

FIG. 1

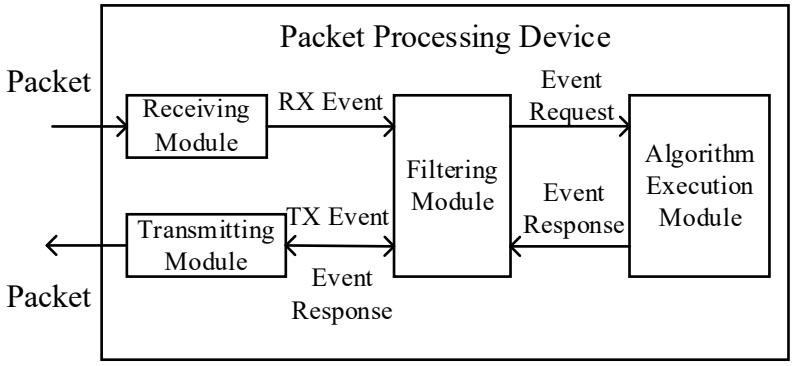


FIG. 2

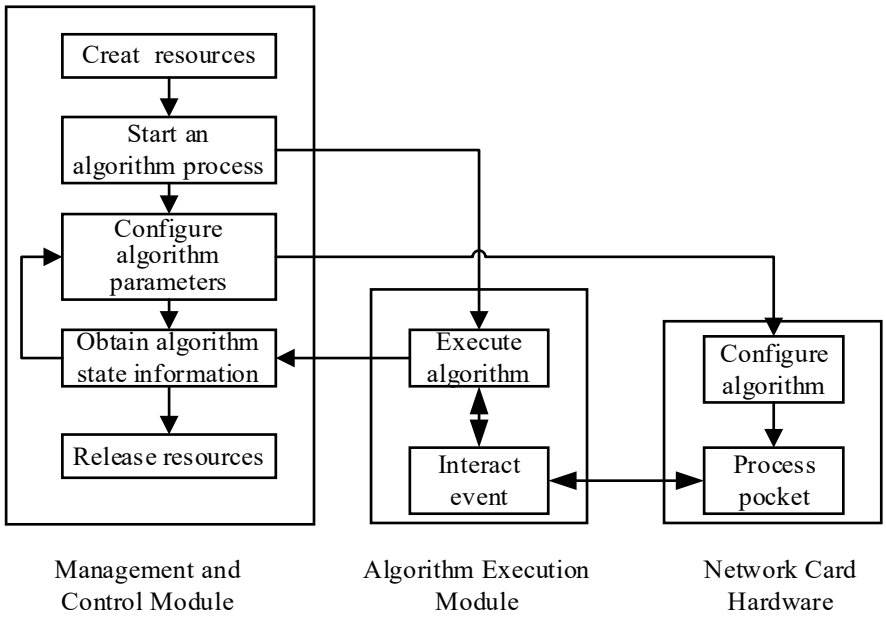


FIG. 3

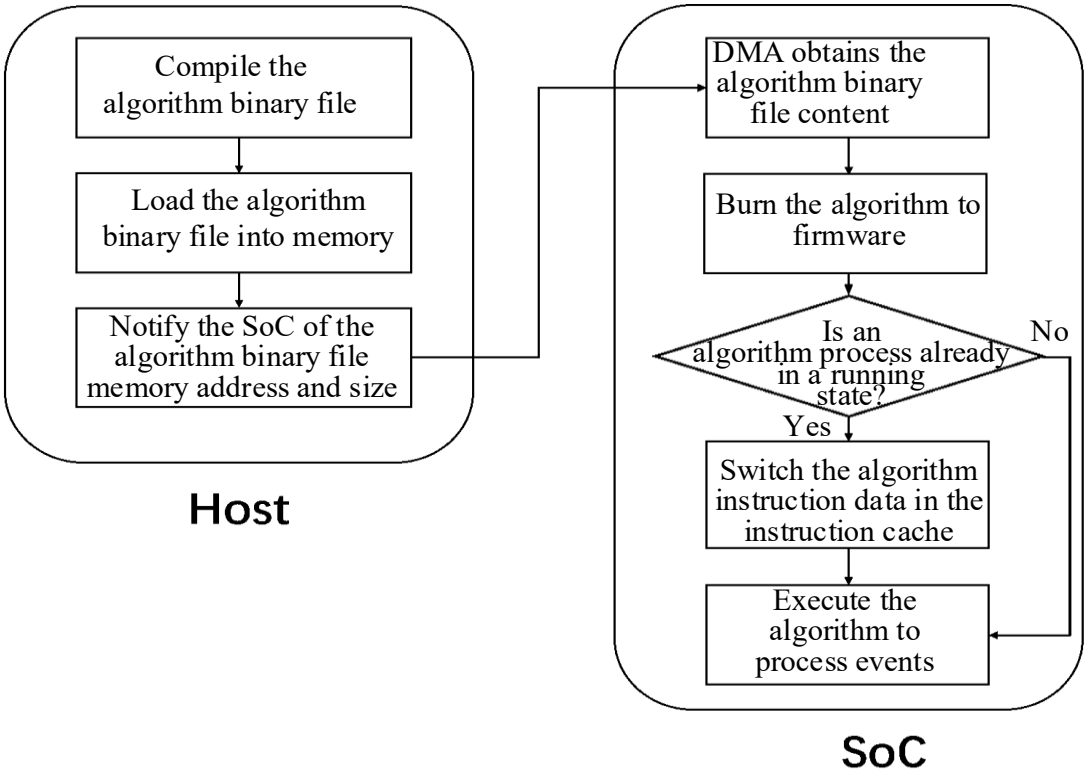

Compile the algorithm binary file
Load the algorithm binary file into memory
Notify the SoC of the algorithm binary file memory address and size
Host
DMA obtains the algorithm binary file content
Burn the algorithm to firmware
Is an algorithm process already in a running state?
No
Yes
Switch the algorithm instruction data in the instruction cache
Execute the algorithm to process events
SoC

