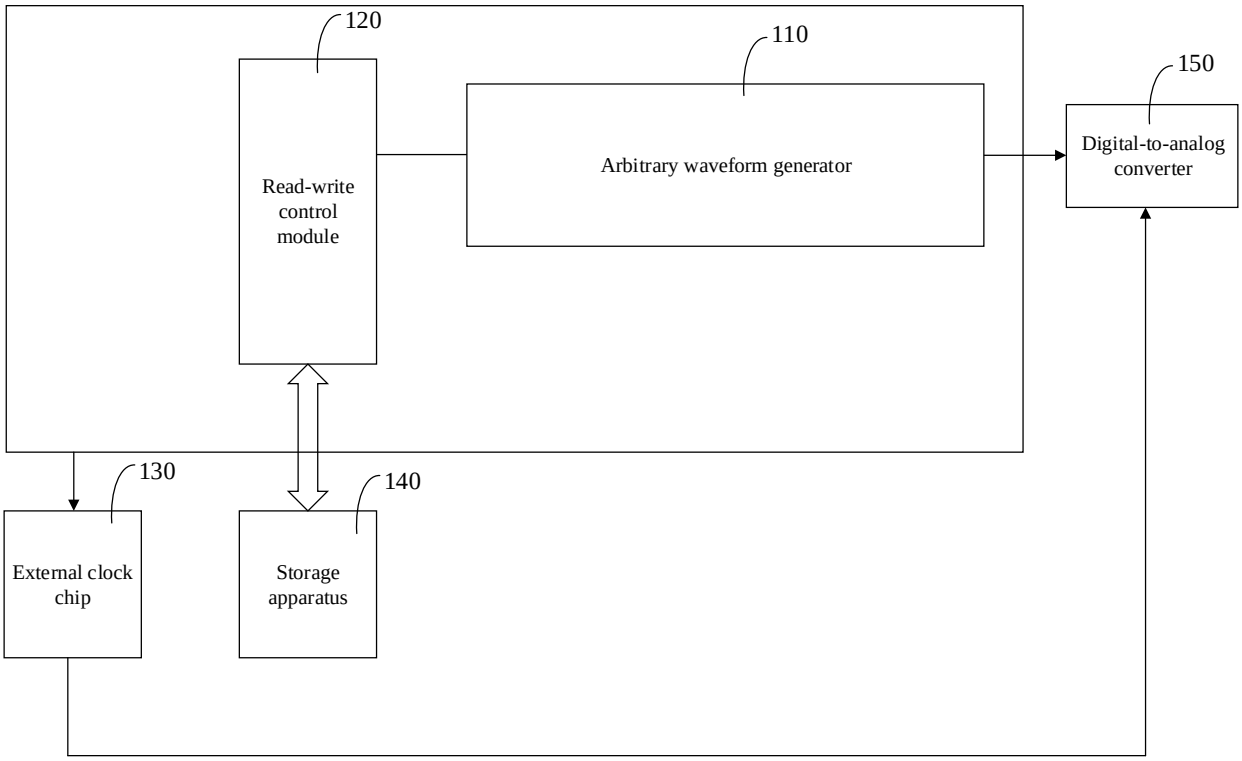

120
110
150
Read-write control module
Arbitrary waveform generator
Digital-to-analog converter
130
140
External clock chip
Storage apparatus

