Industrial Grade PCI DIO 96 Board

- 96 digital input/output lines
- Supports all PPI Modes (Mode0, Mode 1 and Mode 2)
- 5 V TTL/CMOS
- Compatible with NI DIO Card
- 2-wire handshaking capability
- Known power-up states
- Driver simplifies configuration and measurements

**Operating Systems**
- Windows 2000/NT/XP, LabVIEW, Linux

**Application**
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

**Environmental Conditions**
- Operating Temperature: -40°C to +75°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PMC DIO Board

Features:

- Bus Interface: 32 Bit PCI Bus with PMC Interface
- Speed of operation up to 66MHz
- Spartan-3AN FPGA based design
- 128 channel digital I/O signal (64 I/O on PMC interface and 64 on Front panel interface)
- Input/output ON state: 3.5V to 5.0 max at -24mA
- Input/output OFF state: 0.8max at 24mA
- 16 groups of 8 channels can be programmed as input/output
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
RIO DIO AIO Board

Features:
- Bus Interface: 16 Bit Data bus, 8 Bit Address Bus
- Spartan-3AN FPGA based design

Digital IO:
- 24 Channel digital I/O signal
- Input/output ON state = 3.5V to 5.0 max at -24mA
- Input/output OFF state = 0.8 max at 24mA
- 3 groups of 8 channels can be programmed as input/output

Analog Output:
- 24 channel single ended analog Output – (Replaceable with Analog Input Channel)
- Unipolar or bipolar voltage output
- Programmable output voltage: 0-5V, 0-10V, ±5V, ±10V
- 16 bit Resolution
- Conversion time 10usec
- Over current protection

Analog Input:
- 24 Single Ended Inputs – (Replaceable with Analog Output Channels)
- Input Resolution: - 16 Bits
- Input Range: ± 10V
- Sampling Rate up to 250Ks/S per channel

Application
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation
PMC AO Board

Features

- Bus Interface:- 32 Bit PCI Bus with PMC Interface
- Speed of operation up to 66MHz
- Spartan-3AN FPGA based design
- 32 channel single ended analog Output
- Unipolar or bipolar voltage output
- Programmable output voltage: 0-5V, 0-10V, 0-10.8V, ±5V, ±10V, ±10.8V and is capable of driving up to +/-20mA
- 16 bit Resolution
- Conversion time 10usec typ
- Over current protection
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PMC High Speed Data Acquisition Board

Features
- Bus Interface: 64 Bit PCI Bus with PMC Interface
- Virtex-4 FPGA based design
- 32 channel digital I/O signal
- RS232 & RS485 Interface
- 32Mb Flash
- 2Mb Static RAM for data storage
- Analog Inputs: 2 Channel
- Input Resolution: 14 Bits
- Sampling rate up to 125MSPS
- Filter: Low Pass Filter for all channels
- Two Analog Outputs
- 14 bit Resolution
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Applications
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PMC ARINC 429 Board

Features

- Bus Interface: 32 Bit PCI Bus with PMC Interface
- Speed of operation up to 66MHz
- Spartan-3AN FPGA and Arinc429 controller based design
- 8 transmit and 8 receive independent channels
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PMC ARINC 717 Board

Features

- Bus Interface: 32 Bit PCI Bus with PMC Interface
- Speed of operation up to 66MHz
- Spartan-3AN FPGA with ARINC 717 IP Core
- One Channel ARINC 717 Transmitter and Receiver
- Generates all PCM telemetry signals like NRZ, Bi-Phase, Differential Bi-phase, DM signals
- Used to test all types of PCM based telemetry equipments
- Configurable output signals format (parity, word length, Minor, Major frame, Bit position)
- User can configure the words and word positions in the frame
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PMC MIL1553B Board

Features:
- Bus Interface: 32 Bit PCI Bus with PMC Interface
- Speed of operation up to 66MHz
- 1553B (DDC) controller based design
- 2 dual redundant channels
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
3U CPCI MIL1553B Board

Features:
- Bus Interface: 32 Bit PCI Bus with 3 U Form factor
- PCI to PCI Bridge Interface
- Speed of operation up to 66MHz
- 1 1553B dual redundant channel
- 4 RS422 Channels
- 16 TTL I/O Channels
- Message Storage Buffer
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
3U CPCI ARINC 429 Board

Features:

- Bus Interface: 32 Bit PCI Bus with 3 U Form factor
- PCI to PCI Bridge Interface
- Speed of operation up to 66MHz
- 8 ARINC 429 TX and 16 ARINC 429 RX channels
- 4 RS422 Channels
- 16 TTL I/O Channels
- Message Storage Buffer
- Driver interface for Windows2000/XP/VISTA and LINUX OS
- Self Test future

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
C012 Communication Board (Rear IO & M Module Interface)

- Suitable for standard desktops
- Four channel in single board
- Up to 10 Mbits/sec operating speed
- Low Cost solution
- Standard INMOS link protocol
- Communicates with transputers
- Converts between serial link and parallel bus
- Tristate bidirectional bus interface
- Memory mapped registers
- Interrupt capability
- TTL compatibility

APPLICATIONS

- Connecting microprocessors to transputers
- High speed links between microprocessors
- Inter-family microprocessor interfacing

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
One Wire Communication Board

- Digital serial bus communication with low speed data over a single line. Both signaling and driving power over a same single signal.
- Protocol used in small inexpensive devices. Such as digital thermometer, weather instruments, laptop sub module, authenticate system and some cell phone battery packs.
- Always master only initiates the communication and in overall in charge of the network.
- Bus communicates with master and slave at a low data rate of 12kbps.
- All terminals in the network are communicating by half-duplex mode.
- Maximum of 255 nodes in each 1-wire network
- Each data transaction will start with 480micro second low RESET pulse.

Features of node:
- Each 1-Wire slave has a unique 64-bit serial number that acts as its node address, which is stored in its ROM the 64 bit serial number again divided in to 3 groups.
- The first byte stores the 8-bit family codes that identify the device type, which can be master or Slave.
- The next six bytes store a customizable 48-bit individual address, device to be individually selected from among many that can be connected to the same 1-wire bus.
- The last byte, the most significant byte (MSB), contains a CRC of a value based on data of first seven bytes.
- All nodes will respond to a master on reception of RESET pulse.

