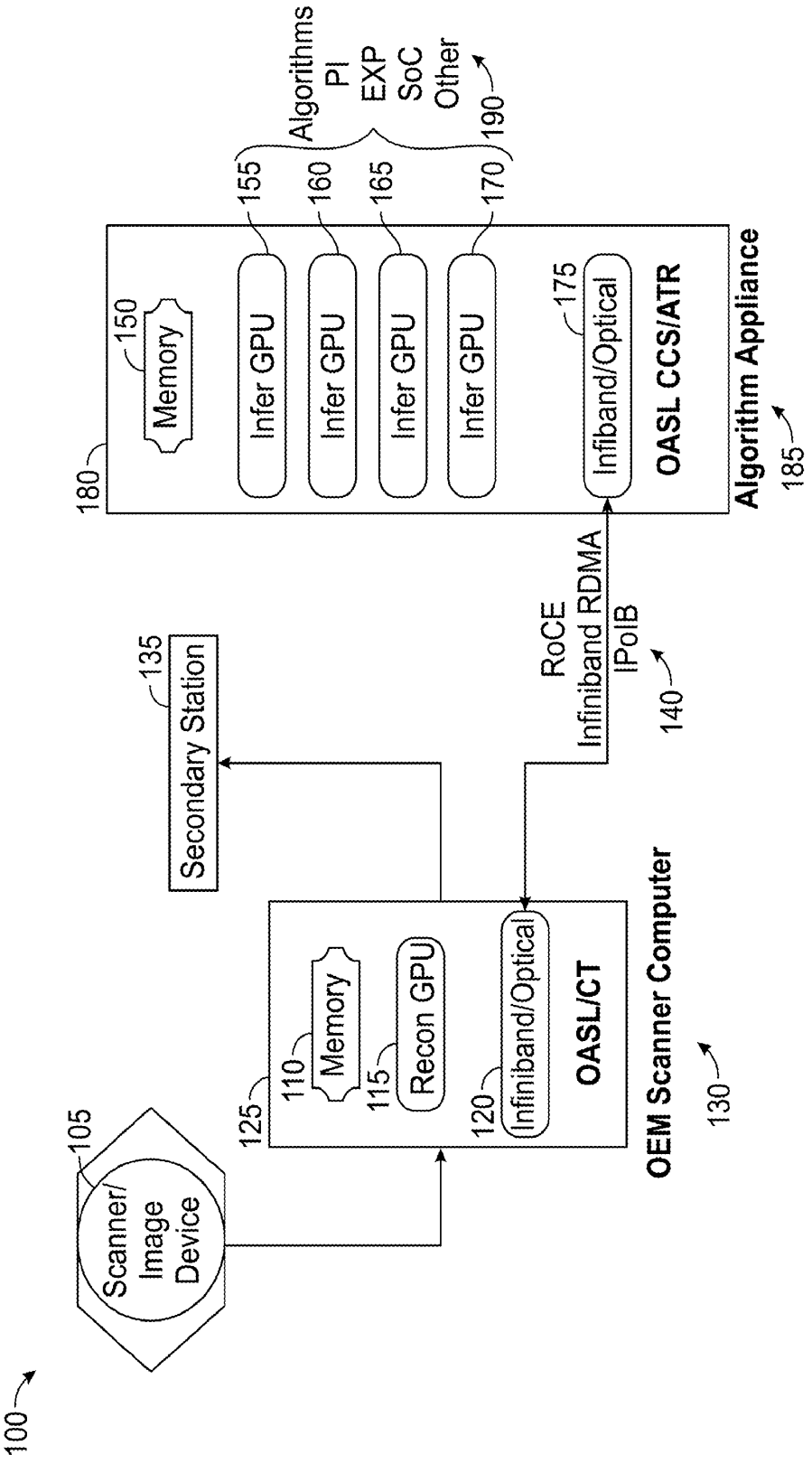

100
Scanner/
Image
Device
105
125
110
Memory
115
Recon GPU
120
Infiniband/Optical
OASL/CT
OEM Scanner Computer
130
Secondary Station
135
RoCE
Infiniband RDMA
IPoIB
140
180
Memory
150
Infer GPU
155
Infer GPU
160
Infer GPU
165
Infer GPU
170
Algorithms
PI
EXP
SoC
Other
190
175
Infiband/Optical
OASL CCS/ATR
Algorithm Appliance
185

