AValon RF Digital Modules Selection Guide 12/1/2004

Common features:

Power: 5V to 10VDC
Internal bus is via two fast daisy chain 100Mbit/sec IIS
Size 60mm x33mm,
Weight under 30gram

RF Transceiver Modules

- **TR423-1 76Kbaud Transceiver**
  – 2GFSK modulation
  – Tuning: 460MHz to 960MHz
  – Bandwidth of 162KHz
  – RF power 0.25W
  – AES Encryption
  – A/D, D/A, RS485, Audio

- **TR430-2G 200Kbaud Transceiver**
  – 2GFSK modulation
  – Tuning: 460MHz to 960MHz, optional VHF band
  – Bandwidth of 162KHz
  – Automatic Channel Negotiations & Power Control
  – RF power 1W
  – Forward Error Correction(FEC)
  – AES Encryption
  – Optional GPS

- **TR430-2G+ 325Kbaud Transceiver**
  Same as TR430-2G except
  – Tuning range is 430-480MHz & 860-960MHz
  – Bandwidth is 300KHz

- **TR430-3G 1.53Mbaud Transceiver**
  – 2GFSK modulation
  – Tuning: 460MHz to 960MHz
    Optional: 138MHz-460MHz, L, S or C Band
  – Bandwidth of 1MHz
  – Automatic Channel Negotiations & Power Control
  – RF power 1W
  – Forward Error Correction(FEC)
  – AES Encryption
  – Optional GPS

- **TR430-3G+ 3.06Mbaud Transceiver**
  Same as TR430-3G except
  – 4GFSK modulation

- **TR430-3B 1.1M Software Defined Radio**
  Same as TR430-3G except
  – COFDM Space-Time Modulation
  – Bandwidth of 162KHz
  – No GPS option

Interface Modules

- **Module A MPEG4 Encoder**
  – NTSC/PAL Analog Video Input
  – Video and Audio Pre-Processor DSP (BF561)
    Removes Thermal noise
    Electronic Picture Stabilization
    On Screen Display with Real Time Clock
    Audio G.729 Codec with data rates of 8Kbit/sec
  – MPEG4 Encoder with output rates of 1,1.5,2,3,5Mbit/sec
  – Audio codec with a electet microphone amplifier and a
    1.2W power amplifier
  – RS485 for camera PTZ

- **Module B MPEG4 Encoder**
  Same as Module A with on board camera and microphone

- **Module C TCP/IP + USB + IDE/ATA**
  – MCP5200 Power PC with resident RTOS
  – TCP/IP interface with data rate of 50Mbit/sec
  – USB 2.0 interface with data rate of 50Mbit/sec
  – IDE/ATA Hard Disk Drive Interface to 1.8"/2.5" HDD

- **Module D MPEG4 Codec**
  – Dual TI DM642-720MHz
  – Video Encoder
  – Video Decoder
  – Audio Codec with microphone amplifier and 1.2W power
    amplifier
  – SD interface

- **Module E - (E1, E2, E3, E4) Platform I/O**
  Based on an Altera FPGA and NEOS environment
  – MIL-STD-1553 interface (E1)
  – ARINC 429 interface (E2)
  – CAN interface (E3)
  – OBDII interface (E4)

- **Module F - Transmetta® TM8800 CPU**
  – CPU at 1.6GHz with dynamic power control
  – 768Mbytes of DDR DRAM
  – AGP display controller with 1280x1024
  – Toshiba 0.85" Four GB HDD
  – 802.11g and Bluetooth modules
  – Windows XP Embedded / Optional Linux