EXAR
A New Direction in Mixed-Signal

DST 大盛唐
誠信 高效 科技 創新

Applications Overview

High Performance Analog

大盛唐电子集团有限公司

DST ELECTRONIC GROUP CO., LTD

www.szdst.com.cn

Broad Application Base

MEDICAL

Portable / High-end Blood Analyzer

Portable Ultrasound

Portable / High-end Thermometer MRI and Ultrasound

Patient Monitor

Pulse Oximetry

Accurate affordable medical equipment for everyone

Low power for green technology and longer battery life

Integration to save space and lower cost

Higher precision for improved performance

Sensor Conditioning Products

High performance analog products that enable next generation technology

INDUSTRIAL

Digital Oscilloscope

Traffic Camera

Network Analyzer

Basestation Repeater

Small/Large Weigh Scales

Security Systems

Car DVD

Home Appliance

Smoke Detector

Set Top Box

Automatic Meter Reading

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HPA Highlight Applications

- Battery ATE – CLC1200
- Video Splitter – CLC4601
- Barcode Scanner – CLC2011/CLC4011
- Laser Parking System – CLC1001/CLC1003/CLC2023
- Laser Range Finder – CLC1004
- Wireless Phone Charger – CLC2011 (Samsung Reference Design)
- E - Whiteboard – CLC2007
- Sensor / Transducer Interfaces – CLC1200/CLC1001/CLC1002/CLC1003
- Motor Control – CLC2011/CLC4011/CLC1003
- Video Surveillance – CLC2000/CLC4601/CLC2005/CLC2007
- aCVi (HD Video Transmission) – CLC2007/CDK3405/CDK2308
- Pro Audio – CLC2058/CLC2059/CLC1003
- Medical Imaging/Monitors – CDK8307/CDK3405/CDK3404

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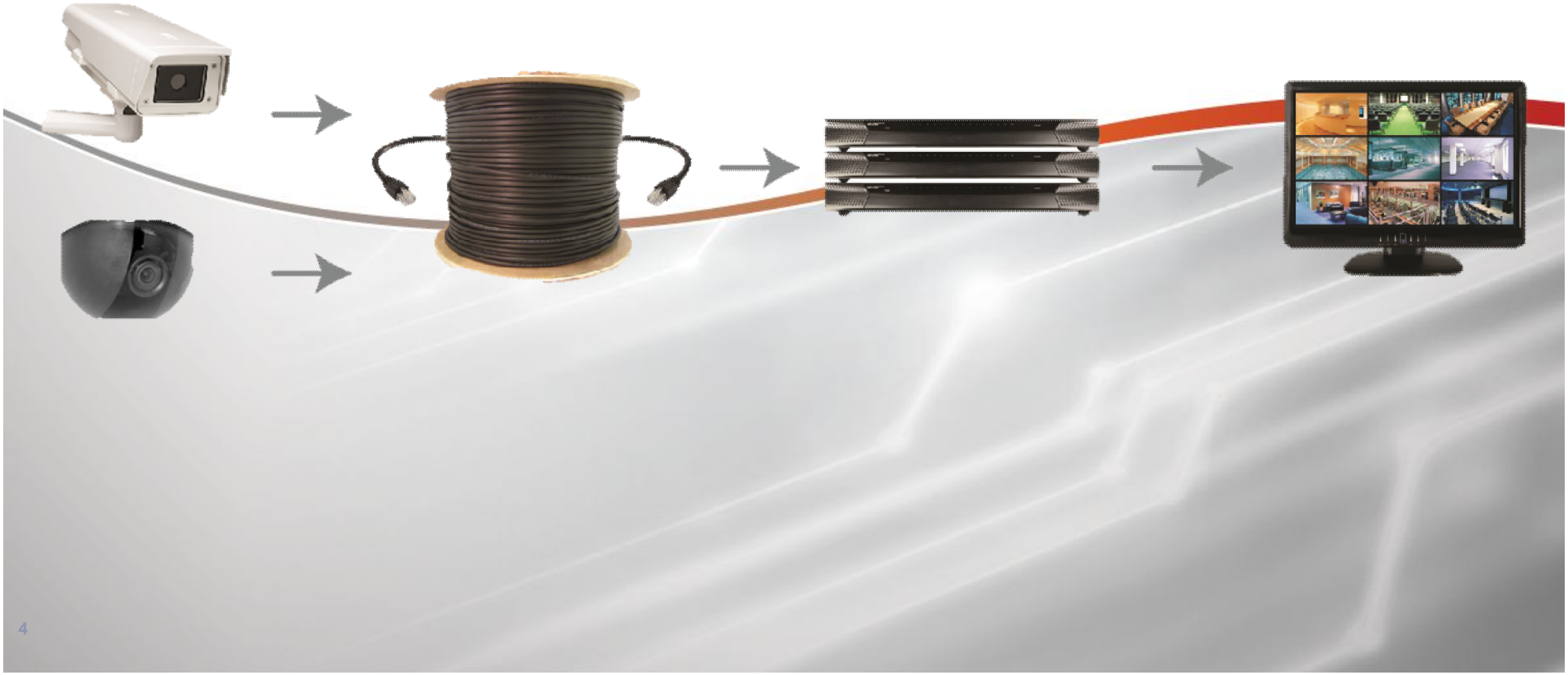
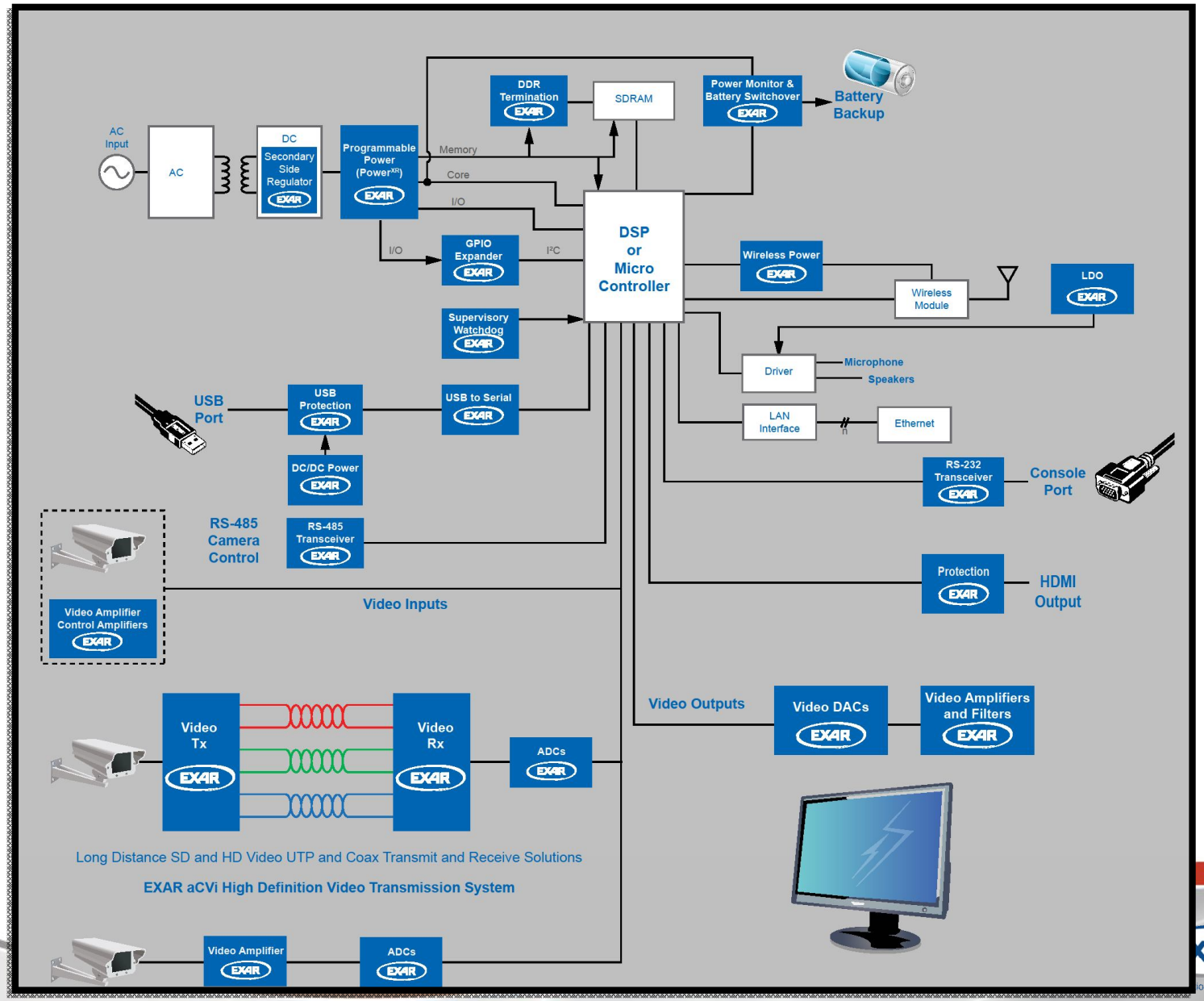
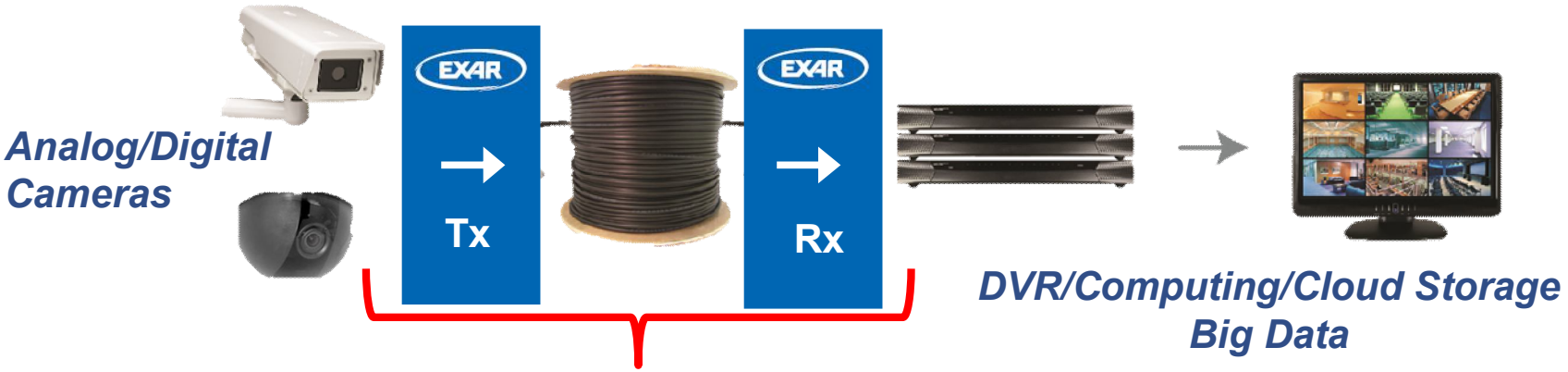
Video Solutions



