

VALIANT COMMUNICATIONS LIMITED

VCL-30TM, iDSL DSLAM



Valiant's iDSL access solution provides up to 15 iDSL (ISDN, Digital Subscriber Line) ports, each port supporting data @ 64/128Kbps on a single twisted pair - terminating at the customer premises on a ISDN "U" interface or V.35 interface @ 128 kbps, 10/100 BaseT Cisco Routers . The transmission range is up to 5 Km. on a 0.4 (26AWG) twisted copper pair. These pairs are multiplexed at the ISP / Telco to a 2Mbps, G.703, G.704 E1 link. The iDSL lines uses ISDN "U" interface technology with 2B1Q encoding for transmission on twisted pairs.

At the Central Office / ISP Premises, the iDSL interface card will plug directly into the VCL-30 chassis (common equipment) to deliver 128Kbps, 2 wire data from the customer premises into a channelized E1. Time-slot selection and management is available.

The VCL-30TM, E1 (Common Equipment) consisting of the following components:

- E1, Control Cards ,
- 19" Shelf 3U High (sub-rack)
- Connectorized Backplane (3 U High) and
- 48VDC Input Power Supply Card



The Central Office / ISP Premises interface equipment includes the following cards:

Valiant's Central Office / ISP premises iDSL modem card - part number VCL-30-080 (used with the VCL-30 Common Equipment) can be used to deliver data @ 128 Kbps to a customer premises up to a distance of 5 Km. , on a ordinary 0.5 mm twister copper pair.

| Sr. # | Valiant Part # | Product Description of the Use Configurable Units | Qty. |
|-------|----------------|---|---------|
| 1. | VCL-30-080 | iDSL Modem Card, Central Office / ISP Multiplexer Side - transports 128Kbps on a single twisted copper pair upto 5Km. | 1 to 15 |

At the customer premises the VCL-30, iDSL DSLAM provides multiple options for customers:

- 1) To connect the remote subscriber on Valiant's iDSL desktop modem. (see customer premises option #1)
- 2) To connect the remote subscriber on Cisco iDSL router. (see customer premises option #2)

Customer Premises Option # 1

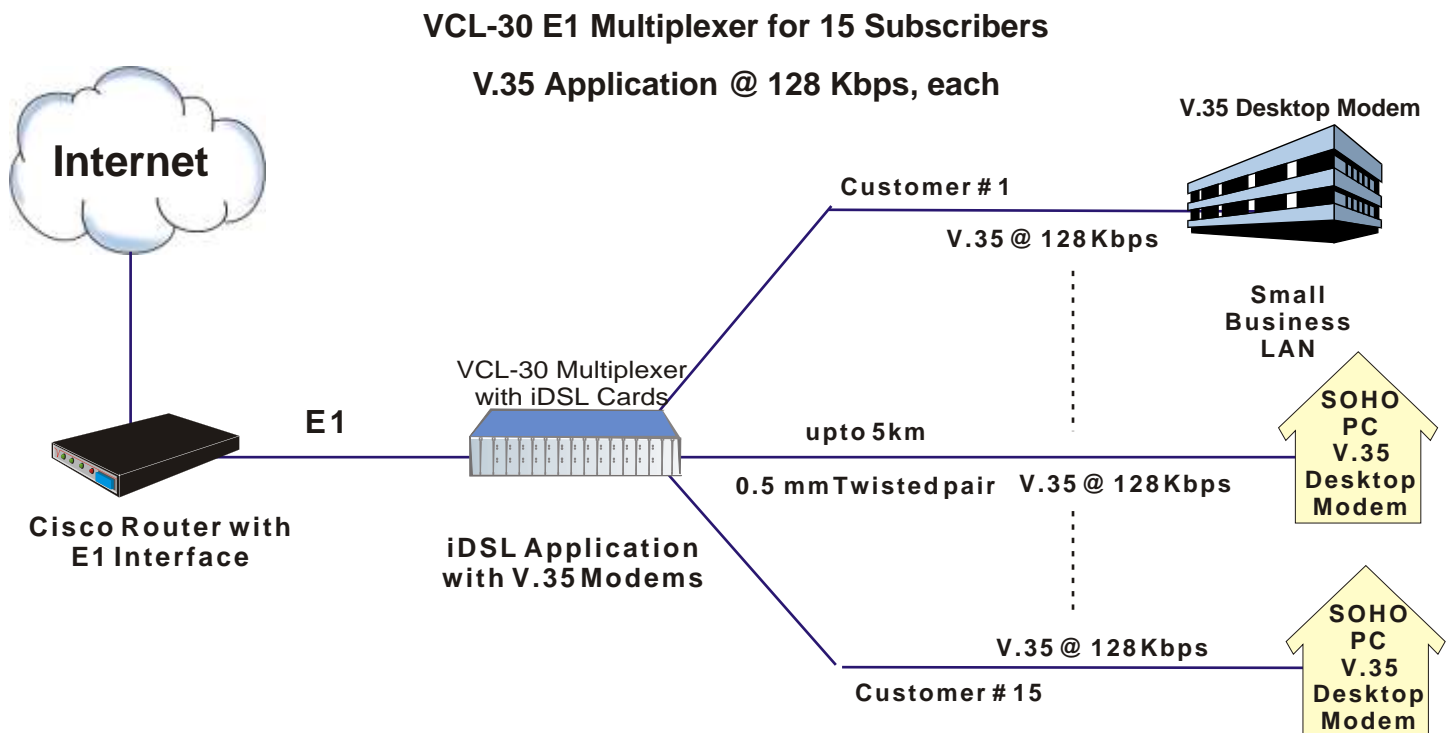
Valiant's Central Offices / ISP Premises iDSL Modem cards - (part # VCL-30-80) can be used with our V.35, baseband modem - part # VCL-30-090 (desk top customer premises modem with V.35 interface).