Application
- Elevators
- Automobiles
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PCI Carrier Board

Features
- 64 bit PCI edge connector
- 64 bit PMC connectors
- Operated frequency up to 66MHz
- Regulated 3.3v supply to module

Application
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Pulse Acquisition Board

- Used to measure the amplitude of discrete pulses driving relay coils/motors
- Programmable No. of samples acquisition with programmable trigger option
- Converts sine wave to square wave for pulse measurement
- Measures amplitude of sine wave
- 16 Bit ADC interface
- 16 Bit data bus host interface
- FPGA based design with flexible configuration
- 1K FIFO Storage

Application

- ATE
- Data Acquisition System
- Motor Control
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to +55°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
3U and 6U CPCI CARRIER Board

Features
- Bus Interface: 32 Bit/64 bit PCI Bus with cPCI Interface
- One / Two slots of 32/64 bit PMC connector interface
- Speed of operation up to 66MHz
- 64 bit, 66MHz PCI Bridge based design
- Self Test future

Application
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PCI to CPCI/PXI Extender Board

PCI to CPCI Extender card is used for extending the standard desktop PCI bus to compatible CPCI bus. This will help to test all the CPCI and PXI cards without having a CPCI or PXI backplane. This card is very low cost board and very use to interface with standard board. This board also facilitates to debug the CPCI and PXI boards.

Features:

- Suitable for standard desktops
- No software or driver interface required
- Suitable for CPCI and PXI boards
- Supports 33MHZ and 66Mhz Clock
- Supports 32Bit and 64Bit Bus
- Low Cost solution
- Enables easy debugging
- Standard half size PCI form factor

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PCI to PC104 Extender Board

PCI to PC104/EPIC Extender card is used for extending the standard desktop PCI bus to compatible PC104 or EPIC bus. This will help to test all the PC104 cards through standard PC without any embedded processors. This card is very low cost board and very use to interface with standard board. This board also facilitates to debug the PC104 or EPIC boards.

Features:

- Suitable for standard desktops
- No software or driver interface required
- Suitable for CPCI and PXI boards
- Supports 33MHz and 66Mhz Clock
- Supports 32Bit and 64Bit Bus
- Low Cost solution
- Enables easy debugging
- Standard half size PCI form factor

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PCI to PCI Express Board

PCI to PCI Express card is used to extend PCI / PCI-X bus from one PCI system to another system over an optical fiber medium up to 500 meters or over a copper medium up to 7 meters using a PCI express interface. This card receives/transmit PCI signals from/to the Host System. These PCI signals are converted into PCI Express using PCI / PCI-x to PCI Express cross bridge and vice versa. The PCI Express signal is transmitted / received through the optical interface or copper interface.

**Features**
- Bus Interface:- 32 Bit/64 bit PCI Bus
- Speed of operation up to 66MHz
- Converts PCI to PCI Express
- Easy Plug and Play Installation
- Easily fits into standard PC cases
- PCI Express Specification Version 1.0 Compliant
- PCI Specification Version 2.3 Compliant

**SPECIFICATIONS:**
Input (Board interface): PCI /PCI-X - 32 / 64 bit at 33 / 66 MHz
Output (Field interface): x1 (2.5Gbps) PCI Express Optical interface (500 meters)
x2 (5Gbps) PCI Express Optical interface (500 meters)
x4 (10Gbps) PCI Express Optical interface (500 meters) or x4 Copper interface (7 meters)
Form Factor: Short PCI Form Factor (167.64mm (W) x 106.68mm (H))

**POWER REQUIREMENTS:** Power consumption: 3.3V @ 3.33A (from the PCI slot)

**MECHANICAL:** Board Dimensions: 167.64mm (W) x 106.68mm (H)

**Application**
- ATE
- Data Acquisition System

**Environmental Conditions**
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PCI Express to CPCI Board

PCI Express to CPCI card is used to extend PCI / PCI-X bus from one PCI system to another system over an optical fiber medium up to 500meters or over a copper medium up to 7meters using a PCI express interface. This card receives/transmit cPCI signals from/to the Host System. These cPCI signals are converted into PCI Express using cPCI / PCI-x to PCI Express cross bridge and vice versa. The PCI Express signal is transmitted / received through the optical interface or copper interface.

Features

- Bus Interface: 32 Bit/64 bit PCI Bus
- Speed of operation up to 66MHz
- Converts PCI Express to CPCI
- Easy Plug and Play Installation
- Easily fits into standard CPCI / PXI chassis
- PCI Express Specification Version 1.0 Compliant
- PCI Specification Version 2.3 Compliant

Specifications:

Input (Board interface): PCI /PCI-X - 32 / 64 bit at 33 / 66 MHz
Output (Field interface): x1 (2.5Gb/s) PCI Express Optical interface (500 meters)
x2 (5Gb/s) PCI Express Optical interface (500 meters)
x4 (10Gb/s) PCI Express Optical interface (500 meters) or x4 Copper interface (7 meters)

Form Factor: Short PCI Form Factor (167.64mm (W) x 106.68mm (H))

Mechanical: Board Dimensions: 160mm (W) x 100mm (H)

Application

- ATE
- Data Acquisition System

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Dual Channel Digital Receiver

Dual Channel Digital Receiver is a complete high-frequency dual-channel A/D converter capable of sampling rates up to 210 MHz. It accepts two front panel analog inputs and delivers digital output samples over four FPDP (Front Panel Data Port) connectors utilizing FPDP standards.

The Dual Channel Digital Receiver features two 12-bit Analog Devices AD9430 A/D Converters, and two user-configurable Xilinx® Virtex-IV Series FPGAs. It also features a VME A64/D64 slave interface for setting up operating modes and selectable A/D range, and optionally provides 32-bit access from the VMEbus to the FPGAs. It is an ideal system as a high-speed data acquisition front end for real-time recording and digital signal processing systems.