FIG. 1

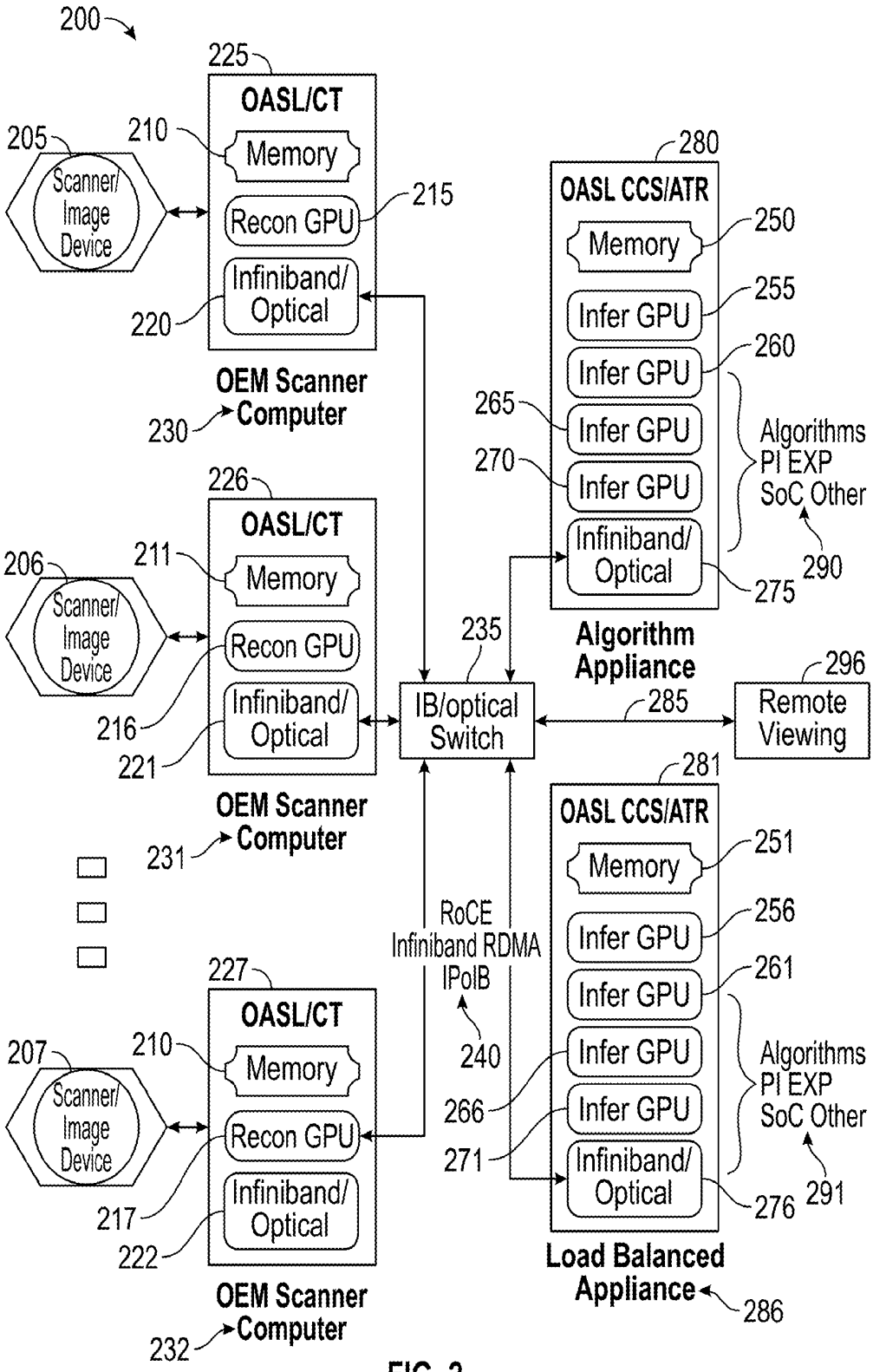

200
225
OASL/CT
205
210
Memory
Scanner/ Image Device
Recon GPU
215
Infiniband/ Optical
220
OEM Scanner Computer
230
226
OASL/CT
206
211
Memory
Scanner/ Image Device
Recon GPU
216
Infiniband/ Optical
221
OEM Scanner Computer
231
227
OASL/CT
207
210
Memory
Scanner/ Image Device
Recon GPU
217
Infiniband/ Optical
222
OEM Scanner Computer
232
280
OASL CCS/ATR
Memory
250
Infer GPU
255
Infer GPU
260
265
Infer GPU
270
Infer GPU
Infiniband/ Optical
275
Algorithms PI EXP SoC Other
290
Algorithm Appliance
235
IB/optical Switch
285
296
Remote Viewing
281
OASL CCS/ATR
Memory
251
Infer GPU
256
Infer GPU
261
Infer GPU
266
Infer GPU
271
Infiniband/ Optical
276
Algorithms PI EXP SoC Other
291
Load Balanced Appliance
286
RoCE
Infiniband RDMA
IPoIB
240