Video Surveillance total EXAR Solution



Video Surveillance

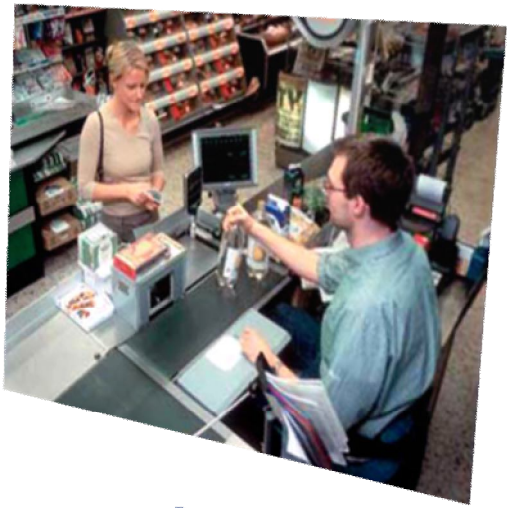


- EXAR's Value to the System Application
  - **Lowest Cost – Highest Performance signal transmission**
  - **System Flexibility – Widest variety of input/output devices**
    - **Supports both analog and digital cameras**
  - **Longest Cable driving solution in the industry**
  - **More secure than IP networked systems**
  - **Turn-Key reference designs – Ready to Go!**

Video Surveillance & Distribution

Residential

Industrial

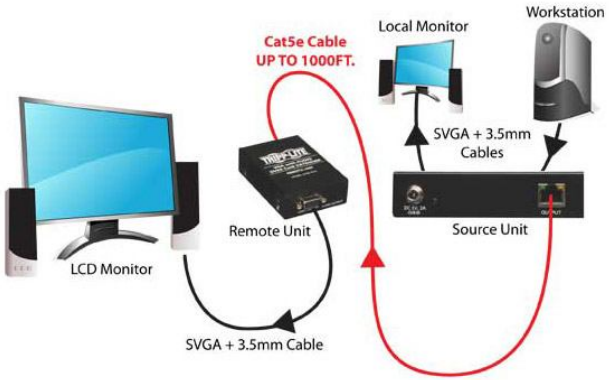


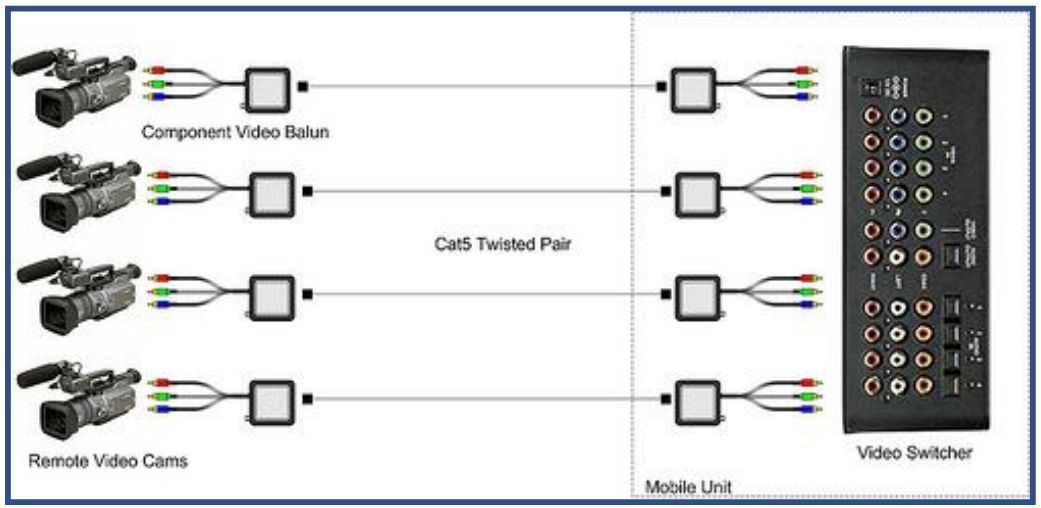
Retail

- EXAR's current solutions provide the critical transmit and receive components for a wide range of video surveillance applications and a wide range of video formats.

Video Surveillance & Distribution

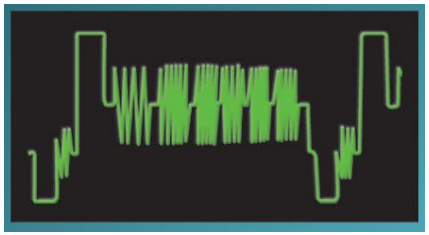
Extend a VGA Video + Stereo Audio Signal up to 1000 ft.



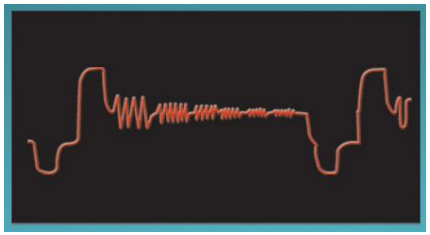


- EXAR supports a wide range of video, audio, and power distribution over twisted pair cable (Cat5e, Cat6…), coaxial, and video graphics adapter (VGA)cables.
- EXAR supports a variety of end equipment in many form factors.

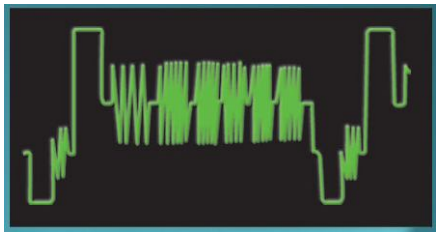
Video Surveillance Over UTP



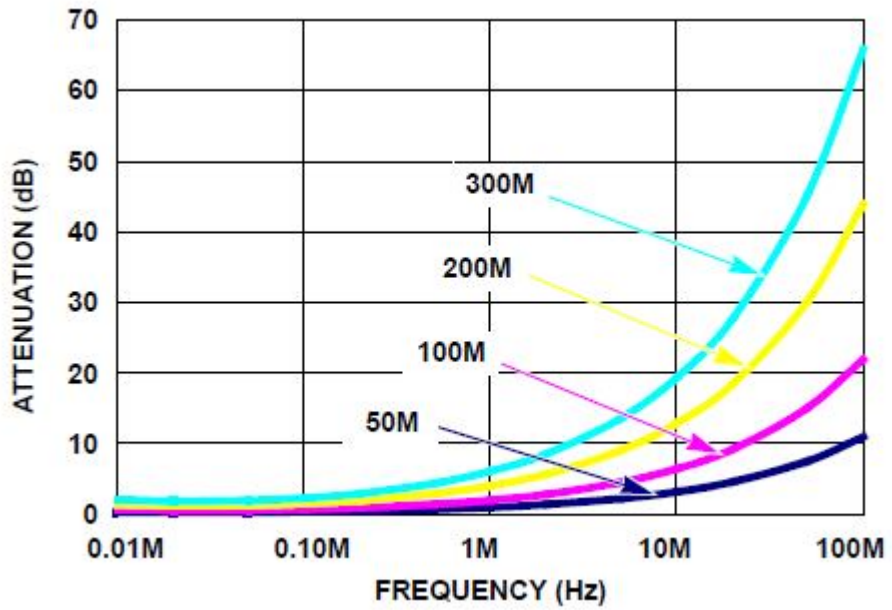
Original Signal



Via UTP



Equalization



- EXAR solves the signal loss associated with driving the low cost UTP (Cat5) cable.
- EXAR provides the industry's longest cable driving solutions up to 1800M
- EXAR analog solutions are superior to today's wired digital video transmission protocols due to:
  - Lower Cost
  - Longer Distance
  - More Secure
  - Better Image Integrity

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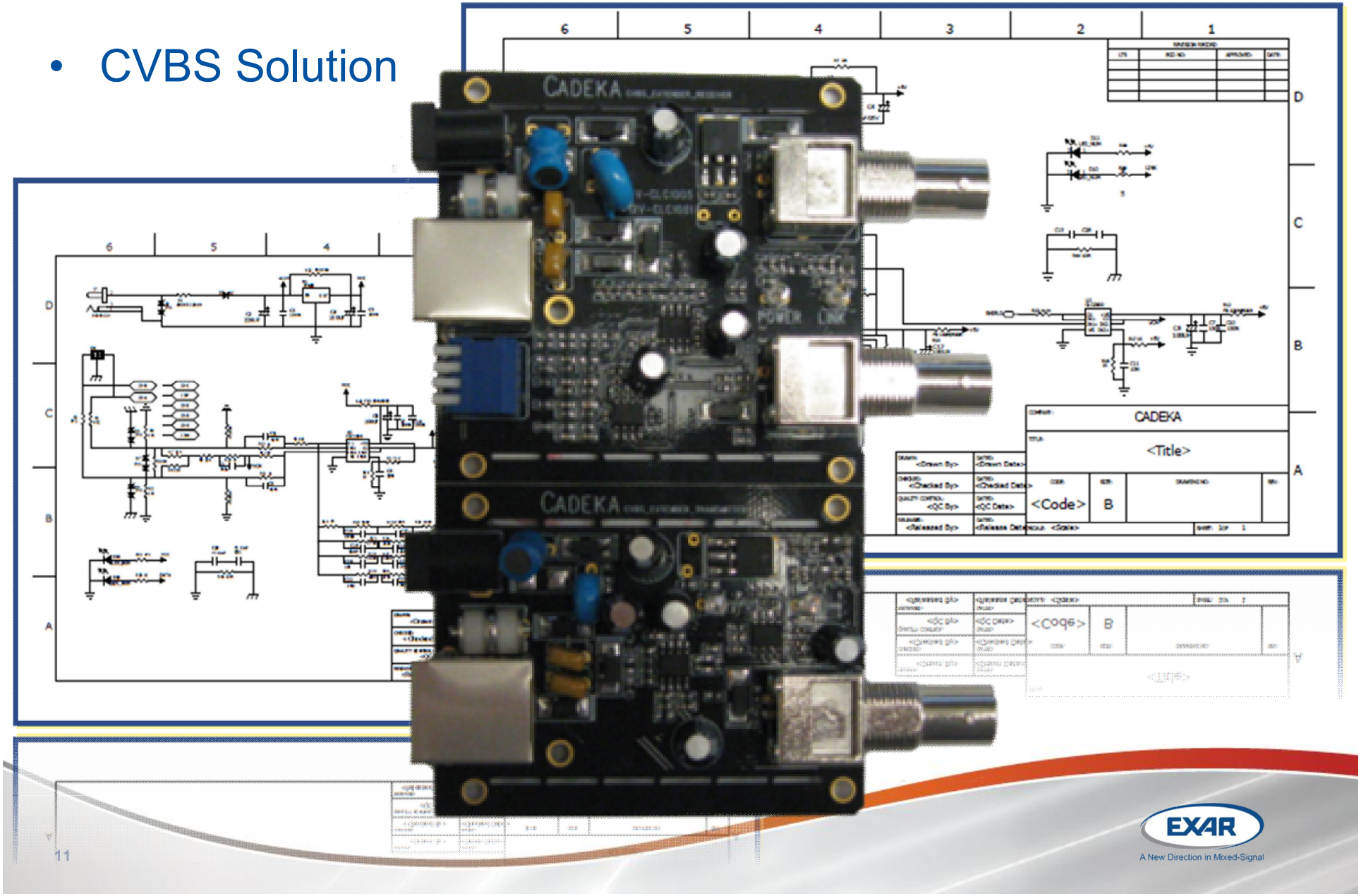
Video Surveillance Reference Designs

- EXAR provides a variety of reference designs using EXAR components.
  - Composite Video (CVBS) Transmitter (Tx) and Receiver (Rx) from 300M to 1800M (industries longest cable solution)
  - SDVGA Video Transmitter and Receiver for 300M
  - HDVGA Extender including audio and separate video sync in a single cable
  - SAG compensated CVBS and RS-485 compliant TX/Rx
  - Current Feedback based Receiver and Equalizer
  - CCTV multi circuit UTP transmission
  - …
  - Custom solutions

Video Surveillance Reference Designs

- CVBS Solution



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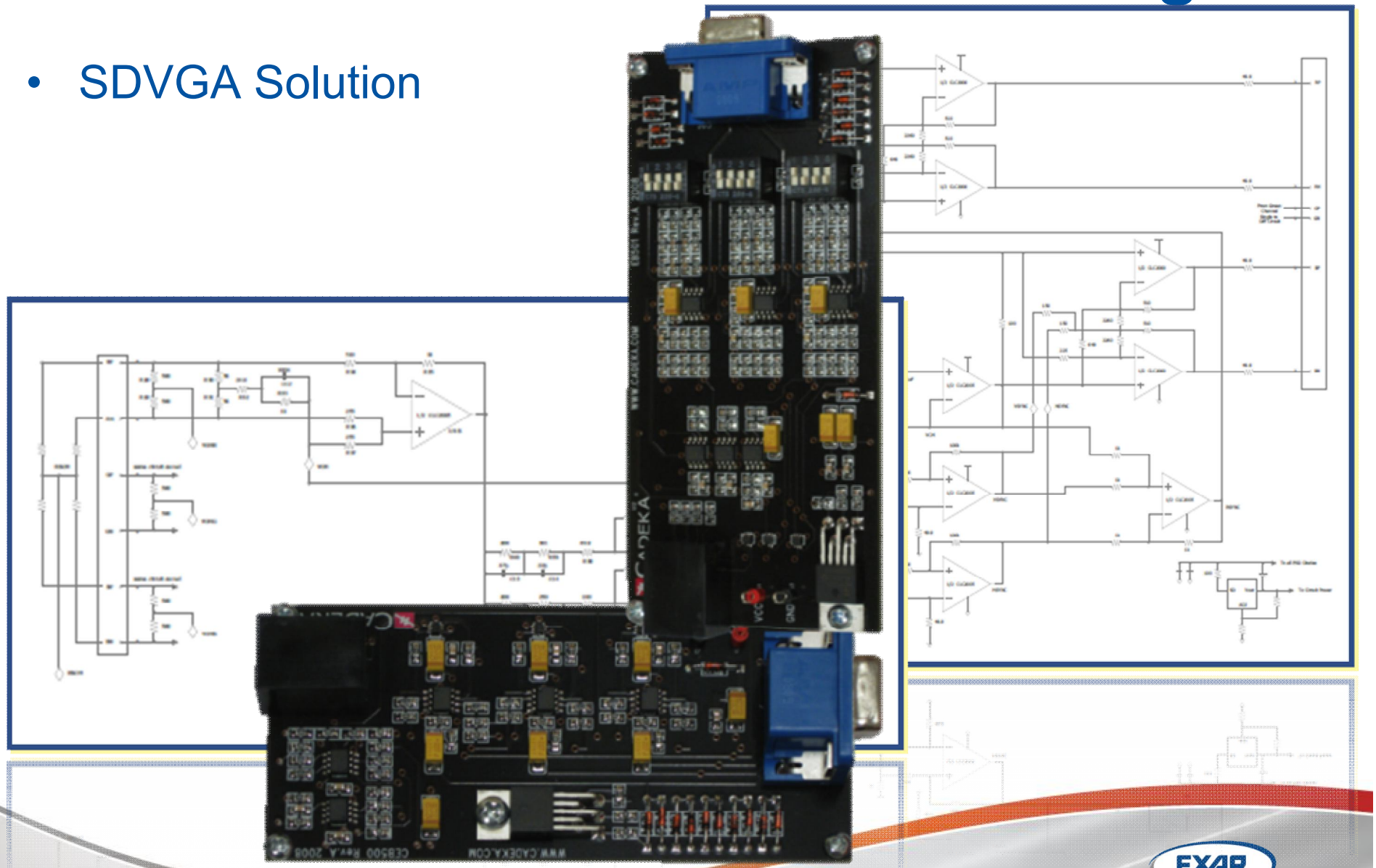
Video Surveillance Reference Designs

- SDVGA Solution



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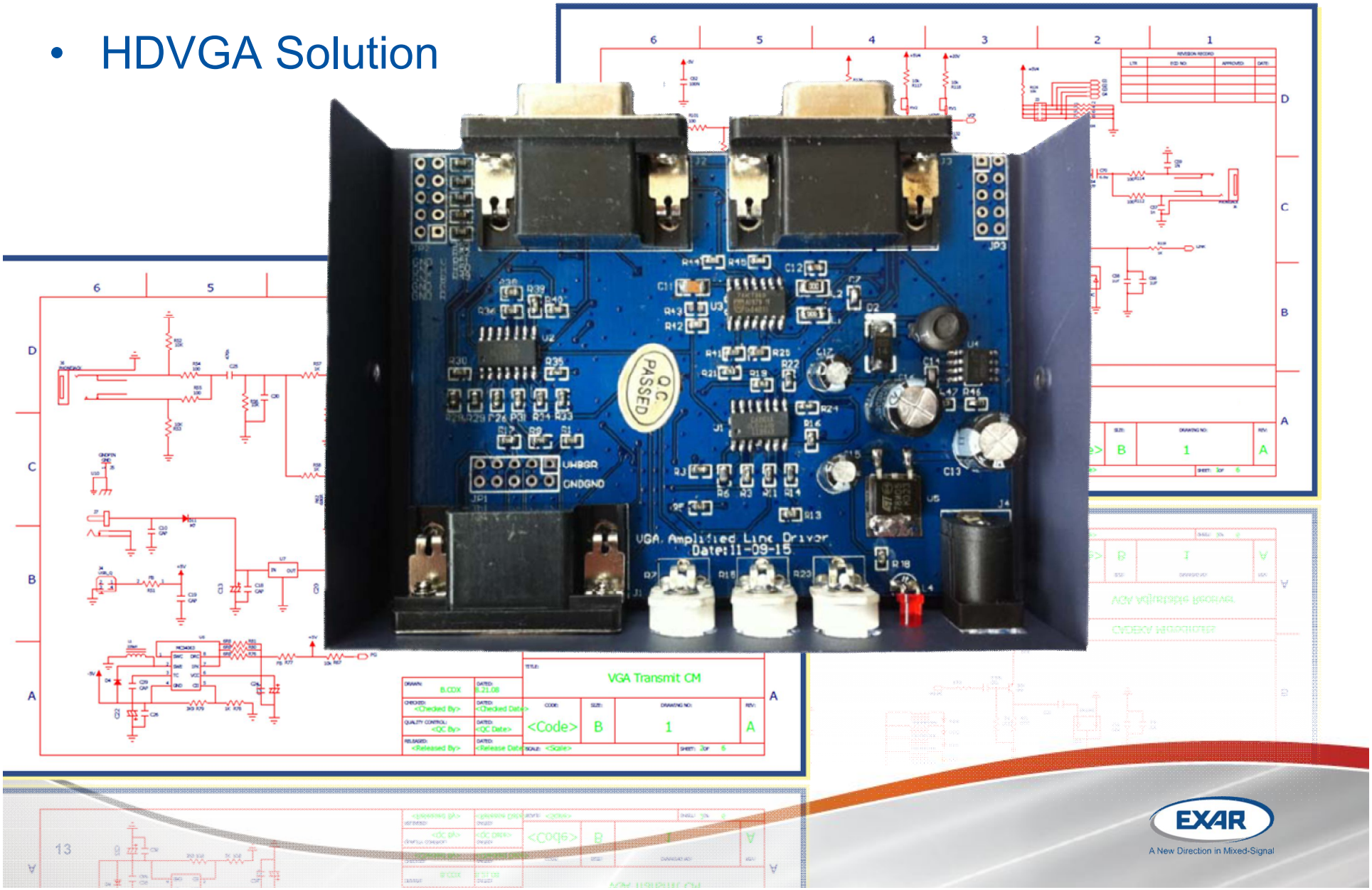
Video Surveillance Reference Designs

