Open Channel

Sender UTxO

Value:
+ **M** AGIX

Open Channel

Mint:
+ **1 channel_token**

Signatures:
- sender

Channel UTxO

Address: channel script + _

Value:
+ **1** channel_token
+ **K** AGIX

Datum:
+ ChannelDatum:
    + Nonce: 0
    + ChannelId: "Sender UTxO"
    + Signer
    + Receiver
    + GroupId
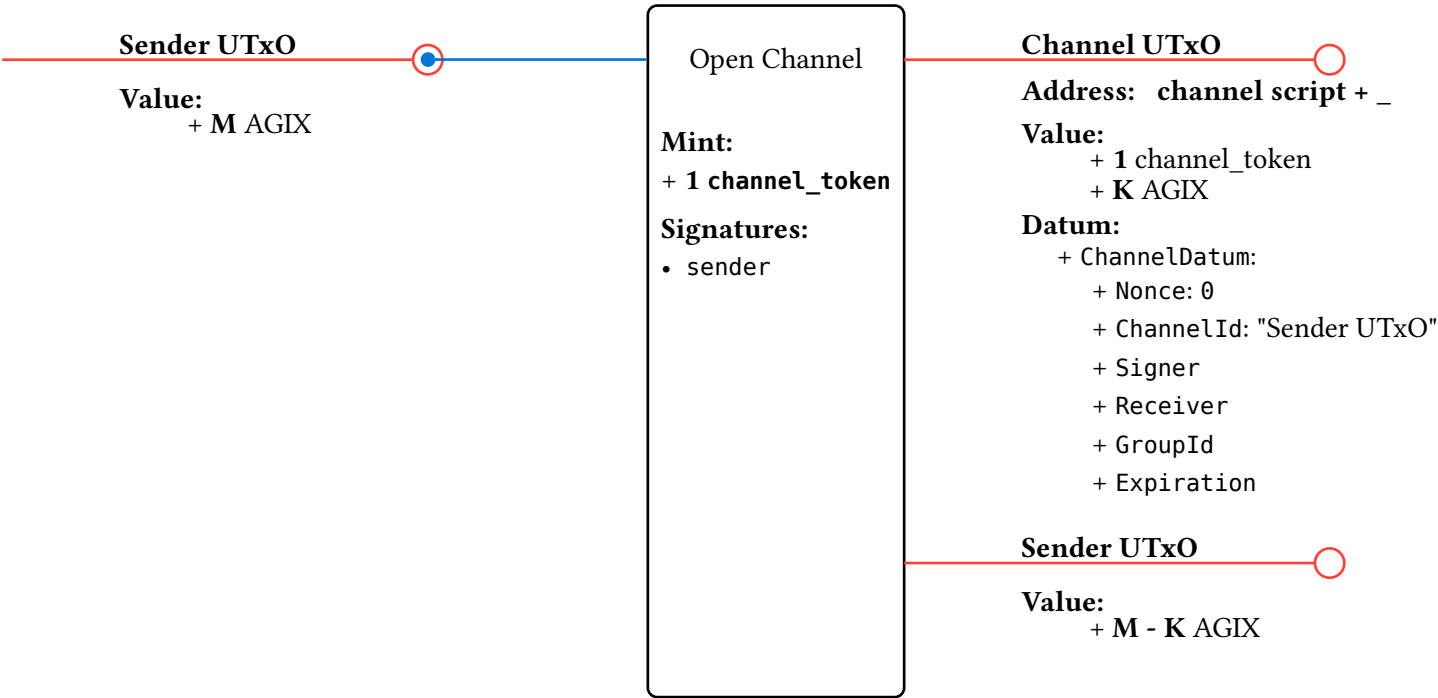   + Expiration

Sender UTxO

Value:
+ **M - K** AGIX

Note:

channel_token = "channel script" + "channel id"

Sender opens a channel with K AGIX

Extend and/or AddFunds Channel

Channel UTxO
Update

Address: **channel script + _**

Value:
+ **1** channel_token
+ **M** AGIX

Datum:
+ ChannelDatum:
  + Nonce
  + ChannelId
  + Signer
  + Receiver
  + GroupId
  + Expiration

