

Infineon

Fast Ethernet over Plastic Optical Fiber – the Link to IPTV

October 2006



Never stop thinking

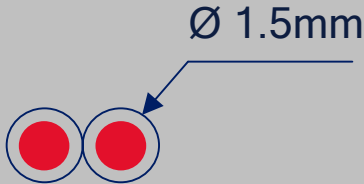
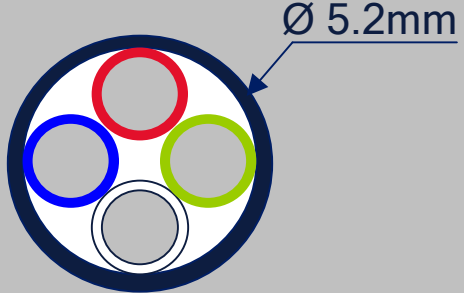
POF Value Propositions

- Easy to install
 - flexible cable and interface to optical ports
 - No need for professional installation or special tools

- Low cost transport medium @ ~0.3 Euro per meter
- POF transceiver capable of up to 200MBit/s
- Immune to electrical interference / emission health concerns
- Avoids shared media problems
- Complementary to 802.11x wireless technology
- Field proven technology in high reliability automotive environment

POF vs Electrical Ethernet

stop thinking
Never

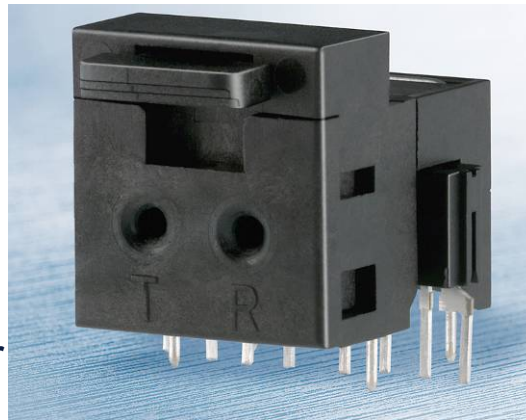
	Plastic fiber	Electical Ethernet Cable
Size matters	 <p>Ø 1.5mm</p>	 <p>Ø 5.2mm</p>

Connector assembly		
	<p>Cut and plug – connectorless Low cost cutter Anyone can do</p>	<p>Multicore RJ-45 connector Crimp tool Trained personnel</p>

Duplex POF Transceiver with Bare Fiber Adapter

Features:

- Low cost Fast Ethernet Transceiver for optical data transmission over plastic optical fiber
- Bare fiber adapter for plastic optical fibers
- No connector required on the fiber side
- Easy installation, fiber can be cut with simple tool and directly inserted
- Supports Fast Ethernet 100MBit/s over POF

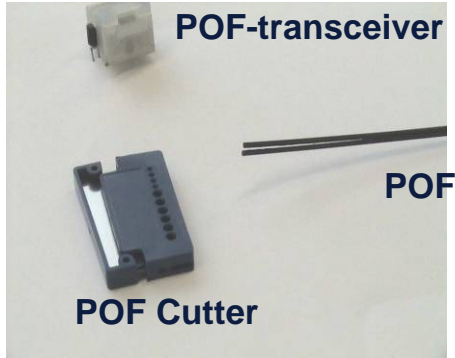


Transmitter

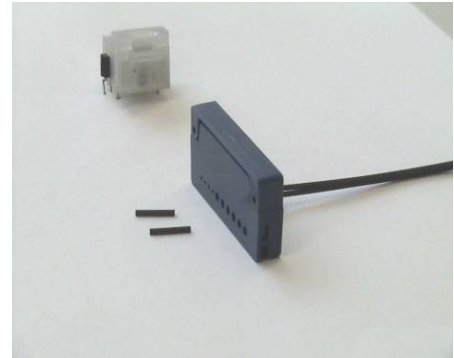
Receiver

- | | |
|--|---|
| <ul style="list-style-type: none"> • Fast LED with integrated driving circuit (Logic to Light) • differential input 0.2 – 2.4V • Emission at 650 nm, visible red • Operating temperature range 0° to 70°C • 3.3V supply voltage | <ul style="list-style-type: none"> • Fast Si-Pin Photodiode with integrated TIA and postamplifier (Light to Logic) • differential output >0.5V • Sensitive at 650 nm • Operating temperature range 0° to 70°C • 3.3V supply voltage |
|--|---|

