// Verilated -\*- C++ -\*-

// DESCRIPTION: Verilator output: Design implementation internals

// See Vaes\_top.h for the primary calling header

#include "Vaes\_top.h" // For This

#include "Vaes\_top\_\_Syms.h"

//--------------------

// STATIC VARIABLES

//--------------------

VL\_CTOR\_IMP(Vaes\_top) {

Vaes\_top\_\_Syms\* \_\_restrict vlSymsp = \_\_VlSymsp = new Vaes\_top\_\_Syms(this, name());

Vaes\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Reset internal values

// Reset structure values

\_ctor\_var\_reset();

}

void Vaes\_top::\_\_Vconfigure(Vaes\_top\_\_Syms\* vlSymsp, bool first) {

if (0 && first) {} // Prevent unused

this->\_\_VlSymsp = vlSymsp;

}

Vaes\_top::~Vaes\_top() {

delete \_\_VlSymsp; \_\_VlSymsp=NULL;

}

//--------------------

void Vaes\_top::eval() {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+++++TOP Evaluate Vaes\_top::eval\n"); );

Vaes\_top\_\_Syms\* \_\_restrict vlSymsp = this->\_\_VlSymsp; // Setup global symbol table

Vaes\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

#ifdef VL\_DEBUG

// Debug assertions

\_eval\_debug\_assertions();

#endif // VL\_DEBUG

// Initialize

if (VL\_UNLIKELY(!vlSymsp->\_\_Vm\_didInit)) \_eval\_initial\_loop(vlSymsp);

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Clock loop\n"););

vlSymsp->\_\_Vm\_activity = true;

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

void Vaes\_top::\_eval\_initial\_loop(Vaes\_top\_\_Syms\* \_\_restrict vlSymsp) {

vlSymsp->\_\_Vm\_didInit = true;

\_eval\_initial(vlSymsp);

vlSymsp->\_\_Vm\_activity = true;

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

\_eval\_settle(vlSymsp);

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't DC converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

//--------------------

// Internal Methods

void Vaes\_top::\_settle\_\_TOP\_\_1(Vaes\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vaes\_top::\_settle\_\_TOP\_\_1\n"); );

Vaes\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Variables

VL\_SIGW(\_\_Vtemp18,95,0,3);

VL\_SIGW(\_\_Vtemp19,127,0,4);

VL\_SIGW(\_\_Vtemp20,255,0,8);

VL\_SIGW(\_\_Vtemp22,127,0,4);

VL\_SIGW(\_\_Vtemp23,255,0,8);

VL\_SIGW(\_\_Vtemp24,255,0,8);

VL\_SIGW(\_\_Vtemp26,127,0,4);

VL\_SIGW(\_\_Vtemp27,255,0,8);

VL\_SIGW(\_\_Vtemp28,255,0,8);

VL\_SIGW(\_\_Vtemp35,95,0,3);

VL\_SIGW(\_\_Vtemp37,95,0,3);

// Body

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0U] = 0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[1U] = 9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[2U] = 0x12U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[3U] = 0x1bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[4U] = 0x24U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[5U] = 0x2dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[6U] = 0x36U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[7U] = 0x3fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[8U] = 0x48U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[9U] = 0x41U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xaU] = 0x5aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbU] = 0x53U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xcU] = 0x6cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xdU] = 0x65U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xeU] = 0x7eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xfU] = 0x77U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x10U] = 0x90U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x11U] = 0x99U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x12U] = 0x82U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x13U] = 0x8bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x14U] = 0xb4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x15U] = 0xbdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x16U] = 0xa6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x17U] = 0xafU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x18U] = 0xd8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x19U] = 0xd1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x1aU] = 0xcaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x1bU] = 0xc3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x1cU] = 0xfcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x1dU] = 0xf5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x1eU] = 0xeeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x1fU] = 0xe7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x20U] = 0x3bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x21U] = 0x32U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x22U] = 0x29U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x23U] = 0x20U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x24U] = 0x1fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x25U] = 0x16U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x26U] = 0xdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x27U] = 4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x28U] = 0x73U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x29U] = 0x7aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x2aU] = 0x61U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x2bU] = 0x68U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x2cU] = 0x57U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x2dU] = 0x5eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x2eU] = 0x45U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x2fU] = 0x4cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x30U] = 0xabU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x31U] = 0xa2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x32U] = 0xb9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x33U] = 0xb0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x34U] = 0x8fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x35U] = 0x86U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x36U] = 0x9dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x37U] = 0x94U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x38U] = 0xe3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x39U] = 0xeaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x3aU] = 0xf1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x3bU] = 0xf8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x3cU] = 0xc7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x3dU] = 0xceU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x3eU] = 0xd5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x3fU] = 0xdcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x40U] = 0x76U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x41U] = 0x7fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x42U] = 0x64U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x43U] = 0x6dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x44U] = 0x52U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x45U] = 0x5bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x46U] = 0x40U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x47U] = 0x49U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x48U] = 0x3eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x49U] = 0x37U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x4aU] = 0x2cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x4bU] = 0x25U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x4cU] = 0x1aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x4dU] = 0x13U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x4eU] = 8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x4fU] = 1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x50U] = 0xe6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x51U] = 0xefU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x52U] = 0xf4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x53U] = 0xfdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x54U] = 0xc2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x55U] = 0xcbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x56U] = 0xd0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x57U] = 0xd9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x58U] = 0xaeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x59U] = 0xa7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x5aU] = 0xbcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x5bU] = 0xb5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x5cU] = 0x8aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x5dU] = 0x83U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x5eU] = 0x98U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x5fU] = 0x91U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x60U] = 0x4dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x61U] = 0x44U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x62U] = 0x5fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x63U] = 0x56U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x64U] = 0x69U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x65U] = 0x60U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x66U] = 0x7bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x67U] = 0x72U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x68U] = 5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x69U] = 0xcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x6aU] = 0x17U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x6bU] = 0x1eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x6cU] = 0x21U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x6dU] = 0x28U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x6eU] = 0x33U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x6fU] = 0x3aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x70U] = 0xddU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x71U] = 0xd4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x72U] = 0xcfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x73U] = 0xc6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x74U] = 0xf9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x75U] = 0xf0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x76U] = 0xebU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x77U] = 0xe2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x78U] = 0x95U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x79U] = 0x9cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x7aU] = 0x87U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x7bU] = 0x8eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x7cU] = 0xb1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x7dU] = 0xb8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x7eU] = 0xa3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x7fU] = 0xaaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x80U] = 0xecU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x81U] = 0xe5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x82U] = 0xfeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x83U] = 0xf7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x84U] = 0xc8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x85U] = 0xc1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x86U] = 0xdaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x87U] = 0xd3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x88U] = 0xa4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x89U] = 0xadU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x8aU] = 0xb6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x8bU] = 0xbfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x8cU] = 0x80U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x8dU] = 0x89U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x8eU] = 0x92U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x8fU] = 0x9bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x90U] = 0x7cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x91U] = 0x75U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x92U] = 0x6eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x93U] = 0x67U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x94U] = 0x58U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x95U] = 0x51U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x96U] = 0x4aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x97U] = 0x43U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x98U] = 0x34U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x99U] = 0x3dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x9aU] = 0x26U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x9bU] = 0x2fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x9cU] = 0x10U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x9dU] = 0x19U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x9eU] = 2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0x9fU] = 0xbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa0U] = 0xd7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa1U] = 0xdeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa2U] = 0xc5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa3U] = 0xccU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa4U] = 0xf3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa5U] = 0xfaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa6U] = 0xe1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa7U] = 0xe8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa8U] = 0x9fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xa9U] = 0x96U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xaaU] = 0x8dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xabU] = 0x84U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xacU] = 0xbbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xadU] = 0xb2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xaeU] = 0xa9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xafU] = 0xa0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb0U] = 0x47U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb1U] = 0x4eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb2U] = 0x55U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb3U] = 0x5cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb4U] = 0x63U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb5U] = 0x6aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb6U] = 0x71U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb7U] = 0x78U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb8U] = 0xfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xb9U] = 6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbaU] = 0x1dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbbU] = 0x14U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbcU] = 0x2bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbdU] = 0x22U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbeU] = 0x39U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xbfU] = 0x30U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc0U] = 0x9aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc1U] = 0x93U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc2U] = 0x88U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc3U] = 0x81U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc4U] = 0xbeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc5U] = 0xb7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc6U] = 0xacU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc7U] = 0xa5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc8U] = 0xd2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xc9U] = 0xdbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xcaU] = 0xc0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xcbU] = 0xc9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xccU] = 0xf6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xcdU] = 0xffU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xceU] = 0xe4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xcfU] = 0xedU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd0U] = 0xaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd1U] = 3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd2U] = 0x18U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd3U] = 0x11U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd4U] = 0x2eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd5U] = 0x27U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd6U] = 0x3cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd7U] = 0x35U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd8U] = 0x42U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xd9U] = 0x4bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xdaU] = 0x50U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xdbU] = 0x59U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xdcU] = 0x66U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xddU] = 0x6fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xdeU] = 0x74U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xdfU] = 0x7dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe0U] = 0xa1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe1U] = 0xa8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe2U] = 0xb3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe3U] = 0xbaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe4U] = 0x85U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe5U] = 0x8cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe6U] = 0x97U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe7U] = 0x9eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe8U] = 0xe9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xe9U] = 0xe0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xeaU] = 0xfbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xebU] = 0xf2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xecU] = 0xcdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xedU] = 0xc4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xeeU] = 0xdfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xefU] = 0xd6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf0U] = 0x31U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf1U] = 0x38U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf2U] = 0x23U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf3U] = 0x2aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf4U] = 0x15U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf5U] = 0x1cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf6U] = 7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf7U] = 0xeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf8U] = 0x79U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xf9U] = 0x70U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xfaU] = 0x6bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xfbU] = 0x62U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xfcU] = 0x5dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xfdU] = 0x54U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xfeU] = 0x4fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtime9[0xffU] = 0x46U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0U] = 0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[1U] = 0xeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[2U] = 0x1cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[3U] = 0x12U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[4U] = 0x38U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[5U] = 0x36U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[6U] = 0x24U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[7U] = 0x2aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[8U] = 0x70U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[9U] = 0x7eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xaU] = 0x6cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbU] = 0x62U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xcU] = 0x48U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xdU] = 0x46U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xeU] = 0x54U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xfU] = 0x5aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x10U] = 0xe0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x11U] = 0xeeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x12U] = 0xfcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x13U] = 0xf2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x14U] = 0xd8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x15U] = 0xd6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x16U] = 0xc4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x17U] = 0xcaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x18U] = 0x90U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x19U] = 0x9eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x1aU] = 0x8cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x1bU] = 0x82U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x1cU] = 0xa8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x1dU] = 0xa6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x1eU] = 0xb4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x1fU] = 0xbaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x20U] = 0xdbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x21U] = 0xd5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x22U] = 0xc7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x23U] = 0xc9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x24U] = 0xe3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x25U] = 0xedU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x26U] = 0xffU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x27U] = 0xf1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x28U] = 0xabU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x29U] = 0xa5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x2aU] = 0xb7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x2bU] = 0xb9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x2cU] = 0x93U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x2dU] = 0x9dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x2eU] = 0x8fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x2fU] = 0x81U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x30U] = 0x3bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x31U] = 0x35U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x32U] = 0x27U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x33U] = 0x29U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x34U] = 3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x35U] = 0xdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x36U] = 0x1fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x37U] = 0x11U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x38U] = 0x4bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x39U] = 0x45U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x3aU] = 0x57U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x3bU] = 0x59U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x3cU] = 0x73U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x3dU] = 0x7dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x3eU] = 0x6fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x3fU] = 0x61U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x40U] = 0xadU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x41U] = 0xa3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x42U] = 0xb1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x43U] = 0xbfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x44U] = 0x95U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x45U] = 0x9bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x46U] = 0x89U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x47U] = 0x87U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x48U] = 0xddU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x49U] = 0xd3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x4aU] = 0xc1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x4bU] = 0xcfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x4cU] = 0xe5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x4dU] = 0xebU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x4eU] = 0xf9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x4fU] = 0xf7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x50U] = 0x4dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x51U] = 0x43U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x52U] = 0x51U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x53U] = 0x5fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x54U] = 0x75U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x55U] = 0x7bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x56U] = 0x69U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x57U] = 0x67U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x58U] = 0x3dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x59U] = 0x33U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x5aU] = 0x21U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x5bU] = 0x2fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x5cU] = 5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x5dU] = 0xbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x5eU] = 0x19U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x5fU] = 0x17U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x60U] = 0x76U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x61U] = 0x78U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x62U] = 0x6aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x63U] = 0x64U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x64U] = 0x4eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x65U] = 0x40U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x66U] = 0x52U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x67U] = 0x5cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x68U] = 6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x69U] = 8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x6aU] = 0x1aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x6bU] = 0x14U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x6cU] = 0x3eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x6dU] = 0x30U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x6eU] = 0x22U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x6fU] = 0x2cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x70U] = 0x96U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x71U] = 0x98U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x72U] = 0x8aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x73U] = 0x84U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x74U] = 0xaeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x75U] = 0xa0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x76U] = 0xb2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x77U] = 0xbcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x78U] = 0xe6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x79U] = 0xe8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x7aU] = 0xfaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x7bU] = 0xf4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x7cU] = 0xdeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x7dU] = 0xd0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x7eU] = 0xc2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x7fU] = 0xccU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x80U] = 0x41U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x81U] = 0x4fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x82U] = 0x5dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x83U] = 0x53U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x84U] = 0x79U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x85U] = 0x77U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x86U] = 0x65U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x87U] = 0x6bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x88U] = 0x31U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x89U] = 0x3fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x8aU] = 0x2dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x8bU] = 0x23U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x8cU] = 9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x8dU] = 7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x8eU] = 0x15U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x8fU] = 0x1bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x90U] = 0xa1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x91U] = 0xafU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x92U] = 0xbdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x93U] = 0xb3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x94U] = 0x99U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x95U] = 0x97U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x96U] = 0x85U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x97U] = 0x8bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x98U] = 0xd1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x99U] = 0xdfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x9aU] = 0xcdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x9bU] = 0xc3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x9cU] = 0xe9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x9dU] = 0xe7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x9eU] = 0xf5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0x9fU] = 0xfbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa0U] = 0x9aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa1U] = 0x94U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa2U] = 0x86U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa3U] = 0x88U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa4U] = 0xa2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa5U] = 0xacU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa6U] = 0xbeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa7U] = 0xb0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa8U] = 0xeaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xa9U] = 0xe4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xaaU] = 0xf6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xabU] = 0xf8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xacU] = 0xd2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xadU] = 0xdcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xaeU] = 0xceU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xafU] = 0xc0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb0U] = 0x7aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb1U] = 0x74U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb2U] = 0x66U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb3U] = 0x68U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb4U] = 0x42U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb5U] = 0x4cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb6U] = 0x5eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb7U] = 0x50U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb8U] = 0xaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xb9U] = 4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbaU] = 0x16U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbbU] = 0x18U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbcU] = 0x32U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbdU] = 0x3cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbeU] = 0x2eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xbfU] = 0x20U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc0U] = 0xecU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc1U] = 0xe2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc2U] = 0xf0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc3U] = 0xfeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc4U] = 0xd4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc5U] = 0xdaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc6U] = 0xc8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc7U] = 0xc6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc8U] = 0x9cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xc9U] = 0x92U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xcaU] = 0x80U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xcbU] = 0x8eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xccU] = 0xa4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xcdU] = 0xaaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xceU] = 0xb8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xcfU] = 0xb6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd0U] = 0xcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd1U] = 2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd2U] = 0x10U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd3U] = 0x1eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd4U] = 0x34U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd5U] = 0x3aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd6U] = 0x28U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd7U] = 0x26U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd8U] = 0x7cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xd9U] = 0x72U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xdaU] = 0x60U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xdbU] = 0x6eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xdcU] = 0x44U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xddU] = 0x4aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xdeU] = 0x58U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xdfU] = 0x56U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe0U] = 0x37U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe1U] = 0x39U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe2U] = 0x2bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe3U] = 0x25U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe4U] = 0xfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe5U] = 1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe6U] = 0x13U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe7U] = 0x1dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe8U] = 0x47U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xe9U] = 0x49U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xeaU] = 0x5bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xebU] = 0x55U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xecU] = 0x7fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xedU] = 0x71U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xeeU] = 0x63U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xefU] = 0x6dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf0U] = 0xd7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf1U] = 0xd9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf2U] = 0xcbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf3U] = 0xc5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf4U] = 0xefU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf5U] = 0xe1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf6U] = 0xf3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf7U] = 0xfdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf8U] = 0xa7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xf9U] = 0xa9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xfaU] = 0xbbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xfbU] = 0xb5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xfcU] = 0x9fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xfdU] = 0x91U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xfeU] = 0x83U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimee[0xffU] = 0x8dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0U] = 0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[1U] = 0xdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[2U] = 0x1aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[3U] = 0x17U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[4U] = 0x34U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[5U] = 0x39U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[6U] = 0x2eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[7U] = 0x23U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[8U] = 0x68U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[9U] = 0x65U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xaU] = 0x72U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbU] = 0x7fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xcU] = 0x5cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xdU] = 0x51U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xeU] = 0x46U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xfU] = 0x4bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x10U] = 0xd0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x11U] = 0xddU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x12U] = 0xcaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x13U] = 0xc7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x14U] = 0xe4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x15U] = 0xe9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x16U] = 0xfeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x17U] = 0xf3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x18U] = 0xb8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x19U] = 0xb5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x1aU] = 0xa2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x1bU] = 0xafU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x1cU] = 0x8cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x1dU] = 0x81U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x1eU] = 0x96U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x1fU] = 0x9bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x20U] = 0xbbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x21U] = 0xb6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x22U] = 0xa1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x23U] = 0xacU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x24U] = 0x8fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x25U] = 0x82U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x26U] = 0x95U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x27U] = 0x98U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x28U] = 0xd3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x29U] = 0xdeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x2aU] = 0xc9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x2bU] = 0xc4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x2cU] = 0xe7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x2dU] = 0xeaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x2eU] = 0xfdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x2fU] = 0xf0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x30U] = 0x6bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x31U] = 0x66U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x32U] = 0x71U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x33U] = 0x7cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x34U] = 0x5fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x35U] = 0x52U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x36U] = 0x45U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x37U] = 0x48U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x38U] = 3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x39U] = 0xeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x3aU] = 0x19U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x3bU] = 0x14U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x3cU] = 0x37U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x3dU] = 0x3aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x3eU] = 0x2dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x3fU] = 0x20U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x40U] = 0x6dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x41U] = 0x60U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x42U] = 0x77U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x43U] = 0x7aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x44U] = 0x59U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x45U] = 0x54U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x46U] = 0x43U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x47U] = 0x4eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x48U] = 5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x49U] = 8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x4aU] = 0x1fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x4bU] = 0x12U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x4cU] = 0x31U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x4dU] = 0x3cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x4eU] = 0x2bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x4fU] = 0x26U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x50U] = 0xbdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x51U] = 0xb0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x52U] = 0xa7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x53U] = 0xaaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x54U] = 0x89U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x55U] = 0x84U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x56U] = 0x93U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x57U] = 0x9eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x58U] = 0xd5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x59U] = 0xd8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x5aU] = 0xcfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x5bU] = 0xc2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x5cU] = 0xe1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x5dU] = 0xecU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x5eU] = 0xfbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x5fU] = 0xf6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x60U] = 0xd6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x61U] = 0xdbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x62U] = 0xccU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x63U] = 0xc1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x64U] = 0xe2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x65U] = 0xefU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x66U] = 0xf8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x67U] = 0xf5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x68U] = 0xbeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x69U] = 0xb3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x6aU] = 0xa4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x6bU] = 0xa9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x6cU] = 0x8aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x6dU] = 0x87U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x6eU] = 0x90U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x6fU] = 0x9dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x70U] = 6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x71U] = 0xbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x72U] = 0x1cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x73U] = 0x11U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x74U] = 0x32U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x75U] = 0x3fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x76U] = 0x28U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x77U] = 0x25U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x78U] = 0x6eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x79U] = 0x63U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x7aU] = 0x74U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x7bU] = 0x79U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x7cU] = 0x5aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x7dU] = 0x57U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x7eU] = 0x40U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x7fU] = 0x4dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x80U] = 0xdaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x81U] = 0xd7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x82U] = 0xc0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x83U] = 0xcdU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x84U] = 0xeeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x85U] = 0xe3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x86U] = 0xf4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x87U] = 0xf9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x88U] = 0xb2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x89U] = 0xbfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x8aU] = 0xa8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x8bU] = 0xa5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x8cU] = 0x86U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x8dU] = 0x8bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x8eU] = 0x9cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x8fU] = 0x91U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x90U] = 0xaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x91U] = 7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x92U] = 0x10U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x93U] = 0x1dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x94U] = 0x3eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x95U] = 0x33U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x96U] = 0x24U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x97U] = 0x29U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x98U] = 0x62U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x99U] = 0x6fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x9aU] = 0x78U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x9bU] = 0x75U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x9cU] = 0x56U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x9dU] = 0x5bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x9eU] = 0x4cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0x9fU] = 0x41U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa0U] = 0x61U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa1U] = 0x6cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa2U] = 0x7bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa3U] = 0x76U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa4U] = 0x55U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa5U] = 0x58U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa6U] = 0x4fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa7U] = 0x42U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa8U] = 9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xa9U] = 4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xaaU] = 0x13U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xabU] = 0x1eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xacU] = 0x3dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xadU] = 0x30U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xaeU] = 0x27U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xafU] = 0x2aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb0U] = 0xb1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb1U] = 0xbcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb2U] = 0xabU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb3U] = 0xa6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb4U] = 0x85U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb5U] = 0x88U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb6U] = 0x9fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb7U] = 0x92U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb8U] = 0xd9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xb9U] = 0xd4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbaU] = 0xc3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbbU] = 0xceU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbcU] = 0xedU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbdU] = 0xe0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbeU] = 0xf7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xbfU] = 0xfaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc0U] = 0xb7U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc1U] = 0xbaU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc2U] = 0xadU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc3U] = 0xa0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc4U] = 0x83U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc5U] = 0x8eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc6U] = 0x99U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc7U] = 0x94U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc8U] = 0xdfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xc9U] = 0xd2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xcaU] = 0xc5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xcbU] = 0xc8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xccU] = 0xebU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xcdU] = 0xe6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xceU] = 0xf1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xcfU] = 0xfcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd0U] = 0x67U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd1U] = 0x6aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd2U] = 0x7dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd3U] = 0x70U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd4U] = 0x53U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd5U] = 0x5eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd6U] = 0x49U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd7U] = 0x44U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd8U] = 0xfU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xd9U] = 2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xdaU] = 0x15U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xdbU] = 0x18U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xdcU] = 0x3bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xddU] = 0x36U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xdeU] = 0x21U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xdfU] = 0x2cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe0U] = 0xcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe1U] = 1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe2U] = 0x16U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe3U] = 0x1bU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe4U] = 0x38U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe5U] = 0x35U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe6U] = 0x22U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe7U] = 0x2fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe8U] = 0x64U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xe9U] = 0x69U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xeaU] = 0x7eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xebU] = 0x73U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xecU] = 0x50U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xedU] = 0x5dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xeeU] = 0x4aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xefU] = 0x47U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf0U] = 0xdcU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf1U] = 0xd1U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf2U] = 0xc6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf3U] = 0xcbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf4U] = 0xe8U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf5U] = 0xe5U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf6U] = 0xf2U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf7U] = 0xffU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf8U] = 0xb4U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xf9U] = 0xb9U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xfaU] = 0xaeU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xfbU] = 0xa3U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xfcU] = 0x80U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xfdU] = 0x8dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xfeU] = 0x9aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimed[0xffU] = 0x97U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0U] = 0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[1U] = 0xbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[2U] = 0x16U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[3U] = 0x1dU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[4U] = 0x2cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[5U] = 0x27U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[6U] = 0x3aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[7U] = 0x31U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[8U] = 0x58U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[9U] = 0x53U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0xaU] = 0x4eU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0xbU] = 0x45U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0xcU] = 0x74U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0xdU] = 0x7fU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0xeU] = 0x62U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0xfU] = 0x69U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x10U] = 0xb0U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x11U] = 0xbbU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x12U] = 0xa6U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x13U] = 0xadU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x14U] = 0x9cU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x15U] = 0x97U;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x16U] = 0x8aU;