- HDVGA Solution



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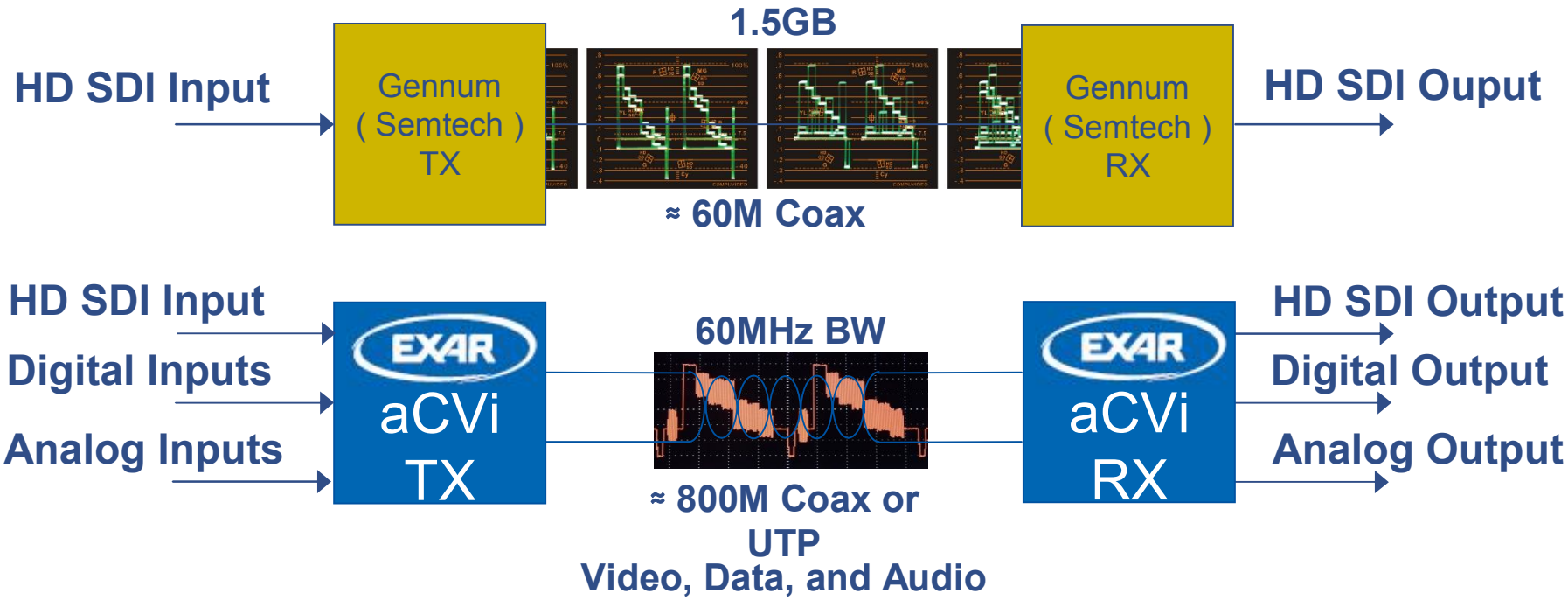
Video Surveillance Next Generation



Advanced Composite Video Interface

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Industrial & Medical Solutions

Application Overview

Current Shunt

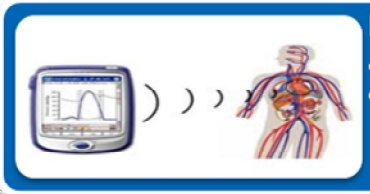
- Test equipment
- Heavy industry
- Motor control
- Inverter

Pressure Sensor

Weight Scale Sensor

Flow Meters

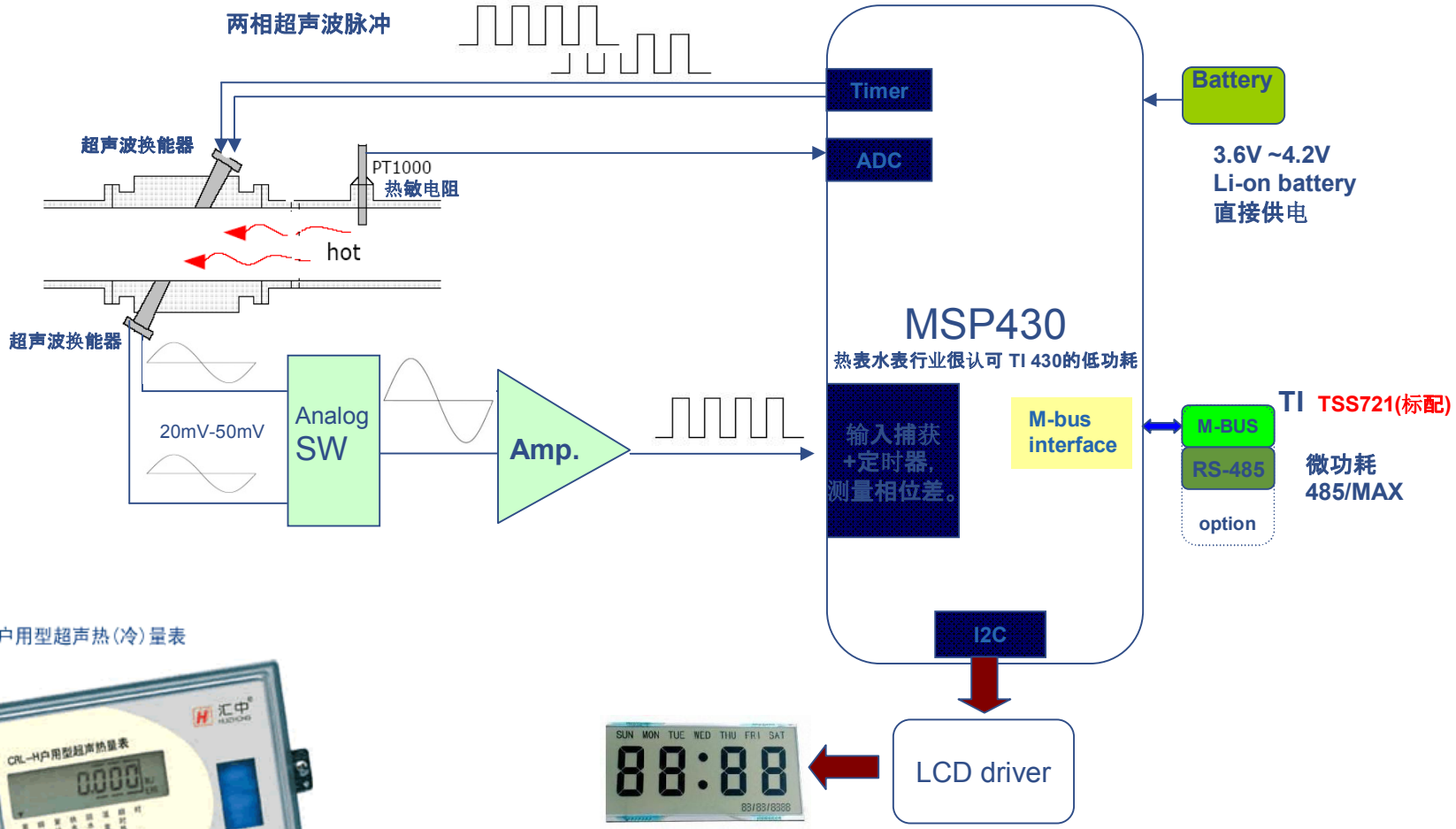
- Heat flow meter
- Magnetic flow meter



Medical

- ECG
- Pulse Oximeter

Flow Meters



CRL-H系列户用型超声热(冷)量表

CLC1008/CLC2008

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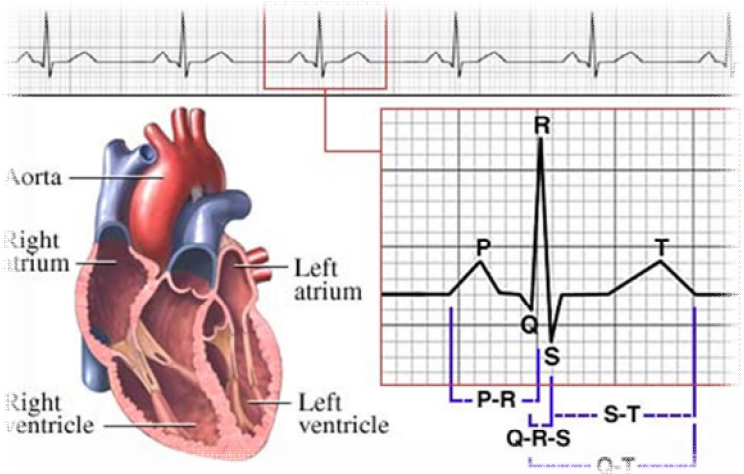
ECG

- CLC1200, better frequency response in low gain setting compare to AD620.



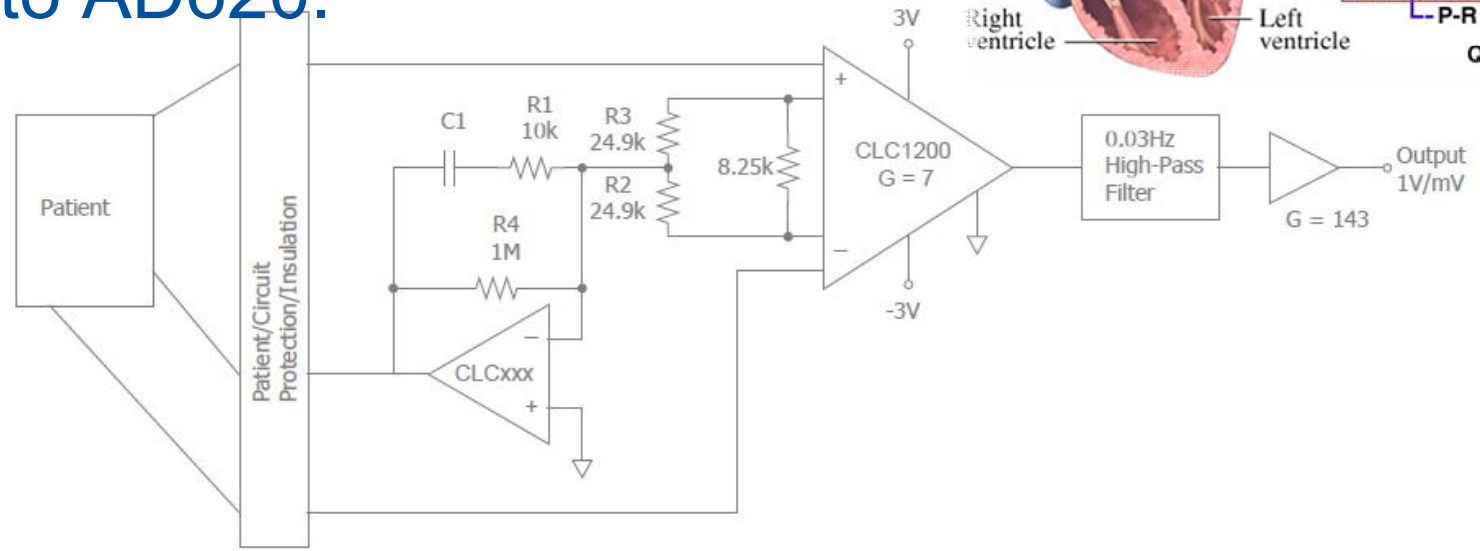


Figure 4: Typical Circuit for ECG Monitor Applications

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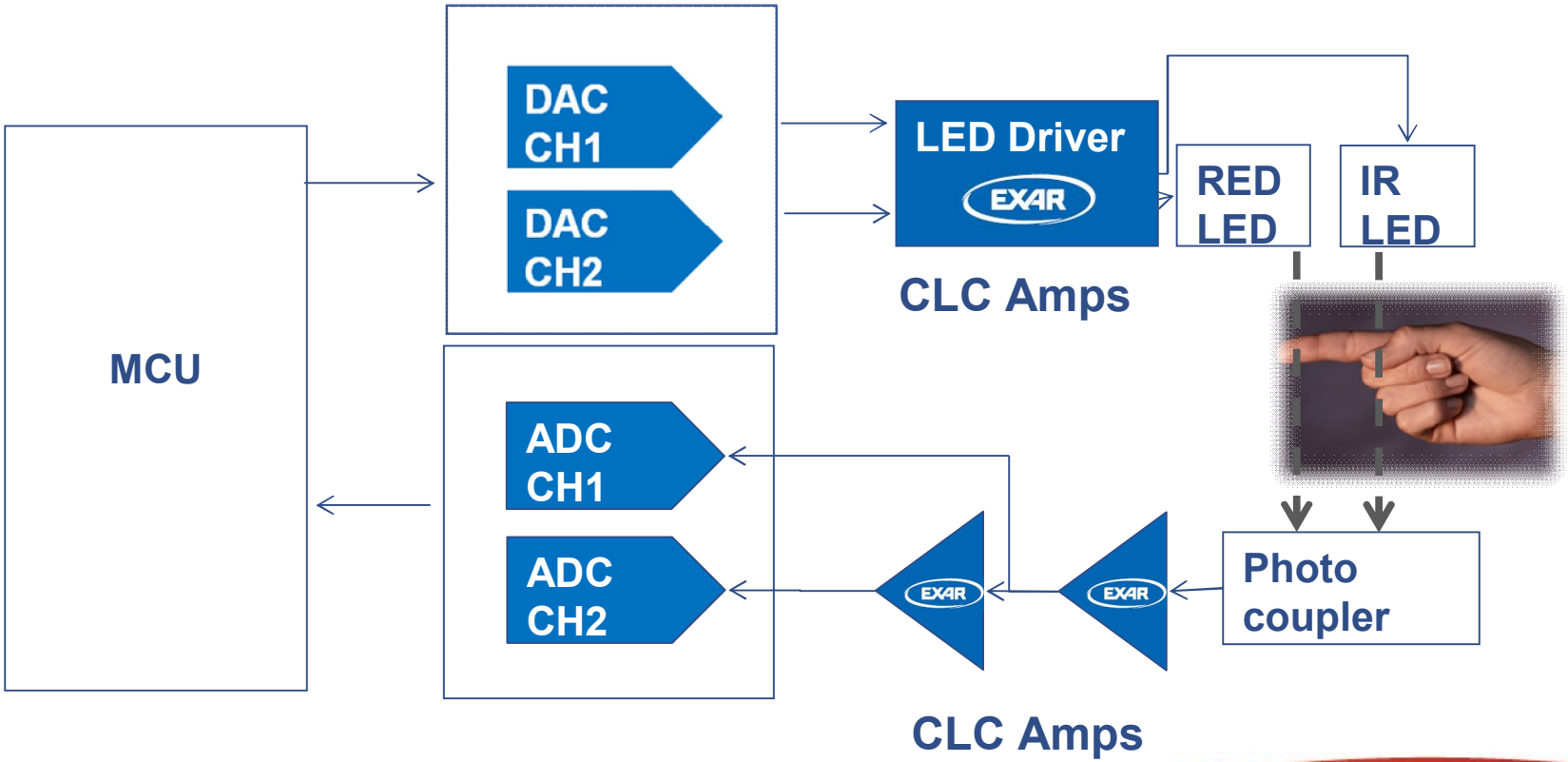
Pulse Oximetry

CLC2011
RRIO makes it easy to design
Better linearity than CMOS OPAMP



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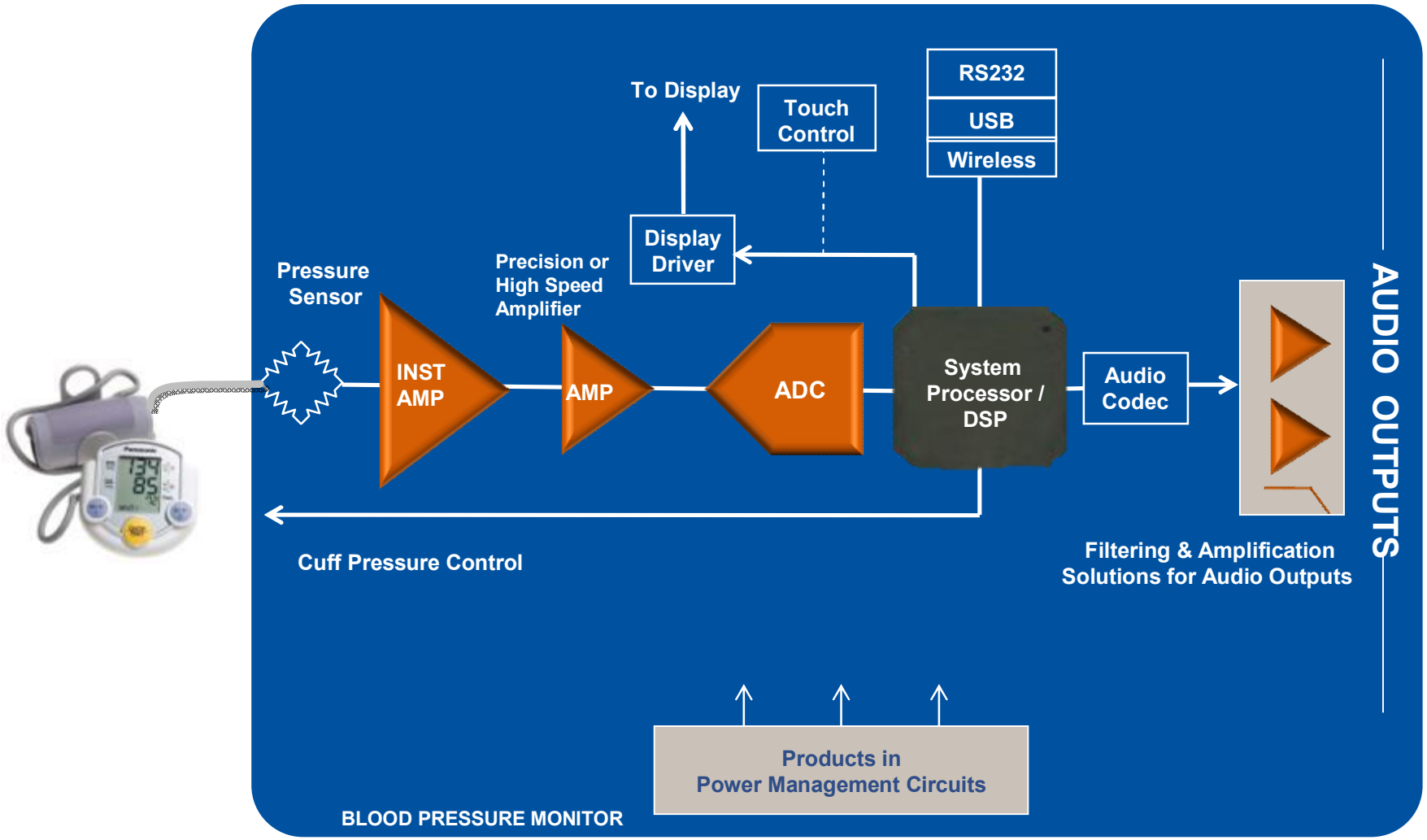
Blood Pressure Monitor



CLC1200 CLC1001 CLC1003

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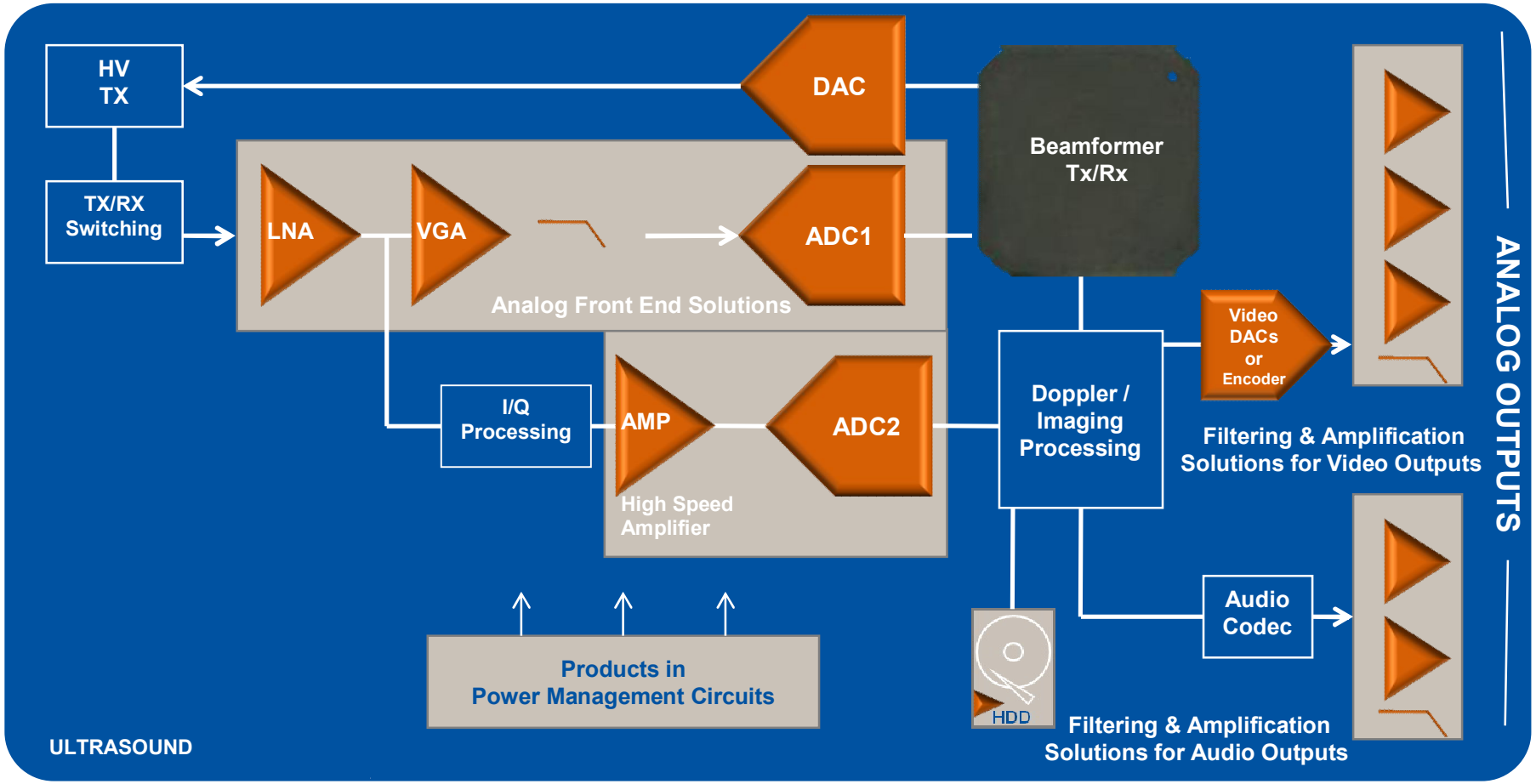
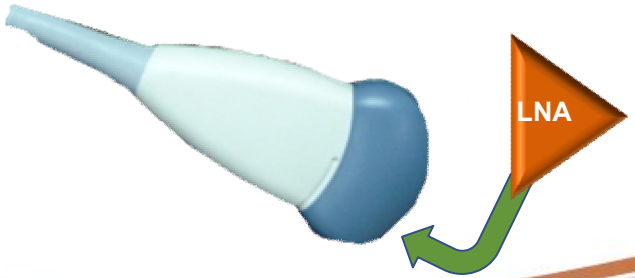
Ultrasound





CLC1001 CDK8307 CDK3405

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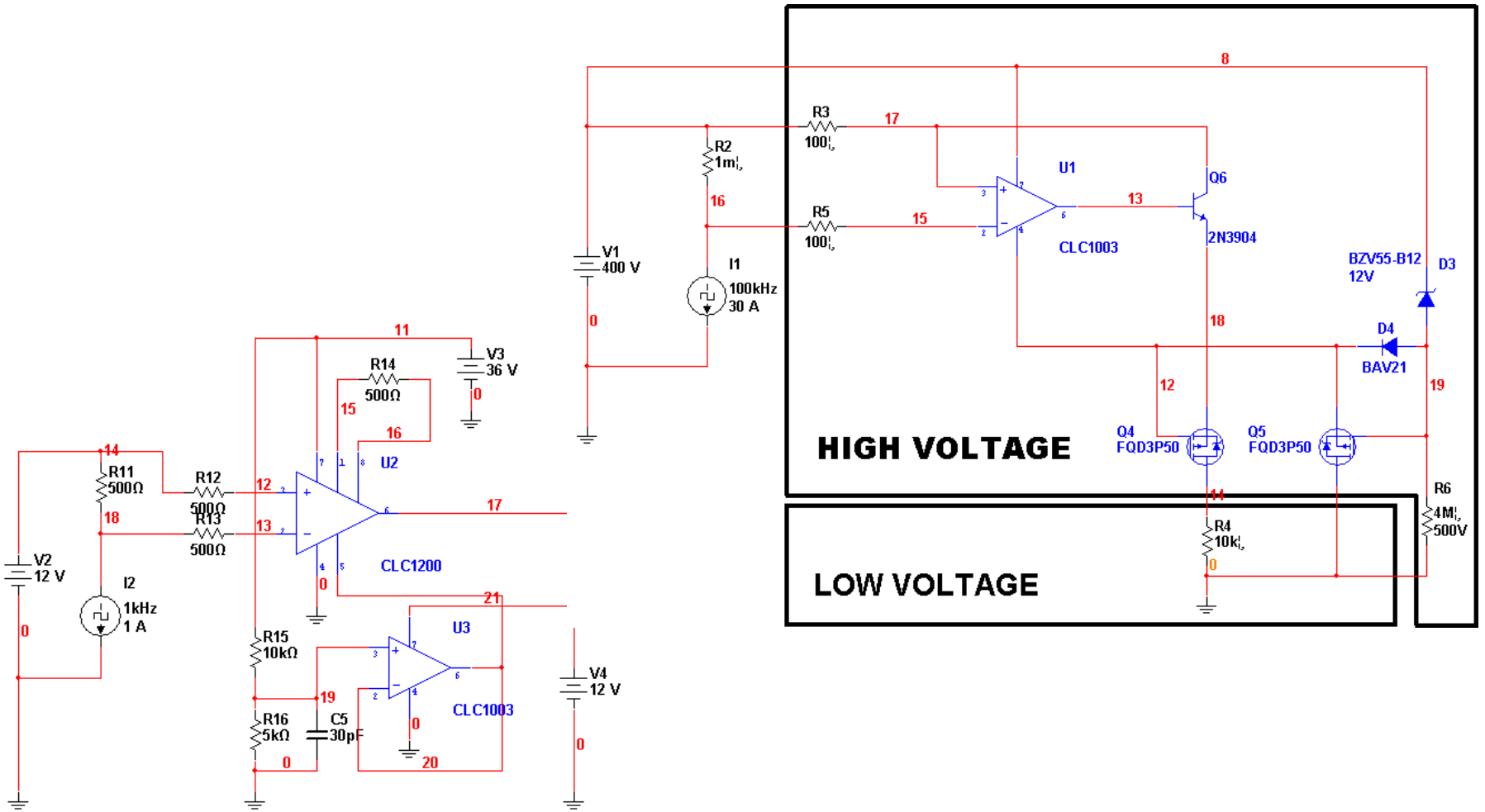
Miscellaneous Precision Circuit Design



