



```

if(psel && penable && pwrite)
begin
    case(paddr)
        //3'b000: nxt_pslverr=1;
        //3'b001: nxt_pslverr=1;
        3'b010: nxt_bitperiod[7:0]=pdata;
        3'b011: nxt_bitperiod[13:8]=pdata;
        3'b100: nxt_datasize=pdata[3:0]; //extend upper four bit
with zero
        //3'b110: nxt_pslverr=1;
    endcase
end

if(pwrite && !(paddr==3'd2 || paddr==3'd3 || paddr==3'd4))
    pslverr=1;

if(!pwrite && !(paddr==3'd0 || paddr==3'd1 || paddr==3'd2 ||
paddr==3'd3 || paddr==3'd4 || paddr==3'd6))
    pslverr=1;

//read
if(psel && penable && !pwrite)
begin

```

```

    //nxt_prdata = prdata;
case(paddr)
    3'b000: prdata={7'd0,data_ready};
    3'b001:
    begin
        prdata[0]=framing_error;
        prdata[1]=overrun_error;
    end
    3'b010: prdata=bit_period[7:0];
    3'b011: prdata=bit_period[13:8];
    3'b100: prdata= {4'd0,data_size};
    3'b110:
    begin
        prdata=rx_data;
        data_read=1;//clear data buffer
    end
endcase
end

```