

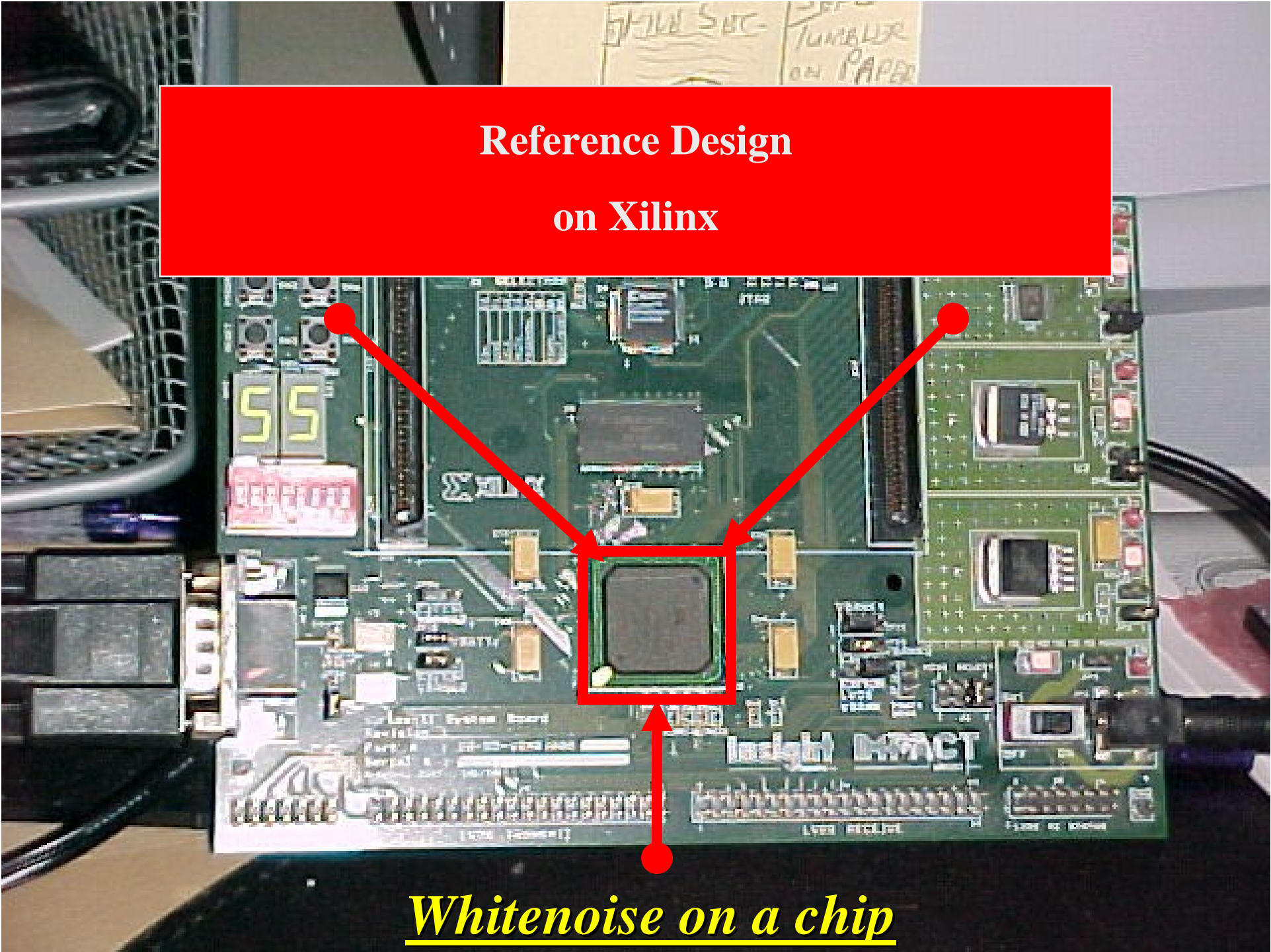


*Securing the World's Information*

## **Whitenoise in Hardware**

July 2006

**Reference Design  
on Xilinx**



**Whitenoise on a chip**

# Whitenoise FPGA

- ◆ **Characteristics of FPGA Prototype**
  - Low cost
  - High Speed Encryption/Decryption
    - 1.28 + Gb/s
  - Channelized ( 2 independent channels )
  
- ◆ **More Powerful Chips = Higher Speed/More throughput**
  - Current Xilinx Chip \$5-\$10 (Volume) = 1.28Gb/s
  - Next Model Up ~\$80 = 12.8 Gb/s
  - ASIC Implementation in 3<sup>rd</sup> Party Electronics
  
- ◆ **Reference design on Xilinx FPGA**
  - Easy to test and verify the power and functionality of Whitenoise in hardware applications.
  
- ◆ 8 bits per clock cycle per channel
- ◆ 2 channels = 16 bits per clock cycle

# H/W Target Application Examples

## Communications Protection (without additional delay)

- Cellular Phones
  - Routers
  - Satellite Earth Stations
  - Wireless Networks
  - Video Conferencing
  - VoIP
  - Military/Government/Financial  
Networking Equipment
- 
- DRM Protection examples
    - Content to mobile devices, Cell Phones, PC's (ex. Movielink)
    - Music Players (IPOD, etc.)
    - On-Line Game Boxes
    - Set-top Boxes (PPV)