| Sr. # | Valiant Part # | Customer Premises iDSL equipment - Option 1 | Qty. |
|-------|-----------------------|--|---------|
| 1. | VCL-30-090 | iDSL Desk-Top Modem Customer Side / Remote Side - transports 128Kbps on a single twisted copper pair upto 5Km.-V.35 data interface | 1 to 15 |
| 2. | VCL-30 iDSL V.35 male | V.35 Data Interface Cable (with male M34 connector) | 1 to 15 |

Customer Premises, Option # 1

ISP iDSL Application

iDSL Deployment



Customer Premises Option # 2 - Cisco iDSL Router
 (to see application diagram click here)

Our Central Office / ISP Premises iDSL Modem cards - (part # VCL-30-80) is also compatible with the Cisco 804 iDSL Router and can be used to deliver data @ 64 Kbps / 128 Kbps to the Customer Premises, on 2 wires. The Customer Data Interface is a 10BaseT x 4, on the Cisco 804 iDSL Router.

Cisco 804 iDSL Router



| Sr. # | Part # | Customer Premises iDSL equipment - Option 1 | Qty. |
|-------|-------------------------|--|---------|
| 1. | Cisco - 804 iDSL Router | Cisco - 804 iDSL Router with Universal Power Supply, 110VAC-220VAC, 50Hz/60Hz, UL and CE Approved Customer Premises equipment. Data Interface - 10BaseT x 4 Ports. Delivers 64/128 Kbps leased line upto 5 Km. | 1 to 15 |

The above solution delivers 64Kbps / 128Kbps, leased line, upto 5 Km from the VCL-30, to the customer premises on iDSL. Terminates on 10BaseT x 4 ports at customer premises.