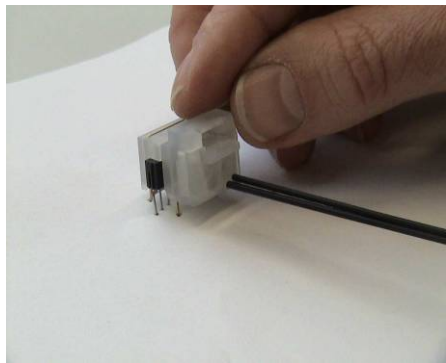
Fiber Installation – Quick and Easy



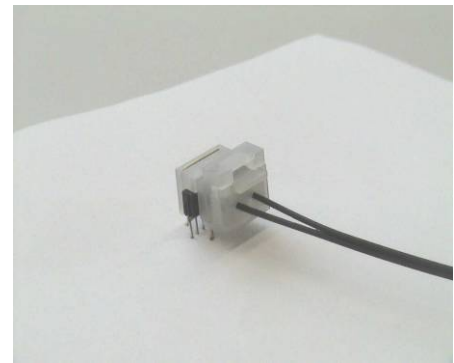
1 Material: POF-transceiver (here stand-alone), POF and cutter



2 Cut POF to length



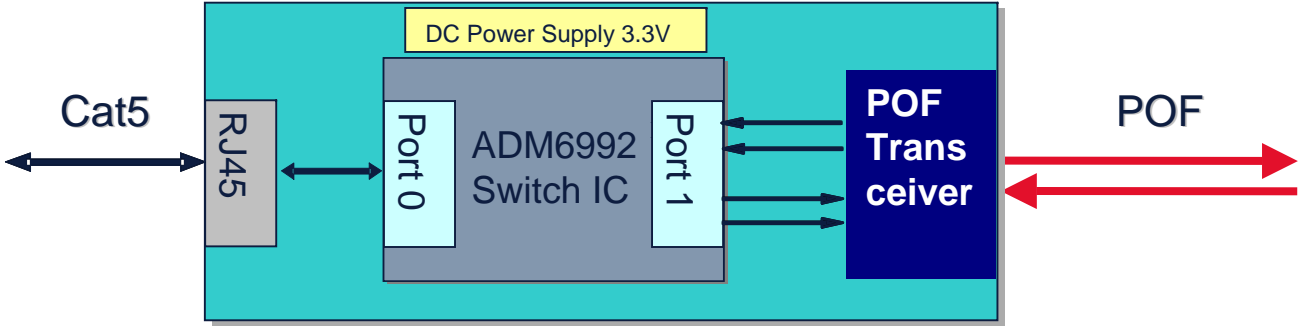
3 Insert POF into transceiver holes



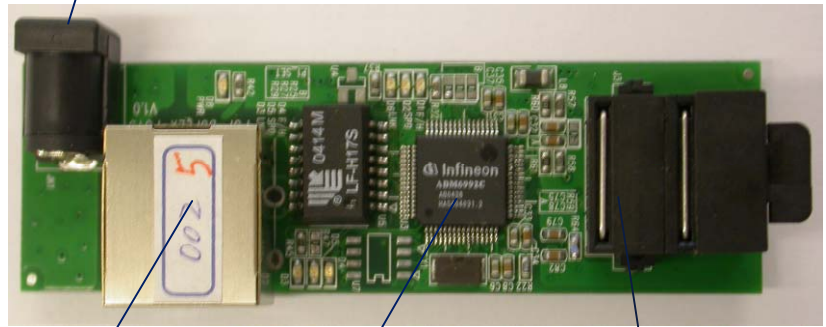
4 Lock POF with slider – end of installation

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POF Media Converter Concept Sample