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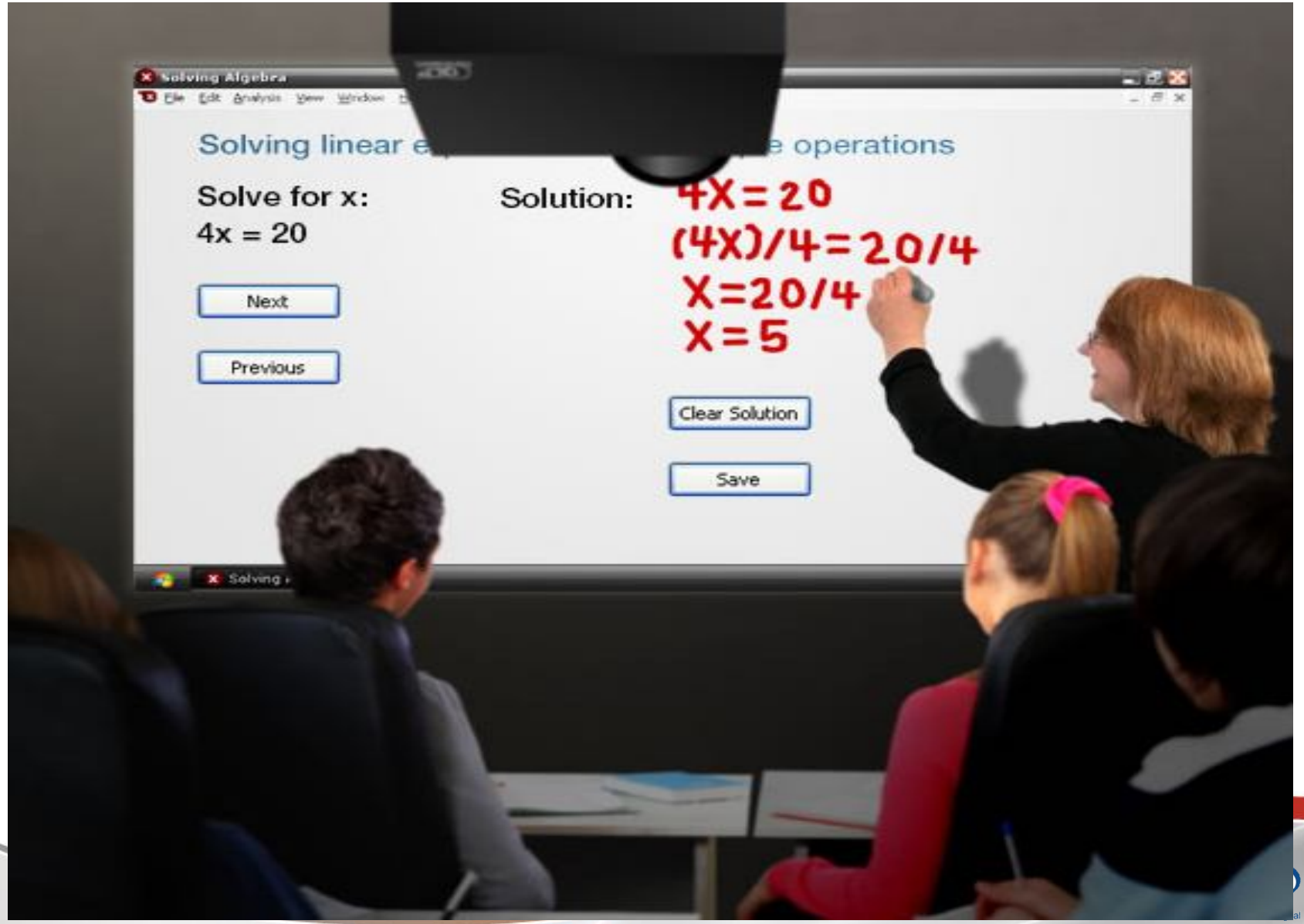
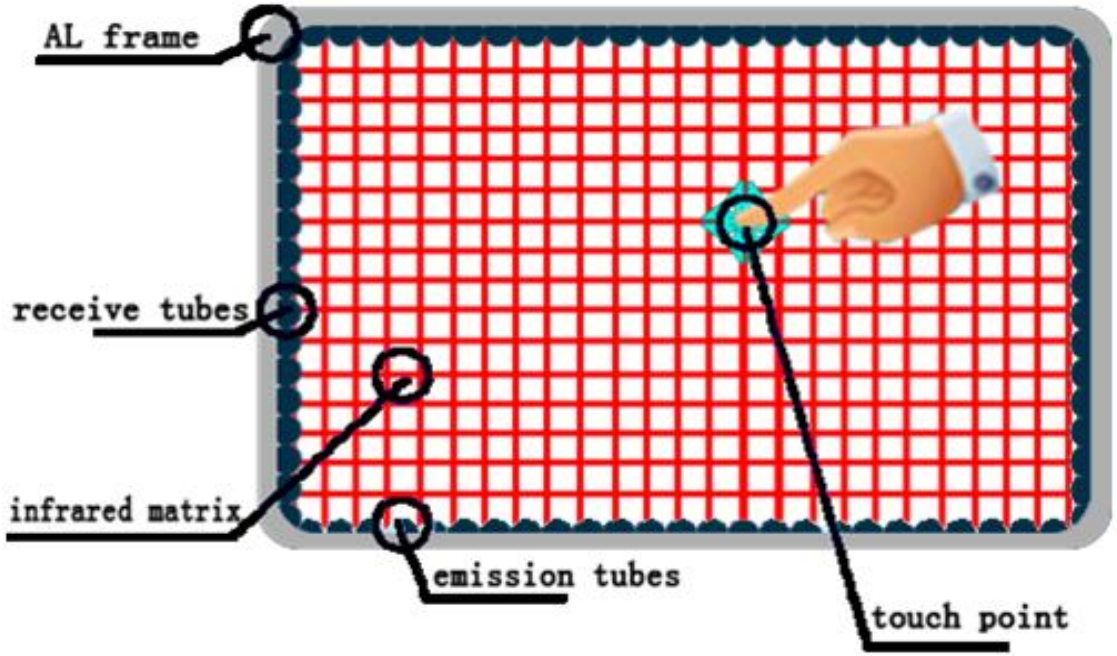
E - Whiteboard



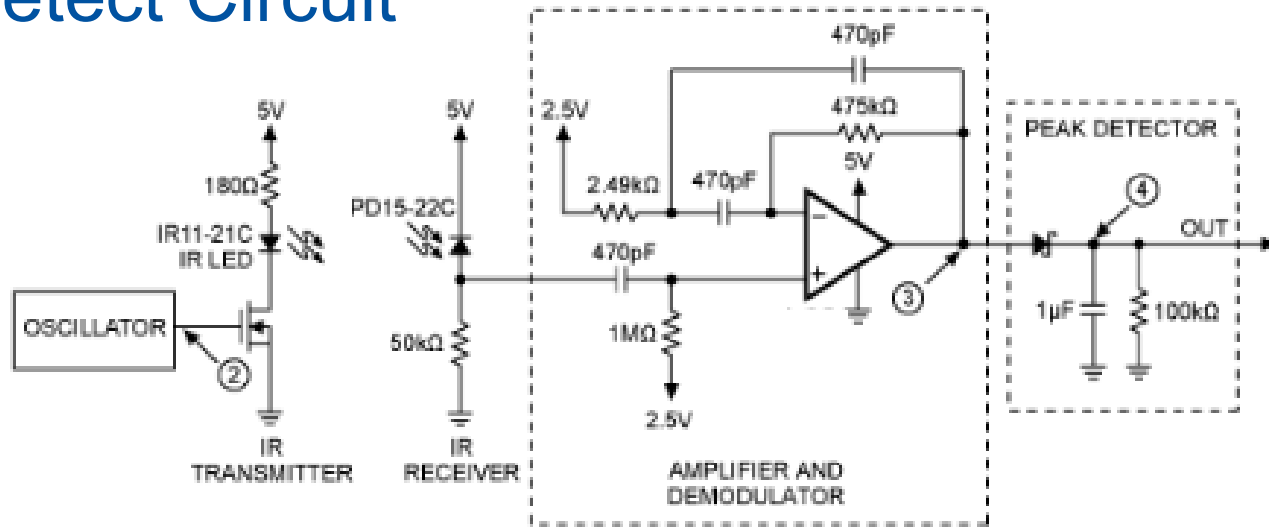
Infrared Scan EWB

- Principle: made of X, Y direction over the infrared matrix to detect and locate the user's touch area sensitively.
- Advantage: Touch by finger, no Touch Pen needed



Infrared Scan EWB

- IR Detect Circuit



Comlinear® CLC1003

Low Distortion, Low Offset, RRIO Amplifier

- ✓ **1mV max input offset voltage, 0.00005% THD, 5.4nV/√Hz noise**
- ✓ **55MHz Bandwidth, 12V/us slew rate**
- ✓ **2.5V-12V power supply, Input/Output Rail to Rail**