vlTOPp->aes\_top\_\_DOT\_\_aes\_decryption\_\_DOT\_\_xtimeb[0x17U] = 0x81U;

// Verilated -\*- C++ -\*-

// DESCRIPTION: Verilator output: Design implementation internals

// See Vdes\_top.h for the primary calling header

#include "Vdes\_top.h" // For This

#include "Vdes\_top\_\_Syms.h"

//--------------------

// STATIC VARIABLES

//--------------------

VL\_CTOR\_IMP(Vdes\_top) {

Vdes\_top\_\_Syms\* \_\_restrict vlSymsp = \_\_VlSymsp = new Vdes\_top\_\_Syms(this, name());

Vdes\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Reset internal values

// Reset structure values

\_ctor\_var\_reset();

}

void Vdes\_top::\_\_Vconfigure(Vdes\_top\_\_Syms\* vlSymsp, bool first) {

if (0 && first) {} // Prevent unused

this->\_\_VlSymsp = vlSymsp;

}

Vdes\_top::~Vdes\_top() {

delete \_\_VlSymsp; \_\_VlSymsp=NULL;

}

//--------------------

void Vdes\_top::eval() {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+++++TOP Evaluate Vdes\_top::eval\n"); );

Vdes\_top\_\_Syms\* \_\_restrict vlSymsp = this->\_\_VlSymsp; // Setup global symbol table

Vdes\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

#ifdef VL\_DEBUG

// Debug assertions

\_eval\_debug\_assertions();

#endif // VL\_DEBUG

// Initialize

if (VL\_UNLIKELY(!vlSymsp->\_\_Vm\_didInit)) \_eval\_initial\_loop(vlSymsp);

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Clock loop\n"););

vlSymsp->\_\_Vm\_activity = true;

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

void Vdes\_top::\_eval\_initial\_loop(Vdes\_top\_\_Syms\* \_\_restrict vlSymsp) {

vlSymsp->\_\_Vm\_didInit = true;

\_eval\_initial(vlSymsp);

vlSymsp->\_\_Vm\_activity = true;

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

\_eval\_settle(vlSymsp);

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't DC converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

//--------------------

// Internal Methods

void Vdes\_top::\_settle\_\_TOP\_\_1(Vdes\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vdes\_top::\_settle\_\_TOP\_\_1\n"); );

Vdes\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Body

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[1U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[2U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[3U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[4U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[5U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[6U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[7U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[8U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[9U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0xaU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0xbU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0xcU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0xdU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0xeU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0xfU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x10U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x11U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x12U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x13U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x14U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x15U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x16U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x17U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x18U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x19U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x1aU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x1bU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x1cU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x1dU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x1eU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x1fU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x20U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x21U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x22U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x23U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x24U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x25U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x26U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x27U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x28U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x29U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x2aU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x2bU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x2cU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x2dU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x2eU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x2fU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x30U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x31U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x32U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x33U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x34U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x35U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x36U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x37U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x38U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x39U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x3aU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x3bU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x3cU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x3dU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x3eU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox1[0x3fU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[1U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[2U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[3U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[4U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[5U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[6U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[7U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[8U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[9U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0xaU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0xbU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0xcU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0xdU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0xeU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0xfU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x10U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x11U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x12U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x13U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x14U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x15U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x16U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x17U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x18U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x19U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x1aU] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x1bU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x1cU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x1dU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x1eU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x1fU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x20U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x21U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x22U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x23U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x24U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x25U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x26U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x27U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x28U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x29U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x2aU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x2bU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x2cU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x2dU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x2eU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x2fU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x30U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x31U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x32U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x33U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x34U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x35U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x36U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x37U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x38U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x39U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x3aU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x3bU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x3cU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x3dU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x3eU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox2[0x3fU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[1U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[2U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[3U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[4U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[5U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[6U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[7U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[8U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[9U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0xaU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0xbU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0xcU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0xdU] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0xeU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0xfU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x10U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x11U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x12U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x13U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x14U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x15U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x16U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x17U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x18U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x19U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x1aU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x1bU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x1cU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x1dU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x1eU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x1fU] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x20U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x21U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x22U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x23U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x24U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x25U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x26U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x27U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x28U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x29U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x2aU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x2bU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x2cU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x2dU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x2eU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x2fU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x30U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x31U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x32U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x33U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x34U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x35U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x36U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x37U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x38U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x39U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x3aU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x3bU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x3cU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x3dU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x3eU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox3[0x3fU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[1U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[2U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[3U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[4U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[5U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[6U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[7U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[8U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[9U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0xaU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0xbU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0xcU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0xdU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0xeU] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0xfU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x10U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x11U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x12U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x13U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x14U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x15U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x16U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x17U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x18U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x19U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x1aU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x1bU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x1cU] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x1dU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x1eU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x1fU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x20U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x21U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x22U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x23U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x24U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x25U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x26U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x27U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x28U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x29U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x2aU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x2bU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x2cU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x2dU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x2eU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x2fU] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x30U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x31U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x32U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x33U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x34U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x35U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x36U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x37U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x38U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x39U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x3aU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x3bU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x3cU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x3dU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x3eU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox4[0x3fU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[1U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[2U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[3U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[4U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[5U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[6U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[7U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[8U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[9U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0xaU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0xbU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0xcU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0xdU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0xeU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0xfU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x10U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x11U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x12U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x13U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x14U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x15U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x16U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x17U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x18U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x19U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x1aU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x1bU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x1cU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x1dU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x1eU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x1fU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x20U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x21U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x22U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x23U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x24U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x25U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x26U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x27U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x28U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x29U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x2aU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x2bU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x2cU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x2dU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x2eU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x2fU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x30U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x31U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x32U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x33U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x34U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x35U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x36U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x37U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x38U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x39U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x3aU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x3bU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x3cU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x3dU] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x3eU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox5[0x3fU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[1U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[2U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[3U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[4U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[5U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[6U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[7U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[8U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[9U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0xaU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0xbU] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0xcU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0xdU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0xeU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0xfU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x10U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x11U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x12U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x13U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x14U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x15U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x16U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x17U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x18U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x19U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x1aU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x1bU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x1cU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x1dU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x1eU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x1fU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x20U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x21U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x22U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x23U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x24U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x25U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x26U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x27U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x28U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x29U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x2aU] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x2bU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x2cU] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x2dU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x2eU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x2fU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x30U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x31U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x32U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x33U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x34U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x35U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x36U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x37U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x38U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x39U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x3aU] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x3bU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x3cU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x3dU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x3eU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox6[0x3fU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[1U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[2U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[3U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[4U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[5U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[6U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[7U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[8U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[9U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0xaU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0xbU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0xcU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0xdU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0xeU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0xfU] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x10U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x11U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x12U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x13U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x14U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x15U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x16U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x17U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x18U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x19U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x1aU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x1bU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x1cU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x1dU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x1eU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x1fU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x20U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x21U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x22U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x23U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x24U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x25U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x26U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x27U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x28U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x29U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x2aU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x2bU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x2cU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x2dU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x2eU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x2fU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x30U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x31U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x32U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x33U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x34U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x35U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x36U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x37U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x38U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x39U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x3aU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x3bU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x3cU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x3dU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x3eU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox7[0x3fU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[1U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[2U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[3U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[4U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[5U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[6U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[7U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[8U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[9U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0xaU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0xbU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0xcU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0xdU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0xeU] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0xfU] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x10U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x11U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x12U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x13U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x14U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x15U] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x16U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x17U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x18U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x19U] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x1aU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x1bU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x1cU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x1dU] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x1eU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x1fU] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x20U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x21U] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x22U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x23U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x24U] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x25U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x26U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x27U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x28U] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x29U] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x2aU] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x2bU] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x2cU] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x2dU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x2eU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x2fU] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x30U] = 2U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x31U] = 1U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x32U] = 0xeU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x33U] = 7U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x34U] = 4U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x35U] = 0xaU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x36U] = 8U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x37U] = 0xdU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x38U] = 0xfU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x39U] = 0xcU;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x3aU] = 9U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x3bU] = 0U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x3cU] = 3U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x3dU] = 5U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x3eU] = 6U;

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_sbox8[0x3fU] = 0xbU;

vlTOPp->des\_top\_\_DOT\_\_AS = (1U & (vlTOPp->des\_top\_\_DOT\_\_CFG

>> 2U));

vlTOPp->des\_top\_\_DOT\_\_MODE = (1U & (vlTOPp->des\_top\_\_DOT\_\_CFG

>> 6U));

vlTOPp->io\_interrupt = vlTOPp->des\_top\_\_DOT\_\_INTSTA;

vlTOPp->des\_top\_\_DOT\_\_valid = (1U & ((vlTOPp->des\_top\_\_DOT\_\_CFG

>> 1U) | (IData)(vlTOPp->io\_start)));

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_as1 = (1U

& ((4U

& vlTOPp->des\_top\_\_DOT\_\_CFG)

?