Features
- Two 215-MHz, 12-bit A/D converters
- RF transformers supports 700 MHz input
- Four FPDP front panel outputs
- FIFO buffering for real-time recording
- Advanced Xilinx® Virtex-IV FPGAs
- Multi-board synchronization

Specifications
Front Panel Connectors
- Analog Inputs: Two female SMA connectors
- Sample Clock Input: One female SMA connector
- Sync/Gate Bus: One 26-pin connector, with four gates, one sync, and one clock input/output LVDS signals, plus one sync and one gate input TTL signals
- FPDP Outputs: Two 80-pin FPDP connectors (A and B)
- FPDP Outputs: Two 80-pin FPDP connectors (C and D)

Analog Signal Inputs
Quantity: 2 Front panel SMA connectors
Input Type: Single-ended, non-inverting
Coupling: AC
Input Impedance: 50Ω
Full Scale Input: +8dBm (1.59 Volts p-p) or +2 dBm (0.796 Volts p-p)

Analog Input Transformers
Quantity: 2
Type: Mini−Circuits ADT1−1WT
3 dB Passband: 400 kHz to 800 MHz (limited to 700 MHz by A/D)

Analog/Digital Converters
Quantity: 2
Device: Analog Devices AD9430
Sampling Rate: 60 MHz to 215 MHz
Resolution: 12 bits
Bandwidth: 700 MHz at full power
Coupling: Transformer coupled
Clock Source: On-board crystal oscillator or external clock

Internal Clock
Frequency: 210−MHz crystal oscillator (standard) 213.333−MHz crystal oscillator

External Clock Input
Source: Front panel SMA connector
Type: Single−ended, non−inverting, Sine Wave
Frequency: 60 MHz to 215 MHz
Impedance: 50Ω, AC coupled
Full−scale Input Voltage: 0 to +4 dBm

External Sync/Gate Inputs
LVDS Signals: Front panel LVDS Sync Bus inputs/outputs:
GATE A: 2 LVDS pins (1 differential pair)
GATE B: 2 LVDS pins (1 differential pair)
GATE C: 2 LVDS pins (1 differential pair)
GATE D: 2 LVDS pins (1 differential pair)
FPGA SYNC: 2 LVDS pins (1 differential pair)
CLK: 2 LVDS pins (1 differential pair)
TTL Signals: Front panel TTL inputs:
TTL GATE: 1 pin
TTL SYNC: 1 pin
Gate Disable: Each gate can be disabled; when disabled, FIFO writes default to enabled
Triggering: Each gate can be programmed as a trigger

Field−Programmable Gate Arrays
Quantity: Two
Device: Xilinx Virtex-IV XC4VFX60, Xilinx Virtex-IV XC4VSX55

Programming: Factory programmed.

Memory
SDRAM
Quantity: Two, one per FPGA
Size: 256 MBytes (32M x 32) each
Note: Each FPGA bank contains four 16M x 16 chips, configured for a 32-bit wide data bus
Interface: Interfaced to FPGA

Flash
Quantity: Two, one per FPGA
Size: 16 MBytes each
Mapping: Programmable by the corresponding FPGA
Write Enable: With jumper

Additional Flash
Quantity: Two, one per FPGA
Size: 32 MBytes each
Mapping: Programmable by the corresponding FPGA

Digital Outputs
Quantity: Standard: Two Front Panel Data Port (FPDP) connectors, each providing 32-bit output
Output Type: FPDP I, non-inverted configuration FPDP II, double the selected clock rate
Clock: On-board clock

FIFOs
Quantity: Four IDT72V3690 FIFOs, one for each FPDP port
Size: 32,768 x 36
Speed: FIFOs are capable of 166 MHz speed, but are run at one half of sample clock speed

VME Slave Interface
Type: Slave A, 64 D64, A64/D64
Control: Operating modes, gate/trigger, FIFO reset, data packing, FPDP I or II, FPDP framing, time sync command and status (read only)

Environmental – Commercial Applications
Operating Temperature: 0° to 50°C
Storage Temperature: -20° to 90°C
Relative Humidity: 0 to 95% non-condensing
VME Rack Exhaust Temp: 0° to 50°C

Environmental – Ruggedized Applications Cooling Method (operational): Forced Air
PMC FPDP Board

Features

- Four FPDP front panel outputs
- FIFO buffering for real-time recording
- FPDP Outputs: Two 80-pin FPDP connectors (A and B)
- FPDP Outputs: Two 80-pin FPDP connectors (C and D)
- Quantity: Standard: Two Front Panel Data Port (FPDP) connectors, each providing 32-bit output
- Output Type: FPDP I, non-inverted configuration FPDP II, double the selected clock rate
- Clock: On-board clock
- FIFOs
- Quantity: Four IDT72V3690 FIFOs, one for each FPDP port
- Size: 32,768 x 36
- Speed: FIFOs are capable of 166 MHz speed, but are run at one half of sample clock speed

Environmental – Commercial Applications

Operating Temperature: 0° to 50°C
Storage Temperature: −20° to 90°C
Relative Humidity: 0 to 95% non-condensing
Advanced Programmable Mixed Data Acquisition & Control Board

Features:

- 32 Bit ARM9 LPC3250 Processor (256KB SRAM)
- External memory (Flash - 2 MB, RAM - 512 KB, 8KB DPRAM)
- 10/100 MBPS Ethernet Interface
- USB 2.0 Host/Device Interface
- 144 Digital IO Channels - (18 * 8 Configurable Ports)
- 64 Analog Inputs (16 Bit, 1MSPS)
- 16 Analog Outputs (16 Bit)
- 2 RS232 Serial Ports
- High Speed Logic Device with 1 M bit in system flash, 54Kbit Block Ram and 11Kbit Distributed Ram
- Power, Analog and Digital signals Interface Connectors (J1, J2 and J3 - 96 Pin Euro)
- Data acquisition of all analog & digital channels
- External Bus through Add on module (15 bit address bus and 16 bit data bus)
- Transmission of 1Kbytes at 400us through Ethernet
- Power Requirements: +15V/2.5A, -15V/2.5A and +5V/6A
- Board Dimension is 366.72mm x 150mm
- Portable and 9U 19” chassis mountable
- Board has interface connectors in rear side as well as in front side
- J1, J2 and J3 96 Pin Euro connectors at rear side and Ethernet, JTAG, RS232, USB connectors at front side

Application

- ATE
- Data Acquisition System
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
CPCI ARM Processor Board with ‘M’ Module Interface

- 32 Bit ARM LPC3250 Processor (256KB SRAM)
- 133MHz External Bus Speed and 266 MHz internal CPU Speed
- 32 Bit, 33MHz CPCI Bus, 6U Form Factor
- External memory ( Flash - 2 MB, RAM - 512 KB, DPRAM - 128KB)
- 10/100 MBPS Ethernet Interface
- USB 2.0 Host/Device Interface
- 2 RS232 Serial Ports, 4 RS422 Serial Ports
- M Module Interface
- 6U board compatible with CPCI & PXI backplanes
- High Speed Logic Device
- Hot Swap Feature
- Front Panel and Rear IO Interface
- External Bus through Rear IO
- Reception of 3Kbytes within 2ms through Ethernet
- Board Dimension is 160mm x 233.35mm
- Power Requirements: +3.3V, +5V and +/-12V
- Board Dimension is 160mm x 233.35mm
- Board has Rear IO interface
- Ethernet, JTAG, RS232, USB connectors at front side
- BSPs and Driver software for Windows and Linux OS

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
ARM LPC2364 Board

- 128KB On chip Flash
- 16*2 line LCD Module interface
- Two CAN channel at 1MPBS
- Ethernet interface which supports 10/100 MBPS
- Full Modem RS232 interface
- RS485 interface
- RTC (Real Time Clock)
- 2048 bits serial EEPROM with data protect and sequential read.
- 24 ULN outputs of 12V level.
- Eight 110V DC inputs interface.
- Six digital inputs interface
- Four on board keys interface
- Power delay circuit for external use
- ON board inspection circuit

Application
- Elevators
- Automobile
- Process Control Industries
- Industrial Automation

Environmental Conditions
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
ARM LPC2468 Board

Features:

- 32 Bit ARM7 LPC2468 Processor (128KB SRAM, 512KB FLASH)
- 10/100 MBPS Ethernet Interface
- USB 2.0 Host/Device Interface
- 2 RS232 Serial Ports
- High Speed Logic Device
- External Bus Interface (15 bit address bus and 16 bit data bus)

Application

- ATE
- Data Acquisition System
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
PowerPC 404 Board

Specification:

- Virtex 4 FPGA with Embedded PowerPC 405 (PPC405) Core
- Up to 450 MHz operation
- Tri-mode Ethernet Media Access Controller
- A/D Converter Blocks (10-bit / 200 kilo samples per second)
- Select IO Technology (Wide selections of I/O standards from 1.5V to 3.3V)
- DDR2 SDRAM (256MByte)
- Program Storage Flash Memory (8MByte)
- Data Storage Flash Memory (8MByte)
- Vertex-4 FPGA PROM (4MByte)

Features:

- Ethernet Port – 10/100/1000Mbps Ethernet 2 Channels
- RS232/RS422 – 9 Channels
- Two SPI interfaces configured in Master-mode
- Synchro to Digital converter
- JTAG – Flash Programming and Debugging

Applications

- Embedded Applications
SIM SWITCHER

SPECIFICATIONS
- ARM9 Microprocessor Based System
- Contains 6 SIM card holders
- SIM card holders of push to lock/unlock type
- One LED indicator is placed for each SIM card to indicate the states – NO SIM, SIM_FREE, SIM_BUSY
- External power supply cord is attached to the system
- Pins of the power cord is Universally usable
- USB-in connectivity present to connect with PC
- System has Insulated body
- Stand alone application for SIM Switching
- Customer application through API support
- Supports all Phones and SIM systems

APPLICATIONS
- Automatic Phone Testing- Compatibility verification for different service provider.
- Automatic Service Provider Testing –Compatibility verification for different phone types
EVDO Switch

- EVDO Switch will accept the data from USB modem and converts the data in to Ethernet format and transfers to the router/PC and vice-versa
- Connects USB IF wireless modems to multiple nodes (PCs)
- Compatible with GSM / CDMA
- No specific application software / driver. Runs with Browser
- ARM9 (LPC3250 @262MHz) Core Processor based high speed device
- Automatically establishes link with ISP and PC
FM Token less Transmitter & Receiver

Transmitter and Receiver units are designed to work at 24V DC voltage (nominal) with variation between 19.2 V to 28.8V. The system is designed to work with carrier frequency 1800/2700 Hz and modulated frequency 65Hz/85Hz. For 1800Hz Carrier Frequency **RED** border is used in Front Panel and for 2700Hz Carrier Frequency **BLUE** border is used in Front Panel. Maximum power consumed by transmitter and receiver are 1.2W and 8W, respectively. Sense level for receiver is less than –19 dBm and No sense level for receiver is more than –22 dBm with 1mw (0 dBm) transmitter power. The equipment is designed to work satisfactorily with temperature variation from 0°C to 55°C with relative humidity of 95% at 35°C. Suitable test points are provided in the back of the equipment to monitor the necessary parameters.