FIG. 2

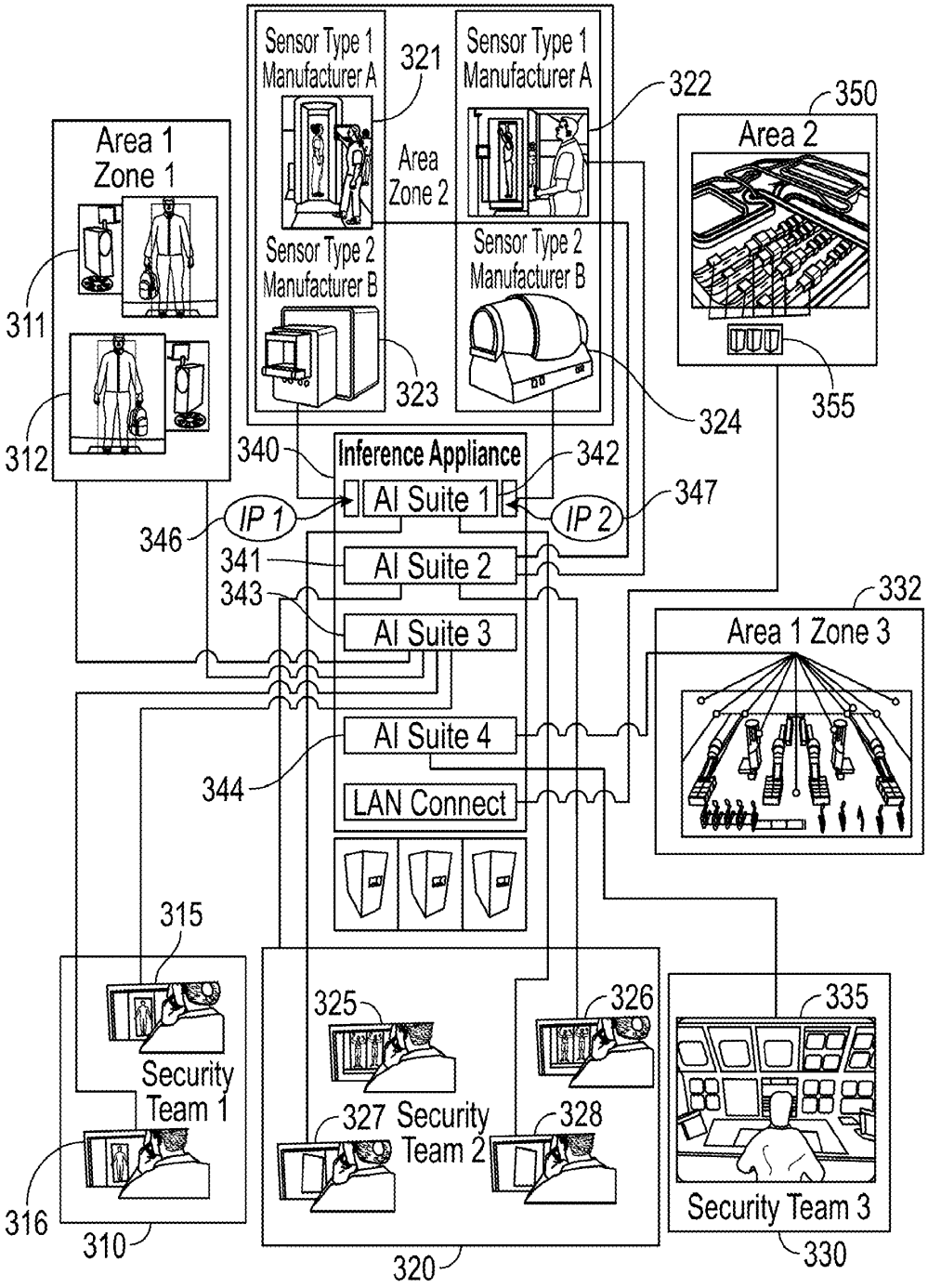

Sensor Type 1
Manufacturer A
321
Sensor Type 1
Manufacturer A
322
350
Area 1
Zone 1
Area
Zone 2
Area 2
Sensor Type 2
Manufacturer B
Sensor Type 2
Manufacturer B
311
323
324
355
312
340
Inference Appliance
342
AI Suite 1
IP 1
IP 2
347
346
341
AI Suite 2
343
332
AI Suite 3
Area 1 Zone 3
AI Suite 4
344
LAN Connect
315
325
326
335
Security
Team 1
327
Security
Team 2
328
316
310
320
Security Team 3
330