FIG. 1

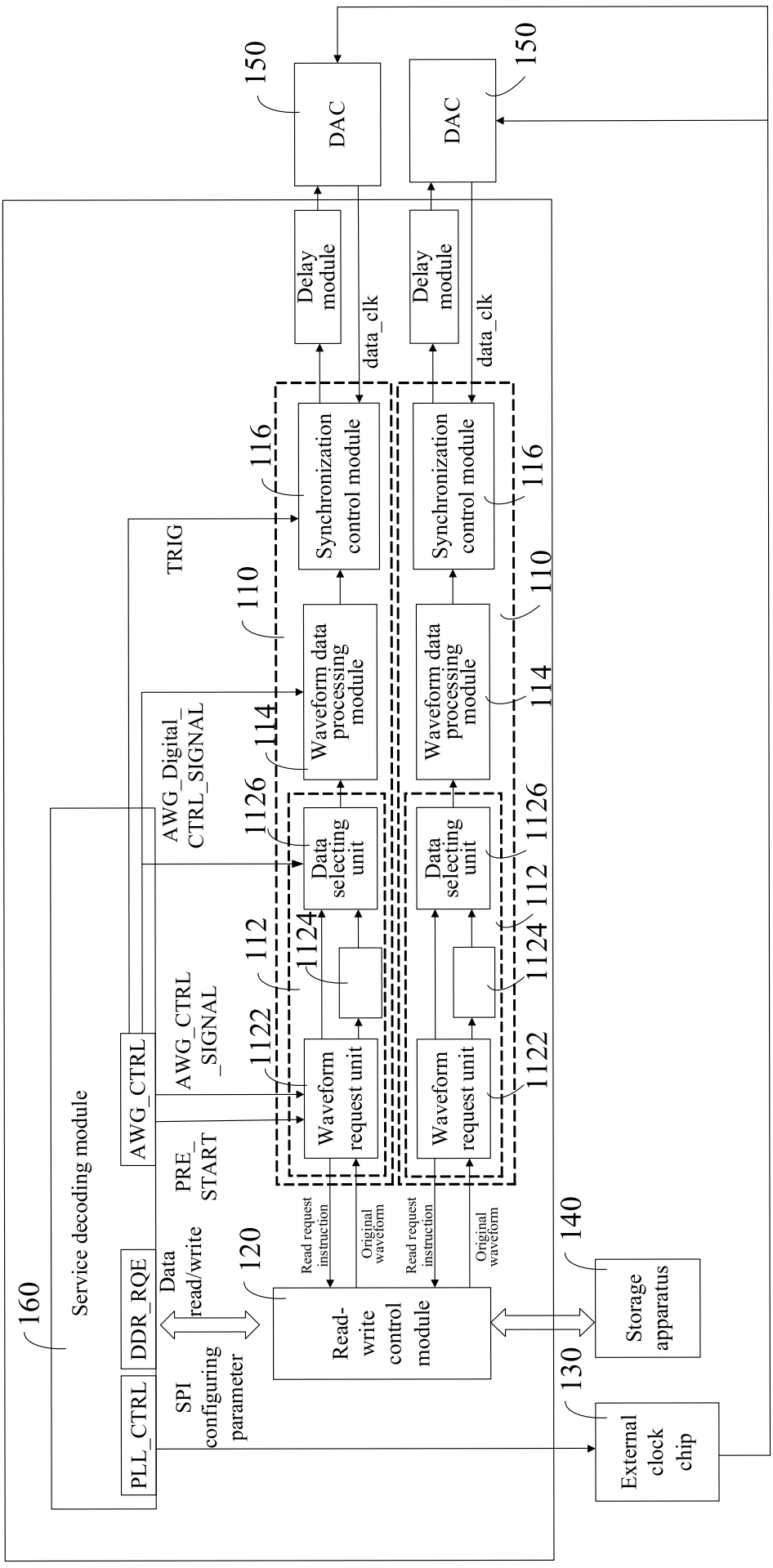

160
Service decoding module
PLL_CTRL
DDR_RQE
AWG_CTRL
PRE_START
AWG_CTRL_SIGNAL
AWG_Digital_CTRL_SIGNAL
TRIG
SPI configuring parameter
Data read/write
120
Read-write control module
130
External clock chip
140
Storage apparatus
Read request instruction
Original waveform
Waveform request unit
1122
Data selecting unit
1126
1124
112
Waveform data processing module
114
110
Synchronization control module
116
Delay module
data_clk
DAC
150