FIG. 4

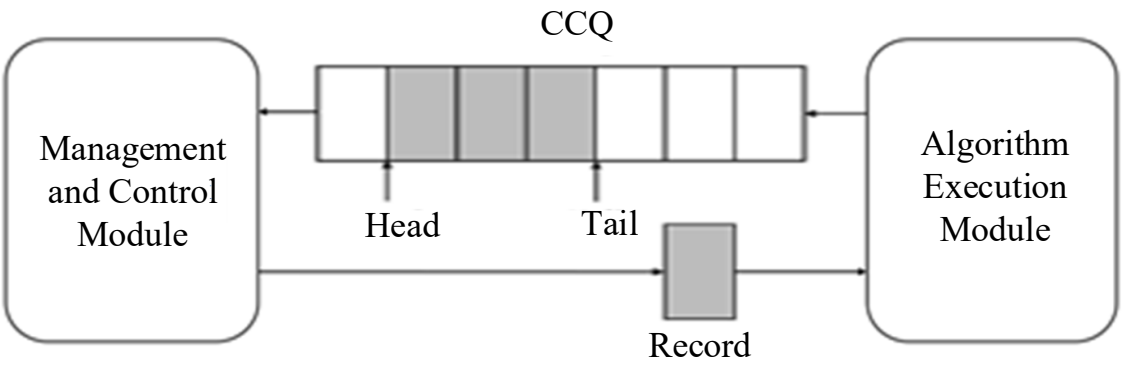

CCQ
Management and Control Module
Head
Tail
Record
Algorithm Execution Module

FIG. 5

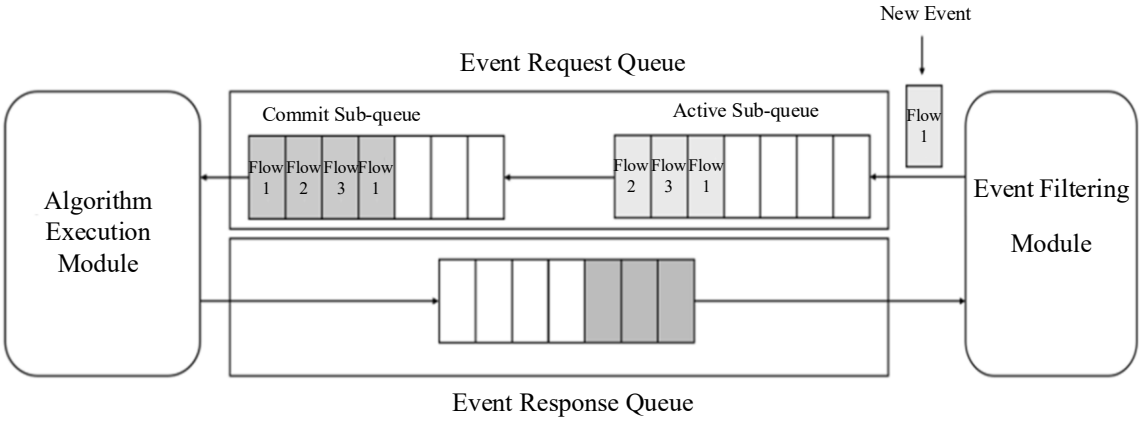


FIG. 6

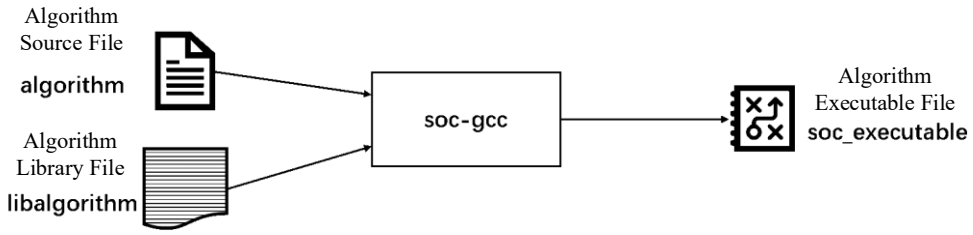


FIG. 7

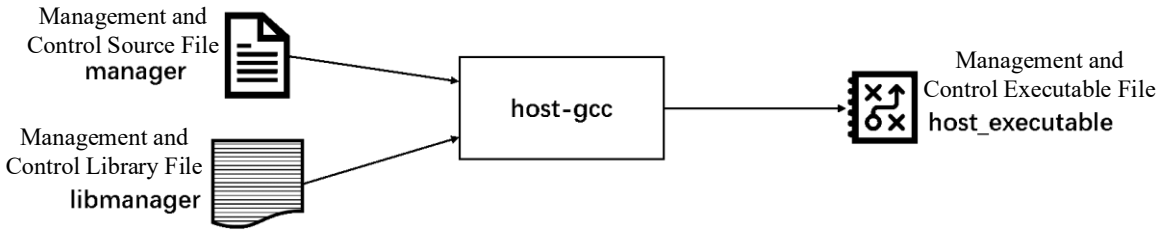


FIG. 8

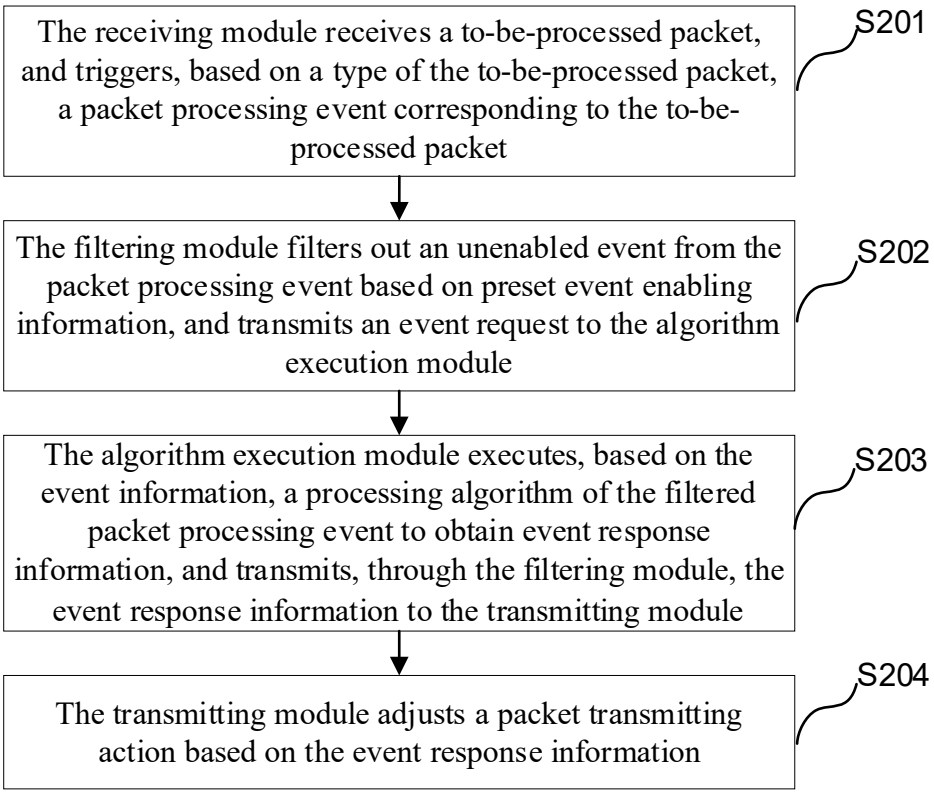

The receiving module receives a to-be-processed packet, and triggers, based on a type of the to-be-processed packet, a packet processing event corresponding to the to-be-processed packet
S201
The filtering module filters out an unenabled event from the packet processing event based on preset event enabling information, and transmits an event request to the algorithm execution module
