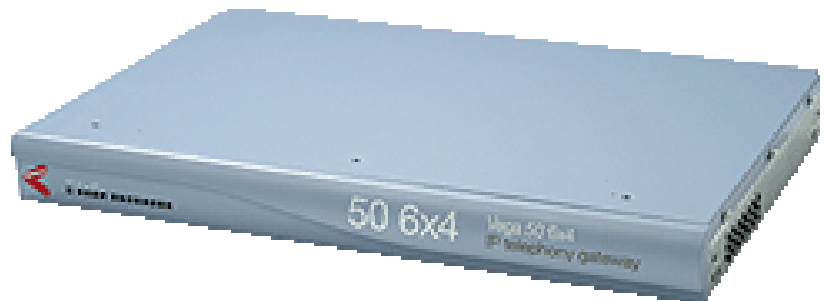


# Product Overview

## Vega 50 6x4



### Vega 50 6x4 features

- Desktop or 19" rack mount
- I U
- Supports up to 6 four port interface cards (factory fit options)

### FXS

- 4 to 24 ports
- Loop start signaling
- Generate FSK Caller ID (mdmf & sdmf)
- Line current reversal generation (answer and disconnect indication)
- Loop current disconnect generation (disconnect indication only)
- Fallback relays to 2 dedicated FXO ports (if no BRI ports fitted)

### FXO

- 4 to 24 ports
- Additional 2 ports for 'FXS fallback' (if FXS ports are fitted and no BRI ports are fitted)
- Loop start signaling
- Detects Caller ID (mdmf & sdmf)
- Line current reversal detection (answer and disconnect indication)
- Loop current disconnect detection (disconnect indication only)
- Tone detection clear-down

## BRI

- 4 or 8 ports (8 or 16 simultaneous calls)
- S/T physical interface
- Euro ISDN signaling
- NT / TE configurable
- Power on NT ports

## Vega general product features

- Web browser configuration
- 10 base T / 100 base TX LAN
- QOS packet marking
  - layer 3 Type Of Service
  - layer 2 802.1 p/q
- Call detail records available
  - from Telnet and Serial interfaces
  - via Radius accounting records
- Built in dial planner
- SNMP
- SYSLOG
- Auto-load of configuration and firmware
  - at boot
  - scheduled

## Vega VoIP features

- Echo cancellation
  - G.168 – up to 128ms
- Codecs / companders
  - G.711Alaw64k
  - G711ulaw64k
  - G729AnnexA (/b)
  - G.723.1
  - T.38
- Silence suppression configurable per codec

## Environmental

- Operating temperature: 0°C to +40°C
- Storage temperature: -20°C to +70°C
- Humidity: 0 to 90% (non condensing)

## Power

- 100 - 240 Vac, 47 - 63 Hz, 1A - 0.5A
- Fuse rating: 2A H - type T (e.g. Bussmann S505)

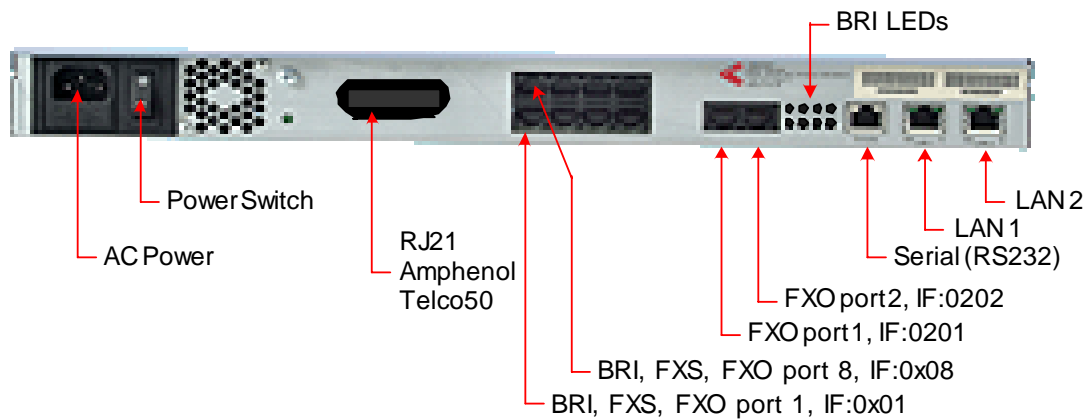
## Physical dimensions

- 445mm (17.5") x 44mm (1.7") x 280mm (11") width / height / depth
- Industrial rack mount: 483mm (19"), 1U
- Weight: 3.5 kg



<b>Telephony status LEDs</b>	<b>LED Off</b>	<b>LED On</b>
Vega 50 6x4	No call in progress	1 or more calls in progress

<b>Vega Ok LED</b>	<b>LED Off</b>	<b>LED flashing</b>	<b>LED On</b>
Vega 50 6x4	Over temperature	Fan failed	All OK