(((2U

== (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt))

| (0U

== (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt)))

? 1U

: 0U)

:

(((2U

== (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt))

| (0U

== (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt)))

? 0U

: 1U)));

vlTOPp->des\_top\_\_DOT\_\_SKEY1 = (((QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_SKEY1H))

<< 0x20U) | (QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_SKEY1L)));

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_skeydone

= (1U & ((0x10U == (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_keycnt))

| (vlTOPp->des\_top\_\_DOT\_\_CFG >> 3U)));

vlTOPp->io\_done = vlTOPp->des\_top\_\_DOT\_\_done;

vlTOPp->des\_top\_\_DOT\_\_temp1 = ((((((((((((((VL\_NEGATE\_I((IData)(

(0U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_DATAL)

| (VL\_NEGATE\_I((IData)(

(1U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_DATAH))

| (VL\_NEGATE\_I((IData)(

(2U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_SKEY1L))

| (VL\_NEGATE\_I((IData)(

(3U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_SKEY1H))

| (VL\_NEGATE\_I((IData)(

(4U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_SKEY2L))

| (VL\_NEGATE\_I((IData)(

(5U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_SKEY2H))

| (VL\_NEGATE\_I((IData)(

(6U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_SKEY3L))

| (VL\_NEGATE\_I((IData)(

(7U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_SKEY3H))

| (VL\_NEGATE\_I((IData)(

(8U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_IVL))

| (VL\_NEGATE\_I((IData)(

(9U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_IVH))

| (VL\_NEGATE\_I((IData)(

(0xaU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->des\_top\_\_DOT\_\_CFG))

| (VL\_NEGATE\_I((IData)(

(0xbU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->des\_top\_\_DOT\_\_INTEN)))

| (VL\_NEGATE\_I((IData)(

(0xcU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->des\_top\_\_DOT\_\_INTSTA)))

| (VL\_NEGATE\_I((IData)(

(0xdU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->des\_top\_\_DOT\_\_done)));

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_din = ((0U

== (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt))

?

((1U

& ((vlTOPp->des\_top\_\_DOT\_\_CFG

>> 6U)

& (~

(vlTOPp->des\_top\_\_DOT\_\_CFG

>> 2U))))

?

((((QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_DATAH))

<< 0x20U)

| (QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_DATAL)))

^

(((QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_IVH))

<< 0x20U)

| (QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_IVL))))

:

(((QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_DATAH))

<< 0x20U)

| (QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_DATAL))))

: vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_IP\_Inv);

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_start

= ((IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_valid)

& (~ (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_des\_\_DOT\_\_valid\_r)));

vlTOPp->des\_top\_\_DOT\_\_start = ((IData)(vlTOPp->des\_top\_\_DOT\_\_valid)

& (~ (IData)(vlTOPp->des\_top\_\_DOT\_\_valid\_r)));

vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_skey\_init

= ((2U == (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt))

? ((0x20U & vlTOPp->des\_top\_\_DOT\_\_CFG) ?

(((QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_SKEY3H))

<< 0x20U) | (QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_SKEY3L)))

: vlTOPp->des\_top\_\_DOT\_\_SKEY1) : ((1U

== (IData)(vlTOPp->des\_top\_\_DOT\_\_u\_des\_loop\_\_DOT\_\_r\_cnt))

?

(((QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_SKEY2H))

<< 0x20U)

| (QData)((IData)(vlTOPp->des\_top\_\_DOT\_\_SKEY2L)))

: vlTOPp->des\_top\_\_DOT\_\_SKEY1));

// Verilated -\*- C++ -\*-

// DESCRIPTION: Verilator output: Design implementation internals

// See Vsm1\_top.h for the primary calling header

#include "Vsm1\_top.h" // For This

#include "Vsm1\_top\_\_Syms.h"

//--------------------

// STATIC VARIABLES

//--------------------

VL\_CTOR\_IMP(Vsm1\_top) {

Vsm1\_top\_\_Syms\* \_\_restrict vlSymsp = \_\_VlSymsp = new Vsm1\_top\_\_Syms(this, name());

Vsm1\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Reset internal values

// Reset structure values

\_ctor\_var\_reset();

}

void Vsm1\_top::\_\_Vconfigure(Vsm1\_top\_\_Syms\* vlSymsp, bool first) {

if (0 && first) {} // Prevent unused

this->\_\_VlSymsp = vlSymsp;

}

Vsm1\_top::~Vsm1\_top() {

delete \_\_VlSymsp; \_\_VlSymsp=NULL;

}

//--------------------

void Vsm1\_top::eval() {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+++++TOP Evaluate Vsm1\_top::eval\n"); );

Vsm1\_top\_\_Syms\* \_\_restrict vlSymsp = this->\_\_VlSymsp; // Setup global symbol table

Vsm1\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

#ifdef VL\_DEBUG

// Debug assertions

\_eval\_debug\_assertions();

#endif // VL\_DEBUG

// Initialize

if (VL\_UNLIKELY(!vlSymsp->\_\_Vm\_didInit)) \_eval\_initial\_loop(vlSymsp);

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Clock loop\n"););

vlSymsp->\_\_Vm\_activity = true;

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

void Vsm1\_top::\_eval\_initial\_loop(Vsm1\_top\_\_Syms\* \_\_restrict vlSymsp) {

vlSymsp->\_\_Vm\_didInit = true;

\_eval\_initial(vlSymsp);

vlSymsp->\_\_Vm\_activity = true;

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

\_eval\_settle(vlSymsp);

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't DC converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

//--------------------

// Internal Methods

void Vsm1\_top::\_settle\_\_TOP\_\_1(Vsm1\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vsm1\_top::\_settle\_\_TOP\_\_1\n"); );

Vsm1\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Variables

VL\_SIGW(\_\_Vtemp59,127,0,4);

// Body

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[1U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[2U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[3U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[4U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[5U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[6U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[7U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[8U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[9U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0xaU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0xbU] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0xcU] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0xdU] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0xeU] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r0[0xfU] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[1U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[2U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[3U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[4U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[5U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[6U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[7U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[8U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[9U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0xaU] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0xbU] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0xcU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0xdU] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0xeU] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r1[0xfU] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[1U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[2U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[3U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[4U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[5U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[6U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[7U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[8U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[9U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0xaU] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0xbU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0xcU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0xdU] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0xeU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r2[0xfU] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[1U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[2U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[3U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[4U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[5U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[6U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[7U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[8U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[9U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0xaU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0xbU] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0xcU] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0xdU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0xeU] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r3[0xfU] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[1U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[2U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[3U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[4U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[5U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[6U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[7U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[8U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[9U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0xaU] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0xbU] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0xcU] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0xdU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0xeU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r4[0xfU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[1U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[2U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[3U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[4U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[5U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[6U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[7U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[8U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[9U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0xaU] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0xbU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0xcU] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0xdU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0xeU] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r5[0xfU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[1U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[2U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[3U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[4U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[5U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[6U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[7U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[8U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[9U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0xaU] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0xbU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0xcU] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0xdU] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0xeU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r6[0xfU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[1U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[2U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[3U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[4U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[5U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[6U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[7U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[8U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[9U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0xaU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0xbU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0xcU] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0xdU] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0xeU] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox\_r7[0xfU] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[1U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[2U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[3U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[4U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[5U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[6U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[7U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[8U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[9U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0xaU] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0xbU] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0xcU] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0xdU] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0xeU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox0[0xfU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[1U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[2U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[3U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[4U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[5U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[6U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[7U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[8U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[9U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0xaU] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0xbU] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0xcU] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0xdU] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0xeU] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox1[0xfU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[1U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[2U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[3U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[4U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[5U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[6U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[7U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[8U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[9U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0xaU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0xbU] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0xcU] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0xdU] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0xeU] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox2[0xfU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[1U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[2U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[3U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[4U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[5U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[6U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[7U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[8U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[9U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0xaU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0xbU] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0xcU] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0xdU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0xeU] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox3[0xfU] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[1U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[2U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[3U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[4U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[5U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[6U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[7U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[8U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[9U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0xaU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0xbU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0xcU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0xdU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0xeU] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox4[0xfU] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[1U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[2U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[3U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[4U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[5U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[6U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[7U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[8U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[9U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0xaU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0xbU] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0xcU] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0xdU] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0xeU] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox5[0xfU] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0U] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[1U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[2U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[3U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[4U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[5U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[6U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[7U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[8U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[9U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0xaU] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0xbU] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0xcU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0xdU] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0xeU] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox6[0xfU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0U] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[1U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[2U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[3U] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[4U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[5U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[6U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[7U] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[8U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[9U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0xaU] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0xbU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0xcU] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0xdU] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0xeU] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_sbox7[0xfU] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0U] = 0x78U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[1U] = 0xc1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[2U] = 0xd0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[3U] = 0xf0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[4U] = 0x98U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[5U] = 0x2cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[6U] = 0xeaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[7U] = 0xb4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[8U] = 0xc8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[9U] = 0x8fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xaU] = 0x55U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbU] = 0xdaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xcU] = 0x4eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xdU] = 0x2eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xeU] = 0x81U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xfU] = 0xaeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x10U] = 1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x11U] = 0x34U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x12U] = 0x5cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x13U] = 0xc2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x14U] = 0xf3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x15U] = 0xcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x16U] = 0xb3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x17U] = 0xe3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x18U] = 0xa6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x19U] = 0xcbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x1aU] = 0x30U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x1bU] = 0xf2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x1cU] = 0xadU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x1dU] = 0x8dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x1eU] = 0x36U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x1fU] = 0x80U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x20U] = 0x87U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x21U] = 0x9eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x22U] = 0xb1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x23U] = 0xcfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x24U] = 0xe7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x25U] = 0x7fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x26U] = 0x41U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x27U] = 0x13U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x28U] = 0x7eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x29U] = 0x44U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x2aU] = 0xdeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x2bU] = 0xaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x2cU] = 0x51U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x2dU] = 0x84U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x2eU] = 0xedU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x2fU] = 0xa2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x30U] = 0x3cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x31U] = 0x3eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x32U] = 4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x33U] = 0x85U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x34U] = 0xa9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x35U] = 0x47U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x36U] = 0x48U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x37U] = 0x37U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x38U] = 0x33U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x39U] = 0xcaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x3aU] = 0xddU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x3bU] = 0xd2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x3cU] = 0x97U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x3dU] = 0x88U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x3eU] = 0x50U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x3fU] = 0x99U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x40U] = 0x5eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x41U] = 0xf4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x42U] = 0x92U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x43U] = 6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x44U] = 0xd4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x45U] = 0x63U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x46U] = 0xc0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x47U] = 3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x48U] = 0xc7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x49U] = 0xd6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x4aU] = 0x6eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x4bU] = 0x3dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x4cU] = 0xfaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x4dU] = 0xe4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x4eU] = 0xe9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x4fU] = 0x4aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x50U] = 0xf6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x51U] = 0xcdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x52U] = 0x3bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x53U] = 7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x54U] = 0x42U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x55U] = 0x52U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x56U] = 0xdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x57U] = 0xe8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x58U] = 0x38U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x59U] = 0x6cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x5aU] = 0x4dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x5bU] = 0x8bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x5cU] = 0x66U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x5dU] = 0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x5eU] = 0xf5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x5fU] = 0xb0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x60U] = 0xfdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x61U] = 0x75U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x62U] = 0xb7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x63U] = 0x7cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x64U] = 0xd5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x65U] = 0x56U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x66U] = 0x11U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x67U] = 0xc6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x68U] = 0x70U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x69U] = 0x2fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x6aU] = 0x5aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x6bU] = 0xe6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x6cU] = 0x2dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x6dU] = 0x26U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x6eU] = 0xb9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x6fU] = 0xd1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x70U] = 0xa7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x71U] = 0x6bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x72U] = 0x74U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x73U] = 0x58U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x74U] = 0x7aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x75U] = 0x22U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x76U] = 0x6dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x77U] = 0x24U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x78U] = 0xebU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x79U] = 0x96U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x7aU] = 0xdfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x7bU] = 0x23U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x7cU] = 0x6fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x7dU] = 0xceU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x7eU] = 0xabU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x7fU] = 0x46U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x80U] = 0x7bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x81U] = 0xffU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x82U] = 0x5bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x83U] = 0x86U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x84U] = 0x93U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x85U] = 0x28U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x86U] = 0x59U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x87U] = 0xc5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x88U] = 0xefU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x89U] = 0x69U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x8aU] = 0x7dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x8bU] = 0x9dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x8cU] = 0x1aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x8dU] = 0xe0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x8eU] = 0xfcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x8fU] = 0xb6U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x90U] = 0x4fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x91U] = 0xbaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x92U] = 0x4bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x93U] = 0xa3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x94U] = 0x14U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x95U] = 0xdbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x96U] = 0x72U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x97U] = 0x89U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x98U] = 0xe5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x99U] = 0xf7U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x9aU] = 0x10U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x9bU] = 0x9cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x9cU] = 0xc3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x9dU] = 0x64U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x9eU] = 0x1cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0x9fU] = 0xacU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa0U] = 0x40U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa1U] = 0x2aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa2U] = 0xb8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa3U] = 0x17U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa4U] = 0xbfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa5U] = 0x90U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa6U] = 0xb5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa7U] = 0x83U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa8U] = 0x29U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xa9U] = 0x21U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xaaU] = 0x8cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xabU] = 0x3fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xacU] = 0x67U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xadU] = 0x54U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xaeU] = 0x65U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xafU] = 0x95U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb0U] = 9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb1U] = 0xc9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb2U] = 0x49U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb3U] = 0xbdU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb4U] = 0x43U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb5U] = 0xaaU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb6U] = 0xecU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb7U] = 0xe1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb8U] = 0x77U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xb9U] = 0xa1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbaU] = 0x1fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbbU] = 0x5fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbcU] = 0xa8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbdU] = 0xbbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbeU] = 0x71U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xbfU] = 0x25U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc0U] = 0x79U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc1U] = 5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc2U] = 0x3aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc3U] = 0xe2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc4U] = 0x9fU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc5U] = 0xdcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc6U] = 0x12U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc7U] = 0x39U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc8U] = 0xd9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xc9U] = 0x94U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xcaU] = 0x8eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xcbU] = 0x18U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xccU] = 8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xcdU] = 0xfbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xceU] = 0x9aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xcfU] = 0x8aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd0U] = 0x15U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd1U] = 2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd2U] = 0x27U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd3U] = 0x45U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd4U] = 0x2bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd5U] = 0x57U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd6U] = 0x73U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd7U] = 0x16U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd8U] = 0xafU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xd9U] = 0x53U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xdaU] = 0xeeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xdbU] = 0xfU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xdcU] = 0x19U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xddU] = 0x5dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xdeU] = 0x6aU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xdfU] = 0x1eU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe0U] = 0x61U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe1U] = 0x4cU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe2U] = 0x1dU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe3U] = 0x68U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe4U] = 0xa5U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe5U] = 0xccU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe6U] = 0xa0U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe7U] = 0xc4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe8U] = 0x60U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xe9U] = 0x35U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xeaU] = 0xb2U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xebU] = 0xbcU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xecU] = 0x76U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xedU] = 0xbeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xeeU] = 0x1bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xefU] = 0xa4U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf0U] = 0xeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf1U] = 0x91U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf2U] = 0x9bU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf3U] = 0xbU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf4U] = 0x82U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf5U] = 0xf9U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf6U] = 0x62U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf7U] = 0xf8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf8U] = 0x32U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xf9U] = 0xd3U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xfaU] = 0xf1U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xfbU] = 0x31U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xfcU] = 0x20U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xfdU] = 0xd8U;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xfeU] = 0xfeU;