S202
The algorithm execution module executes, based on the event information, a processing algorithm of the filtered packet processing event to obtain event response information, and transmits, through the filtering module, the event response information to the transmitting module
S203
The transmitting module adjusts a packet transmitting action based on the event response information
S204

FIG. 9

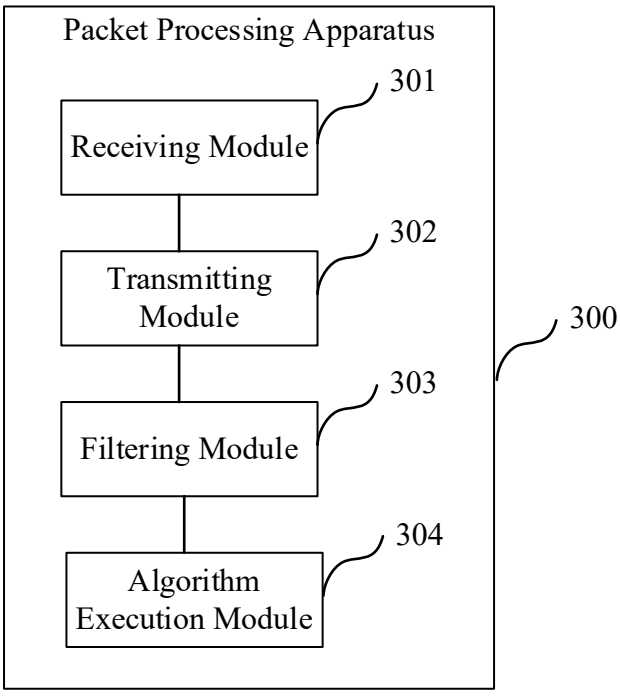

Packet Processing Apparatus
301
Receiving Module
302
Transmitting Module
303
Filtering Module
304
Algorithm Execution Module
300