RJ21 / Amphenol / Telco 50 connector allows connection to all 24 FXS / FXO telephony interfaces  
 8 RJ45s are connected in parallel to the first 8 ports of the RJ21 / Amphenol / Telco 50  
 BRI ports need 4 wire connections and so are only available on the RJ45 connectors

FXS interfaces:

IF 01018	IF 0107	IF 0106	IF 0105
IF 0101	IF 0102	IF 0103	IF 0104

2 RJ45s allow connection to the 2 'fallback' FXO ports

FXO interfaces:

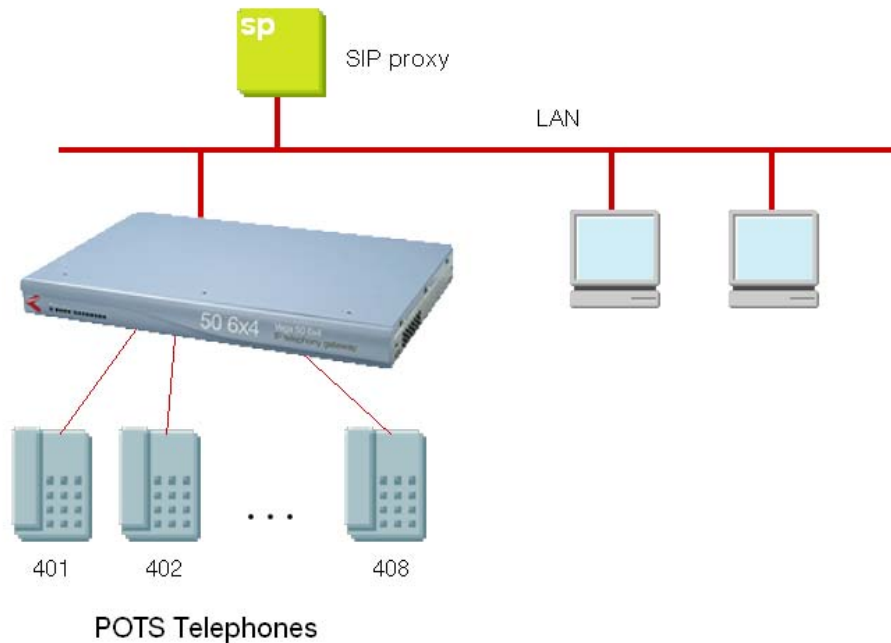
IF 0201	IF 0202
---------	---------

<b><i>BRI L2 status LED</i></b>	<b><i>LED Off</i></b>	<b><i>LED Flash</i></b>	<b><i>LED On</i></b>
<i>Vega 50 BRI</i>	No physical connection	Physical only	Physical + layer 2

BRI Interfaces:

IF 0308	IF 0307	IF 0306	IF 0305
IF 0301	IF 0302	IF 0303	IF 0304

## Typical configuration



## Tech Spec

### FXS

#### •Physical

Drives up to REN 3.0

Drive capability

- 0.8km @ REN 3
- 2.5km @ REN 2.5
- 6km @ REN1.8

Line power supplied

#### •Signalling

- Loop start
- DTMF dialling detection

Line current reversal generation

- answer and disconnect indication

Loop current disconnect generation

- disconnect indication

FSK caller ID generation (mdmf & sdmf)

Fallback relays on FXS ports 1 and 2 to the two fallback FXO ports (provided that there are no BRI interfaces)

## FXO

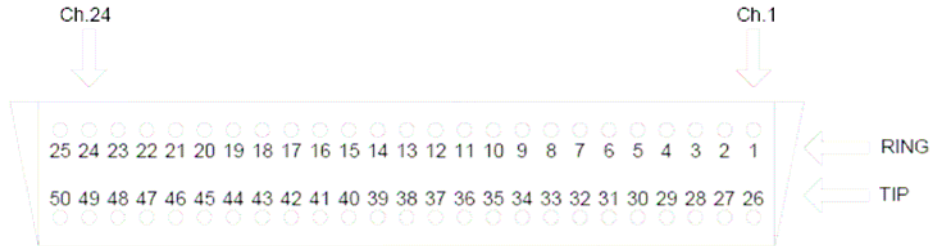
- Physical
  - Software configurable interface impedance: 600R, 900R and CTR21
  - REN 0.6
- Signalling
  - Loop start
  - DTMF outdial
  - Loop current disconnect clear-down detection (aka Battery Stop)
  - Line current reversal detection (aka Battery Reversal)
  - FSK caller ID detection (mdmf & sdmf)

## BRI

- Physical
  - S/T bus connection (requires an NT1)
  - I.430 framing structure
  - 2 bearer channels (64 kbps) per interface
  - 1 "D" channel (16 kbps)
  - TE / NT mode soft configurable on each DSL
  - Line power available (NT)
  - Line power not required (TE)
- DSL Signalling
  - Euro-ISDN (DSS1/TBR3)
  - Supports point-to-point (static TEI) and
  - point-to-multipoint operation (automatic TEI)

## Vega and cable pinouts

An RJ21 / Amphenol / Telco 50 connector is used for up to 24 analogue telephony connections. (BRI connections are only available on the RJ45 connectors)