**Product Model:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Transmitter Frequency</th>
<th>Receiver Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 Type</td>
<td>1800 Hz</td>
<td>1800 Hz</td>
</tr>
<tr>
<td>2700 Type</td>
<td>2700 Hz</td>
<td>2700 Hz</td>
</tr>
</tbody>
</table>

**Transmitter Specifications:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission frequency</td>
<td>1800 Hz or 2700 Hz</td>
<td>±2%</td>
</tr>
<tr>
<td>Transmission output</td>
<td>1mW, 3mW, 5mW adjustable</td>
<td>±10 %, -5 %</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>600 Ohm, 1120 Ohm adjustable</td>
<td>±10 %</td>
</tr>
<tr>
<td>Modulation System</td>
<td>Frequency Modulation</td>
<td></td>
</tr>
<tr>
<td>Modulation Frequency</td>
<td>65 Hz or 85Hz</td>
<td>±1.5Hz</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>1.2Watt or less</td>
<td>At 24V DC</td>
</tr>
<tr>
<td>Input Power Supply</td>
<td>24V DC</td>
<td>±20 %</td>
</tr>
<tr>
<td>Shift Frequency</td>
<td>160Hz</td>
<td>±15 %</td>
</tr>
</tbody>
</table>
Receiver Specification:

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving frequency</td>
<td>1800 Hz or 2700 Hz</td>
<td>±2%</td>
</tr>
<tr>
<td>Level Range</td>
<td>1 to 28 dB</td>
<td>In steps of 2dB or less</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>600 Ohm, 1120 Ohm adjustable</td>
<td>±10 %</td>
</tr>
<tr>
<td>Relay output voltage</td>
<td>24V DC or above</td>
<td>21V Min.</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>8 Watt or less</td>
<td>At 24V DC</td>
</tr>
<tr>
<td>Input Power Supply</td>
<td>24V DC</td>
<td>±20 %</td>
</tr>
<tr>
<td>Sense level for Receiving</td>
<td>More than -19 dBm</td>
<td></td>
</tr>
<tr>
<td>No sense level for receiving</td>
<td>Less than -22 dBm</td>
<td></td>
</tr>
</tbody>
</table>

Application

- Railways

Environmental Conditions

- Operating Temperature: -40°C to +75°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Transmission of Critical Happenings - “CATCH”

Features:

- CATCH is a simple and reliable system and it improves loco availability/utilization
- Helps to monitor loco health so as to manage maintenance and related operations
- Critical data over web on real time anywhere
- Trouble shooting personnel can proactively address many faults by scanning information and can interrogate with loco, sending suitable instruction to loco pilot enroute
- Train location via GPS and diagnose problems much quicker and prevent root failures
- Improve asset utilization significantly
- Real time SMS can be sent to the concerned people if the alarm/annunciation is not attended by the loco pilot
- The system will have its chargeable batteries and will transmit the data at the intended time even when the loco is switched off
- The integration of the system on the existing EM 2000 will be a seamless integration and simple one, and does not require much time and cost
- The proposed system will be provided with safety and protection features, so that its operation will not affect the Loco performance in any way
- This is modular and can acquire all the Four RS 232 ports and transmit the data. This also provided with additional USB ports so that even for other than WDP4 engine, this system can be used
- LCD proactive response will be sent to loco pilot and critical error can be addressed
- Isolated (protected) Keypad Simulation
Elevator Controller System

The lift controller consists of powerful ARM LPC2364 controller chip having Enhanced Vectored Interrupt Controller, Ethernet 10/100 MAC with DMA, USB 2.0 Full Speed Device Controller, CAN 2.0B with two channels, General purpose DMA controller, Four UART, one with full modem interface, Three I2C serial interfaces, Three SPI/SSP serial interfaces, I2S interface, 10-bit ADC with 6 channels, 10-bit DAC, Four 32-bit timers. The lift controller can capable latching 3 ports for Output port writing, it can read 6 Opto input line and four internal Key inputs. Also can display all the Floor information on the 64*128 byte LCD display module.

Also the main lift controller is communicating with other salve controller using powerful CAN channels, which is best for its supporting distributed real-time control with a very high level of security for automotive and industrial environments. The lift controller is used for services of general application as well as commercial use. It supports all the functionality of Simplex as well as duplex qualities with reduced design complexity.

FEATURES:
- 2 CAN channel powerful Communication interface with slaves.
- Single Channel Configurable Ethernet communication for debug purpose.
- Support both simplex as well as duplex terminology.
- Hardware design has optimized.
- 4 UART channel for user communication while problem trace out.
- Separate latches for both reading digital inputs and output ports.
- Lift status information display on the 64*128 byte LCD display module.
- Lift attends all call requests on interrupt basis so improved speed.
- Power for the LPC 2364 board is drawn less power 3.3V.
CAN BASED SYSTEM

- Works with 2 wires, supplied with landing displays and communication with "CAN" processor
- Provides field-proven performance, lifetime support commitment.
- Remote communication with modem and suitable software enables user to download the system history from remote location
- Monitor and control elevators in real time across campus or country.
- Group Control Available up to 64 floors and 6 cars.
- Displays car and hall calls, waiting times and Data Log Information on a color screen.
- Stores information during the working day.
- Self learning call allocation, allows system to read day by day call history and respond to the unexpected travel patterns from previous experience

CAN OR SERIAL BASED G + 64 DUPLEX & GROUP CONTROLLER:

- Auto Learning for slow detection and easy commissioning.
- Encoder signal for floor detection.
- Detail diagnostic of individual components ensures safety and reliable operation
- Attached ARD for each panel for rescue in case of power fail.
- Intelligent algorithm to attend any calls within 10 seconds for standard configuration.
- VIP option, Fireman switch, overload protection & protection of all other standard interfaces integrated.
- Annunciator is integrated with Gong bell.
- Preferable selection of floor by user, software functional options, Delay times and important configurations.
- Error diagnosis by PC interfaces; elevator error history and services details make your maintenance job very effective and efficient in time period.

Advantages:

- One Wire Display
- Floor displays and car display PCB systems in serial.
- One magnet per floor and one door zone on car top for any number of floors.
- Incorporated up to G + 64, auto door with integrated ARD.
- Floor displays and Car push switches through one wire interface.
- Floor and car displays are 2 wired interfaced.
CAN CONTROLLER:

- The "CAN" Bus Interface for Hall Controllers and Car controller
- On-board EEPROM and KEY inputs for user settings parameters
- LCD Module Interface
- Eight 110 VDC Opto input interface
- Six inputs interface
  (TINS, TUIB, TDIB, FIRE, FP, PRO-SW)
- RS485 Interface and RS232 Interface (Optional)
- Real time clock for Time Information

Advantages

- Compact Board Size 200X230 mm
- Easy to access screw terminals
Encoder Decoder Unit for Lakshaya – II

Encoder Decoder Unit is used to interact with ground station through PCM interface. Receives and transmits command/status information on Lakshya aircraft. Also provides real time clock synchronization, latitude/longitude information and IRIG-B Time. System is a digital, high speed FPGA controlled, intelligent unit to interact with various sub systems.

Features:
- Virtex 4 based design
- GPS Interface
- PCM (QPSK) Interface
- Interface with sub system: RS485
- Power Supply : 28V DC

Application
- UAV
- ATE

Environmental Conditions
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
ESI (Electronics Systems Integration Unit)

The ESI subsystem provides platform interfaces like Gyro and on board Radar Blanking. This unit receives Analog and Digital GYRO inputs from ship and pre-trigger pulses from on board radars of the ship. This unit measures and provides the ship heading data to VARUNA ESM system. It also provides Heading, Roll and Pitch data to the ECM system. This unit also generates band wise composite ESM Rx. Blanking gates and provides all the required interfaces to ESM receiver, ECM System and System Controller units.

Features:

- One Gyro Interface through synchro or resolver (SDC):
- Two SPI Interface:
- Two Ethernet Ports (10/100/1000)
- Nine Serial Links (RS232/422):
- 14 Analog Trigger Pulses:
- 7 TTL Trigger Pulses:
- 13 ESM Heading Data (Blanking):

Application

- Aerospace, Ships
- Data Acquisition System
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Ground Test Equipment (ESI Test Jig)

This Test System designed to test the analog, discrete, Ethernet, RS232, RS422, Synchro /Resolver and SPI Signals. It is standalone test equipment and has GUI ATP Software interface with laptop/PC through RS232/Ethernet Interface.

Features:

- **Processor**: NXP LPC2468, @ 72 MHz – ARM7 Processor
  - On-chip Memory: 512Kbyte Flash, 98Kbyte SRAM.
- **Memory**: I2C EEPROM USB (16Kbyte), Flash 64Kbytes
- **RS232 UART Port**: One RS232 UART Port
- **SPI Port**: Two SPI Ports supporting slave-mode.
- **Digital and Analog Outputs**
- **DSC Module**: Digital to synchro converter
- **Power**: +12V, -12V, +5V, 3.3V

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Infotainment

- Information, Communication, Entertainment and Commerce (ICEC) - Integrated Solution
- HDTV, Tablet PC, Camera, Set Top Box, etc. – Integrated to a limited extent
- Integrated solution for extraordinary experiences & changes
- It offers full range of e-Living solutions in smart-home, smart-community, smart connectivity, smart business and smart content
- Customers can experience & enjoy the luxuries of true e-Lifestyle
- Convenience, Secure and Simple
- "Transform everyday living of extraordinary people into extraordinary living everyday."
- Well Informed, Well Connected & Well Entertained

<table>
<thead>
<tr>
<th>Children Infotainment and Education</th>
<th>E-Living for Ladies</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Living for Gentlemen</td>
<td>E-Living for Elders</td>
</tr>
<tr>
<td>Community Services</td>
<td>Second Home Owner Services</td>
</tr>
<tr>
<td>Personalized Media Center</td>
<td>PR/PRO ASSISTANCE</td>
</tr>
</tbody>
</table>
Feed Formulator

This software is developed for food manufacturing industries to optimize feed manufacturing methods. This software optimize their animals' weight gains and maintain optimum health, this software will gives the power to change feed formulas on a moment's notice, plus track orders, formulas, and amounts. In Addition, software will automatically adjust ingredients to achieve optimum costs. Software will store all information in database server. Software has following features and also database design is compatible for any additional development packages related to organization requirements. Software is designed on modular approach so that the future up-gradation in case of any change requirements will have minimum impact on the existing software

Requirements:
- Feed Formulation
- Least-Cost Feed Formulation
- Optimal ingredient allocation
- Composing the best finished & complement feed, additives and premixes
- Managing ingredients, nutrients, premixes and products etc.
- Shall be equally useful for dairy, poultry, sheep, horses, dogs and cats etc.
- Shall have power to handle unlimited number of Ingredients, Nutrients and Species.
- Guarantees improved user experience and fast development of new features.
- Guarantees user friendly Data Management
- All functionalities shall be completely integrated and can easily be navigated.
- Shall work in Linear Mode which is suitable for conventional feed formulation.
- Shall have facility to Export the Report data to Excel and PDF
- Shall have Parametric Analysis, Shadow Price, Marginal Price and Sensitivity analysis

☐ Feed Formulation

The process of quantifying the amounts of feed ingredients to form a single mixture supplies all of their nutrient requirements.

☐ Least-Cost Feed Formulation:

Combining many feed ingredients in a certain proportion to provide the balanced nutritional feed at the least possible cost.

☐ This can be applied to
- Market simulations
- Optimal ingredient allocation
- Composing the best finished & complement feed, additives and premixes
- Managing ingredients, nutrients, premixes and products etc.

☐ Feed Formulator is an easy to use software for "Least Cost Feed Formulation“.
☐ It is equally useful for dairy, poultry, sheep, horses, dogs and cats etc.
☐ It has power to handle unlimited number of Ingredients, Nutrients and Species.
☐ Guarantees improved user experience and fast development of new features.
☐ Guarantees user friendly Data Management
☐ All functionalities are completely integrated and can easily be navigated.
☐ It works in Linear Mode which is suitable for conventional feed formulation.
☐ We can Export the Report data to Excel and PDF.
☐ Parametric Analysis, Shadow Price, Marginal Price and Sensitivity analysis are available.
Bill of Material & MDI

BOM (Bill of Materials) and MDI (Master Drawing Index) is client server configuration software & it is used to assist/automate purchase and stores procedure in any organization. Software has features like to raise materials indent, purchase order, to track purchase order status, inward materials inspection, etc... Software will store all information in database server. Software has following features and also database design is compatible for any additional development packages related to organization requirements.