Update Channel

Signatures:
• user

Channel UTxO

Address: **channel script + _**

Value:
+ **1** channel_token
+ **M + K** AGIX

Datum:
+ ChannelDatum:
  + Nonce
  + ChannelId
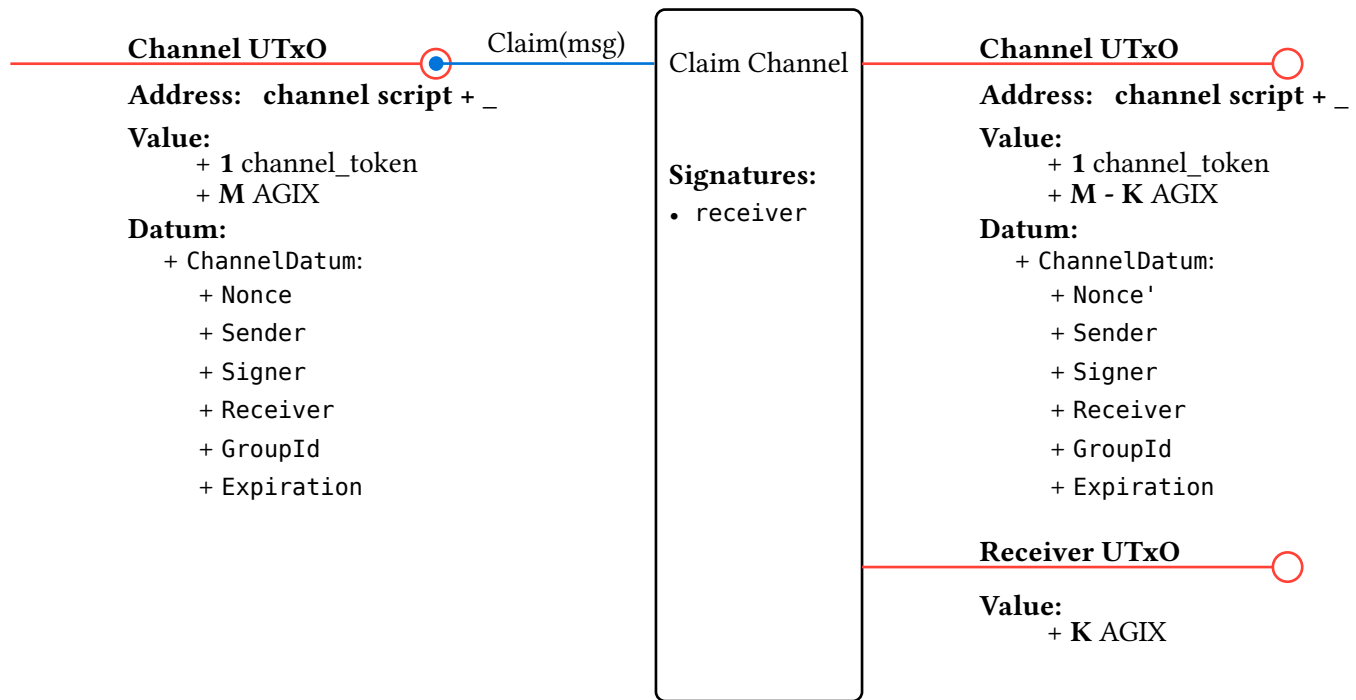 + Signer
  + Receiver
  + GroupId
  + Expiration'

Note:

Expiration $\leq$ Expiration'

$0 \leq K$

user must be sender when extending the channel

Claim Channel

Channel UTxO

Claim(msg)

Address: **channel script + _**

Value:
+ **1** channel_token
+ **M** AGIX

Datum:
+ ChannelDatum:
  + Nonce
  + Sender
  + Signer
  + Receiver
  + GroupId
  + Expiration

Claim Channel

Signatures:
• receiver

Channel UTxO

Address: **channel script + _**

Value:
+ **1** channel_token
+ **M - K** AGIX

Datum:
+ ChannelDatum:
  + Nonce'
  + Sender
  + Signer
  + Receiver
  + GroupId
  + Expiration

Receiver UTxO

Value:
+ **K** AGIX

Note:

msg is signed by the signer

Nonce' = Nonce + 1

Close Channel

Channel UTxO   Close

Address: **channel script + _**

Value:
     + **1** channel_token
     + **M** AGIX

Datum:
   + ChannelDatum:
     + Nonce
     + Sender
     + Signer
     + Receiver
     + GroupId
     + Expiration

Claim Channel

Mint:
- **1 channel_token**

Signatures:
- sender

Valid Range:
Expiration $\leq$ slot

Sender UTxO

Value:
     + **M** AGIX

Note: