iBoard

Full Linux® embedded core module

iBoard is a FULL Linux® embedded core module in the very tiny size (55x65 mm.) Its high performance (100 MIPs) with low power consumption (1.5 watts) and flexible module designed can be integrated into the wide range of application. We provide one build-in Ethernet combined with Linux® stable TCP/IP networking that ideally suited for Internet enabled solutions. Also, one or two build-in USB host port provided for wide variety of peripheral devices e.g. Camera, Hard disk, USB Flash drive, USB to Ethernet adaptor, USB to Serial adaptor, Bluetooth, Wireless LAN. Legacy Asynchronous RS232, RS422, RS485 device also supported as well e.g. Barcode scanner, Modem, LED Message board, RFID Reader, Industrial sensor with MODBUS. Additional 48 GPIO can be used for Relay, Door lock, Door gate, Sensor, Siren, I2C.

Hardware Feature

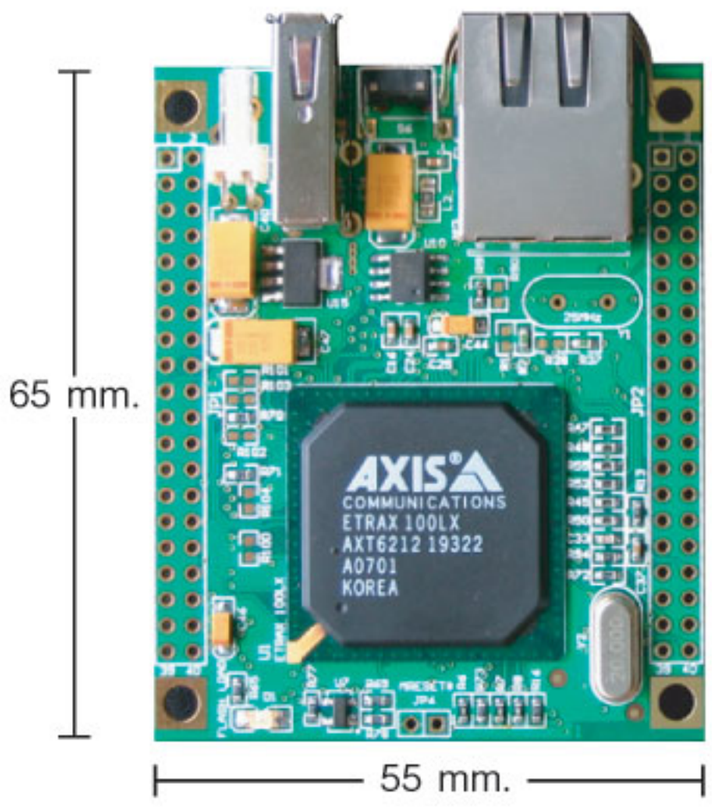
- Microprocessor ETRAX 100LX RISC Architecture 100 MIPS 32-bit
- 8 MB Flash up to 32 MB
- 32 MB SDRAM up to 64 MB
- 1 x Ethernet 10/100 on board RJ45 header
- 2 x USB port (one onboard USB type A header and transceiver chip)
- 2 x 20 pin header for 48 DIO, 4 Serial UARTs and/or Parallel port
- Extreme Low Power 300mA @ 5V

Based on FULL Linux and Open Source Software, developers will have a strong international community for sharing your design possibility and iBoard designer will give you the advice for your success project based on iBoard.

Software Features

- Fast startup < 5 sec boot
- Build in Web server
- Real Linux Operating System Kernel 2.4.x or 2.6.x
- Full suit of TCP/IP ipv4, ipv6
  - PPP for asynchronous modem (GPRS/EDGE, Analog, ISDN)
  - PPPoE for ADSL , IPSec, VPN
  - FTP, TFTP, SNMP
- Firmware Upgradeable though FTP, SSH and Telnet with Lan Interface
- Development Kit installed under GNU License

iBoard Dimension



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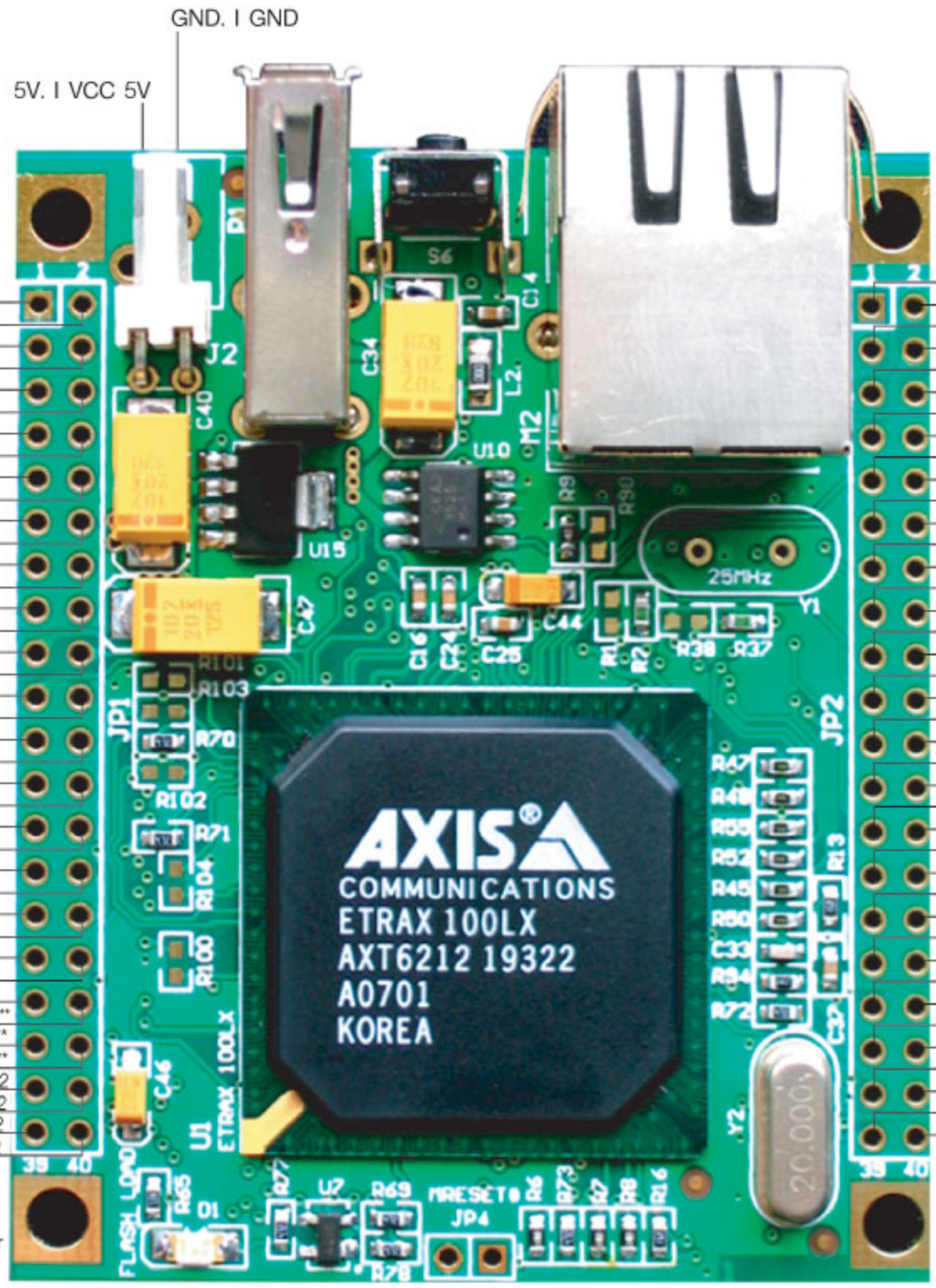
iBoard Pin Out



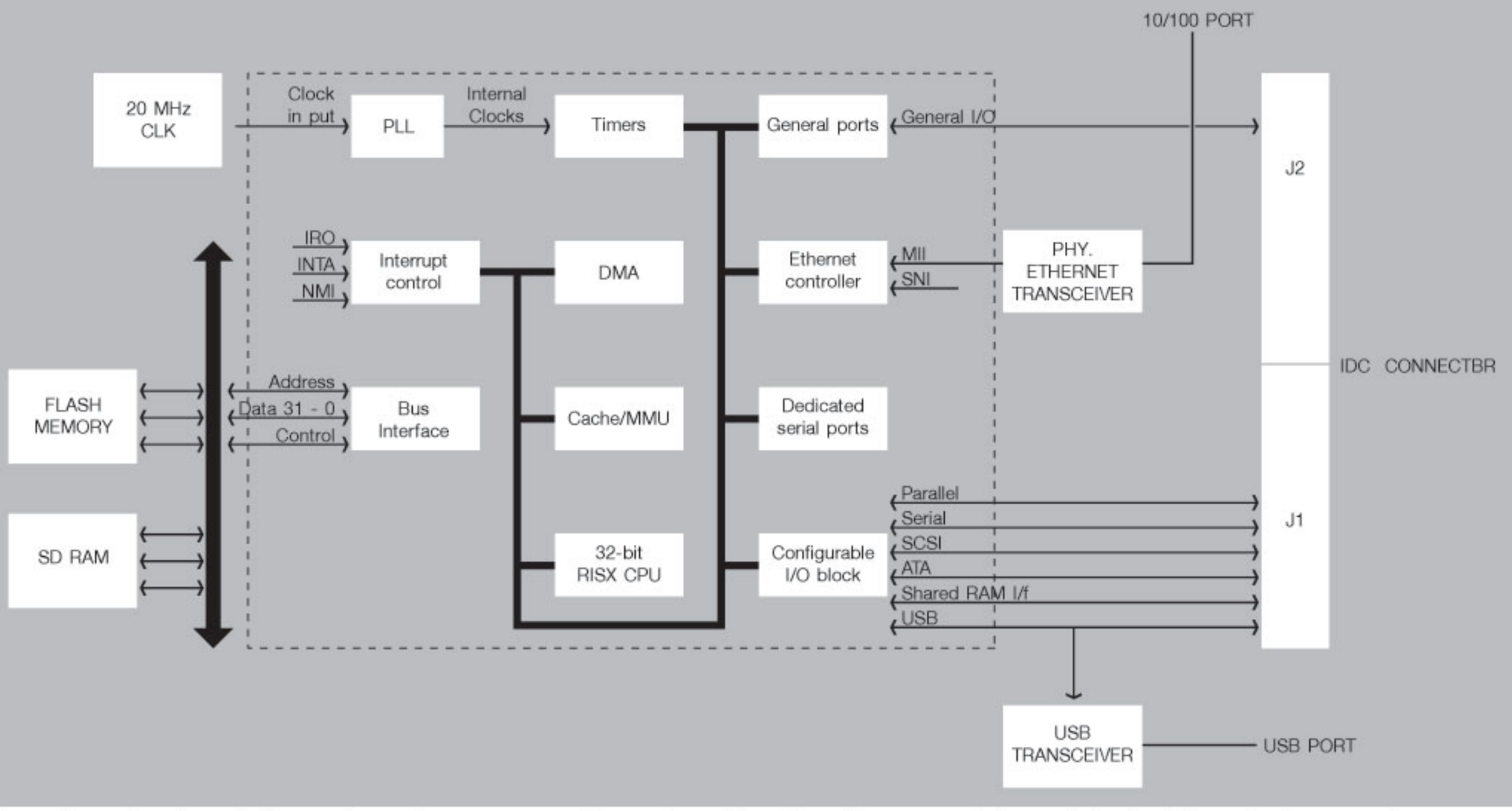
GND I GDN
GND I GDN
SHDN_LX I Power Off
INTA I INTA (Out)
3.3V I VCC 3.3V
5V I VCC 5V
CTS3 I Clear to send /dev/ttyS3
TXD3 I Transmit data dev/ttyS3
RTS3 I Request to send /dev/ttyS3
RXD3 I Receive data /dev/ttyS3
IOG17 I Input/Output line G17
IOG24 I Input/Output line G24
IOG21 I Input/Output line G21
IOG23 I Input/Output line G23
IOG18 I Input/Output line G18
IOG20 I Input/Output line G20
USB2-VM I VM line on USB2*
OG29 I Output line G29
OG28 I Output line G28
USB2-OE I OE line on USB2*
USB2-RCV I RCV line on USB2*
OG25 I Output line G25
USB2-SPEED I Speed line on USB2*
USB2-VP VP line on USB2*
USB2-VPO I VPO line on USB2*
USB2-VMO I VMO line on USB2*
IOG16 I Input/Output line G16
IOG19 I Input/Output line G19
IOG22 I Input/Output line G22
NMI I Non maskerable Interrupt
Mreset# I Master reset
IRQ I Interrupt request line
PA0 I Input/Output line A0
PA1 I Input/Output line A1 Connected to SW6 (Factory Dufalt SW)**
PA2 I Input/Output line A2 Connected to Ethernet Active LED**
PA3 I Input/Output line A3 Connected to Flash Load LED**
PA4/DTR2 I Input/Output line A4 / Data terminal ready /dev/ttyS2
PA5/R12 I Input/Output line A5 / Ring indicator /dev/ttyS2
PA6/DSR2 I Input/Output line A6 / Data set ready /dev/ttyS2
PA7/DCD2 I Input/Output line A7 / Data carrier detect /dev/ttyS2