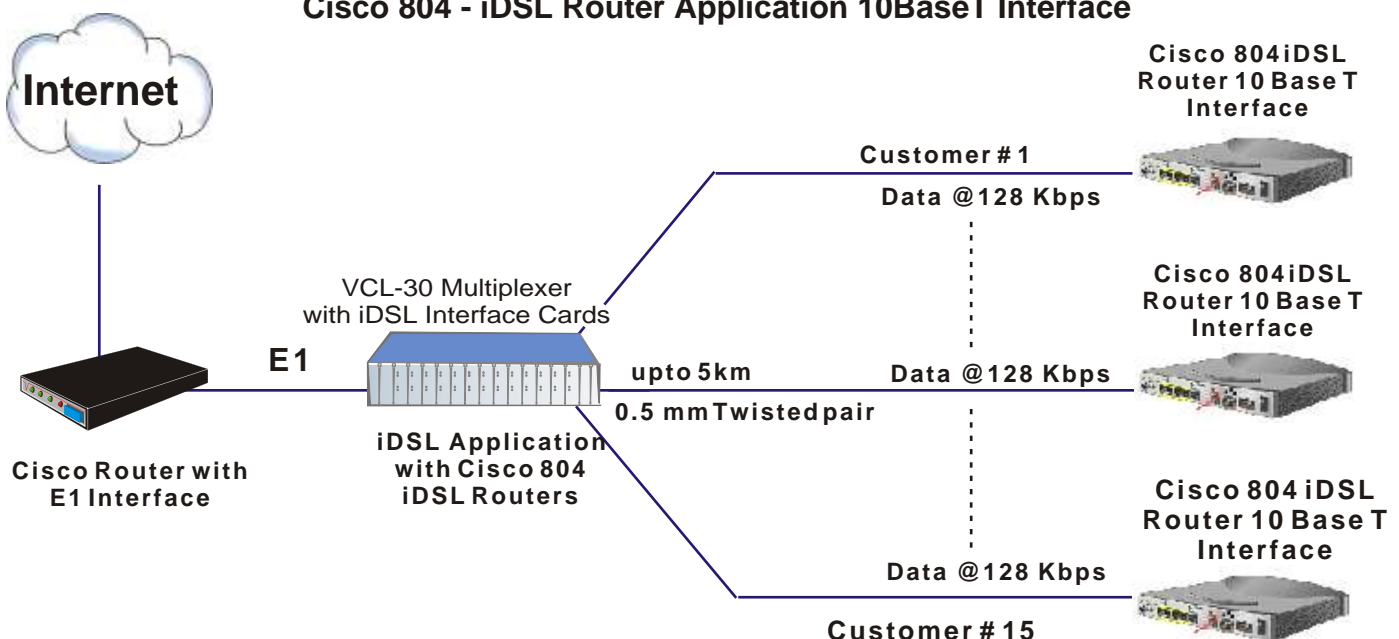
Note:

Either customer Premises option # 1, or customer premises option # 2 may be ordered, for use with Central Office / ISP Premises iDSL Modem cards - (part # VCL-30-080) depending on the user requirements.