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Sm1B[0xffU] = 0xd7U;

vlTOPp->io\_interrupt = vlTOPp->sm1\_top\_\_DOT\_\_intsta;

vlTOPp->sm1\_top\_\_DOT\_\_iv[0U] = vlTOPp->sm1\_top\_\_DOT\_\_iv0;

vlTOPp->sm1\_top\_\_DOT\_\_iv[1U] = vlTOPp->sm1\_top\_\_DOT\_\_iv1;

vlTOPp->sm1\_top\_\_DOT\_\_iv[2U] = (IData)((((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_iv3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_iv2))));

vlTOPp->sm1\_top\_\_DOT\_\_iv[3U] = (IData)(((((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_iv3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_iv2)))

>> 0x20U));

vlTOPp->sm1\_top\_\_DOT\_\_dataInv[0U] = ((0xff000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data0

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data0

<< 8U))

| ((0xff00U

& (vlTOPp->sm1\_top\_\_DOT\_\_data0

>> 8U))

| (0xffU

& (vlTOPp->sm1\_top\_\_DOT\_\_data0

>> 0x18U)))));

vlTOPp->sm1\_top\_\_DOT\_\_dataInv[1U] = ((0xff000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data1

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data1

<< 8U))

| ((0xff00U

& (vlTOPp->sm1\_top\_\_DOT\_\_data1

>> 8U))

| (0xffU

& (vlTOPp->sm1\_top\_\_DOT\_\_data1

>> 0x18U)))));

vlTOPp->sm1\_top\_\_DOT\_\_dataInv[2U] = (IData)((((QData)((IData)(

((0xff000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

<< 8U))

| ((0xff00U

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

>> 8U))

| (0xffU

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

>> 0x18U)))))))

<< 0x20U)

| (QData)((IData)(

((0xff000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

<< 8U))

| ((0xff00U

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

>> 8U))

| (0xffU

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

>> 0x18U)))))))));

vlTOPp->sm1\_top\_\_DOT\_\_dataInv[3U] = (IData)(((((QData)((IData)(

((0xff000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

<< 8U))

| ((0xff00U

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

>> 8U))

| (0xffU

& (vlTOPp->sm1\_top\_\_DOT\_\_data3

>> 0x18U)))))))

<< 0x20U)

| (QData)((IData)(

((0xff000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

<< 8U))

| ((0xff00U

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

>> 8U))

| (0xffU

& (vlTOPp->sm1\_top\_\_DOT\_\_data2

>> 0x18U))))))))

>> 0x20U));

vlTOPp->sm1\_top\_\_DOT\_\_ek[0U] = vlTOPp->sm1\_top\_\_DOT\_\_key4;

vlTOPp->sm1\_top\_\_DOT\_\_ek[1U] = vlTOPp->sm1\_top\_\_DOT\_\_key5;

vlTOPp->sm1\_top\_\_DOT\_\_ek[2U] = (IData)((((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key7))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key6))));

vlTOPp->sm1\_top\_\_DOT\_\_ek[3U] = (IData)(((((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key7))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key6)))

>> 0x20U));

vlTOPp->sm1\_top\_\_DOT\_\_NUM = (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0x10U));

vlTOPp->sm1\_top\_\_DOT\_\_CNT = (1U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xfU));

vlTOPp->sm1\_top\_\_DOT\_\_AS = (1U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 8U));

vlTOPp->sm1\_top\_\_DOT\_\_keystart = (1U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 2U));

vlTOPp->sm1\_top\_\_DOT\_\_CTR = (4U == (7U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)));

vlTOPp->sm1\_top\_\_DOT\_\_OFB = (3U == (7U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)));

vlTOPp->sm1\_top\_\_DOT\_\_CFB = (2U == (7U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)));

vlTOPp->sm1\_top\_\_DOT\_\_CBC = (1U == (7U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)));

vlTOPp->sm1\_top\_\_DOT\_\_ECB = (0U == (7U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)));

vlTOPp->sm1\_top\_\_DOT\_\_datdone = ((IData)(vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_datacnt)

== ((IData)(1U)

+ (0xfU &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))));

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Enskey[0U] =

((8U == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x20U]

: ((0xaU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x28U]

: ((0xcU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x30U]

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x38U])));

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Enskey[1U] =

((8U == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x21U]

: ((0xaU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x29U]

: ((0xcU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x31U]

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x39U])));

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Enskey[2U] =

((8U == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x22U]

: ((0xaU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x2aU]

: ((0xcU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x32U]

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x3aU])));

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Enskey[3U] =

((8U == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x23U]

: ((0xaU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x2bU]

: ((0xcU == (0xfU & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 4U))) ? vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x33U]

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0x3bU])));

vlTOPp->sm1\_top\_\_DOT\_\_datastart = (1U & ((vlTOPp->sm1\_top\_\_DOT\_\_control

>> 3U)

| (IData)(vlTOPp->io\_start)));

vlTOPp->sm1\_top\_\_DOT\_\_as\_mode = (1U & ((((2U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

| (3U

==

(7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

| (4U ==

(7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

? 0U :

(1U & (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 8U))));

vlTOPp->sm1\_top\_\_DOT\_\_datain[0U] = ((((4U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

| (2U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

| (3U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

? vlTOPp->sm1\_top\_\_DOT\_\_iv[0U]

: (((1U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

& (~ (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 8U)))

? (vlTOPp->sm1\_top\_\_DOT\_\_dataInv[0U]

^ vlTOPp->sm1\_top\_\_DOT\_\_iv[0U])

: vlTOPp->sm1\_top\_\_DOT\_\_dataInv[0U]));

vlTOPp->sm1\_top\_\_DOT\_\_datain[1U] = ((((4U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

| (2U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

| (3U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

? vlTOPp->sm1\_top\_\_DOT\_\_iv[1U]

: (((1U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

& (~ (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 8U)))

? (vlTOPp->sm1\_top\_\_DOT\_\_dataInv[1U]

^ vlTOPp->sm1\_top\_\_DOT\_\_iv[1U])

: vlTOPp->sm1\_top\_\_DOT\_\_dataInv[1U]));

vlTOPp->sm1\_top\_\_DOT\_\_datain[2U] = ((((4U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

| (2U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

| (3U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

? vlTOPp->sm1\_top\_\_DOT\_\_iv[2U]

: (((1U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

& (~ (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 8U)))

? (vlTOPp->sm1\_top\_\_DOT\_\_dataInv[2U]

^ vlTOPp->sm1\_top\_\_DOT\_\_iv[2U])

: vlTOPp->sm1\_top\_\_DOT\_\_dataInv[2U]));

vlTOPp->sm1\_top\_\_DOT\_\_datain[3U] = ((((4U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

| (2U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

| (3U == (7U

& (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU))))

? vlTOPp->sm1\_top\_\_DOT\_\_iv[3U]

: (((1U ==

(7U &

(vlTOPp->sm1\_top\_\_DOT\_\_control

>> 0xcU)))

& (~ (vlTOPp->sm1\_top\_\_DOT\_\_control

>> 8U)))

? (vlTOPp->sm1\_top\_\_DOT\_\_dataInv[3U]

^ vlTOPp->sm1\_top\_\_DOT\_\_iv[3U])

: vlTOPp->sm1\_top\_\_DOT\_\_dataInv[3U]));

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_eksk[0U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[0U]

^ vlTOPp->sm1\_top\_\_DOT\_\_sk0)

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_eksk[1U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[1U]

^ vlTOPp->sm1\_top\_\_DOT\_\_sk1)

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_eksk[2U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[2U]

^ (IData)(

(((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_sk3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_sk2)))))

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_eksk[3U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[3U]

^ (IData)(

((((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_sk3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_sk2)))

>> 0x20U)))

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_ekak[0U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[0U]

^ vlTOPp->sm1\_top\_\_DOT\_\_key0)

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_ekak[1U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[1U]

^ vlTOPp->sm1\_top\_\_DOT\_\_key1)

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_ekak[2U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[2U]

^ (IData)(

(((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key2)))))

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_ekak[3U] = (

(4U

& vlTOPp->sm1\_top\_\_DOT\_\_control)

?

(vlTOPp->sm1\_top\_\_DOT\_\_ek[3U]

^ (IData)(

((((QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm1\_top\_\_DOT\_\_key2)))

>> 0x20U)))

: 0U);

vlTOPp->io\_done = vlTOPp->sm1\_top\_\_DOT\_\_datdone;

vlTOPp->sm1\_top\_\_DOT\_\_temp1 = ((((((((VL\_NEGATE\_I((IData)(

(0U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm1\_top\_\_DOT\_\_control)

| (VL\_NEGATE\_I((IData)(

(1U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_inten)))

| (VL\_NEGATE\_I((IData)(

(2U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_datdone)))

| (VL\_NEGATE\_I((IData)(

(3U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_intsta)))

| (VL\_NEGATE\_I((IData)(

(0x14U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm1\_top\_\_DOT\_\_data0))

| (VL\_NEGATE\_I((IData)(

(0x15U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm1\_top\_\_DOT\_\_data1))

| (VL\_NEGATE\_I((IData)(

(0x16U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm1\_top\_\_DOT\_\_data2))

| (VL\_NEGATE\_I((IData)(

(0x17U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm1\_top\_\_DOT\_\_data3));

vlTOPp->sm1\_top\_\_DOT\_\_dataout[0U] = ((IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode)

? ((0xffffff80U

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[0U]

<< 7U))

| (0x7fU

& ((vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[1U]

<< 7U)

| (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[0U]

>> 0x19U))))

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Endata[0U]);

vlTOPp->sm1\_top\_\_DOT\_\_dataout[1U] = ((IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode)

? ((0xffff8000U

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[1U]

<< 0xfU))

| (0x7fffU

& ((vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[2U]

<< 0xfU)

| (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[1U]

>> 0x11U))))

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Endata[1U]);

vlTOPp->sm1\_top\_\_DOT\_\_dataout[2U] = ((IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode)

? (IData)(

(((QData)((IData)(

((0x80000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[3U]

<< 0x1fU))

| (0x7fffffffU

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[3U]

>> 1U)))))

<< 0x20U)

| (QData)((IData)(

((0xff800000U

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[2U]

<< 0x17U))

| (0x7fffffU

& ((vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[3U]

<< 0x17U)

| (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[2U]

>> 9U))))))))

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Endata[2U]);

vlTOPp->sm1\_top\_\_DOT\_\_dataout[3U] = ((IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode)

? (IData)(

((((QData)((IData)(

((0x80000000U

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[3U]

<< 0x1fU))

| (0x7fffffffU

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[3U]

>> 1U)))))

<< 0x20U)

| (QData)((IData)(

((0xff800000U

& (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[2U]

<< 0x17U))

| (0x7fffffU

& ((vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[3U]

<< 0x17U)

| (vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Dedata[2U]

>> 9U)))))))

>> 0x20U))

: vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Endata[3U]);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_InitDeJ[0U]

= ((((0U == (IData)(vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_datacnt))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_datastart))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode))

? (vlTOPp->sm1\_top\_\_DOT\_\_datain[0U] ^ vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[0U])

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_InitDeJ[1U]

= ((((0U == (IData)(vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_datacnt))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_datastart))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode))

? (vlTOPp->sm1\_top\_\_DOT\_\_datain[1U] ^ vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[1U])

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_InitDeJ[2U]

= ((((0U == (IData)(vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_datacnt))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_datastart))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode))

? (vlTOPp->sm1\_top\_\_DOT\_\_datain[2U] ^ vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[2U])

: 0U);

vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_InitDeJ[3U]

= ((((0U == (IData)(vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_datacnt))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_datastart))

& (IData)(vlTOPp->sm1\_top\_\_DOT\_\_as\_mode))

? (vlTOPp->sm1\_top\_\_DOT\_\_datain[3U] ^ vlTOPp->sm1\_top\_\_DOT\_\_sm1\_en\_\_DOT\_\_Skey[3U])

: 0U);

// Verilated -\*- C++ -\*-

// DESCRIPTION: Verilator output: Design implementation internals

// See Vsm2\_top.h for the primary calling header

#include "Vsm2\_top.h" // For This

#include "Vsm2\_top\_\_Syms.h"

//--------------------

// STATIC VARIABLES

//--------------------

VL\_CTOR\_IMP(Vsm2\_top) {

Vsm2\_top\_\_Syms\* \_\_restrict vlSymsp = \_\_VlSymsp = new Vsm2\_top\_\_Syms(this, name());

Vsm2\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Reset internal values

// Reset structure values

\_ctor\_var\_reset();

}

void Vsm2\_top::\_\_Vconfigure(Vsm2\_top\_\_Syms\* vlSymsp, bool first) {

if (0 && first) {} // Prevent unused

this->\_\_VlSymsp = vlSymsp;

}

Vsm2\_top::~Vsm2\_top() {

delete \_\_VlSymsp; \_\_VlSymsp=NULL;

}

//--------------------

void Vsm2\_top::eval() {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+++++TOP Evaluate Vsm2\_top::eval\n"); );

Vsm2\_top\_\_Syms\* \_\_restrict vlSymsp = this->\_\_VlSymsp; // Setup global symbol table

Vsm2\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

#ifdef VL\_DEBUG

// Debug assertions

\_eval\_debug\_assertions();

#endif // VL\_DEBUG

// Initialize

if (VL\_UNLIKELY(!vlSymsp->\_\_Vm\_didInit)) \_eval\_initial\_loop(vlSymsp);

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Clock loop\n"););

vlSymsp->\_\_Vm\_activity = true;

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

void Vsm2\_top::\_eval\_initial\_loop(Vsm2\_top\_\_Syms\* \_\_restrict vlSymsp) {

vlSymsp->\_\_Vm\_didInit = true;

\_eval\_initial(vlSymsp);

vlSymsp->\_\_Vm\_activity = true;

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

\_eval\_settle(vlSymsp);

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't DC converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

//--------------------

// Internal Methods

VL\_INLINE\_OPT void Vsm2\_top::\_sequent\_\_TOP\_\_1(Vsm2\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vsm2\_top::\_sequent\_\_TOP\_\_1\n"); );

Vsm2\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Variables

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_addr,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_a\_addr,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_b\_addr,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_n\_addr,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_r\_addr,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_loopn,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_R\_sub\_N,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_R\_add\_N,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_loopw,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_N,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_add\_c,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_sub\_c,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RN,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_B,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_AB,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_loop,7,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_SUB\_B,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_ADD\_N,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RB,0,0);

VL\_SIG8(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_ADD\_N,0,0);

VL\_SIGW(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata,2112,0,67);

VL\_SIGW(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r,64,0,3);

VL\_SIGW(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r,64,0,3);

VL\_SIGW(\_\_Vtemp1,95,0,3);

VL\_SIGW(\_\_Vtemp3,95,0,3);

VL\_SIGW(\_\_Vtemp4,95,0,3);

VL\_SIGW(\_\_Vtemp5,95,0,3);

VL\_SIGW(\_\_Vtemp6,95,0,3);

VL\_SIGW(\_\_Vtemp7,95,0,3);

VL\_SIGW(\_\_Vtemp10,95,0,3);

VL\_SIGW(\_\_Vtemp11,95,0,3);

VL\_SIGW(\_\_Vtemp12,95,0,3);

VL\_SIGW(\_\_Vtemp14,95,0,3);

VL\_SIGW(\_\_Vtemp15,95,0,3);

VL\_SIGW(\_\_Vtemp17,95,0,3);

VL\_SIGW(\_\_Vtemp18,95,0,3);

VL\_SIGW(\_\_Vtemp19,95,0,3);

VL\_SIGW(\_\_Vtemp20,95,0,3);

VL\_SIGW(\_\_Vtemp21,95,0,3);

VL\_SIGW(\_\_Vtemp24,95,0,3);

VL\_SIGW(\_\_Vtemp25,95,0,3);

VL\_SIGW(\_\_Vtemp26,95,0,3);

VL\_SIGW(\_\_Vtemp29,95,0,3);

VL\_SIGW(\_\_Vtemp30,95,0,3);

VL\_SIGW(\_\_Vtemp31,95,0,3);

VL\_SIGW(\_\_Vtemp32,95,0,3);

VL\_SIGW(\_\_Vtemp33,95,0,3);

VL\_SIGW(\_\_Vtemp36,95,0,3);

VL\_SIGW(\_\_Vtemp37,95,0,3);

VL\_SIGW(\_\_Vtemp38,95,0,3);

VL\_SIGW(\_\_Vtemp39,95,0,3);

VL\_SIGW(\_\_Vtemp40,95,0,3);

VL\_SIGW(\_\_Vtemp43,95,0,3);

VL\_SIGW(\_\_Vtemp44,95,0,3);

VL\_SIGW(\_\_Vtemp45,95,0,3);

VL\_SIGW(\_\_Vtemp48,95,0,3);

VL\_SIGW(\_\_Vtemp49,95,0,3);

VL\_SIGW(\_\_Vtemp50,95,0,3);

VL\_SIGW(\_\_Vtemp51,95,0,3);

VL\_SIGW(\_\_Vtemp52,95,0,3);

VL\_SIGW(\_\_Vtemp54,95,0,3);

VL\_SIGW(\_\_Vtemp56,2143,0,67);

VL\_SIGW(\_\_Vtemp59,2143,0,67);

VL\_SIGW(\_\_Vtemp62,2143,0,67);

VL\_SIGW(\_\_Vtemp65,2143,0,67);

VL\_SIGW(\_\_Vtemp67,2143,0,67);

VL\_SIGW(\_\_Vtemp69,2143,0,67);

VL\_SIGW(\_\_Vtemp70,2143,0,67);

VL\_SIGW(\_\_Vtemp73,2143,0,67);

VL\_SIGW(\_\_Vtemp76,2143,0,67);

VL\_SIGW(\_\_Vtemp79,2143,0,67);

VL\_SIGW(\_\_Vtemp80,2143,0,67);

VL\_SIGW(\_\_Vtemp83,2143,0,67);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r\_addr,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n,63,0);

VL\_SIG64(\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b,63,0);

// Body

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_RANNUM = vlTOPp->sm2\_top\_\_DOT\_\_RANNUM;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_INTEN = vlTOPp->sm2\_top\_\_DOT\_\_INTEN;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U] = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U] = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U] = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c = vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_N = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_N;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_sub\_c = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_sub\_c;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RN = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RN;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_B = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_B;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_AB = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_AB;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_loop = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_loop;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_SUB\_B = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_SUB\_B;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_ADD\_N = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_ADD\_N;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RB = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RB;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_ADD\_N = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_ADD\_N;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r[0U] = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r[0U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r[1U] = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r[1U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r[2U] = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r[2U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state

= vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_add\_c = vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_add\_c;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state

= vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_a\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_a\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_b\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_b\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_n\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_n\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_r\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_r\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_R\_sub\_N = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_R\_sub\_N;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_R\_add\_N = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_R\_add\_N;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_loopw = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_loopw;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_addr = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_addr;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[1U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[1U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[2U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[2U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[3U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[3U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[4U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[4U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[5U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[5U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[6U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[6U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[7U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[7U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[8U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[8U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[9U] =

vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[9U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xaU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xaU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xbU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xbU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xcU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xcU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xdU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xdU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xeU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xeU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xfU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0xfU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x10U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x10U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x11U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x11U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x12U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x12U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x13U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x13U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x14U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x14U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x15U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x15U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x16U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x16U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x17U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x17U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x18U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x18U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x19U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x19U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1aU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1aU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1bU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1bU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1cU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1cU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1dU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1dU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1eU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1eU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1fU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x1fU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x20U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x20U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x21U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x21U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x22U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x22U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x23U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x23U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x24U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x24U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x25U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x25U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x26U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x26U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x27U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x27U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x28U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x28U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x29U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x29U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2aU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2aU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2bU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2bU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2cU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2cU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2dU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2dU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2eU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2eU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2fU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x2fU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x30U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x30U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x31U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x31U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x32U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x32U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x33U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x33U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x34U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x34U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x35U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x35U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x36U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x36U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x37U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x37U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x38U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x38U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x39U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x39U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3aU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3aU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3bU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3bU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3cU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3cU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3dU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3dU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3eU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3eU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3fU]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x3fU];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x40U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x40U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x41U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x41U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x42U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_Rdata[0x42U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_loopn = vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_loopn;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_state

= vlTOPp->sm2\_top\_\_DOT\_\_u\_mulp\_\_DOT\_\_state;

// ALWAYS at ../../scripts/v2c/../../src/sm2/sm2\_top.v:58

vlTOPp->sm2\_top\_\_DOT\_\_rsel\_RAM = ((IData)(vlTOPp->rstn)

& (0x1ffU >=

(0x3ffU &

(vlTOPp->io\_mem\_io\_addr

>> 2U))));

// ALWAYS at ../../scripts/v2c/../../src/sm2/sm2\_top.v:64

vlTOPp->sm2\_top\_\_DOT\_\_raddr = ((IData)(vlTOPp->rstn)

& (vlTOPp->io\_mem\_io\_addr

>> 2U));

// ALWAYS at ../../scripts/v2c/../../src/sm2/sm2\_top.v:74

vlTOPp->sm2\_top\_\_DOT\_\_valid\_r = ((IData)(vlTOPp->rstn)

& (IData)(vlTOPp->sm2\_top\_\_DOT\_\_valid));

// ALWAYS at ../../scripts/v2c/../../src/sm2/sm2\_top.v:196

if (vlTOPp->rstn) {

if (vlTOPp->io\_mem\_io\_sel) {

vlTOPp->sm2\_top\_\_DOT\_\_temp2 = vlTOPp->sm2\_top\_\_DOT\_\_temp1;

}

} else {

vlTOPp->sm2\_top\_\_DOT\_\_temp2 = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/sm2/add\_Zeng.v:52

if (vlTOPp->rstn) {

if (((((((((0U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))

| (1U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))

| (2U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))

| (3U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))

| (4U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))

| (8U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))

| (5U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))

| (7U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state)))) {

if ((0U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN = 0U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout = VL\_ULL(0);

if ((((IData)(vlTOPp->sm2\_top\_\_DOT\_\_start)

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 3U)) & (0U != (0xffU &

(vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U))))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr

= (((QData)((IData)((0xffU

& vlTOPp->sm2\_top\_\_DOT\_\_CFGH)))

+ (QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr

= (((QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 8U))))

+ (QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

= (((QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U))))

+ (QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

= (((QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))))

+ (QData)((IData)((0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 1U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU & ((vlTOPp->sm2\_top\_\_DOT\_\_CFGH

+ (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)) - (IData)(1U)));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD = 1U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

}

} else {

if ((1U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 2U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr));

} else {

if ((2U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr

- VL\_ULL(1));

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a

= vlTOPp->sm2\_top\_\_DOT\_\_add\_din;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 5U;

} else {

if ((3U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

= (VL\_ULL(1) + vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop

= (0xffU & ((IData)(1U)

+ (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 4U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr));

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 4U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr));

}

} else {

if ((4U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

= (VL\_ULL(1)

+ vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr);

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 8U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n

= vlTOPp->sm2\_top\_\_DOT\_\_add\_din;

} else {

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 6U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n

= vlTOPp->sm2\_top\_\_DOT\_\_add\_din;

}

} else {

if ((8U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

if ((vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n

> vlTOPp->sm2\_top\_\_DOT\_\_add\_din)) {

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 0xcU;

} else {

if ((vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n

== vlTOPp->sm2\_top\_\_DOT\_\_add\_din)) {

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 3U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU

& (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr));

if (((IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)

==

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = 1U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

=

(0xffU

& (((vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U)

+

(vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U))

- (IData)(1U)));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

=

(((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

=

(((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

}

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = 1U;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 3U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU

& (((vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U)

+

(vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U))

- (IData)(1U)));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

= (

((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

= (

((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

}

}

} else {

if ((5U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop

= (0xffU

& ((IData)(1U)

+ (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_AddT[0U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_AddT[1U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U]

= vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_AddT[2U];

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout

= (((QData)((IData)(

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_AddT[1U]))

<< 0x20U)

| (QData)((IData)(

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_AddT[0U])));

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU

& (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 7U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c

= (1U &

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_AddT[2U]);

} else {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD) {

if (((IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)

<

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

=

(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 1U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

=

(0xffU

& (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr));

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 3U;

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

=

(((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

=

(0xffU

& (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = 1U;

} else {

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

=

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

= (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U))));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

= (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN = 1U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

}

}

}

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB) {

if (((IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)

<

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

=

(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 3U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

=

(0xffU

& (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr));

} else {

VL\_EXTEND\_WQ(65,64, \_\_Vtemp1, vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n);

if (

VL\_LT\_W(3, vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r, \_\_Vtemp1)) {

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 0xcU;

} else {

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 3U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = 0U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

=

(0xffU

& (((vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U)

+

(vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U))

- (IData)(1U)));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr

=

(((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr

=

(((QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))))

+ (QData)((IData)(

(0xffU

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)))))

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

}

}

}

}

}

}

}

}

}

}

} else {

if ((6U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop

= (0xffU & ((IData)(1U) + (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 7U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr));

if ((vlTOPp->sm2\_top\_\_DOT\_\_add\_din

>= (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n

+ (QData)((IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c))))) {

VL\_EXTEND\_WQ(65,64, \_\_Vtemp3, vlTOPp->sm2\_top\_\_DOT\_\_add\_din);

VL\_EXTEND\_WQ(65,64, \_\_Vtemp4, vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n);

VL\_EXTEND\_WI(65,1, \_\_Vtemp5, (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c));

VL\_ADD\_W(3, \_\_Vtemp6, \_\_Vtemp4, \_\_Vtemp5);

VL\_SUB\_W(3, \_\_Vtemp7, \_\_Vtemp3, \_\_Vtemp6);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U]

= \_\_Vtemp7[0U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U]

= \_\_Vtemp7[1U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U]

= (1U & \_\_Vtemp7[2U]);

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout

= (vlTOPp->sm2\_top\_\_DOT\_\_add\_din

- (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n

+ (QData)((IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c))));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = 0U;

} else {

if (((IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop)

== ((0xffU & (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U)) - (IData)(1U)))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c = 0U;

}

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c) {

VL\_EXTEND\_WQ(65,64, \_\_Vtemp10, vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_Invn);

VL\_EXTEND\_WQ(65,64, \_\_Vtemp11, vlTOPp->sm2\_top\_\_DOT\_\_add\_din);

VL\_ADD\_W(3, \_\_Vtemp12, \_\_Vtemp10, \_\_Vtemp11);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U]

= \_\_Vtemp12[0U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U]

= \_\_Vtemp12[1U];

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U]

= (1U & \_\_Vtemp12[2U]);

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_Invn

+ vlTOPp->sm2\_top\_\_DOT\_\_add\_din);

} else {

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout

= (VL\_ULL(1) + (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_Invn

+ vlTOPp->sm2\_top\_\_DOT\_\_add\_din));

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout

= (VL\_ULL(1) + (vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_Invn

+ vlTOPp->sm2\_top\_\_DOT\_\_add\_din));

}

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = 1U;

}

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = 0U;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 0U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U] = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U] = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U] = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr = VL\_ULL(0);

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = 0U;

}

}

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_add\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_sub\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_COMPARE\_RN = 0U;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_state = 0U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[0U] = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[1U] = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r[2U] = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_a\_addr = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_b\_addr = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_n\_addr = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_r\_addr = VL\_ULL(0);

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addr = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_loop = 0U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_addout = VL\_ULL(0);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_ADD = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_add\_\_DOT\_\_WORK\_SUB = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/sm2/sub\_Zeng.v:65

if (vlTOPp->rstn) {

if (((((((((0U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state))

| (1U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))

| (2U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))

| (3U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))

| (4U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))

| (5U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))

| (6U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))

| (7U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state)))) {

if ((0U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_N = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_add\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_sub\_c = 0U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RN = 0U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_subout = VL\_ULL(0);

if ((((IData)(vlTOPp->sm2\_top\_\_DOT\_\_start)

& (vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 4U)) & (0U != (0xffU &

(vlTOPp->sm2\_top\_\_DOT\_\_CFGL

>> 8U))))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr

= (QData)((IData)((0xffU & vlTOPp->sm2\_top\_\_DOT\_\_CFGH)));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

= (QData)((IData)((0xffU &

(vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 8U))));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n\_addr

= (QData)((IData)((0xffU &

(vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x10U))));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r\_addr

= (QData)((IData)((0xffU &

(vlTOPp->sm2\_top\_\_DOT\_\_CFGH

>> 0x18U))));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_R\_SUB\_B = 0U;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 1U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_addr

= (0xffU & vlTOPp->sm2\_top\_\_DOT\_\_CFGH);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_AB = 1U;

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_loop = 0U;

}

} else {

if ((1U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state))) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_loop

= (0xffU & ((IData)(1U) + (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_loop)));

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_AB) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr

= (VL\_ULL(1) + vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr);

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 2U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr));

} else {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_ADD\_N) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 5U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_n\_addr));

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 2U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr));

}

}

} else {

if ((2U == (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state))) {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_AB) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

= (VL\_ULL(1) + vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr);

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a

= vlTOPp->sm2\_top\_\_DOT\_\_add\_din;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 3U;

} else {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_A\_SUB\_B) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

- VL\_ULL(1));

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_a

= vlTOPp->sm2\_top\_\_DOT\_\_add\_din;

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 7U;

} else {

if (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_COMPARE\_RB) {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

= (VL\_ULL(1)

+ vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr);

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r\_addr));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 6U;

} else {

\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

= (vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_b\_addr

- VL\_ULL(1));

vlTOPp->\_\_Vdly\_\_sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_state = 6U;

vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_addr

= (0xffU & (IData)(vlTOPp->sm2\_top\_\_DOT\_\_u\_sub\_\_DOT\_\_r\_addr));

}

}

}

// Verilated -\*- C++ -\*-

// DESCRIPTION: Verilator output: Design implementation internals

// See Vsm4\_top.h for the primary calling header

#include "Vsm4\_top.h" // For This

#include "Vsm4\_top\_\_Syms.h"

//--------------------

// STATIC VARIABLES

//--------------------

VL\_CTOR\_IMP(Vsm4\_top) {

Vsm4\_top\_\_Syms\* \_\_restrict vlSymsp = \_\_VlSymsp = new Vsm4\_top\_\_Syms(this, name());

Vsm4\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Reset internal values

// Reset structure values

\_ctor\_var\_reset();

}

void Vsm4\_top::\_\_Vconfigure(Vsm4\_top\_\_Syms\* vlSymsp, bool first) {

if (0 && first) {} // Prevent unused

this->\_\_VlSymsp = vlSymsp;

