Selector GTO Brief Manual

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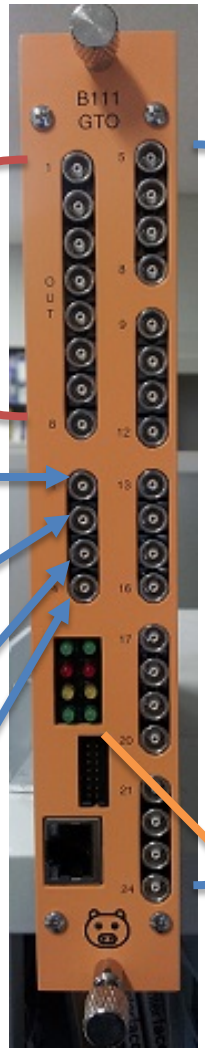
Abstract

- In order to multiplex the input signals, new GTO firmware is developed
  - Firmware name is “SELGTO10”
- Main function
  - Remote control
  - Choose input signals and output (20In 8Out)
    - possible to make OR
  - Down Scale function is available (up to 8ch)
  - Internal clock is provided
    - 1k, 10k, and 50MHz
      - 50MHz is used together with Down Scale

Input / Output



Out0 – Out7
Outpu

In0 – In19
Input

Ctrl0 : Veto
Inhibit Output. Force is not affected.

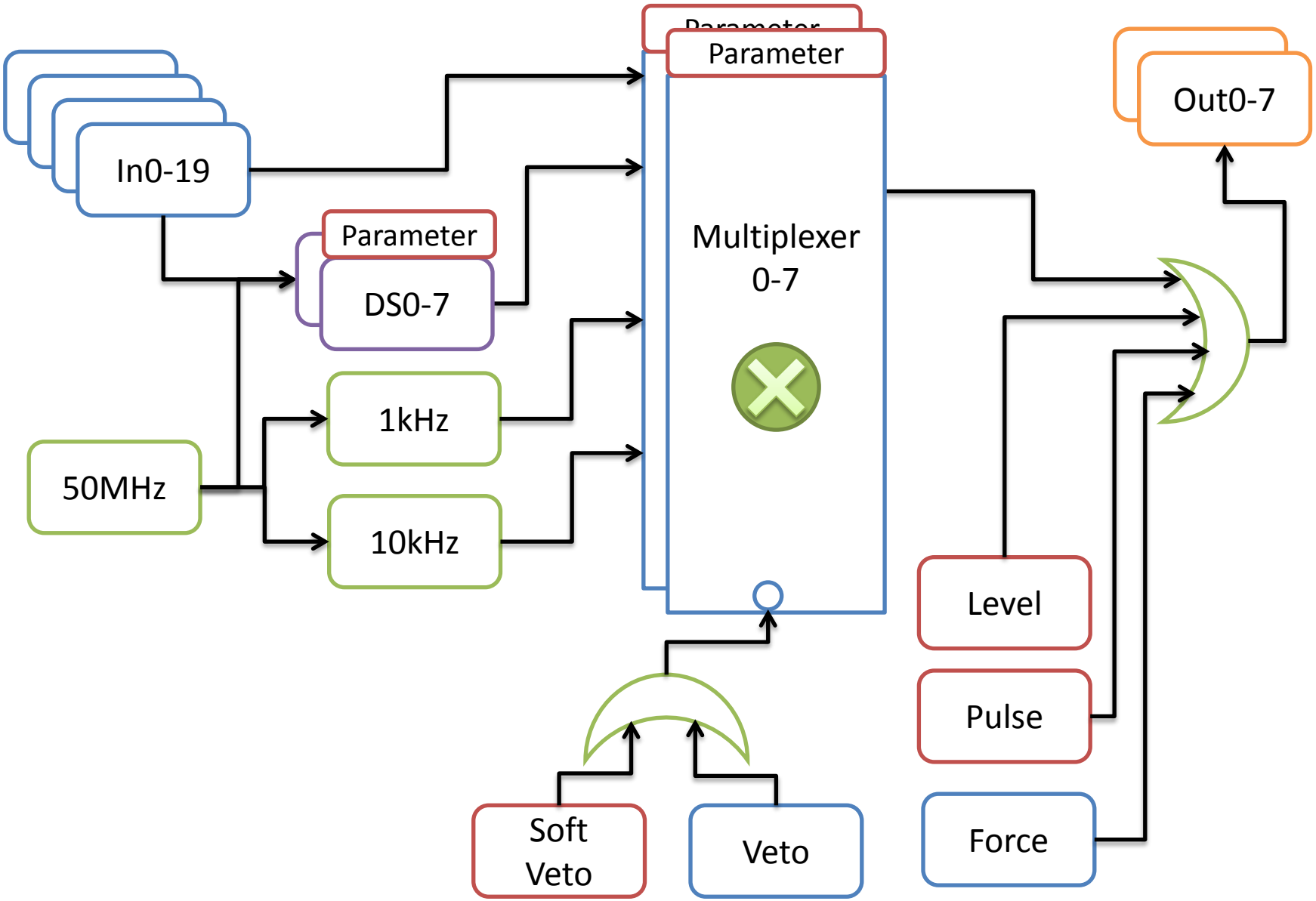
Ctrl1: Reset
Reset the counter of the Downscaler