Features:

- Vendor and supplier management
- Materials Request features
- Purchase Order, Enquiries, Quotations management
- Comparative analysis
- Budget planning with respect to project
- Project and component cost calculation
- Inward materials inspection management
- Track status of purchase order
- Provides Security to access the System
- It maintains the transaction History of each item(s)
- Generates the Report for Month, Year and Selected Period transaction
- Provides the Option to Process BOM
- Shall be compatible with Part Number System
- Compatible for Windows XP, 2000, VISTA and 2003 Server
School Note Book Management System:

School Note Book Management System is an automation tool and very useful tool for education service providers (Notes, book and accessories shops). This software is based on client server configuration & it is used to assist/automate purchase and stores procedure for any class students. Software has features like to configuration for different syllabus and different education system (like State board, CBSE, ICSE, etc...). Software will store all information in database server. Software has following features and also database design is compatible for any additional development packages related to organization requirements.

Features:

- Easy Inventory Management & Maintenance
- Configure and maintain the textbooks, notebooks and miscellaneous items for individual classes
- Sales Management
- Students Management
- Automated Invoice Generation
- Various Report Generation and Customized Sales Reports
- Client Server Architecture enables to run in multiple nodes
- Low Cost Solution
- Centralized Billing System
- Flexible Configuration
- Quick retrial of Bill / Invoice Number
- Easy to get duplicate Bill / Invoice
- One step solution to issue materials
- Automatically quantity is deducted for each Bill / Invoice
Parent Corner

Parent Corner is a very useful tool for education service providers. It helps parents, teachers/lectures/professors, students and institute management in interacted way. This software is based on client server configuration & it is used to record/monitor/inform student’s attendance, performance, extracurricular activities, interest through internet/email to their parents. Students, Teachers and parents can provide their feedback to improve the healthy relation and to improve the performance of student. Software will store all information in database server. Software has following features and also database design is compatible for any additional development packages related to organization requirements.

Features:

- Attendance
- Schedules
- Results
- Assignments
- Parents Applause
- Teachers Applause
- Achievements
- Fee Details
- Teachers Details
- Academic Calendar
- Administration
Students Performance Measurement System

Parent Corner is a very useful tool for education service providers. It helps parents, teachers and students in analytical way. This software is based on client server configuration & it is used to record/monitor/inform student’s performance and interest through statistics. Tool measures his performance in subject wise, test wise, year wise and represents his performance in graphical method which guides teachers and parents to take preventive and corrective measures.

- Students Management
- Client Server Architecture enables to run in multiple nodes
- Low Cost Solution
- Ability to track & analyze the subject average by various combinations like Exam - wise & class - wise.
- Statistical reports like Student Mark Comparison.
- Periodical Academic performance report
- Report Generation
- Single user / Multi user environment
Drive by wire module is used to control and navigate a remote BMP II vehicle from a base BMP II vehicle up to a specified speed (20KMPH) through controlling different actuators and associated electronic control units. Using the drive by wire control system, the BMP II vehicle navigation will be controlled using a wire (Ethernet) then it will be transformed to a wire-less (Wi-Fi) link without affecting the control system.

Motor Control Unit with Actuator:

Application

- Mine Detection
- Unmanned Applications
- Biochemical analysis

Environmental Conditions

- Operating Temperature: -20°C to +65°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Hybrid robot

Development of hybrid locomotion robot such as sliding by legs and crawling by tracks for antipersonnel mine detection. Develop the hybrid locomotion robot mechanical system which consists of the locomotion by means of legs and tracks. Control the robot motion dynamically through Ethernet wire and further control the robot in specified path by programming the vehicle. The hybrid robot will have a manipulator arm for carrying the antipersonnel mine detection sensor.

Application
- Mine Detection
- Unmanned Applications

Environmental Conditions
- Operating Temperature: -20°C to +65°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Advanced ASCAN BIOMETER

Advanced ASCAN bio-meter is a versatile A-scan system for Biometry and IOL Power Computation. This system is used for finding eye axial length; cornea thickness and calculating the eye IOL power value. This system has capability of storing 1000 patient records and downloading facility. System will work as an ASCAN BIOMETER or ASCAN / PACHYMETER BIOMETER system. System consists of touch screen, color LCD, USB interface for downloading and thermal printer interface. It is an ARM9 micro controller-based system. This system uses ultrasound signal for measurements

Features:

Probe: A-scan solid tip probe is built to last for years. Frequency -10 MHz, built in Fixation LED with flexible cable.
Display: Large 800x600 Pixel color display with Back light.
Measurement: Axial Length Measurement range from 15mm to 38mm. Simultaneously shows the axial length, anterior chamber depth, lens thickness, and A-scan waveforms in real-time
Measurement Accuracy: + or - 0.1mm., Resolution : 0.01mm. Measurement: Auto / Manual. An audible signal to the Operator indicates a valid measurement has been completed and stored in memory. Cursor to measure the user desired waveform positions.
IOL Power Calculation Formulas: SRK T, SRK II, Binkhorst I, Holladay and Hoffer Q, AME
Printer: High speed Thermal printer.
USB Host Interface
Electrical Requirements: 230 V AC/ 50 Hz
System on Module (ARM 9 SOM)

Features:

Processor: LPC3250 processor with ARM 9 core running at 266 MHz
SDRAM Memory: DDR2 256 MB (scalable to 512 MB)
Flash Memory: NAND flash 512 MB
Display & Graphics: Programmable color LCD controller supports up to a TFT interface
Touch screen: Integrated touch screen controller
Network Support: 10/100 Base-T Ethernet PHY
PC Interface: One USB 2.0 high-speed On-the-Go interface
Serial Interfaces: Up to four external UARTs
+ CAN 2.0B controller
+ Three I2C ports
+ Three SPI ports
GPIO: Programmable I/O depending on peripheral requirements

Mechanical: 60 mm wide x 60 mm long x 5.4 mm high

Application

- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation

Environmental Conditions

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Signal Processor Board

Features:
- Frequency coverage from 5 kHz to 30 MHz in 1-Hz steps
- High dynamic range: +30 dBm 3rd-order intercept typical
- Digital filtering provides 58 IFBWs from 56 Hz to 8.0 kHz with exceptional shape factors
- AM, Synchronous AM, FM, CW, USB, LSB & ISB detection modes standard
- Tunable notch filter
- Fast, flexible scanning with 100 memory channels
- Large readable LED displays & user-friendly controls
- Noise blanking & pass band tuning
- Internal switchable preamplifier & attenuator
- Operator-selectable RS-232, RS-485, or RS-422 remote control
- Viretx 5 FPGA based design (Two virtex for image processing)
- LPC2468 ARM 7 Processor based design
- MIL1553B and RS485 Interface
- Two High speed 14 bit ADC (125MSPS) for I & Q Sampling
- Direct sampling 2-30MHz
- Audio CODEC
- Conduction Cooled Board