IOG8 / D4 I Input/Output line G8 / LCD interface D4
IOG9 / D5 I Input/Output line G9 / LCD interface D5
IOG10 / D6 I Input/Output line G10 / LCD interface D6
IOG11 / D7 I Input/Output line G11 / LCD interface D7
IOG12 / RS I Input/Output line G12 / LCD interface RS
IOG13 / E I Input/Output line G10 / LCD interface E
IOG14 I Input/Output line G14
IOG15 I Input/Output line G15
IOG0 / I2CRST I Input/Output line G0 / I2C RESET
OG2 I Output line G2
OG5 I Output line G5
IG1 I Input line G1
OG1 I Output line G1
IG4 I Input line G4
OG4 I Output line G4
IG3 I Input line G3
OG3 I Output line G3
IG2 I Input line G2
IG5 I Input line G5
TXD1 / USB1-OE I Transmit data /devttyS1
RTS1 / USB1-VP I Request to send /dev/ttyS1
RXD1 / USB1-RCV I Receive data /dev/ttyS1
RTS1 / USB1-SPEED I Request to send /dev/ttyS1
PB7 I Input/Output line B7
PB6 I Input/Output line B6
PB5 / USB1VM I Input/Output line B5
PB4 I Input/Output line B4
PB3 / USB1-VMO I Input/Output line B3
PB2 / USB1-VPO I Input/Output line B2
PB1 / I2CCLK I Input/Output line B1
PB0 / I2CDAT I Input/Output line B0
BS2 I Bit Configure for Flash Programming mode via Ethernet
CTS2 I Clear to send /dev/ttyS
RTS2 I Request to send /dev/ttyS2
RXD2 I Receive data /dev/ttyS2
TXD2 I Transmit data /dev/ttyS2
CTS0 I Clear to send /dev/ttyS0
RTS0 I Request to send /dev/ttyS0
RXD0 I Receive data /dev/ttyS0
TXD0 I Transmit data /dev/ttyS0

* Connected already with onboard USB Transceiver
** Can be disconnect by unmount the OR resistor

★ All MUX port can be change to another functions by reconfigure the Linux Kernel ★

iBoard Block Diagram



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