Ctrl2 : LED
blink LED4

Ctrl3: Force
Output signal regardless veto and settings

LED	
Veto	----
Reset	----
LED	Test
Force	Ethernet

Circuit diagram



Web Interface

SAMURAI DAQ Control Index page

DAQ Tool

- DAQ Status Monitor
- DAQ Scaler Monitor
- DAQ Process Manager (for advanced user)
- Run summary
- Scaler configurator From here, parameters in DB are changed only. To reflest

- To retrive scaler values, please see here

- Raw data monitor (sdaq02)
- Raw data monitor (sdaq14)
- Raw data monitor (sdaq23)

- Web configurator (sdaq02)
- Edit configuration (sdaq02)
- Web configurator (sdaq14)
- Edit configuration (sdaq14)
- Web configurator (sdaq23)
- Edit configuration (sdaq23)

- Edit host list
- Edit host information
- Edit user definition
- Show XML

- Lock the configuration

Link

- Run Table
- GTO setup
- Trigger Selector
- SAMURAI DAQ information

Selector GTO (172.27.224.9)

Back to the index page
Refresh

Output 0
Modify | in0 Input0

Output 1
Modify | in1 Intpu1 | ds1 50M/1000

Output 2
Modify | ds1 50M/1000

Output 3
Modify | in3 Input3

Output 4
Modify | ds0 Input2/10

Output 5
Modify | 1k 1k clock

Output 6
Modify | 10k 10k clock

Output 7
Modify | 1k 1k clock

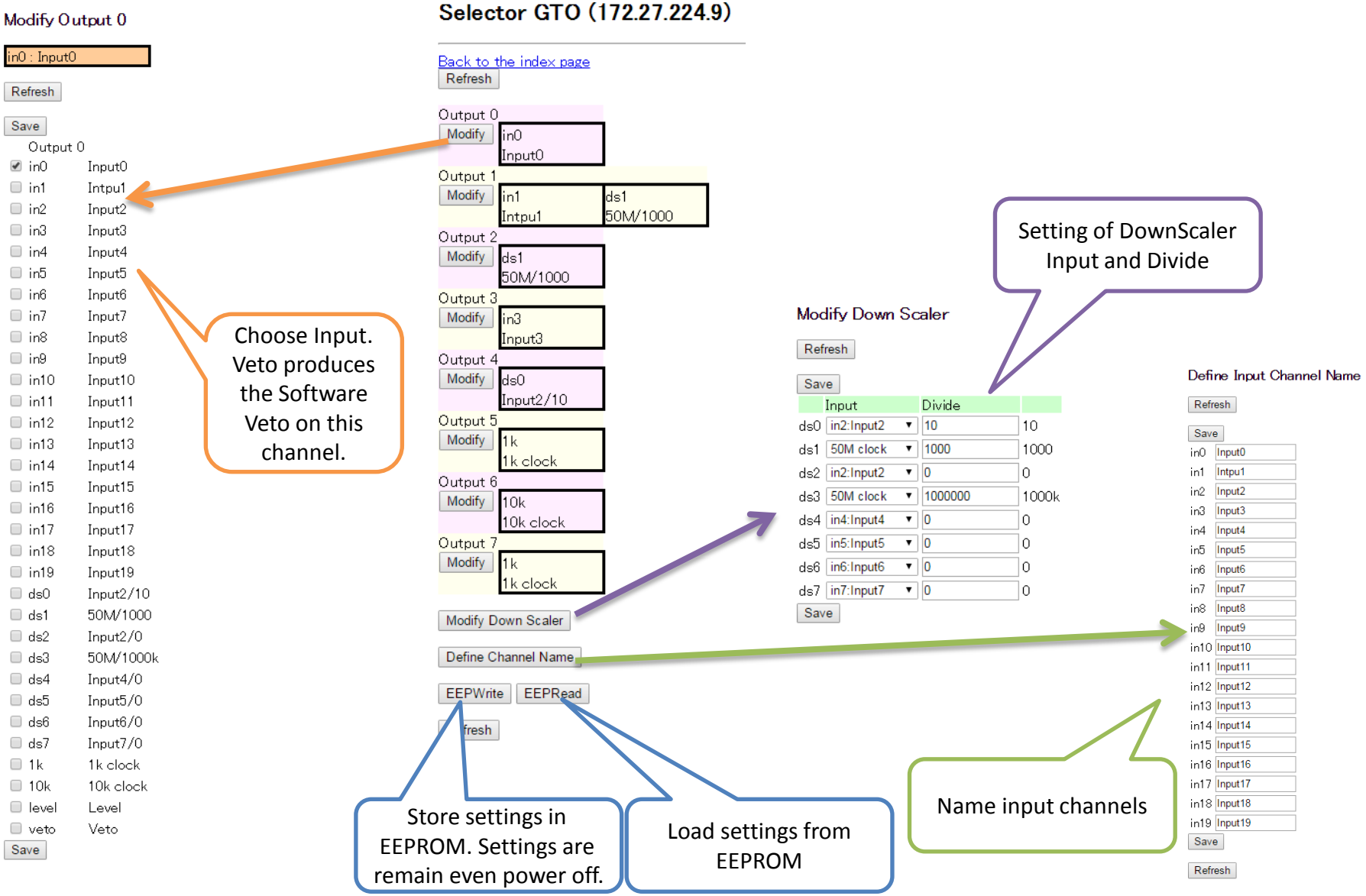
Modify Down Scaler

Define Channel Name

EEPWrite | EEPRead

Refresh

Web Interface



Command line tool cmdselgto

```
cmdselgto HOSTNAME COM [params] ...

COM =  status   : Read status
       read     : Read parameters (for debug)
       init     : Initialize all parameters to default value
       eepr     : Load parameters from EEPROM
       eepw     : Save current parameters to EEPROM
       out0     : Output0 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out1     : Output1 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out2     : Output2 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out3     : Output3 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out4     : Output4 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out5     : Output5 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out6     : Output6 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xXXXXXXXX)
