SOC: AM6421 resource management for ICSSG1

Note – We are working with Am6421. we have kept resources MAIN_0_R5_1 R5F

MAIN_0_R5_1 R5F means subsystem 0 core 0 – Present
MAIN_0_R5_3 R5F means subsystem 0 core 1 – Not Present in Am6421
MAIN_1_R5_1 R5F means subsystem 1 core 0 - Present
MAIN_1_R5_3 R5F means subsystem 1 core 1 – Not Present in Am6421

https://software-dl.ti.com/mcu-plus-sdk/esd/AM64X/latest/exports/docs/api_guide_am64x/RESOURCE_ALLOCATION_GUIDE.html

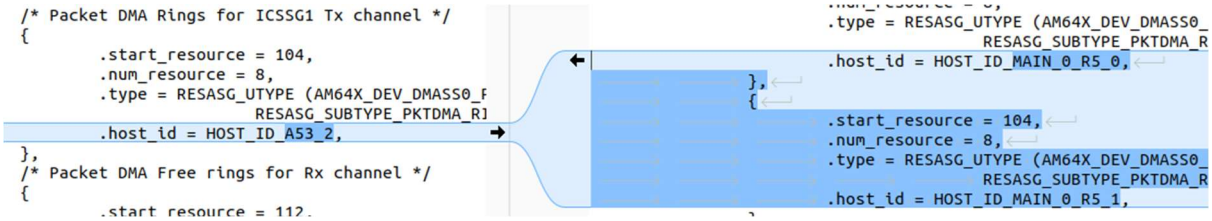
AM6421 Resource changes

Resources	A53_2	MAIN_0_R5_1	MAIN_0_R5_3	MAIN_1_R5_1	MAIN_1_R5_3	M4_0	ALL
Packet DMA							
Free Tx channels	4	3	2	4	2	1	0
Free Rx channels	4	3	2	4	2	1	0
CPSW Tx channels	8						0
CPSW Rx channel	1						0
SA2UL Tx channel0							0
SA2UL Tx channel1	1						0
SA2UL Rx channel0							0
SA2UL Rx channel1							0
SA2UL Rx channel2	1						0
SA2UL Rx channel3	1						0
ICSSG0 Tx channels	8						0
ICSSG0 Rx channel	4						0
ICSSG1 Tx channels		8					0
ICSSG1 Rx channel		4					0

Packet DMA ring accelerator							
Free rings for Tx channel	4	3	2	4	2	1	0
Free rings for Rx channel	4	3	2	4	2	1	0
Free flows for Rx channels	4	3	2	4	2	1	0
Rings for CPSW Tx channel	64						0
Rings for CPSW Rx channel	16						0
CPSW Rx flows	16						0
Rings for SA2UL Tx channel0							0
Rings for SA2UL Tx channel1	8						0
Rings for SA2UL Rx channel0							0
SA2UL Rx channel0 flows							8
Rings for SA2UL Rx channel1							8
SA2UL Rx channel1 flows							8
Rings for SA2UL Rx channel2	8						0
SA2UL Rx channel2 flows	8						0
Rings for SA2UL Rx channel3	8						0
SA2UL Rx channel3 flows	8						0
Rings for ICSSG0 Tx channel	8						0
Rings for ICSSG0 Rx channel	64						0
ICSSG0 Rx flows	64						0
Rings for ICSSG1 Tx channel		8					0
Rings for ICSSG1 Rx channel		64					0
ICSSG1 Rx flows		64					0

Yaml file creation steps

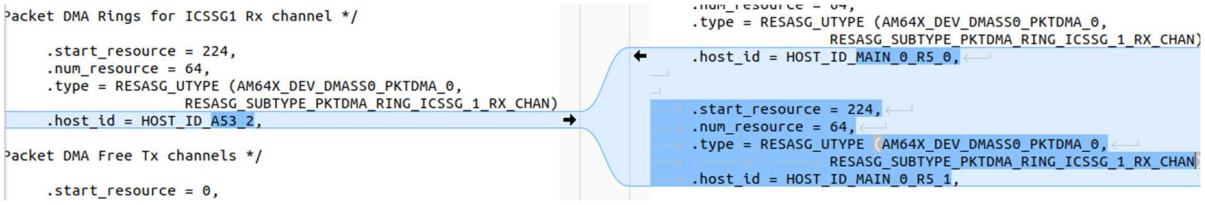
1. RESASG_SUBTYPE_PKTDMA_RING_ICSSG_1_TX_CHAN = 0x0795 = 1941
   MAIN_0_R5_0 = 35
   MAIN_0_R5_1 = 36
   Meld diff



Corresponding Entry in Yaml

```
960
961         -
962                 start_resource: 104
963                 num_resource: 8
964                 type: 1941
965                 host_id: 35
966                 reserved: 0
967         -
968                 start_resource: 104
969                 num_resource: 8
970                 type: 1941
971                 host_id: 36
972                 reserved: 0
973
```