FIG. 10

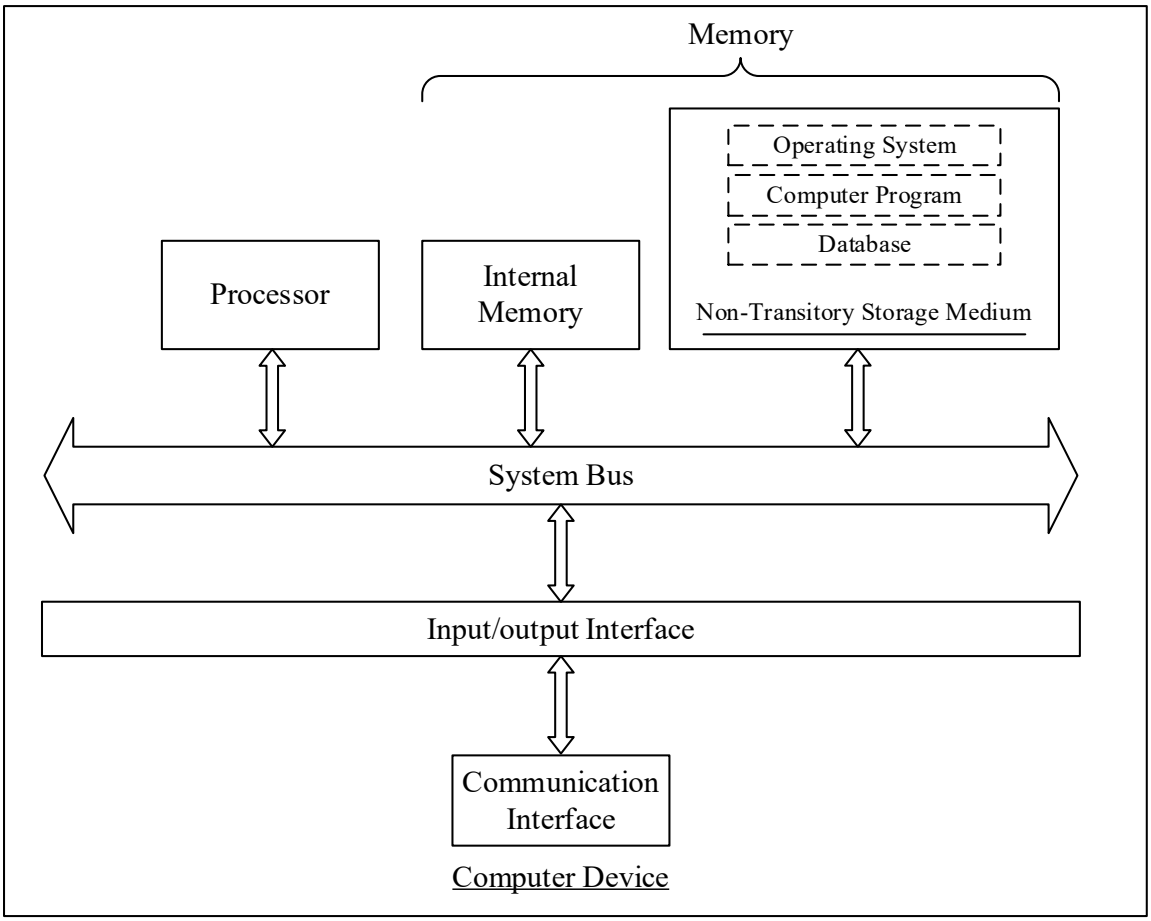

Memory
Operating System
Computer Program
Database
Non-Transitory Storage Medium
Processor
Internal Memory
System Bus
Input/output Interface
Communication Interface
Computer Device

FIG. 11