FIG. 2

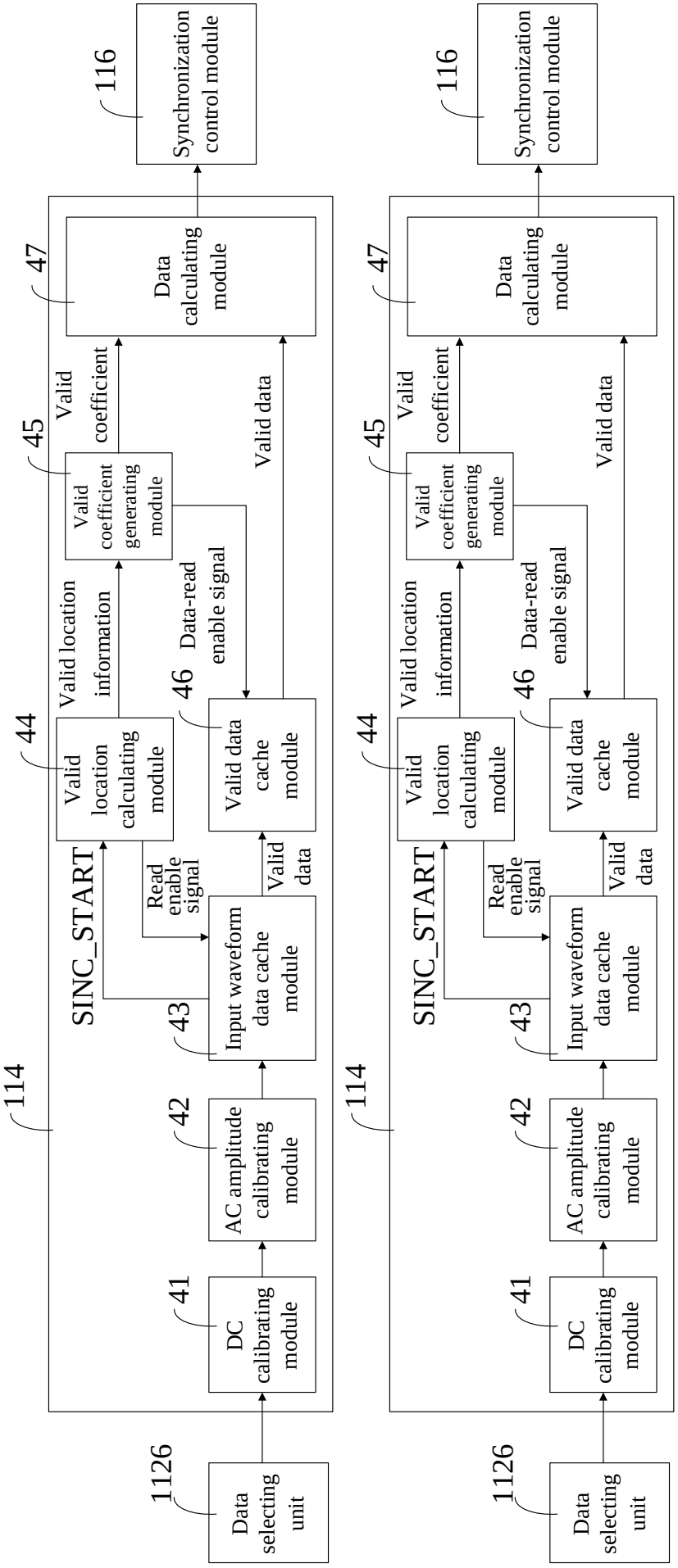

1126
Data selecting unit
114
41
DC calibrating module
42
AC amplitude calibrating module
43
Input waveform data cache module
SINC_START
Read enable signal
Valid data
44
Valid location calculating module
Valid location information
45
Valid coefficient generating module
Valid coefficient
46
Valid data cache module
Data-read enable signal
Valid data
47
Data calculating module
116
Synchronization control module