Channel	Ring	Tip
1	1	26
2	2	27
3	3	28
4	4	29
5	5	30
6	6	31
7	7	32
8	8	33
9	9	34
10	10	35
11	11	36
12	12	37
13	13	38
14	14	39
15	15	40
16	16	41
17	17	42
18	18	43
19	19	44
20	20	45
21	21	46
22	22	47
23	23	48
24	24	49
Unused	25	50



**WARNING!**

**When BRI ports are fitted, two of the four BRI signals are brought out to the associated RJ21 / Amphenol / Telco 50 connector pins. In this situation DO NOT connect anything to these pins on the RJ21 / Amphenol / Telco 50 connector.**

The pinout of the RJ45s for FXS and FXO interfaces is as follows:

Vega 50
4 (Ring)
5 (Tip)

The order of the telephone interfaces - looking from the rear of the Vega - is bottom left to top left anticlockwise, as shown below:

BRI pinouts:

Cables with RJ48 plugs are used to connect to the Vega 50 6x4 BRI ports. The pinout of the Vega 50 6x4 BRI automatically change from NT to TE depending on the configuration setting in the Vega. A (BLUE) straight through cable is used to connect an NT Vega DSL to a TE far end device, and the same (BLUE) straight through cable is used to connect a TE Vega DSL to an NT far end device.

Vega 50 BRI	Far end device
TE	NT
3 (Tx+)	3 (Rx+)
6 (Tx-)	6 (Rx-)
4 (Rx+)	4 (Tx+)
5 (Rx-)	5 (Tx-)
	VegaStream provided cables (ISO 8877)

Vega 50 BRI	Far end device
NT	TE
3 (Rx+)	3 (Tx+)
6 (Rx-)	6 (Tx-)
4 (Tx+)	4 (Rx+)
5 (Tx-)	5 (Rx-)
	VegaStream provided cables (ISO 8877)

For Loopback between a Vega 50 6x4 BRI NT port and a Vega 50 6x4 BRI TE port, use the BLUE cable



Cables with RJ45 sockets are used to connect the Vega to an Ethernet LAN hub, switch or router. A standard straight through cable is required.

Ethernet
1 (Tx+)
2 (Tx-)
3 (Rx+)
6 (Rx-)

Serial cable:

The serial cable consists of a lead with an RJ45 connector on the Vega gateway end and a female 9 way D-Type connector to plug into the PC.

Serial Cable	
RJ45	9 way D-Type
1	8
2	6
3	2
4	5
5	5
6	3
7	4
8	7

To Make cables for Vegas use the following parts (or similar)

BRI cable:

Component	Part number	Description	Manufacturer
<b>Cable</b>	Belden 9804	Cat 5 S-FTP 2 Twisted Pair Cable (UL2960)	Belden <a href="http://www.belden.com">www.belden.com</a>
<b>RJ45 connector</b>	Stewart 360808A217	RJ45 Screened plug	Stewart <a href="http://www.stewartconnector.com">www.stewartconnector.com</a>
<b>RJ45 boot</b>	Stewart 361010SRX225A255	RJ45 UL approved blue strain relief boot	Stewart <a href="http://www.stewartconnector.com">www.stewartconnector.com</a>

Note:

1. When connecting the cable to the RJ45 connector ensure that there is 360° contact between the cable's braided screen and the RJ45 screen.
2. Balanced connections should have their + and – sides in the same twisted pair

LAN cable:

Component	Part number	Description	Manufacturer
<b>Cable</b>	Belden 9804	Cat 5 S-FTP 2 Twisted Pair Cable (UL2960)	Belden <a href="http://www.belden.com">www.belden.com</a>
<b>RJ45 connector</b>	Stewart 360808A217	RJ45 Screened plug	Stewart <a href="http://www.stewartconnector.com">www.stewartconnector.com</a>
<b>RJ45 boot</b>	Stewart 361010SRX225A256	RJ45 UL approved yellow strain relief boot	Stewart <a href="http://www.stewartconnector.com">www.stewartconnector.com</a>
<b>Ferrite</b>	Stewart 28B0562-200	EMI suppression ferrite core (solid, loose)	Stewart <a href="http://www.stewartconnector.com">www.stewartconnector.com</a>
<b>Heat-shrink sleeve</b>	TAKBRO CPA-100-13/4	Adhesive heatshrink (13mm od, 3:1) black UL224, MIL-1-23053	TAKBRO <a href="http://www.takbro.co.uk">www.takbro.co.uk</a>

Note:

1. When connecting the cable to the RJ45 connector ensure that there is 360° contact between the cable's braided screen and the RJ45 screen.
2. EMI suppression ferrite is to be fitted within 2mm +/- 2mm of the RJ45 connector boot – on the end that connects to the Vega.

Web: [www.vegastream.com](http://www.vegastream.com)  
[www.vegaassist.com](http://www.vegaassist.com)

Email: [support@vegastream.com](mailto:support@vegastream.com)