}

Vsm4\_top::~Vsm4\_top() {

delete \_\_VlSymsp; \_\_VlSymsp=NULL;

}

//--------------------

void Vsm4\_top::eval() {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+++++TOP Evaluate Vsm4\_top::eval\n"); );

Vsm4\_top\_\_Syms\* \_\_restrict vlSymsp = this->\_\_VlSymsp; // Setup global symbol table

Vsm4\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

#ifdef VL\_DEBUG

// Debug assertions

\_eval\_debug\_assertions();

#endif // VL\_DEBUG

// Initialize

if (VL\_UNLIKELY(!vlSymsp->\_\_Vm\_didInit)) \_eval\_initial\_loop(vlSymsp);

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Clock loop\n"););

vlSymsp->\_\_Vm\_activity = true;

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

void Vsm4\_top::\_eval\_initial\_loop(Vsm4\_top\_\_Syms\* \_\_restrict vlSymsp) {

vlSymsp->\_\_Vm\_didInit = true;

\_eval\_initial(vlSymsp);

vlSymsp->\_\_Vm\_activity = true;

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

\_eval\_settle(vlSymsp);

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't DC converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

//--------------------

// Internal Methods

void Vsm4\_top::\_settle\_\_TOP\_\_1(Vsm4\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vsm4\_top::\_settle\_\_TOP\_\_1\n"); );

Vsm4\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Body

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0U] = 0xd6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[1U] = 0x90U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[2U] = 0xe9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[3U] = 0xfeU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[4U] = 0xccU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[5U] = 0xe1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[6U] = 0x3dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[7U] = 0xb7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[8U] = 0x16U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[9U] = 0xb6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xaU] = 0x14U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbU] = 0xc2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xcU] = 0x28U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xdU] = 0xfbU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xeU] = 0x2cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xfU] = 5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x10U] = 0x2bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x11U] = 0x67U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x12U] = 0x9aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x13U] = 0x76U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x14U] = 0x2aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x15U] = 0xbeU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x16U] = 4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x17U] = 0xc3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x18U] = 0xaaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x19U] = 0x44U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x1aU] = 0x13U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x1bU] = 0x26U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x1cU] = 0x49U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x1dU] = 0x86U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x1eU] = 6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x1fU] = 0x99U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x20U] = 0x9cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x21U] = 0x42U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x22U] = 0x50U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x23U] = 0xf4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x24U] = 0x91U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x25U] = 0xefU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x26U] = 0x98U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x27U] = 0x7aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x28U] = 0x33U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x29U] = 0x54U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x2aU] = 0xbU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x2bU] = 0x43U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x2cU] = 0xedU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x2dU] = 0xcfU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x2eU] = 0xacU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x2fU] = 0x62U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x30U] = 0xe4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x31U] = 0xb3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x32U] = 0x1cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x33U] = 0xa9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x34U] = 0xc9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x35U] = 8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x36U] = 0xe8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x37U] = 0x95U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x38U] = 0x80U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x39U] = 0xdfU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x3aU] = 0x94U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x3bU] = 0xfaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x3cU] = 0x75U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x3dU] = 0x8fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x3eU] = 0x3fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x3fU] = 0xa6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x40U] = 0x47U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x41U] = 7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x42U] = 0xa7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x43U] = 0xfcU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x44U] = 0xf3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x45U] = 0x73U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x46U] = 0x17U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x47U] = 0xbaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x48U] = 0x83U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x49U] = 0x59U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x4aU] = 0x3cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x4bU] = 0x19U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x4cU] = 0xe6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x4dU] = 0x85U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x4eU] = 0x4fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x4fU] = 0xa8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x50U] = 0x68U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x51U] = 0x6bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x52U] = 0x81U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x53U] = 0xb2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x54U] = 0x71U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x55U] = 0x64U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x56U] = 0xdaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x57U] = 0x8bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x58U] = 0xf8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x59U] = 0xebU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x5aU] = 0xfU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x5bU] = 0x4bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x5cU] = 0x70U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x5dU] = 0x56U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x5eU] = 0x9dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x5fU] = 0x35U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x60U] = 0x1eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x61U] = 0x24U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x62U] = 0xeU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x63U] = 0x5eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x64U] = 0x63U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x65U] = 0x58U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x66U] = 0xd1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x67U] = 0xa2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x68U] = 0x25U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x69U] = 0x22U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x6aU] = 0x7cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x6bU] = 0x3bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x6cU] = 1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x6dU] = 0x21U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x6eU] = 0x78U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x6fU] = 0x87U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x70U] = 0xd4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x71U] = 0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x72U] = 0x46U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x73U] = 0x57U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x74U] = 0x9fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x75U] = 0xd3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x76U] = 0x27U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x77U] = 0x52U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x78U] = 0x4cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x79U] = 0x36U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x7aU] = 2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x7bU] = 0xe7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x7cU] = 0xa0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x7dU] = 0xc4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x7eU] = 0xc8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x7fU] = 0x9eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x80U] = 0xeaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x81U] = 0xbfU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x82U] = 0x8aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x83U] = 0xd2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x84U] = 0x40U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x85U] = 0xc7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x86U] = 0x38U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x87U] = 0xb5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x88U] = 0xa3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x89U] = 0xf7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x8aU] = 0xf2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x8bU] = 0xceU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x8cU] = 0xf9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x8dU] = 0x61U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x8eU] = 0x15U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x8fU] = 0xa1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x90U] = 0xe0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x91U] = 0xaeU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x92U] = 0x5dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x93U] = 0xa4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x94U] = 0x9bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x95U] = 0x34U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x96U] = 0x1aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x97U] = 0x55U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x98U] = 0xadU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x99U] = 0x93U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x9aU] = 0x32U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x9bU] = 0x30U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x9cU] = 0xf5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x9dU] = 0x8cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x9eU] = 0xb1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0x9fU] = 0xe3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa0U] = 0x1dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa1U] = 0xf6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa2U] = 0xe2U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa3U] = 0x2eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa4U] = 0x82U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa5U] = 0x66U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa6U] = 0xcaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa7U] = 0x60U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa8U] = 0xc0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xa9U] = 0x29U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xaaU] = 0x23U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xabU] = 0xabU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xacU] = 0xdU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xadU] = 0x53U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xaeU] = 0x4eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xafU] = 0x6fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb0U] = 0xd5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb1U] = 0xdbU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb2U] = 0x37U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb3U] = 0x45U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb4U] = 0xdeU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb5U] = 0xfdU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb6U] = 0x8eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb7U] = 0x2fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb8U] = 3U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xb9U] = 0xffU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbaU] = 0x6aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbbU] = 0x72U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbcU] = 0x6dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbdU] = 0x6cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbeU] = 0x5bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xbfU] = 0x51U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc0U] = 0x8dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc1U] = 0x1bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc2U] = 0xafU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc3U] = 0x92U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc4U] = 0xbbU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc5U] = 0xddU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc6U] = 0xbcU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc7U] = 0x7fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc8U] = 0x11U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xc9U] = 0xd9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xcaU] = 0x5cU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xcbU] = 0x41U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xccU] = 0x1fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xcdU] = 0x10U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xceU] = 0x5aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xcfU] = 0xd8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd0U] = 0xaU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd1U] = 0xc1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd2U] = 0x31U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd3U] = 0x88U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd4U] = 0xa5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd5U] = 0xcdU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd6U] = 0x7bU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd7U] = 0xbdU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd8U] = 0x2dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xd9U] = 0x74U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xdaU] = 0xd0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xdbU] = 0x12U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xdcU] = 0xb8U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xddU] = 0xe5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xdeU] = 0xb4U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xdfU] = 0xb0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe0U] = 0x89U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe1U] = 0x69U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe2U] = 0x97U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe3U] = 0x4aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe4U] = 0xcU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe5U] = 0x96U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe6U] = 0x77U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe7U] = 0x7eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe8U] = 0x65U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xe9U] = 0xb9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xeaU] = 0xf1U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xebU] = 9U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xecU] = 0xc5U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xedU] = 0x6eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xeeU] = 0xc6U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xefU] = 0x84U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf0U] = 0x18U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf1U] = 0xf0U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf2U] = 0x7dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf3U] = 0xecU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf4U] = 0x3aU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf5U] = 0xdcU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf6U] = 0x4dU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf7U] = 0x20U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf8U] = 0x79U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xf9U] = 0xeeU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xfaU] = 0x5fU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xfbU] = 0x3eU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xfcU] = 0xd7U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xfdU] = 0xcbU;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xfeU] = 0x39U;

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box[0xffU] = 0x48U;

vlTOPp->sm4\_top\_\_DOT\_\_keystart = (1U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 1U));

vlTOPp->sm4\_top\_\_DOT\_\_AS = (1U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 4U));

vlTOPp->sm4\_top\_\_DOT\_\_CNT = (1U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 0xbU));

vlTOPp->sm4\_top\_\_DOT\_\_NUM = (0xfU & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 0xcU));

vlTOPp->sm4\_top\_\_DOT\_\_ECB = (0U == (7U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)));

vlTOPp->sm4\_top\_\_DOT\_\_CBC = (1U == (7U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)));

vlTOPp->sm4\_top\_\_DOT\_\_CFB = (2U == (7U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)));

vlTOPp->sm4\_top\_\_DOT\_\_OFB = (3U == (7U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)));

vlTOPp->sm4\_top\_\_DOT\_\_CTR = (4U == (7U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)));

vlTOPp->io\_interrupt = (1U & (IData)(vlTOPp->sm4\_top\_\_DOT\_\_INTSTA));

vlTOPp->io\_done = (0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt));

vlTOPp->sm4\_top\_\_DOT\_\_d\_done = (0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt));

vlTOPp->io\_mem\_io\_rdata = ((IData)(vlTOPp->sm4\_top\_\_DOT\_\_rsel)

? vlTOPp->sm4\_top\_\_DOT\_\_temp2

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_INTRAW = ((2U & (IData)(vlTOPp->sm4\_top\_\_DOT\_\_INTRAW))

| (0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt)));

vlTOPp->sm4\_top\_\_DOT\_\_INTRAW = ((1U & (IData)(vlTOPp->sm4\_top\_\_DOT\_\_INTRAW))

| ((0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

<< 1U));

vlTOPp->sm4\_top\_\_DOT\_\_as\_mode = (1U & ((((2U ==

(7U &

(vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

| (3U

==

(7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

| (4U ==

(7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

? 0U :

(1U & (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 4U))));

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_CK0 = ((0U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x70e15U

: ((1U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x1c232a31U

:

((2U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x383f464dU

:

((3U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x545b6269U

:

((4U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x70777e85U

:

((5U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x8c939aa1U

:

((6U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xa8afb6bdU

:

((7U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xc4cbd2d9U

:

((8U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xe0e7eef5U

:

((9U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xfc030a11U

:

((0xaU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x181f262dU

:

((0xbU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x343b4249U

:

((0xcU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x50575e65U

:

((0xdU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x6c737a81U

:

((0xeU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x888f969dU

:

((0xfU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xa4abb2b9U

:

((0x10U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xc0c7ced5U

:

((0x11U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xdce3eaf1U

:

((0x12U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xf8ff060dU

:

((0x13U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x141b2229U

:

((0x14U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x30373e45U

:

((0x15U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x4c535a61U

:

((0x16U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x686f767dU

:

((0x17U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x848b9299U

:

((0x18U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xa0a7aeb5U

:

((0x19U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xbcc3cad1U

:

((0x1aU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xd8dfe6edU

:

((0x1bU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0xf4fb0209U

:

((0x1cU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x10171e25U

:

((0x1dU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x2c333a41U

:

((0x1eU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x484f565dU

:

((0x1fU

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

? 0x646b7279U

: 0U))))))))))))))))))))))))))))))));

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[0U] = vlTOPp->sm4\_top\_\_DOT\_\_SKEY1L;

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[1U] = vlTOPp->sm4\_top\_\_DOT\_\_SKEY1H;

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[2U] = (IData)((((QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_SKEY2H))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_SKEY2L))));

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[3U] = (IData)(((((QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_SKEY2H))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_SKEY2L)))

>> 0x20U));

vlTOPp->sm4\_top\_\_DOT\_\_d\_start = (1U & ((vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 3U)

| (IData)(vlTOPp->io\_start)));

vlTOPp->sm4\_top\_\_DOT\_\_IV[0U] = vlTOPp->sm4\_top\_\_DOT\_\_IV1L;

vlTOPp->sm4\_top\_\_DOT\_\_IV[1U] = vlTOPp->sm4\_top\_\_DOT\_\_IV1H;

vlTOPp->sm4\_top\_\_DOT\_\_IV[2U] = (IData)((((QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_IV2H))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_IV2L))));

vlTOPp->sm4\_top\_\_DOT\_\_IV[3U] = (IData)(((((QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_IV2H))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_IV2L)))

>> 0x20U));

vlTOPp->sm4\_top\_\_DOT\_\_Dain[0U] = ((0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1L

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1L

<< 8U))

| ((0xff00U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1L

>> 8U))

| (0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1L

>> 0x18U)))));

vlTOPp->sm4\_top\_\_DOT\_\_Dain[1U] = ((0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1H

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1H

<< 8U))

| ((0xff00U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1H

>> 8U))

| (0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA1H

>> 0x18U)))));

vlTOPp->sm4\_top\_\_DOT\_\_Dain[2U] = (IData)((((QData)((IData)(

((0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

<< 8U))

| ((0xff00U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

>> 8U))

| (0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

>> 0x18U)))))))

<< 0x20U)

| (QData)((IData)(

((0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

<< 8U))

| ((0xff00U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

>> 8U))

| (0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

>> 0x18U)))))))));

vlTOPp->sm4\_top\_\_DOT\_\_Dain[3U] = (IData)(((((QData)((IData)(

((0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

<< 8U))

| ((0xff00U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

>> 8U))

| (0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2H

>> 0x18U)))))))

<< 0x20U)

| (QData)((IData)(

((0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

<< 0x18U))

| ((0xff0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

<< 8U))

| ((0xff00U

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

>> 8U))

| (0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_DATA2L

>> 0x18U))))))))

>> 0x20U));

vlTOPp->sm4\_top\_\_DOT\_\_temp1 = ((((((((((((((((VL\_NEGATE\_I((IData)(

(0U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_DATA1L)

| (VL\_NEGATE\_I((IData)(

(1U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_DATA1H))

| (VL\_NEGATE\_I((IData)(

(2U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_DATA2L))

| (VL\_NEGATE\_I((IData)(

(3U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_DATA2H))

| (VL\_NEGATE\_I((IData)(

(4U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_SKEY1L))

| (VL\_NEGATE\_I((IData)(

(5U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_SKEY1H))

| (VL\_NEGATE\_I((IData)(

(6U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_SKEY2L))

| (VL\_NEGATE\_I((IData)(

(7U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_SKEY2H))

| (VL\_NEGATE\_I((IData)(

(8U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_IV1L))

| (VL\_NEGATE\_I((IData)(

(9U

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_IV1H))

| (VL\_NEGATE\_I((IData)(

(0xaU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_IV2L))

| (VL\_NEGATE\_I((IData)(

(0xbU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_IV2H))

| (VL\_NEGATE\_I((IData)(

(0xcU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& vlTOPp->sm4\_top\_\_DOT\_\_CFG))

| (VL\_NEGATE\_I((IData)(

(0xdU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->sm4\_top\_\_DOT\_\_INTEN)))

| (VL\_NEGATE\_I((IData)(

(0xeU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->sm4\_top\_\_DOT\_\_INTSTA)))

| (VL\_NEGATE\_I((IData)(

(0xeU

==

(0x7fU

& (vlTOPp->io\_mem\_io\_addr

>> 2U)))))

& (IData)(vlTOPp->sm4\_top\_\_DOT\_\_INTRAW)));

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Tinput = ((((

(2U

& vlTOPp->sm4\_top\_\_DOT\_\_CFG)

?

((0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

?

(0x56aa3350U

^

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[2U])

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U])

: 0U)

^

((2U

& vlTOPp->sm4\_top\_\_DOT\_\_CFG)

?

((0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

?

(0x677d9197U

^

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[1U])

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U])

: 0U))

^

((2U

& vlTOPp->sm4\_top\_\_DOT\_\_CFG)

?

((0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

?

(0xb27022dcU

^

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[0U])

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U])

: 0U))

^ vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_CK0);

vlTOPp->sm4\_top\_\_DOT\_\_DATA[0U] = ((((4U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

| (2U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

| (3U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

? vlTOPp->sm4\_top\_\_DOT\_\_IV[0U]

: (((1U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

& (~ (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 4U)))

? (vlTOPp->sm4\_top\_\_DOT\_\_Dain[0U]

^ vlTOPp->sm4\_top\_\_DOT\_\_IV[0U])

: vlTOPp->sm4\_top\_\_DOT\_\_Dain[0U]));

vlTOPp->sm4\_top\_\_DOT\_\_DATA[1U] = ((((4U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

| (2U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

| (3U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

? vlTOPp->sm4\_top\_\_DOT\_\_IV[1U]

: (((1U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

& (~ (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 4U)))

? (vlTOPp->sm4\_top\_\_DOT\_\_Dain[1U]

^ vlTOPp->sm4\_top\_\_DOT\_\_IV[1U])

: vlTOPp->sm4\_top\_\_DOT\_\_Dain[1U]));

vlTOPp->sm4\_top\_\_DOT\_\_DATA[2U] = ((((4U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

| (2U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

| (3U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

? vlTOPp->sm4\_top\_\_DOT\_\_IV[2U]

: (((1U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

& (~ (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 4U)))

? (vlTOPp->sm4\_top\_\_DOT\_\_Dain[2U]

^ vlTOPp->sm4\_top\_\_DOT\_\_IV[2U])

: vlTOPp->sm4\_top\_\_DOT\_\_Dain[2U]));

vlTOPp->sm4\_top\_\_DOT\_\_DATA[3U] = ((((4U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

| (2U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

| (3U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U))))

? vlTOPp->sm4\_top\_\_DOT\_\_IV[3U]

: (((1U == (7U

& (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 8U)))

& (~ (vlTOPp->sm4\_top\_\_DOT\_\_CFG

>> 4U)))

? (vlTOPp->sm4\_top\_\_DOT\_\_Dain[3U]

^ vlTOPp->sm4\_top\_\_DOT\_\_IV[3U])

: vlTOPp->sm4\_top\_\_DOT\_\_Dain[3U]));

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Sout = ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[(0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Tinput

>> 0x18U))]

<< 0x18U)

| ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[

(0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Tinput

>> 0x10U))]

<< 0x10U)

| ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[

(0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Tinput

>> 8U))]

<< 8U)

| vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[

(0xffU

& vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Tinput)])));

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data0 = ((IData)(vlTOPp->sm4\_top\_\_DOT\_\_d\_start)

? (

(0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

?

vlTOPp->sm4\_top\_\_DOT\_\_DATA[3U]

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[3U])

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data1 = ((IData)(vlTOPp->sm4\_top\_\_DOT\_\_d\_start)

? (

(0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

?

vlTOPp->sm4\_top\_\_DOT\_\_DATA[2U]

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[2U])

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data2 = ((IData)(vlTOPp->sm4\_top\_\_DOT\_\_d\_start)

? (

(0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

?

vlTOPp->sm4\_top\_\_DOT\_\_DATA[1U]

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[1U])

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data3 = ((IData)(vlTOPp->sm4\_top\_\_DOT\_\_d\_start)

? (

(0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

?

vlTOPp->sm4\_top\_\_DOT\_\_DATA[0U]

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[0U])

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Mkey = (((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Sout

^ (

(0xffffe000U

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Sout

<< 0xdU))

| (0x1fffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Sout

>> 0x13U))))

^ ((0xff800000U

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Sout

<< 0x17U))

| (0x7fffffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Sout

>> 9U))))

^ ((2U

& vlTOPp->sm4\_top\_\_DOT\_\_CFG)

?

((0U

== (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))

?

(0xa3b1bac6U

^

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[3U])

:

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[3U])

: 0U));

vlTOPp->sm4\_top\_\_DOT\_\_dataout[0U] = ((0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

? vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data0

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_dataout[1U] = ((0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

? vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data1

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_dataout[2U] = ((0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

? (IData)(

(((QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data2))))

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_dataout[3U] = ((0x20U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt))

? (IData)(

((((QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data3))

<< 0x20U)

| (QData)((IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data2)))

>> 0x20U))

: 0U);

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_TData = ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data1

^ vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data2)

^ vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data3);

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Toutput = ((IData)(vlTOPp->sm4\_top\_\_DOT\_\_as\_mode)

?

(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_TData

^

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0U])

:

(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_TData

^

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1fU]));

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout = ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[(0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Toutput

>> 0x18U))]

<< 0x18U)

| ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[

(0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Toutput

>> 0x10U))]

<< 0x10U)

| ((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[

(0xffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Toutput

>> 8U))]

<< 8U)

| vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SM4Box

[

(0xffU

& vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Toutput)])));

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Mdata = (((((vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

^

((0xfffffffcU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

<< 2U))

| (3U

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

>> 0x1eU))))

^

((0xfffffc00U

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

<< 0xaU))

| (0x3ffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

>> 0x16U))))

^

((0xfffc0000U

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

<< 0x12U))

| (0x3ffffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

>> 0xeU))))

^ (

(0xff000000U

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

<< 0x18U))

| (0xffffffU

& (vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_SDout

>> 8U))))

^ vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Data0);

}

VL\_INLINE\_OPT void Vsm4\_top::\_sequent\_\_TOP\_\_2(Vsm4\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vsm4\_top::\_sequent\_\_TOP\_\_2\n"); );

Vsm4\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Variables

VL\_SIG8(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_INTEN,1,0);

VL\_SIG8(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt,5,0);

VL\_SIG8(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt,5,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA1L,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA1H,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA2L,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA2H,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV1L,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV1H,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV2L,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV2H,31,0);

VL\_SIG(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_CFG,31,0);

VL\_SIGW(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey,127,0,4);

VL\_SIGW(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey,1023,0,32);

VL\_SIGW(\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData,127,0,4);

VL\_SIGW(\_\_Vtemp33,127,0,4);

VL\_SIGW(\_\_Vtemp34,127,0,4);

VL\_SIGW(\_\_Vtemp35,127,0,4);

VL\_SIGW(\_\_Vtemp37,127,0,4);

VL\_SIGW(\_\_Vtemp38,127,0,4);

VL\_SIGW(\_\_Vtemp39,127,0,4);

VL\_SIGW(\_\_Vtemp42,127,0,4);

VL\_SIGW(\_\_Vtemp43,127,0,4);

VL\_SIGW(\_\_Vtemp44,127,0,4);

VL\_SIGW(\_\_Vtemp46,127,0,4);

VL\_SIGW(\_\_Vtemp47,127,0,4);

VL\_SIGW(\_\_Vtemp48,127,0,4);

VL\_SIGW(\_\_Vtemp51,127,0,4);

VL\_SIGW(\_\_Vtemp52,127,0,4);

VL\_SIGW(\_\_Vtemp53,127,0,4);

VL\_SIGW(\_\_Vtemp55,127,0,4);

VL\_SIGW(\_\_Vtemp56,127,0,4);

VL\_SIGW(\_\_Vtemp57,127,0,4);

VL\_SIGW(\_\_Vtemp60,127,0,4);

VL\_SIGW(\_\_Vtemp61,127,0,4);

VL\_SIGW(\_\_Vtemp62,127,0,4);

VL\_SIGW(\_\_Vtemp64,127,0,4);

VL\_SIGW(\_\_Vtemp65,127,0,4);

VL\_SIGW(\_\_Vtemp66,127,0,4);

// Body

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[3U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[3U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[1U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[1U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[2U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[2U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[3U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[3U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[4U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[4U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[5U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[5U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[6U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[6U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[7U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[7U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[8U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[8U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[9U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[9U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xaU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xaU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xbU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xbU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xcU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xcU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xdU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xdU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xeU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xeU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xfU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0xfU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x10U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x10U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x11U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x11U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x12U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x12U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x13U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x13U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x14U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x14U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x15U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x15U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x16U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x16U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x17U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x17U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x18U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x18U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x19U] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x19U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1aU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1aU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1bU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1bU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1cU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1cU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1dU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1dU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1eU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1eU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1fU] =

vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Skey[0x1fU];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[0U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[0U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[1U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[1U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[2U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[2U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[3U] = vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_GData[3U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_INTEN = vlTOPp->sm4\_top\_\_DOT\_\_INTEN;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA1L = vlTOPp->sm4\_top\_\_DOT\_\_DATA1L;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA1H = vlTOPp->sm4\_top\_\_DOT\_\_DATA1H;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA2L = vlTOPp->sm4\_top\_\_DOT\_\_DATA2L;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_DATA2H = vlTOPp->sm4\_top\_\_DOT\_\_DATA2H;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV1L = vlTOPp->sm4\_top\_\_DOT\_\_IV1L;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV1H = vlTOPp->sm4\_top\_\_DOT\_\_IV1H;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV2L = vlTOPp->sm4\_top\_\_DOT\_\_IV2L;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_IV2H = vlTOPp->sm4\_top\_\_DOT\_\_IV2H;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_CFG = vlTOPp->sm4\_top\_\_DOT\_\_CFG;

// ALWAYS at ../../scripts/v2c/../../src/sm4/sm4\_top.v:229

vlTOPp->sm4\_top\_\_DOT\_\_rsel = ((IData)(vlTOPp->rstn)

& (IData)(vlTOPp->io\_mem\_io\_sel));

// ALWAYS at ../../scripts/v2c/../../src/sm4/sm4\_top.v:223

if (vlTOPp->rstn) {

if (vlTOPp->io\_mem\_io\_sel) {

vlTOPp->sm4\_top\_\_DOT\_\_temp2 = vlTOPp->sm4\_top\_\_DOT\_\_temp1;

}

} else {

vlTOPp->sm4\_top\_\_DOT\_\_temp2 = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/sm4/sm4.v:72

if (vlTOPp->rstn) {

if ((0U == (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))) {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U]

= vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Mkey;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U]

= (0xb27022dcU ^ vlTOPp->sm4\_top\_\_DOT\_\_SKEY[0U]);

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U]

= (IData)((((QData)((IData)((0x56aa3350U

^ vlTOPp->sm4\_top\_\_DOT\_\_SKEY[2U])))

<< 0x20U) | (QData)((IData)(

(0x677d9197U

^

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[1U])))));

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[3U]

= (IData)(((((QData)((IData)((0x56aa3350U

^ vlTOPp->sm4\_top\_\_DOT\_\_SKEY[2U])))

<< 0x20U) | (QData)((IData)(

(0x677d9197U

^

vlTOPp->sm4\_top\_\_DOT\_\_SKEY[1U]))))

>> 0x20U));

} else {

if ((0x20U > (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt))) {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U]

= vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Mkey;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U]

= vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U]

= vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U];

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[3U]

= vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U];

}

}

} else {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[0U] = 0U;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[1U] = 0U;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[2U] = 0U;

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_Gkey[3U] = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/sm4/sm4.v:63

if (vlTOPp->rstn) {

if ((2U & vlTOPp->sm4\_top\_\_DOT\_\_CFG)) {

if (((vlTOPp->sm4\_top\_\_DOT\_\_CFG >> 1U)

& (0x20U > (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt)))) {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt

= (0x3fU & ((IData)(1U) + (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt)));

}

} else {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt = 0U;

}

} else {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_keycnt = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/sm4/sm4.v:99

if (vlTOPp->rstn) {

if (vlTOPp->sm4\_top\_\_DOT\_\_d\_done) {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt = 0U;

} else {

if (((IData)(vlTOPp->sm4\_top\_\_DOT\_\_d\_start)

& (0x20U > (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt)))) {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt

= (0x3fU & ((IData)(1U) + (IData)(vlTOPp->sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt)));

}

}

} else {

\_\_Vdly\_\_sm4\_top\_\_DOT\_\_u\_sm4\_\_DOT\_\_datacnt = 0U;

}

// Verilated -\*- C++ -\*-

// DESCRIPTION: Verilator output: Design implementation internals

// See Vzuc\_top.h for the primary calling header

#include "Vzuc\_top.h" // For This

#include "Vzuc\_top\_\_Syms.h"

//--------------------

// STATIC VARIABLES

//--------------------

VL\_CTOR\_IMP(Vzuc\_top) {

Vzuc\_top\_\_Syms\* \_\_restrict vlSymsp = \_\_VlSymsp = new Vzuc\_top\_\_Syms(this, name());

Vzuc\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Reset internal values

// Reset structure values

\_ctor\_var\_reset();

}

void Vzuc\_top::\_\_Vconfigure(Vzuc\_top\_\_Syms\* vlSymsp, bool first) {

if (0 && first) {} // Prevent unused

this->\_\_VlSymsp = vlSymsp;

}

Vzuc\_top::~Vzuc\_top() {

delete \_\_VlSymsp; \_\_VlSymsp=NULL;

}

//--------------------

void Vzuc\_top::eval() {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+++++TOP Evaluate Vzuc\_top::eval\n"); );

Vzuc\_top\_\_Syms\* \_\_restrict vlSymsp = this->\_\_VlSymsp; // Setup global symbol table

Vzuc\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

#ifdef VL\_DEBUG

// Debug assertions

\_eval\_debug\_assertions();

#endif // VL\_DEBUG

// Initialize

if (VL\_UNLIKELY(!vlSymsp->\_\_Vm\_didInit)) \_eval\_initial\_loop(vlSymsp);

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Clock loop\n"););

vlSymsp->\_\_Vm\_activity = true;

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

void Vzuc\_top::\_eval\_initial\_loop(Vzuc\_top\_\_Syms\* \_\_restrict vlSymsp) {

vlSymsp->\_\_Vm\_didInit = true;

\_eval\_initial(vlSymsp);

vlSymsp->\_\_Vm\_activity = true;

// Evaluate till stable

int \_\_VclockLoop = 0;

QData \_\_Vchange = 1;

do {

\_eval\_settle(vlSymsp);

\_eval(vlSymsp);

if (VL\_UNLIKELY(++\_\_VclockLoop > 100)) {

// About to fail, so enable debug to see what's not settling.

// Note you must run make with OPT=-DVL\_DEBUG for debug prints.

int \_\_Vsaved\_debug = Verilated::debug();

Verilated::debug(1);

\_\_Vchange = \_change\_request(vlSymsp);

Verilated::debug(\_\_Vsaved\_debug);

VL\_FATAL\_MT(\_\_FILE\_\_,\_\_LINE\_\_,\_\_FILE\_\_,"Verilated model didn't DC converge");

} else {

\_\_Vchange = \_change\_request(vlSymsp);

}

} while (VL\_UNLIKELY(\_\_Vchange));

}

//--------------------

// Internal Methods

VL\_INLINE\_OPT void Vzuc\_top::\_sequent\_\_TOP\_\_1(Vzuc\_top\_\_Syms\* \_\_restrict vlSymsp) {

VL\_DEBUG\_IF(VL\_DBG\_MSGF("+ Vzuc\_top::\_sequent\_\_TOP\_\_1\n"); );

Vzuc\_top\* \_\_restrict vlTOPp VL\_ATTR\_UNUSED = vlSymsp->TOPp;

// Variables

VL\_SIG8(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_INTEN,0,0);

VL\_SIG8(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_done,0,0);

VL\_SIG8(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt,7,0);

VL\_SIG8(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt,3,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14,31,0);

VL\_SIG(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15,31,0);

VL\_SIGW(\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE,255,0,8);

// Body

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_INTEN = vlTOPp->zuc\_top\_\_DOT\_\_INTEN;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_done = vlTOPp->zuc\_top\_\_DOT\_\_done;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15 = vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[0U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[0U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[1U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[1U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[2U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[2U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[3U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[3U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[4U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[4U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[5U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[5U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[6U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[6U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[7U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[7U];

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc\_top.v:219

if (vlTOPp->rstn) {

if (vlTOPp->io\_mem\_io\_sel) {

vlTOPp->zuc\_top\_\_DOT\_\_temp2 = vlTOPp->zuc\_top\_\_DOT\_\_temp1;

}

} else {

vlTOPp->zuc\_top\_\_DOT\_\_temp2 = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:132

if (vlTOPp->rstn) {

if (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_start) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt = 0U;

} else {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt)

== ((IData)(1U) + (0xfU & (vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U))))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt;

} else {

if ((0x20U <= (IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt

= (0xfU & ((IData)(1U) + (IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt)));

}

}

}

} else {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:122

if (vlTOPp->rstn) {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_start)

& (vlTOPp->zuc\_top\_\_DOT\_\_CFG >> 2U))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt = 0U;

} else {

if ((0x20U == (IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt;

} else {

if ((4U & vlTOPp->zuc\_top\_\_DOT\_\_CFG)) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt

= (0xffU & ((IData)(1U) + (IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt)));

}

}

}

} else {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:102

if (vlTOPp->rstn) {

if (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_start) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_done = 0U;

} else {

if ((4U & vlTOPp->zuc\_top\_\_DOT\_\_CFG)) {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt)

== (0xfU & (vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U)))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_done = 1U;

}

} else {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt)

== ((0xfU & (vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U)) - (IData)(1U)))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_done = 1U;

}

}

}

} else {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_done = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:246

if (vlTOPp->rstn) {

if (((0x20U == (IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt))

& (~ (IData)(vlTOPp->zuc\_top\_\_DOT\_\_done)))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[0U] = (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_WB

^ (

(0xffff0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2

<< 0x10U))

| (0xffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0

>> 0xfU))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[1U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[0U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[2U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[1U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[3U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[2U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[4U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[3U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[5U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[4U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[6U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[5U];

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[7U] = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[6U];

}

} else {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[0U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[1U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[2U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[3U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[4U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[5U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[6U] = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[7U] = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:236

if (vlTOPp->rstn) {

if (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_r\_valid) {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R1 =

((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox0

[(0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR1

>> 0x18U))] << 0x18U)

| ((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox1

[(0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR1

>> 0x10U))] << 0x10U)

| ((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox0

[(0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR1

>> 8U))] << 8U)

| vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox1

[(0xffU & vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR1)])));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R2 =

((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox0

[(0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR2

>> 0x18U))] << 0x18U)

| ((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox1

[(0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR2

>> 0x10U))] << 0x10U)

| ((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox0

[(0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR2

>> 8U))] << 8U)

| vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_sbox1

[(0xffU & vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR2)])));

}

} else {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R1 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R2 = 0U;

}

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_init\_cnt;

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:180

if (vlTOPp->rstn) {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_start)

& (vlTOPp->zuc\_top\_\_DOT\_\_CFG >> 2U))) {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0 =

(0x44d700U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[0U]

<< 0x17U))

| (0xffU & vlTOPp->zuc\_top\_\_DOT\_\_IV[0U])));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1 =

(0x26bc00U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[0U]

<< 0xfU))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[1U]

<< 0x18U)

| (vlTOPp->zuc\_top\_\_DOT\_\_IV[0U]

>> 8U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2 =

(0x626b00U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[0U]

<< 7U))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[1U]

<< 0x10U)

| (vlTOPp->zuc\_top\_\_DOT\_\_IV[0U]

>> 0x10U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3 =

(0x135e00U | ((0x7f800000U & ((vlTOPp->zuc\_top\_\_DOT\_\_SKEY[1U]

<< 0x1fU)

| (0x7f800000U

& (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[0U]

>> 1U))))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[1U]

<< 8U) |

(vlTOPp->zuc\_top\_\_DOT\_\_IV[0U]

>> 0x18U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4 =

(0x578900U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[1U]

<< 0x17U))

| (0xffU & vlTOPp->zuc\_top\_\_DOT\_\_IV[1U])));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5 =

(0x35e200U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[1U]

<< 0xfU))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[2U]

<< 0x18U)

| (vlTOPp->zuc\_top\_\_DOT\_\_IV[1U]

>> 8U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6 =

(0x713500U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[1U]

<< 7U))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[2U]

<< 0x10U)

| (vlTOPp->zuc\_top\_\_DOT\_\_IV[1U]

>> 0x10U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7 =

(0x9af00U | ((0x7f800000U & ((vlTOPp->zuc\_top\_\_DOT\_\_SKEY[2U]

<< 0x1fU)

| (0x7f800000U

& (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[1U]

>> 1U))))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[2U]

<< 8U) |

(vlTOPp->zuc\_top\_\_DOT\_\_IV[1U]

>> 0x18U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8 =

(0x4d7800U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[2U]

<< 0x17U))

| (0xffU & vlTOPp->zuc\_top\_\_DOT\_\_IV[2U])));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9 =

(0x2f1300U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[2U]

<< 0xfU))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[3U]

<< 0x18U)

| (vlTOPp->zuc\_top\_\_DOT\_\_IV[2U]

>> 8U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10 =

(0x6bc400U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[2U]

<< 7U))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[3U]

<< 0x10U)

| (vlTOPp->zuc\_top\_\_DOT\_\_IV[2U]

>> 0x10U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11 =

(0x1af100U | ((0x7f800000U & ((vlTOPp->zuc\_top\_\_DOT\_\_SKEY[3U]

<< 0x1fU)

| (0x7f800000U

& (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[2U]

>> 1U))))

| (0xffU & ((vlTOPp->zuc\_top\_\_DOT\_\_IV[3U]

<< 8U) |

(vlTOPp->zuc\_top\_\_DOT\_\_IV[2U]

>> 0x18U)))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12 =

(0x5e2600U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[3U]

<< 0x17U))

| (0xffU & vlTOPp->zuc\_top\_\_DOT\_\_IV[3U])));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13 =

(0x3c4d00U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[3U]

<< 0xfU))

| (0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_IV[3U]

>> 8U))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14 =

(0x789a00U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[3U]

<< 7U))

| (0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_IV[3U]

>> 0x10U))));

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15 =

(0x47ac00U | ((0x7f800000U & (vlTOPp->zuc\_top\_\_DOT\_\_SKEY[3U]

>> 1U))

| (0xffU & (vlTOPp->zuc\_top\_\_DOT\_\_IV[3U]

>> 0x18U))));

} else {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt)

<= ((4U & vlTOPp->zuc\_top\_\_DOT\_\_CFG)

? (0xfU & (vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U)) : ((0xfU &

(vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U))

- (IData)(1U))))) {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14

= vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15

= ((0U == vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_FB)

? 0x7fffffffU : vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_FB);

}

}

} else {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14 = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15 = 0U;

}

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc.v:142

if (vlTOPp->rstn) {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt)

== ((4U & vlTOPp->zuc\_top\_\_DOT\_\_CFG) ?

(0xfU & (vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U)) : ((0xfU & (vlTOPp->zuc\_top\_\_DOT\_\_CFG

>> 4U))

- (IData)(1U))))) {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_r\_valid = 0U;

} else {

if (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_start) {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_r\_valid = 1U;

}

}

} else {

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_r\_valid = 0U;

}

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S3;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S6;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S8;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S12;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S2;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15 = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_round\_cnt;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_W2 = (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R2

^ ((0xffff0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S7

<< 0x10U))

| (0xffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S5

>> 0xfU))));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_W1 = (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R1

+ ((0xffff0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S11

<< 0x10U))

| (0xffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S9

>> 0xfU))));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S420 = ((0x7ff00000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4

<< 0x14U))

| (0xfffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S4

>> 0xbU)));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1021 = ((0x7fe00000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10

<< 0x15U))

| (0x1fffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S10

>> 0xaU)));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1317 = ((0x7ffe0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13

<< 0x11U))

| (0x1ffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S13

>> 0xeU)));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S08 = ((0x7fffff00U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0

<< 8U))

| (0xffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0

>> 0x17U)));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_WB = ((((0xffff0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15

<< 1U))

| (0xffffU

& vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S14))

^ vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R1)

+ vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_R2);

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1515 = ((0x7fff8000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15

<< 0xfU))

| (0x7fffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S15

>> 0x10U)));

// ALWAYS at ../../scripts/v2c/../../src/zuc/zuc\_top.v:85

if (vlTOPp->rstn) {

if (((IData)(vlTOPp->io\_mem\_io\_wren) & (IData)(vlTOPp->io\_mem\_io\_sel))) {

if ((8U == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L =

((0xffffff00U & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L)

| (0xffU & vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L =

((0xffff00ffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L)

| (0xff00U & vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L =

((0xff00ffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L)

| (0xff0000U & vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L =

((0xffffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L)

| (0xff000000U & vlTOPp->io\_mem\_io\_wdata));

}

}

if ((9U == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H =

((0xffffff00U & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H)

| (0xffU & vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H =

((0xffff00ffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H)

| (0xff00U & vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H =

((0xff00ffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H)

| (0xff0000U & vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H =

((0xffffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H)

| (0xff000000U & vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0xaU == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L =

((0xffffff00U & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L)

| (0xffU & vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L =

((0xffff00ffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L)

| (0xff00U & vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L =

((0xff00ffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L)

| (0xff0000U & vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L =

((0xffffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L)

| (0xff000000U & vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0xbU == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H =

((0xffffff00U & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H)

| (0xffU & vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H =

((0xffff00ffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H)

| (0xff00U & vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H =

((0xff00ffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H)

| (0xff0000U & vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H =

((0xffffffU & vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H)

| (0xff000000U & vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0xcU == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1L = ((0xffffff00U

& vlTOPp->zuc\_top\_\_DOT\_\_IV1L)

| (0xffU

& vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1L = ((0xffff00ffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV1L)

| (0xff00U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1L = ((0xff00ffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV1L)

| (0xff0000U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1L = ((0xffffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV1L)

| (0xff000000U

& vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0xdU == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1H = ((0xffffff00U

& vlTOPp->zuc\_top\_\_DOT\_\_IV1H)

| (0xffU

& vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1H = ((0xffff00ffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV1H)

| (0xff00U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1H = ((0xff00ffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV1H)

| (0xff0000U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV1H = ((0xffffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV1H)

| (0xff000000U

& vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0xeU == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2L = ((0xffffff00U

& vlTOPp->zuc\_top\_\_DOT\_\_IV2L)

| (0xffU

& vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2L = ((0xffff00ffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV2L)

| (0xff00U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2L = ((0xff00ffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV2L)

| (0xff0000U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2L = ((0xffffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV2L)

| (0xff000000U

& vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0xfU == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2H = ((0xffffff00U

& vlTOPp->zuc\_top\_\_DOT\_\_IV2H)

| (0xffU

& vlTOPp->io\_mem\_io\_wdata));

}

if ((2U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2H = ((0xffff00ffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV2H)

| (0xff00U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((4U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2H = ((0xff00ffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV2H)

| (0xff0000U

& vlTOPp->io\_mem\_io\_wdata));

}

if ((8U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

vlTOPp->zuc\_top\_\_DOT\_\_IV2H = ((0xffffffU

& vlTOPp->zuc\_top\_\_DOT\_\_IV2H)

| (0xff000000U

& vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0x10U == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((0U != (0xfU & (IData)(vlTOPp->io\_mem\_io\_bwren)))) {

vlTOPp->zuc\_top\_\_DOT\_\_CFG = ((1U

& vlTOPp->zuc\_top\_\_DOT\_\_CFG)

| (0xfffffffeU

& vlTOPp->io\_mem\_io\_wdata));

}

}

if ((0x11U == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U)))) {

if ((1U & (IData)(vlTOPp->io\_mem\_io\_bwren))) {

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_INTEN = (1U

& vlTOPp->io\_mem\_io\_wdata);

}

}

}

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_done) & (IData)(vlTOPp->zuc\_top\_\_DOT\_\_INTEN))) {

vlTOPp->zuc\_top\_\_DOT\_\_INTSTA = 1U;

} else {

if ((((0x12U == (0x7fU & (vlTOPp->io\_mem\_io\_addr

>> 2U))) & (0U

!=

(0xfU

& (IData)(vlTOPp->io\_mem\_io\_bwren))))

& vlTOPp->io\_mem\_io\_wdata)) {

vlTOPp->zuc\_top\_\_DOT\_\_INTSTA = 0U;

}

}

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_valid) &

(~ (IData)(vlTOPp->zuc\_top\_\_DOT\_\_valid\_r)))) {

vlTOPp->zuc\_top\_\_DOT\_\_CFG = (0xfffffffeU

& vlTOPp->zuc\_top\_\_DOT\_\_CFG);

} else {

if (((IData)(vlTOPp->zuc\_top\_\_DOT\_\_done)

& (~ (IData)(vlTOPp->zuc\_top\_\_DOT\_\_done\_r)))) {

vlTOPp->zuc\_top\_\_DOT\_\_DATA7 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[7U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA6 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[6U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA5 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[5U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA4 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[4U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA3 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[3U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA2 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[2U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA1 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[1U];

vlTOPp->zuc\_top\_\_DOT\_\_DATA0 = vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[0U];

vlTOPp->zuc\_top\_\_DOT\_\_CFG = (1U | (0xfffffffcU

& vlTOPp->zuc\_top\_\_DOT\_\_CFG));

}

}

} else {

vlTOPp->zuc\_top\_\_DOT\_\_DATA0 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA1 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA2 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA3 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA4 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA5 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA6 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_DATA7 = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1L = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_SKEY1H = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2L = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_SKEY2H = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_IV1L = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_IV1H = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_IV2L = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_IV2H = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_CFG = 0U;

\_\_Vdly\_\_zuc\_top\_\_DOT\_\_INTEN = 0U;

vlTOPp->zuc\_top\_\_DOT\_\_INTSTA = 0U;

}

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1 = ((0xffff0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_W1

<< 0x10U))

| (0xffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_W2

>> 0x10U)));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2 = ((0xffff0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_W2

<< 0x10U))

| (0xffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_W1

>> 0x10U)));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_ADDM = (VL\_ULL(0xfffffffff)

& ((((((QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S08)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S420)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1021)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1317)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1515))));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_ADDMU = (VL\_ULL(0xfffffffff)

& (((((((QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S0))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S08)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S420)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1021)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1317)))

+ (QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_S1515)))

+

((QData)((IData)(vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_WB))

>> 1U)));

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[0U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[0U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[1U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[1U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[2U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[2U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[3U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[3U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[4U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[4U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[5U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[5U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[6U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[6U];

vlTOPp->zuc\_top\_\_DOT\_\_ZVALUE[7U] = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_ZVALUE[7U];

vlTOPp->zuc\_top\_\_DOT\_\_INTEN = \_\_Vdly\_\_zuc\_top\_\_DOT\_\_INTEN;

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR1 = ((((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

^ (

(0xfffffffcU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

<< 2U))

| (3U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

>> 0x1eU))))

^ ((0xfffffc00U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

<< 0xaU))

| (0x3ffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

>> 0x16U))))

^ ((0xfffc0000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

<< 0x12U))

| (0x3ffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

>> 0xeU))))

^ ((0xff000000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

<< 0x18U))

| (0xffffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW1

>> 8U))));

vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LR2 = ((((vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

^ (

(0xffffff00U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

<< 8U))

| (0xffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

>> 0x18U))))

^ ((0xffffc000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

<< 0xeU))

| (0x3fffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

>> 0x12U))))

^ ((0xffc00000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

<< 0x16U))

| (0x3fffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

>> 0xaU))))

^ ((0xc0000000U

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

<< 0x1eU))

| (0x3fffffffU

& (vlTOPp->zuc\_top\_\_DOT\_\_u\_zuc\_\_DOT\_\_LW2

>> 2U))));