FIG. 3

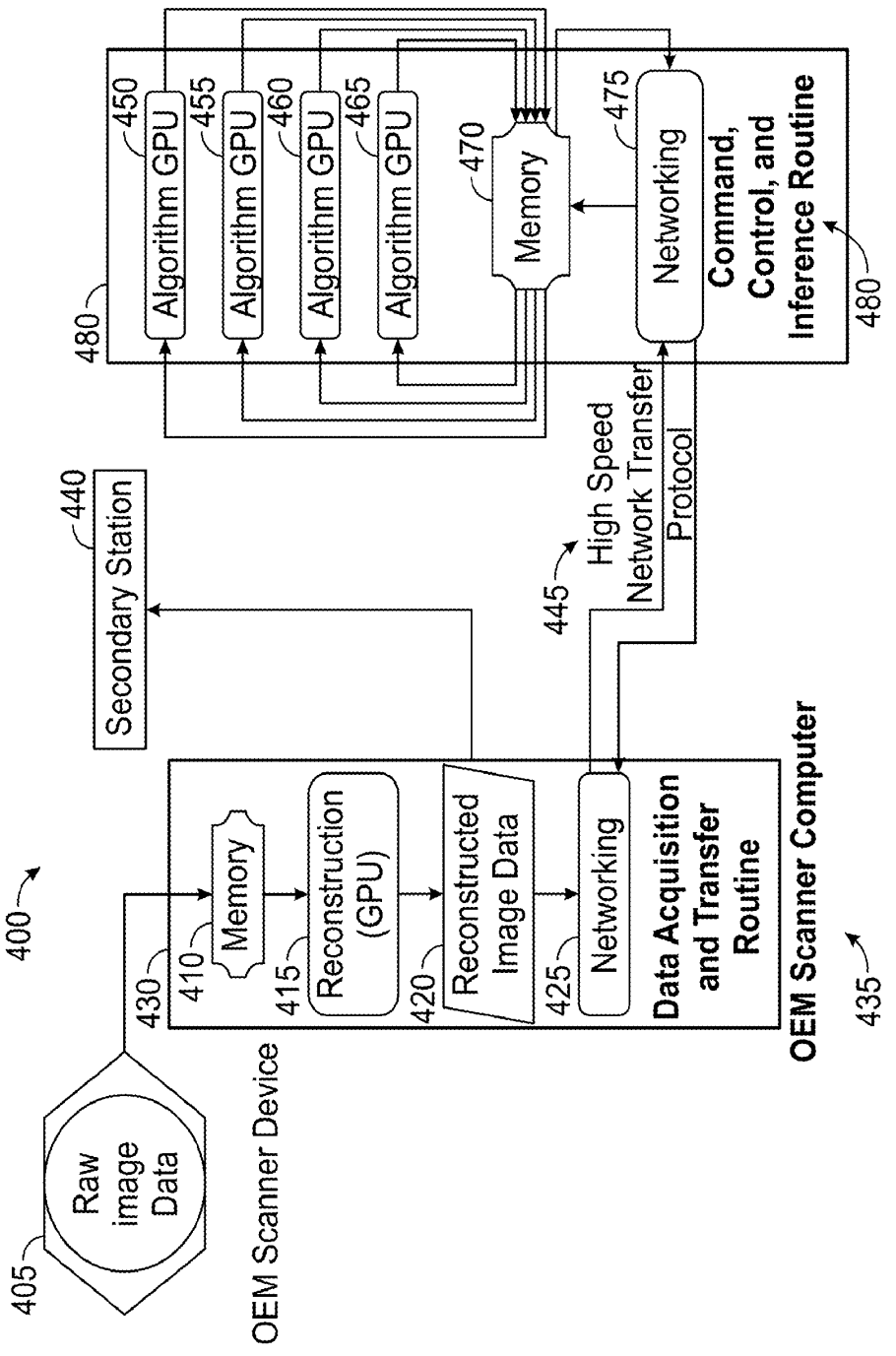

400
405
Raw image Data
OEM Scanner Device
430
410
Memory
415
Reconstruction (GPU)
420
Reconstructed Image Data
425
Networking
Data Acquisition and Transfer Routine
OEM Scanner Computer
435
440
Secondary Station
445
High Speed Network Transfer Protocol
480
450
Algorithm GPU
455
Algorithm GPU
460
Algorithm GPU
465
Algorithm GPU
470
Memory
475
Networking
Command, Control, and Inference Routine
480