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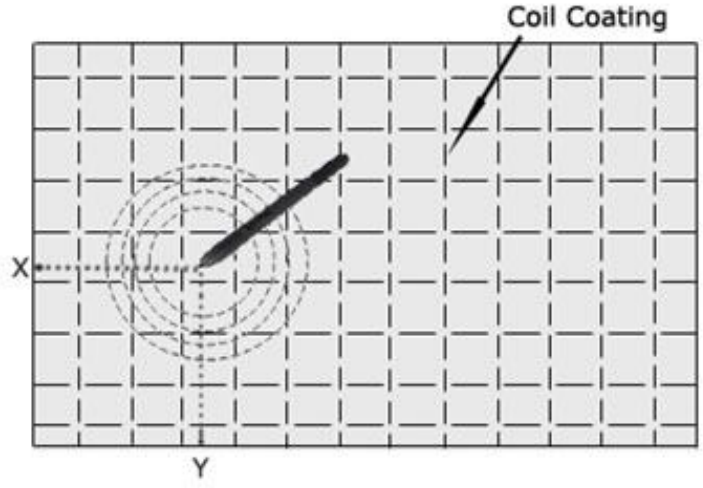
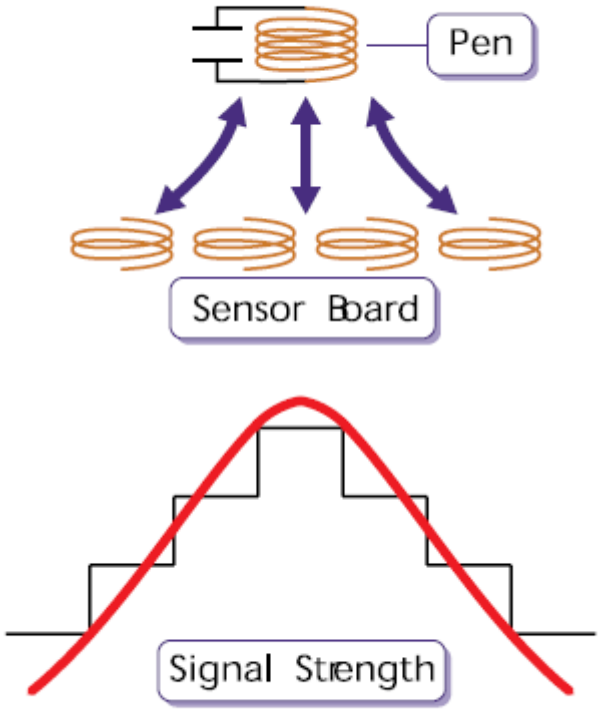
Electromagnetic pen-based EWB

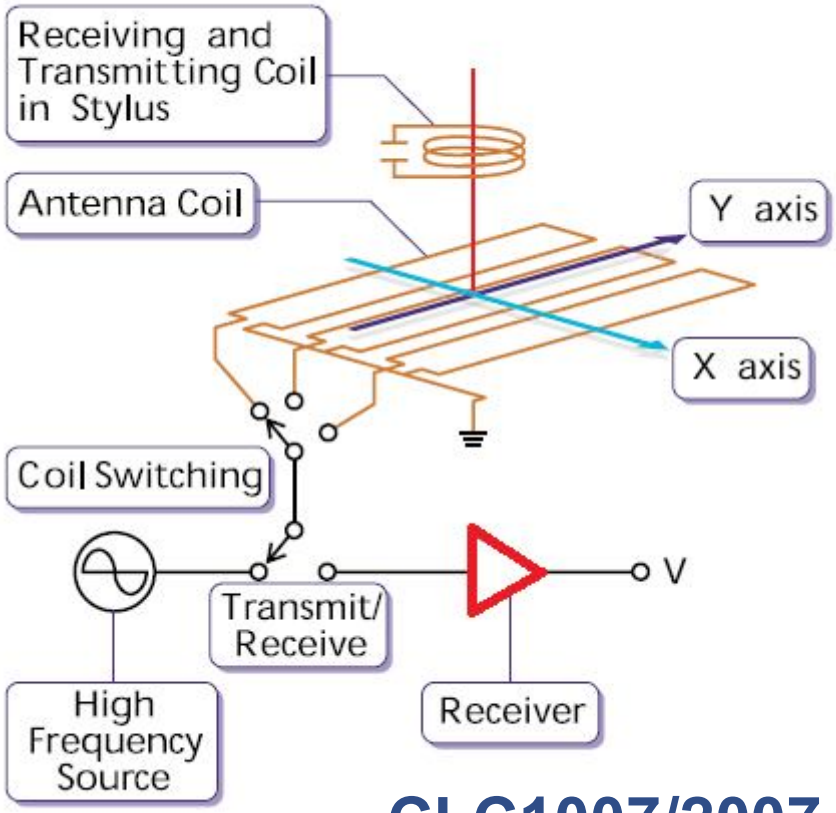
- Principle: Locate position by detecting magnetic field intensity on antenna matrix and Pen



- **Advantages:**
  - **Fast response**
  - **High resolution**

Electromagnetic pen-based EWB





CLC1007/2007

Focus Parts / Applications

aCVI:

CLC4011 (x2), CLC4007, CDK1308, CDK3401, CLC2007, CLC2011

Precision Sensors

CLC1200, CLC1003

Laser Range Finder

CLC1004, CLC1001

Improved Replacements for popular high performance amplifiers and converters

ADV7125 – CDK3405
FMS3818 – CDK3404
AD8052, AD8092 – CLC2007, CLC2005, AD8052LV
AD8051, AD8091 – CLC1007
LMH6643 – CLC2007
LMH6644 – CLC4007
LMH6624, OPA847 – CLC1001
AD620A – CLC1200

Commodity Focus Products

Direct Replacements (just verify package offering)

LM358, LM2904 – CLC2050
LM324 – CLC4050
NJM4580 – CLC2059
NJM4558, MC1458 – CLC2058
FSUSB42 – CLCUSB42
FSUSB30 – CLCUSB30
SGM8622, FAN4274, LMV932, MCP6002, LMV358 – CLC2011
MCP6004 – CLC4011

Other Common High-Runners

Pin Compatible Replacements

- OP275 – CLC2059
- FMS6143, THS7314, THS7315, NCS2553, SGM9123 – CLC3800
- ADS5282, ADS5218, ADS5272 – CDK8307
- LMV922 – CLC2011
- AD8032 – CLC2008
- MAX4281 – CLC1009
- MAX4282 – CLC2009
- OPA337 – CLC1010
- OPA2337 – CLC2010
- AD8541, MAX4250 – CLC1010
- AD8542, MAX4252 – CLC2010

Others…

- See Quick Cross Reference Guide

Success Stories

- Battery ATE – CLC1200
- Video Splitter – CLC4601
- Barcode Scanner – CLC2011/CLC4011
- Laser Parking System – CLC1001/CLC1003/CLC2023
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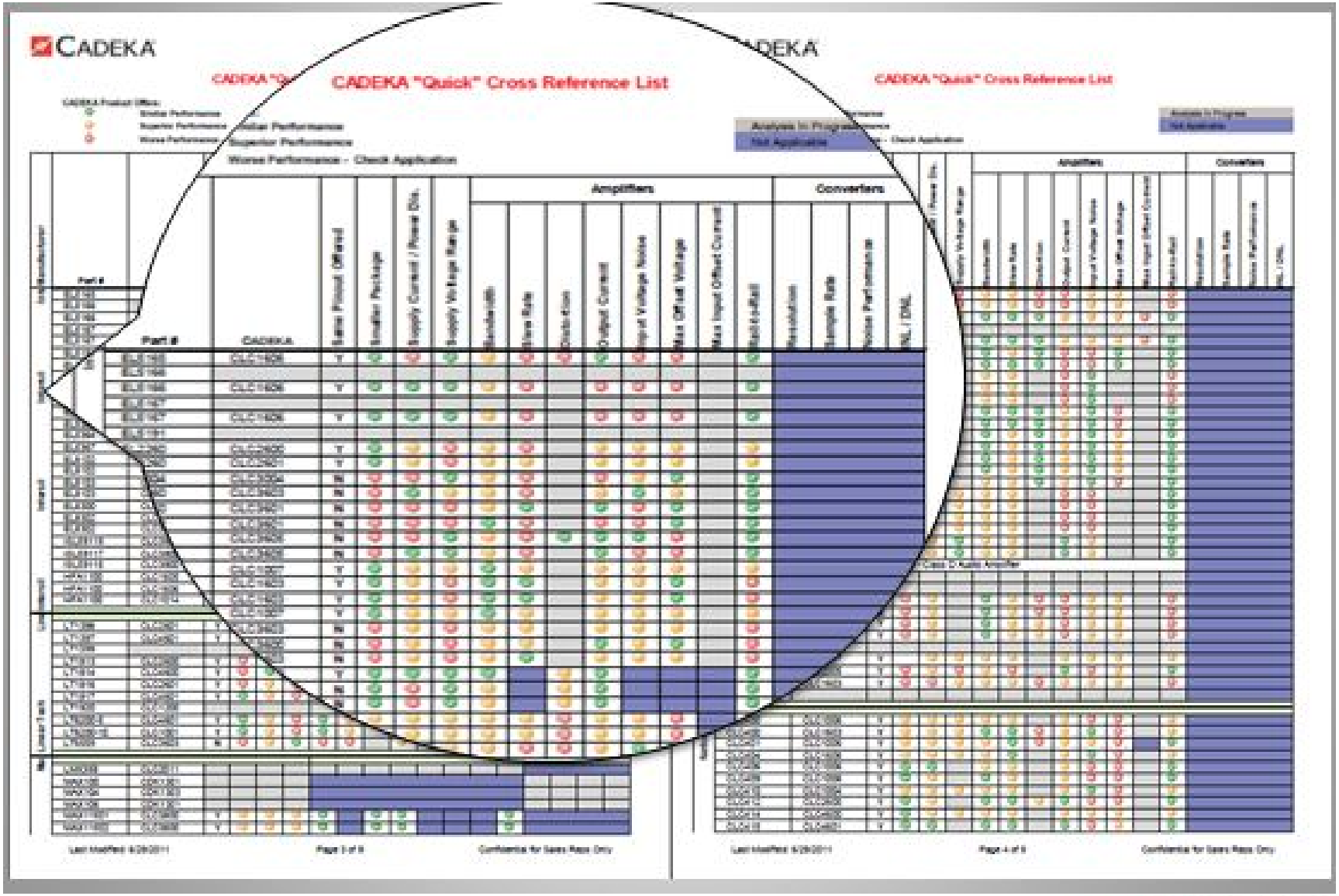
CADEKA
CADEKA "Quick" Cross Reference List
Amplifiers
Converters
Part #
CADEKA
Last Modified: 6/29/2011
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Questions?

THANK YOU

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