DC Power Supply



RJ45

ADM6992 Switch IC

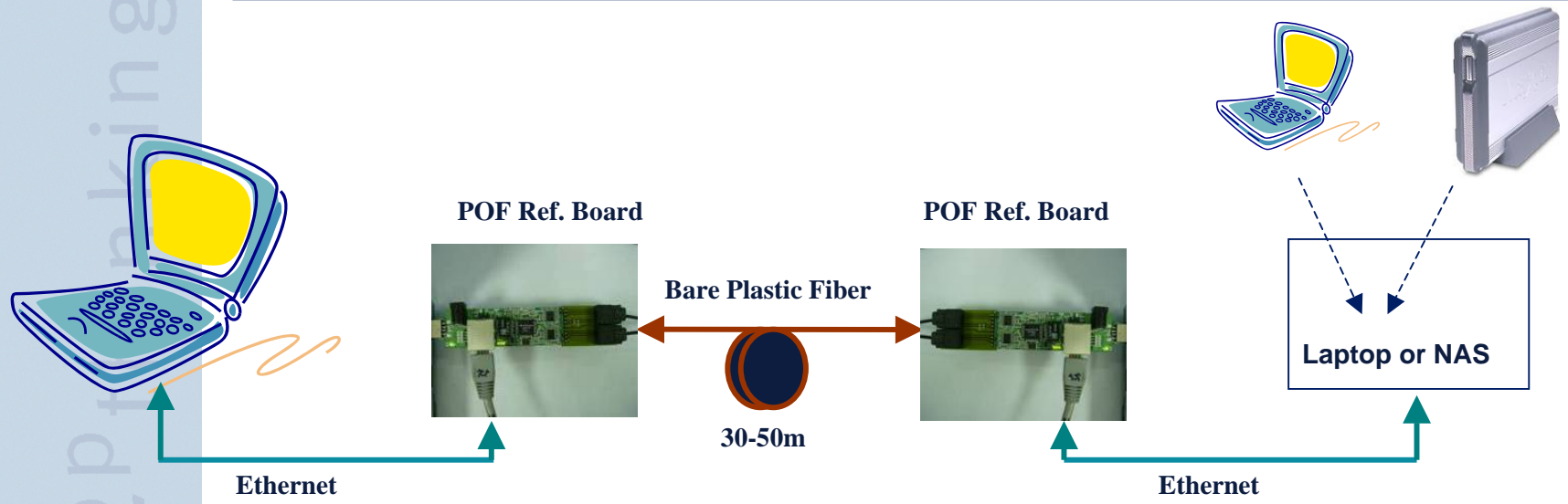
POF Transceiver



Media converter: can serve any existing Ethernet port
Infineon's CPE switch ICs directly interface with the POF transceivers

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Demo: Media Adapter & POF Networking



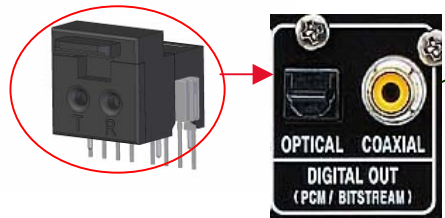
Demo via POF:

- Play video clip ← ~20Mbps
 - Play mp3 audio file ← ~300kpbs
 - File transfer ← ~100Mbps
-

POF Concept Products

- xDSL Media Gateway**

Embedded POF port for in-home network distribution



- POF USB Adapter**
USB2.0 to POF capable of supporting upto 200Mbps (no external power source required)



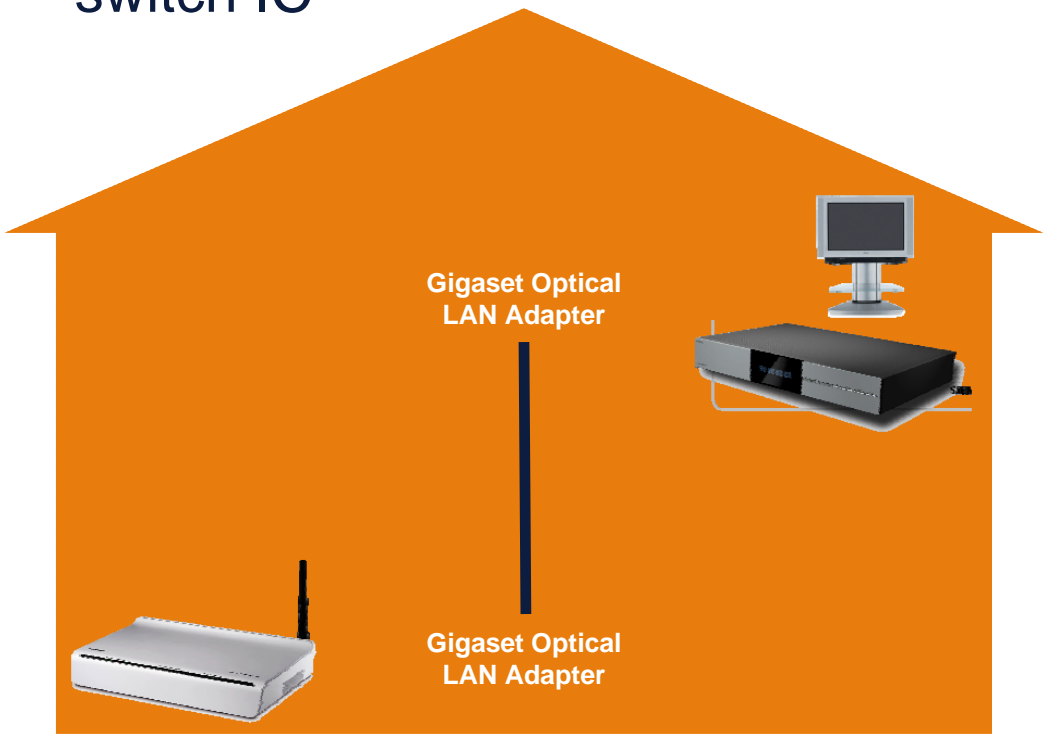
- In-home Networking Kit**
All-in-one home networking kit including all necessary components for easy installation (2 media converters, fiber, power supplies)