Application
- Digital Receivers
- Communication Systems
- RADAR

Environmental Conditions
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Motor Control (Motor Driver) Unit:

The MCU system is designed based on ARM 7 core LPC2917 Microcontrollers to drive two DC servo motors (BLDC) independently. The unit consists of two LPC2917 micro controllers and each controlling one motor. The each controller having two CAN Bus interface with for remote communication. The unit is enclosed with rugged chassis with circular connector for CAN Bus communication and other interfaces. The Motor Control Unit is controlled through CAN Bus. It receives command and generates PWM Outputs to drive the motor. PWM is used to switch the motor voltage depends on the pulse width.

- Supply voltage 24–48 V DC for operation at safety extra-low voltage level
- CAN open inside with Position, Velocity and Homing modes and scaling of units by Factor Group
- Resolver, Encoder and LVDT/RVDT feedback interface
- Evaluation of encoders for precision positioning operations with backlash mechanism
- Evaluation of multi-turn encoders for positioning operations without referencing
- Sequenced driving set positioning with sequential job logic
- Online position profile generator for real-time position profile generation with 250 µs fine interpolation
- PID runs on RTOS

Applications: This MCU controls a variety of low power, low voltage brushless (BLDC) motors. It can be used in applications, such as:
- Transportation power plants
- Mobile equipment (off-highway)
- Material handling equipment, electric vehicles
- Industrial automation
- Robotics

Environmental Conditions
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Universal Pylon Tester

A portable test equipment to check the electrical functionalities of pylons by simulating various store types in aircraft. This system is able to simulate the functionalities of different PIBs (IB/MB/CF, OB & Laser). The system provides facility to test two Pylons in parallel. The tester provides aircraft specific AC &DC voltages and facility to inject discrete inputs for checking output(s) viz firing voltages, fusing voltages. The system provides four channels of RS422 and Two channels of 1553B communication. Portable unit with caster wheels with all required hardware, power supplies, instruments, connectors and laptop housed in it.
EVISION (Obstacle Detector)

1. Android based Multifunctional AID application for visually impaired
2. Simplifies reading/writing
3. Simplifies location of public utilities
4. Simplifies mobile phone operations
5. E-notepad to take notes electronically
6. E-book to download soft copies of books from computer or from similar devices
7. Voice recorder to record speeches
8. Read normal books through optical character recognition system
9. Read Braille text written on plain paper
10. Computer data entry keyboard and screen reader
11. Locator to locate the device if misplaced
12. Personnel locator to locate friends in a crowded gathering
13. RFID based location of personal belongings / Designated places
14. Obstacle Warning System for alerting any obstacle while walking

Obstacle Detector is a distance-measuring system based on ultrasonic sound utilizing the LPC2364FBD100. The system transmits a burst of ultrasonic sound waves towards the subject and then receives the corresponding echo. The LPC2364FBD100 integrated analog comparator is used to detect the arrival of the echo to the system. The time taken for the ultrasonic burst to travel the distance from the system to the subject and back to the system is accurately measured by the LPC2364FBD100. Assuming the speed of sound in air at room temperature to be 1100 ft/s, the LPC2364FBD100 computes the distance between the system and the subject and gives the information to buzzer. The minimum distance that this system can measure is eight inches and is limited by the transmitter's transducer settling-time. The maximum distance that can be measured is 2 meter. The amplitude of the echo depends on the reflecting material, shape, and size. Sound-absorbing targets such as carpets and reflecting surfaces less than two square feet in area reflect poorly. The maximum measurable range is lower for such subjects. If the amplitude of the echo received by the system is so low that it is not detectable by the Comparator. This system is mainly used to replace normal sticks for the visually impaired (blind) peoples. This unit has standard USB 2.0 for mobile interface and has android application for user interface.
Airborne Video Delay Board

Features:

- Spartan FPGA based Design
- Customized design for delaying & switching video inputs to RF section
- Interface with EW Signal Processor Unit
- Two channel video inputs and control
- Video Signal Delay from 1ns to 1ms
- Over duty Indications
- Inhibit Control
- Discrete Interface

Application:

- RADARS
- Electronics Warfare Systems
- Automatic Test Equipments

Environmental Conditions

- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +85°C
- 90% Relative Humidity (Non-condensing)
Ruggedized CPCI Processor Board

Specifications:

Processor:
- Pentium 1GHZ / PowerPC MPC8640 (1Ghz)

Memory
- SDRAM (1024 MB)
- FLASH PROM (8 GBMB)

Other Interface:
- Audio Output
- **Virtex-4 FPGA for Reconfigurable I/O Capability**

Communication Interface:
- Ethernet Port – 2 Channel (1GBPS)
- MIL1553B – 2 Channel (Dual redundancy)
- USB – 2
- RS232 – 4 Channels
- RS422 – 4 Channels
- JTAG – Flash Programming and Debugging

Specifications
- Power Supply Input: 5V DC 40A
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -50°C to +100°C
- 90% Relative Humidity (Non-condensing)

Application
- Airborne
- ATE
- Data Acquisition System
- Process Control Industries
- Industrial Automation
Instrumentation (Tacho) Amplifier

Instrumentation Amplifier is a customized unit to incorporate additional line filtering and spike suppression so that the amplifiers can operate directly off the main aircraft 28 volt system and amplifies the input signal according dynamic input configuration. This unit is capable of working without damage in both under and over voltage conditions. Designed for general aircraft applications

- Modular design
- Complete electrical isolation
- 1 Watt to 20 Watt output
- Form Factor: Stand Alone

Application

- Avionics
- Aerospace
- ATE
- Data Acquisition System