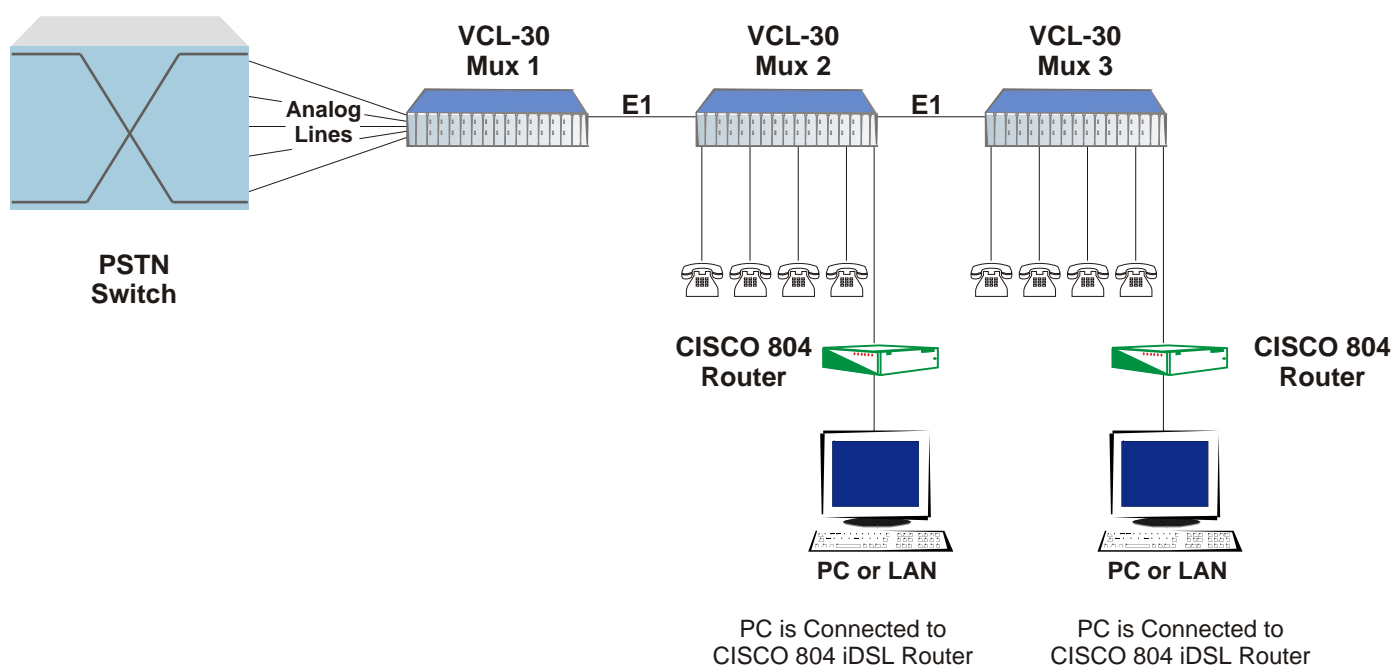
Customer Premises, Option # 2

ISP iDSL Application
iDSL Deployment

VCL-30 E1 Multiplexer for 15 Subscribers
Cisco 804 - iDSL Router Application 10BaseT Interface