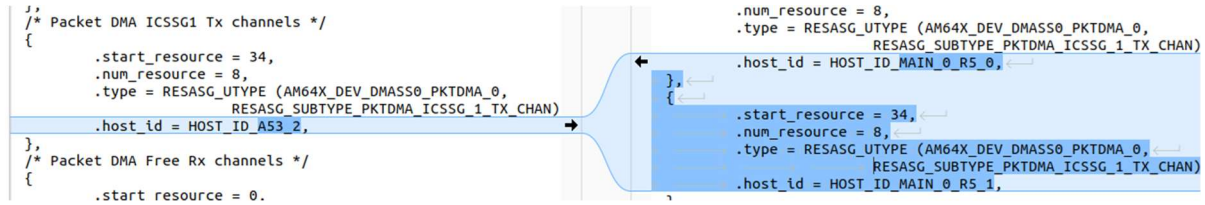
2. RESASG_SUBTYPE_PKTDMA_RING_ICSSG_1_RX_CHAN = 0x079D = 1949
   MAIN_0_R5_0 = 35
   MAIN_0_R5_1 = 36
   Meld diff



Corresponding Entry in Yaml

```
1065        -
1066                start_resource: 224
1067                num_resource: 64
1068                type: 1949
1069                host_id: 35
1070                reserved: 0
1071
1072        -
1073                start_resource: 224
1074                num_resource: 64
1075                type: 1949
1076                host_id: 36
1077                reserved: 0
1078
```

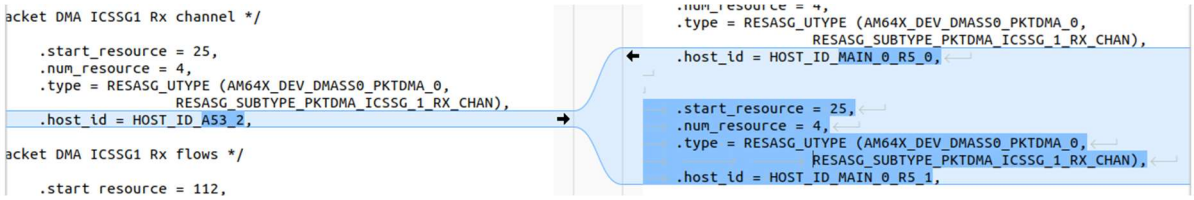
3. RESASG_SUBTYPE_PKTDMA_ICSSG_1_TX_CHAN = 0x07A8 = 1960
   MAIN_0_R5_0 = 35
   MAIN_0_R5_1 = 36
   Meld diff



Corresponding Entry in Yaml

```
1156          -
1157                  start_resource: 34
1158                  num_resource: 8
1159                  type: 1960
1160                  host_id: 35
1161                  reserved: 0
1162
1163          -
1164                  start_resource: 34
1165                  num_resource: 8
1166                  type: 1960
1167                  host_id: 36
1168                  reserved: 0
1169
1170          -
```

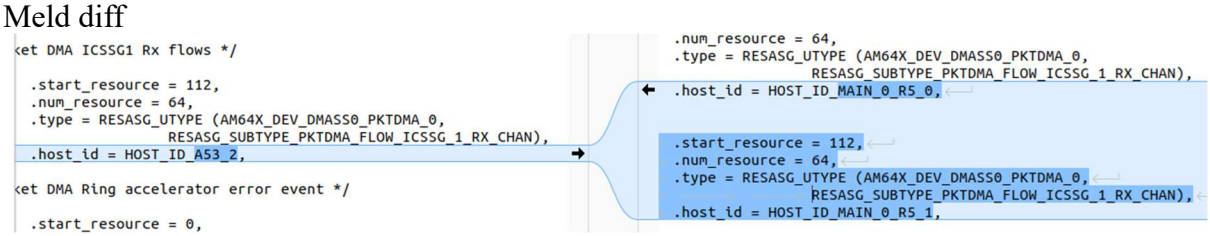
4. RESASG_SUBTYPE_PKTDMA_ICSSG_1_RX_CHAN = 0x07B7 = 1975
   MAIN_0_R5_0 = 35
   MAIN_0_R5_1 = 36
   Meld diff



   Corresponding Entry in Yaml

```
1352          -
1353                  start_resource: 25
1354                  num_resource: 4
1355                  type: 1975
1356                  host_id: 35
1357                  reserved: 0
1358
1359          -
1360                  start_resource: 25
1361                  num_resource: 4
1362                  type: 1975
1363                  host_id: 36
1364                  reserved: 0
1365
```

5. RESASG_SUBTYPE_PKTDMA_FLOW_ICSSG_1_RX_CHAN= 0x07B8 = 1976
   MAIN_0_R5_0 = 35
   MAIN_0_R5_1 = 36
   Meld diff



```
1366        -
1367                start_resource: 112
1368                num_resource: 64
1369                type: 1976
1370                host_id: 35
1371                reserved: 0
1372
1373        -
1374                start_resource: 112
1375                num_resource: 64
1376                type: 1976
1377                host_id: 36
1378                reserved: 0
1379
```