

Outsourcer

Thread 1

Capture new frame
Compress frame
Sign frame
Send frame

If new response
Verify signature

If index = sample index
Sign frame
Send frame

If new response
Verify signature
Compare responses

Thread 2

Receive new response

Thread 3

Receive new response

Contractor

Thread 2

Receive new input

Thread 1

Verify signature
Preprocessing
Inference
Postprocessing
Sign response
Send response

Verifier

Thread 2

Receive new input

Thread 1

Verify signature
Preprocessing
Inference
Postprocessing
Sign response
Send response

Private Key

Outsource-Contract

Verify-Contract

Outsource-Contract

Pre-trained Model

Private Key

Verify-Contract

Pre-trained Model

Private Key

Frame, index,
number of acknowledged outputs,
signature

Response, index, signature

Frame, index,
number of acknowledged outputs,
signature

Response, index, signature