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Siemens Gigaset Optical LAN Adapter

- Target application: reliable video streaming for IPTV
- Easy plug and play installation
- Using Infineon's Fast Ethernet POF Transceiver and switch IC



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IPTV with POF

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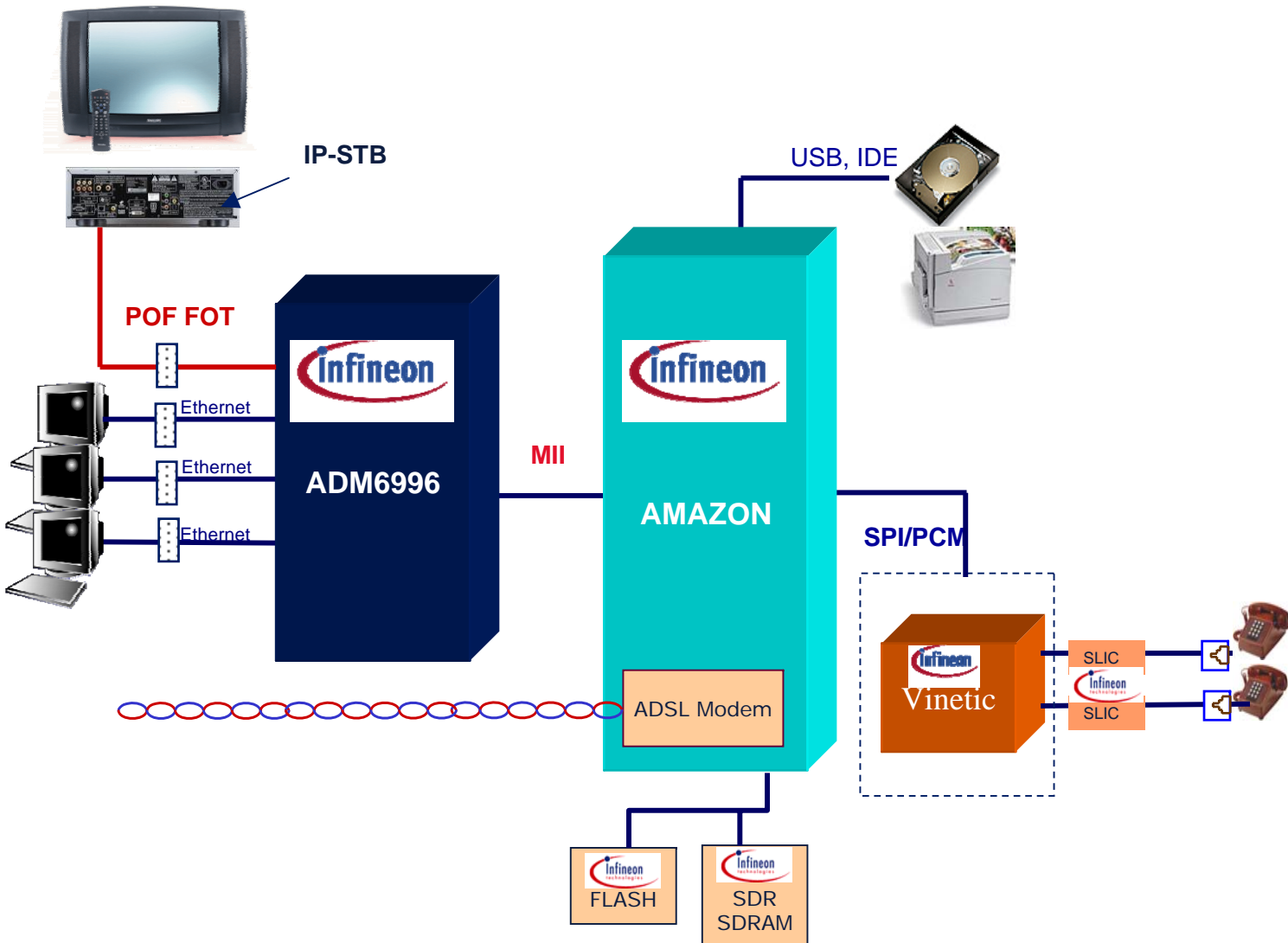