       out7     : Output7 select (in0-in19, ds0-7, 1k, 10k, level, veto, none, 0xX
       dssel0   : Select the input source for DS0 (in0-in19, 50M)
       dssel1   : Select the input source for DS1 (in0-in19, 50M)
       dssel2   : Select the input source for DS2 (in0-in19, 50M)
       dssel3   : Select the input source for DS3 (in0-in19, 50M)
       dssel4   : Select the input source for DS4 (in0-in19, 50M)
       dssel5   : Select the input source for DS5 (in0-in19, 50M)
       dssel6   : Select the input source for DS6 (in0-in19, 50M)
       dssel7   : Select the input source for DS7 (in0-in19, 50M)
       dsrate0  : Set downscale rate0 (0-16777215)
       dsrate1  : Set downscale rate1 (0-16777215)
       dsrate2  : Set downscale rate2 (0-16777215)
       dsrate3  : Set downscale rate3 (0-16777215)
       dsrate4  : Set downscale rate4 (0-16777215)
       dsrate5  : Set downscale rate5 (0-16777215)
       dsrate6  : Set downscale rate6 (0-16777215)
       dsrate7  : Set downscale rate7 (0-16777215)
       pulse    : Pulse output (8bit pattern) (0xXX)
       rst      : Reset clock counter
       test     : Test LED (on/off)
       noop     : Dummy access to GTO
       help     : Help
```

In case, out0 is OR of in1, in3
cmdselgto HOST out0 in1 in3
To store settings in EEPROM
cmdselgto HOST eepw

```
*** Status ***
Out[ 0] :  in0
Out[ 1] :  in1 ds1
Out[ 2] :  ds1
Out[ 3] :  in3
Out[ 4] :  ds0
Out[ 5] :  1k
Out[ 6] :  10k
Out[ 7] :  1k

DS [ 0] :  rate=      10 / src= in2
DS [ 1] :  rate=    1000 / src= 50M
DS [ 2] :  rate=       0 / src= in2
DS [ 3] :  rate= 1000000 / src= 50M
DS [ 4] :  rate=       0 / src= in4
DS [ 5] :  rate=       0 / src= in5
DS [ 6] :  rate=       0 / src= in6
DS [ 7] :  rate=       0 / src= in7
```

Example of status readout
cmdselgto HOST status