FIG. 4

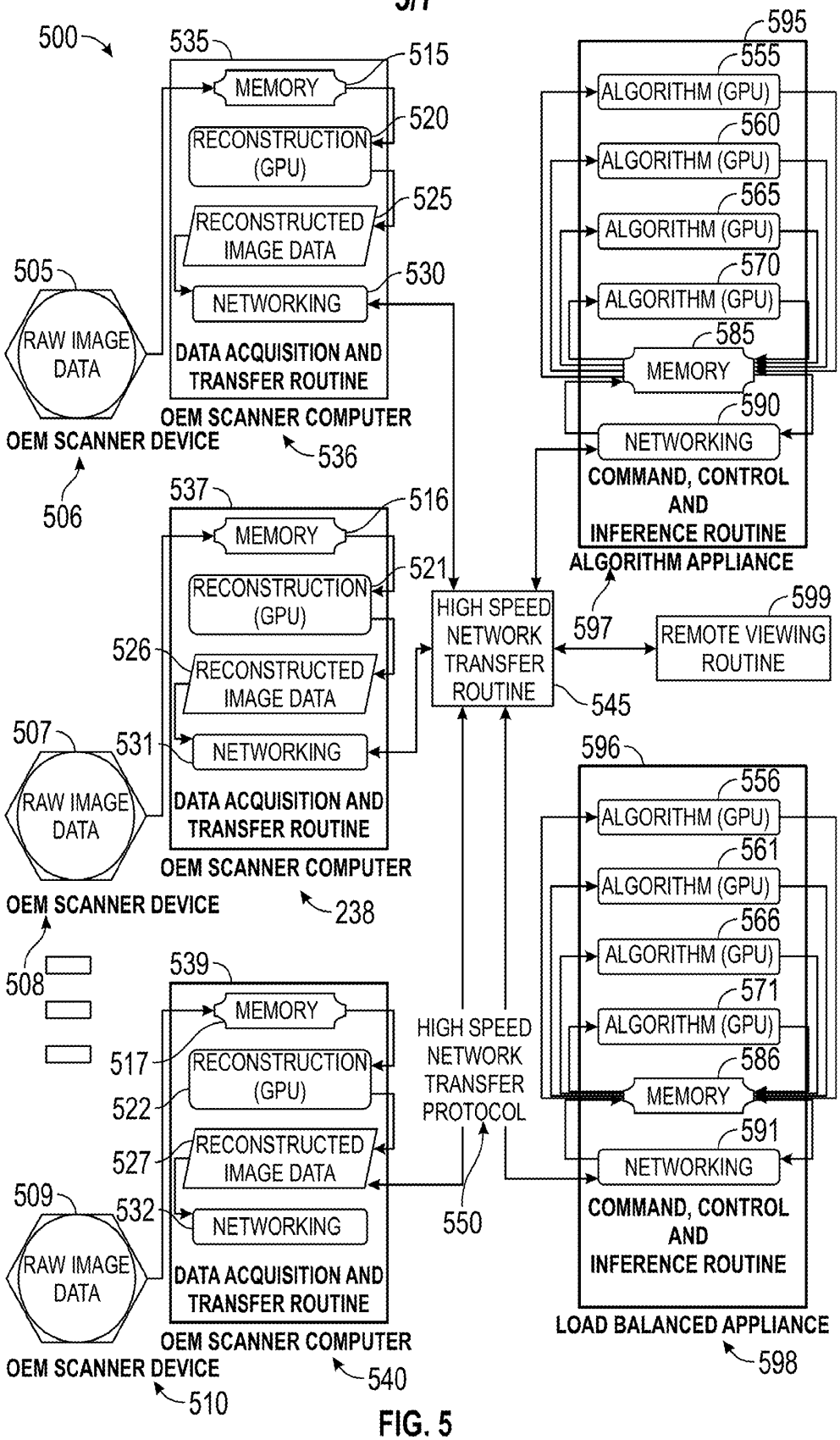

500
535
515
MEMORY
520
RECONSTRUCTION (GPU)
525
RECONSTRUCTED IMAGE DATA
530
NETWORKING
DATA ACQUISITION AND TRANSFER ROUTINE
OEM SCANNER COMPUTER
536
505
RAW IMAGE DATA
OEM SCANNER DEVICE
506
595
555
ALGORITHM (GPU)
560
ALGORITHM (GPU)
565
ALGORITHM (GPU)
570
ALGORITHM (GPU)
585
MEMORY
590
NETWORKING
COMMAND, CONTROL AND INFERENCE ROUTINE
ALGORITHM APPLIANCE
597
599
REMOTE VIEWING ROUTINE
HIGH SPEED NETWORK TRANSFER ROUTINE
545
537
516
MEMORY
521
RECONSTRUCTION (GPU)
526
RECONSTRUCTED IMAGE DATA
531
NETWORKING
DATA ACQUISITION AND TRANSFER ROUTINE
OEM SCANNER COMPUTER
238
507
RAW IMAGE DATA
OEM SCANNER DEVICE
508
596
556
ALGORITHM (GPU)
561
ALGORITHM (GPU)
566
ALGORITHM (GPU)
571
ALGORITHM (GPU)
586
MEMORY
591
NETWORKING
COMMAND, CONTROL AND INFERENCE ROUTINE
LOAD BALANCED APPLIANCE
598
539
MEMORY
517
RECONSTRUCTION (GPU)
522
RECONSTRUCTED IMAGE DATA
527
532
NETWORKING
DATA ACQUISITION AND TRANSFER ROUTINE
OEM SCANNER COMPUTER
540
509
RAW IMAGE DATA
OEM SCANNER DEVICE
510
HIGH SPEED NETWORK TRANSFER PROTOCOL
550

FIG. 5

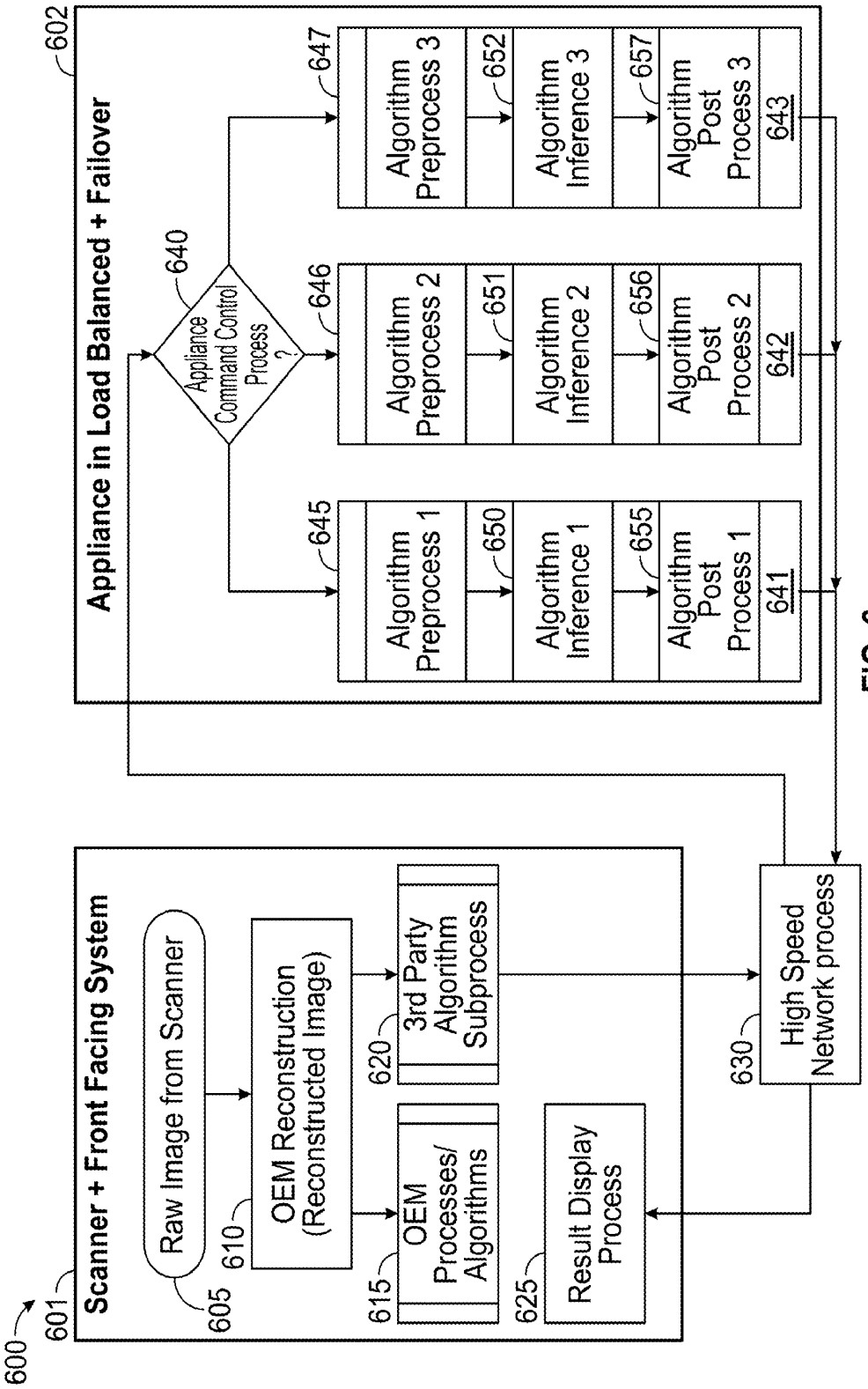

600
601
Scanner + Front Facing System
Raw Image from Scanner
605
OEM Reconstruction (Reconstructed Image)
610
OEM Processes/ Algorithms
615
3rd Party Algorithm Subprocess
620
Result Display Process
625
High Speed Network process
630
602
Appliance in Load Balanced + Failover
Appliance Command Control Process ?
640
Algorithm Preprocess 1
645
Algorithm Inference 1
650
Algorithm Post Process 1
655
641
Algorithm Preprocess 2
646
Algorithm Inference 2
651
Algorithm Post Process 2
656
642
Algorithm Preprocess 3
647
Algorithm Inference 3
652
Algorithm Post Process 3
657
643

FIG. 6

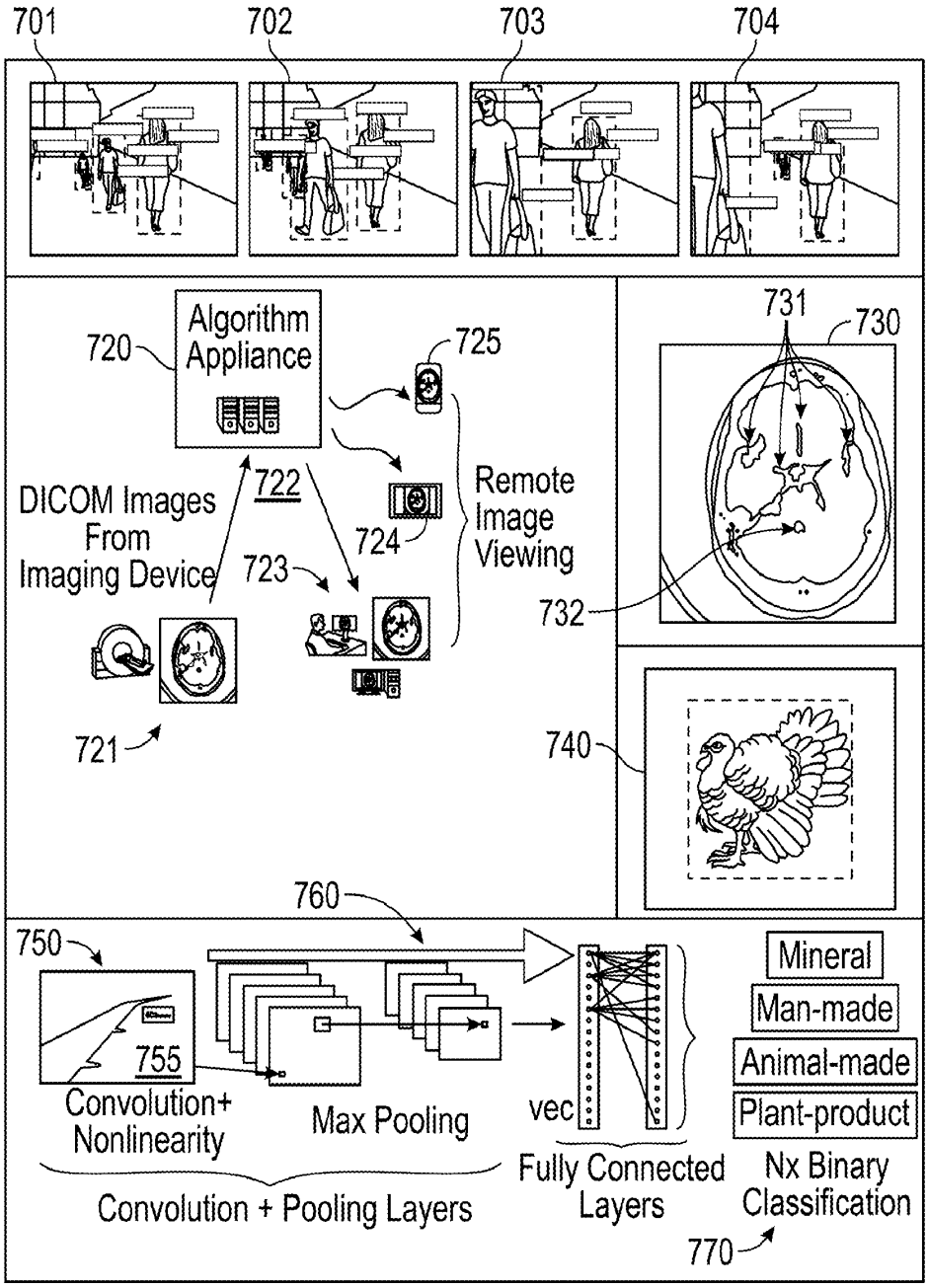

701
702
703
704
Algorithm Appliance
720
725
722
724
723
DICOM Images From Imaging Device
Remote Image Viewing
721
731
730
732
740
760
750
755
Convolution+ Nonlinearity
Max Pooling
vec
Fully Connected Layers
Mineral
Man-made
Animal-made
Plant-product
Nx Binary Classification
Convolution + Pooling Layers
770

FIG. 7