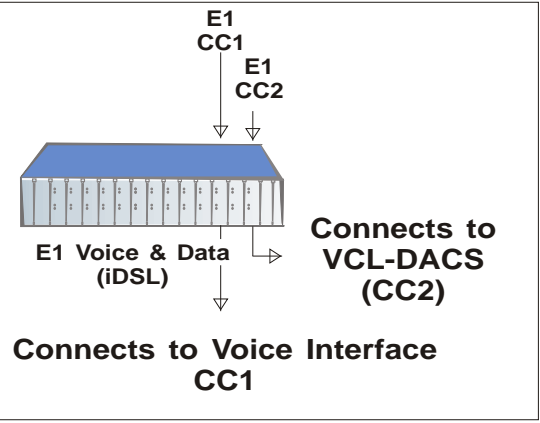


VCL-30, with Voice & iDSL Intranet in a Drop-Insert (Add-Drop) Application

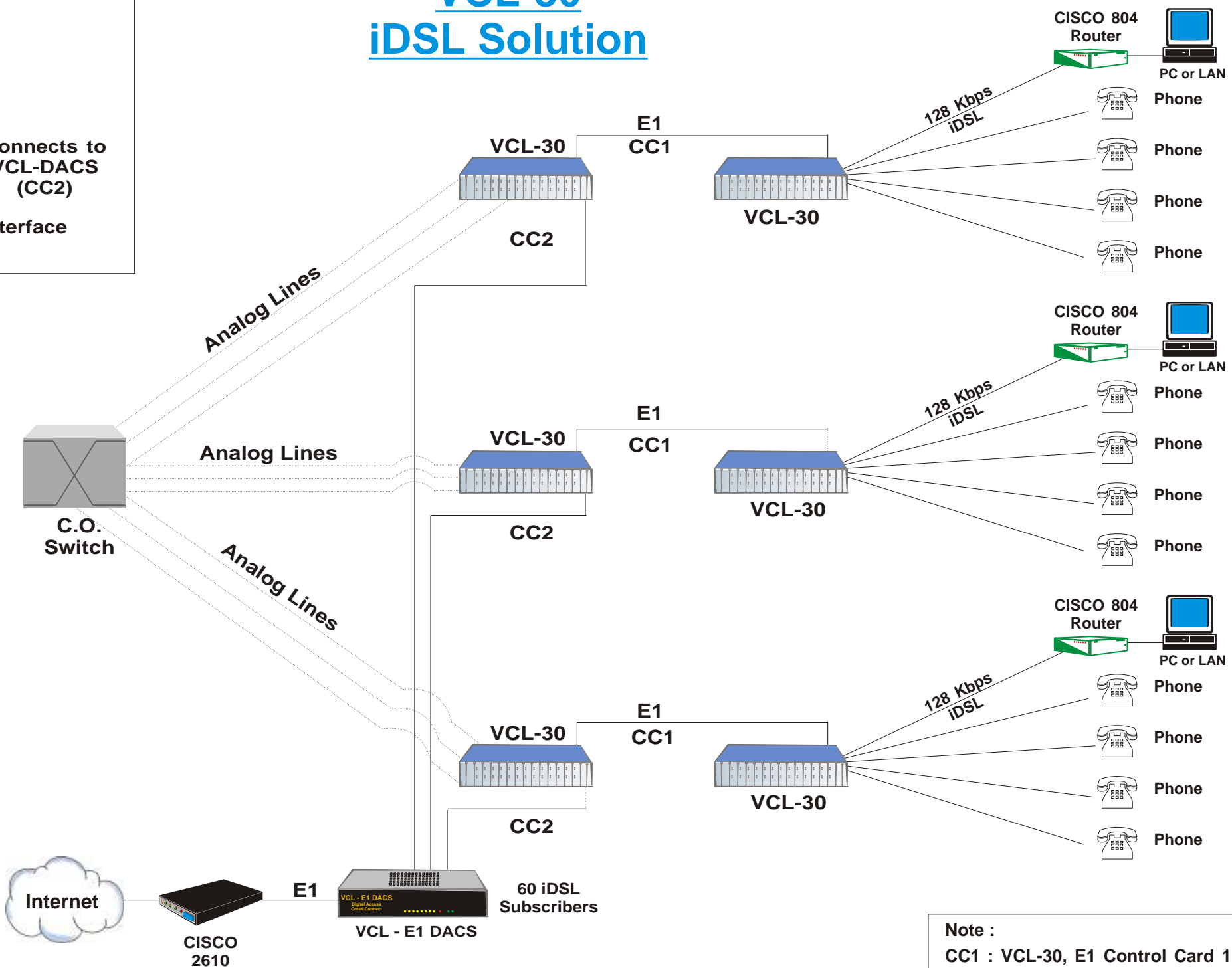


Note : Two Pc's can be linked to form an Intranet by interconnecting them through iDSL links on the VCL-30 Multiplexer(s).

VCL-30 iDSL Solution



Valiant Communications Limited



Note :
 CC1 : VCL-30, E1 Control Card 1
 CC2 : VCL-30, E1 Control Card 2

Technical Specifications

E1 Specifications:

Line Code : HDB3

Impedance : 120 Ohms, balanced pair

Connection : RJ 45 OR Wire-Wrap

(Compatible with Cisco Routers - VWIC (Interface Cards))

Time Slots used : 1-15, 17-31, Time Slot Selectable.

iDSL Specifications

Maximum Distance : 5KM (4 miles) on 0.5 mm twisted Pan. Distance may vary with cable gauge

For distance using various cable gauges please refer to chart below.

Line Coding : (Twisted Pair) 2B1Q

Transmission Technique : iDSL (ISDN) Data Rate 64 Kbps / 128 Kbps selectable

Lighting Protector : CCITT Table 12/20

| VCL BASEBAND MODEM Kms. (Miles) | | | | |
|--|---------------------|------------|-----------|-----------|
| Data Rate (Kbps) | Wire Gauge (AWG/mm) | | | |
| | 19 (.9mm) | 22 (.6mm) | 24 (.5mm) | 26 (.4mm) |
| 128 | 17.4 (10.8) | 11.6 (7.2) | 8.1 (5.0) | 5.5 (3.4) |
| 64 | 17.4 (10.8) | 11.6 (7.2) | 8.1 (5.0) | 5.5 (3.4) |

Power Consumption:

Power Consumption : 26 Watt

Technical Specifications are subject to change without notice.

VCL-30 is a trademark of Valiant Communications Limited.

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VALIANT COMMUNICATIONS LIMITED

71/1, Shivaji Marg, New Delhi - 110015, India

Phone: +91-11 5105 5601, +91-11 5105 5602, +91-11 5105 5603

+91-11 2592 8415, +91-11 2592 8416, +91-11 2541 0053

Fax: +91-11 5105 5604, + 91-11 2543 4300

E-mail: getinfo@valiantcom.com

Web Site: <http://www.valiantcom.com>