IPTV Live Demo at
Broadband World Forum
Paris, Oct 2006

11n WLAN with problems

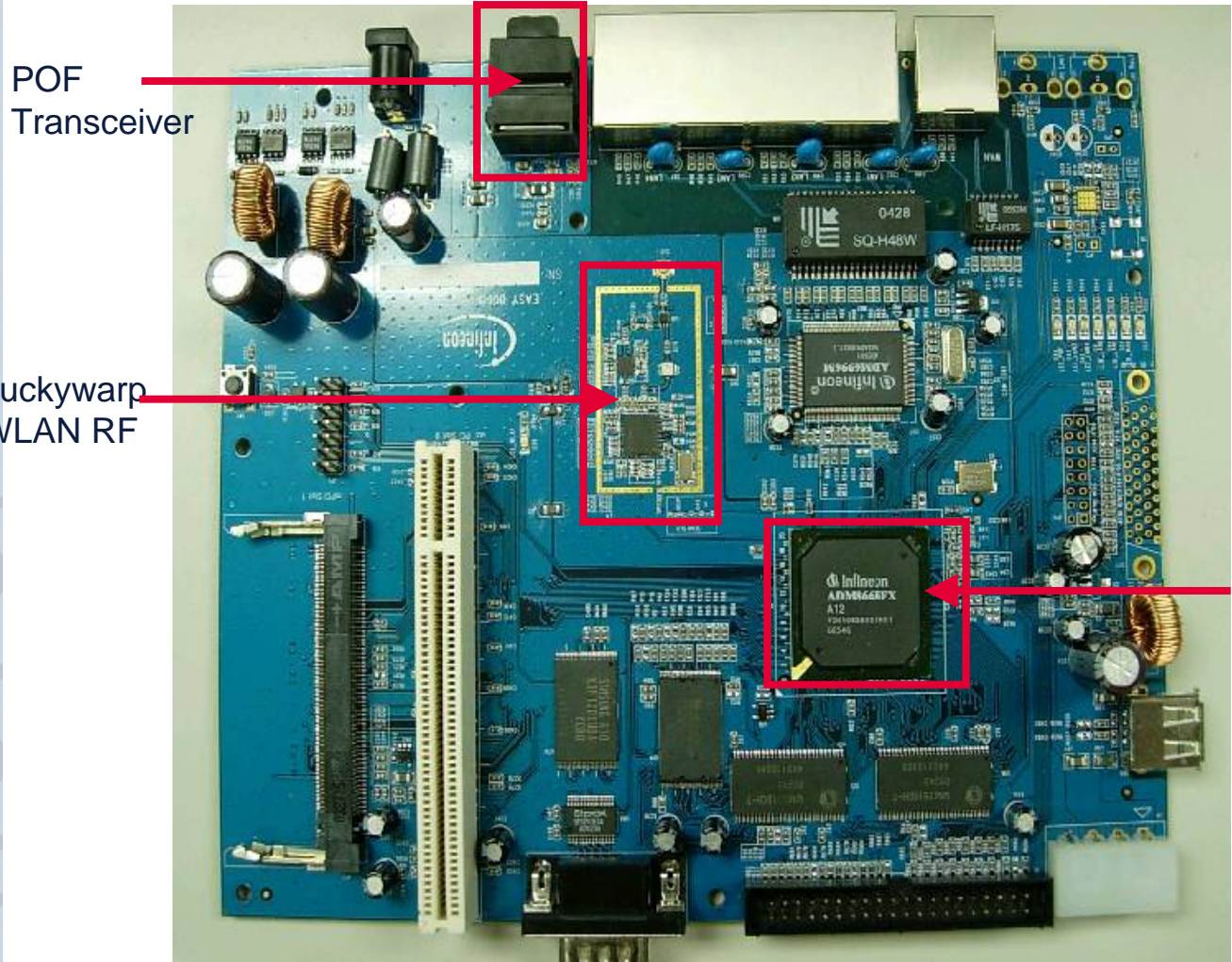


POF Media Router/Gateway Application



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Infineon Wildpass Reference Board with POF Interface Media Server



POF
Transceiver

Luckywarp
WLAN RF

Wildpass
ADM8668FX

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Possible Network Topologies

