	0x0043107d	US	1	*
PACC specific information	0x0043107e	LO	1-n	*
(L1) Grad Shim Values (L2) Reserved	0x0043107f	DS	1-n	(L2)
Coil ID Data	0x00431080	LO	1-n	*
GE Coil Name	0x00431081	LO	1	*
System Configuration Information	0x00431082	LO	1-n	*
Asset R Factors	0x00431083	DS	1-2	*
Additional Asset Data	0x00431084	LO	5	*
Debug Data (text format)	0x00431085	UT	1	*
Debug Data (binary format)	0x00431086	OB	1	*
(L1) Reserved (L2) Software Versions Long	0x00431087	UT	1	(L1)
PURE Acquisition Calibration Series UID	0x00431088	UI	1	*
Governing Body, dB/dt, and SAR definition	0x00431089	LO	3	*

Private In-Plane Phase Encoding Direction	0x0043108a	CS	1	*
FMRI Binary Data Block	0x0043108b	OB	1	*
Voxel Location	0x0043108c	DS	6	*
SAT Band Locations	0x0043108d	DS	7n	*
Spectro Prescan Values	0x0043108e	DS	3	*
Spectro Parameters	0x0043018f	DS	3	*
SAR Definition	0x00431090	LO	1-n	*
SAR value	0x00431091	DS	1-n	*
Image Error Text	0x00431092	LO	1	*
Spectro Quantitation Values	0x00431093	DS	1-n	*
Spectro Ratio Values	0x00431094	DS	1-n	*
Prescan Reuse String	0x00431095	LO	1	*
Content Qualification	0x00431096	CS	1	*
Image Filtering Parameters	0x00431097	LO	8	*
ASSET Acquisition Calibration Series UID	0x00431098	UI	1	*
Extended Options	0x00431099	LO	1-n	*
Rx Stack Identification	0x0043109a	IS	1	*
NPW factor	0x0043109b	DS	1	*
Research Tag 1	0x0043109c	OB	1	*
Research Tag 2	0x0043109d	OB	1	*
Research Tag 3	0x0043109e	OB	1	*
Research Tag 4	0x0043109f	OB	1	*

BrainWave: 1.2.840.113819.3

				DOC0464555 Rev. 3
Private Creator ID	0x20010010	LO	1	*
DICOM Implementation UID	0x20011010	UI	1	*
DICOM Implementation Version	0x10011011	SH	1	*
Within-DICOM-Implementation SOP Instance UID	0x20011012	UI	1	*
Application Name	0x20011013	SH	1	*
Application Version	0x20011014	SH	1	*
Compatibility Version	0x20011015	SH	1	*
Referenced Series UID	0x20011021	UI	1-n	*
Number of Objects Averaged	0x20011031	US	1	*
Number of Expected Time Points	0x20011041	US	1	*
Number of Slices Per Volume	0x20011051	US	1	*
BW Image Type	0x20011060	US	1	*
Experiment Type	0x20011061	US	1	*
Paradigm UID	0x20011071	UI	1	*
Paradigm Name	0x20011072	LO	1	*
Paradigm Description	0x20011073	ST	1	*
Contrast	0x20011080	OB	1	*
Regressor Values	0x20011081	FL	1-n	*
Number of Degrees of Freedom	0x20011086	US	1	*
Z Threshold	0x2001108a	FL	1	*
p Threshold	0x2001108b	FL	1	*
Motion Parameters	0x200110a0	FL	1-n	*
Registration Parameters	0x200110a1	FL	1-n	*
Subject Data	0x200110a2	FL	1-n	*
DTI Parameters	0x200110b0	OB	1	*
Paradigm Info	0x200110c0	OB	1	*

GEMS_MR_RAW_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x70010010	LO	1	*
rdb_hdr_rec	0x70011001	OB	1	*
rdb_hdr_per_pass_tab	0x70011002	OB	1	*
rdr_hdr_unlock_raw	0x70011003	OB	1	*
rdb_hdr_data_acq_tab	0x70011004	OB	1	*
rdb_hdr_nex_tab	0x70011005	OB	1	*
rdb_hdr_nex_abort_tab	0x70011006	OB	1	*
rdb_hdr_tool	0x70011007	OB	1	*
rdb_raw_data	0x70011008	OB	1	*
SSP save	0x70011009	OB	1	*
UDA save	0x7001100a	OB	1	*
rdb_chemsat_data	0x7001100b	OB	1	

GEMS_FUNCTOOL_01

				DOC0464555 Rev. 3
GEHC Private Creator ID	0x00510010	LO	1	*
Functional Proc Group Name	0x00511001	LO	1	*
Functional Processing Name	0x00511002	LO	1	*
Bias of Functional Image	0x00511003	SL	1	*
Scale of Functional Image	0x00511004	FL	1	*
Length of Parameters String	0x00511005	SL	1	*
Store Parameters string, delimited by character ESC=0x1b (27)	0x00511006	LT	1	*
Functional Image Version	0x00511007	LO	1	*
Store Color Ramp	0x00511008	SL	1	*
Store Width of Functional Image	0x00511009	SL	1	*
Store level of Functional Image	0x0051100a	SL	1	*
Store B-Value with Functional Image	0x0051100b	FL	1	*
Analysis Package	0x0051011c	LO	1	*