FIG. 3

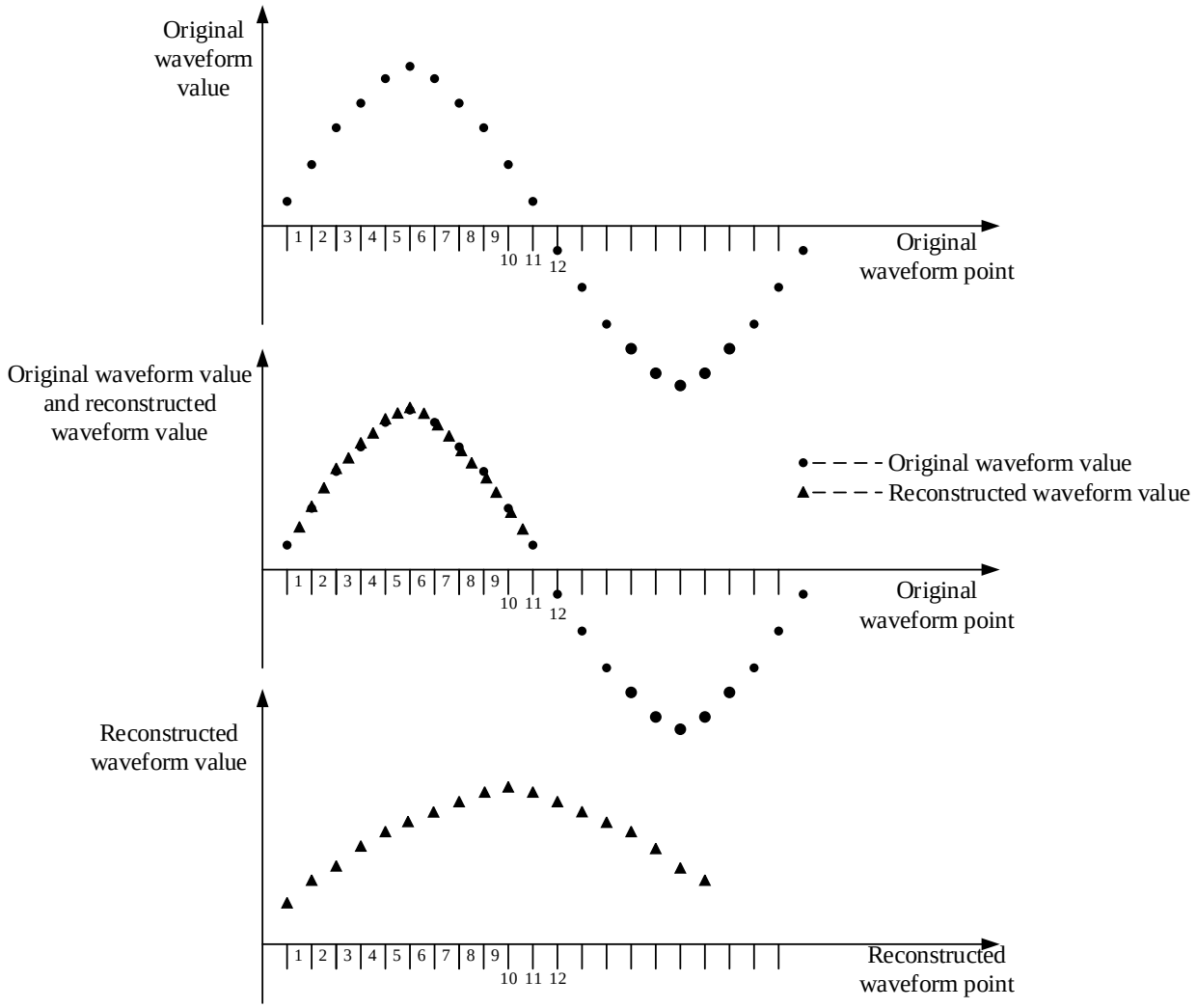

Original waveform value
1 2 3 4 5 6 7 8 9 10 11 12
Original waveform point
Original waveform value and reconstructed waveform value
Original waveform value
Reconstructed waveform value
1 2 3 4 5 6 7 8 9 10 11 12
Original waveform point
Reconstructed waveform value
1 2 3 4 5 6 7 8 9 10 11 12
Reconstructed waveform point

FIG. 4

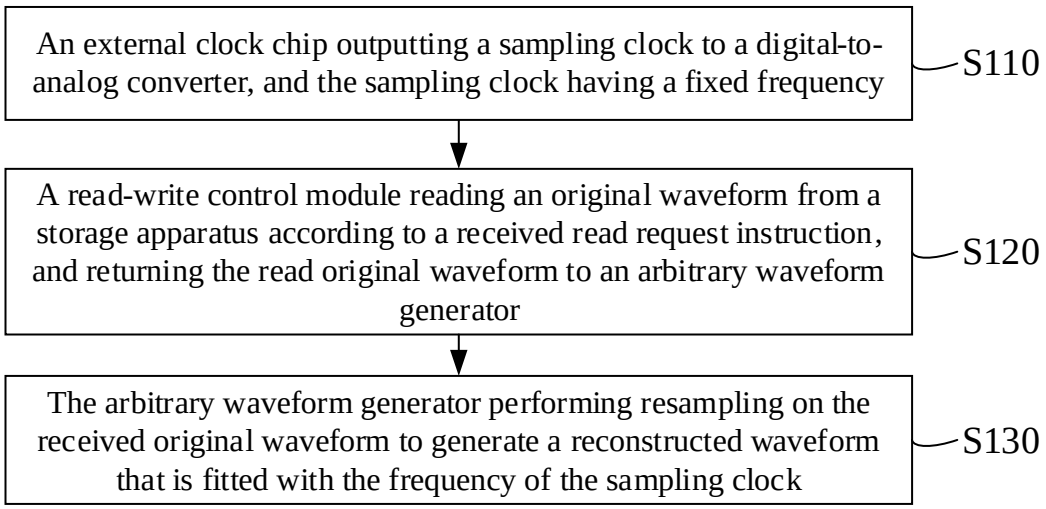

An external clock chip outputting a sampling clock to a digital-to-analog converter, and the sampling clock having a fixed frequency
S110
A read-write control module reading an original waveform from a storage apparatus according to a received read request instruction, and returning the read original waveform to an arbitrary waveform generator
S120
The arbitrary waveform generator performing resampling on the received original waveform to generate a reconstructed waveform that is fitted with the frequency of the sampling clock
S130

FIG. 5