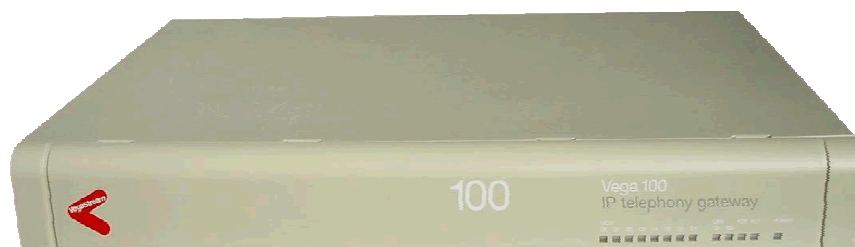


# Vega 100 E1



## Vega 100 E1 features

- Desktop or 19" rack mount
- 2 E1 connections
- 30 or 60 calls to LAN
- Euro ISDN signaling
- QSIG
  - available for basic calls from Release 4
  - tunneled QSIG (all supplementary services) from Release 5
- NT / TE configurable

## 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
- Auto-load config and firmware

## Vega VoIP features

- Echo cancellation
  - G.168 – up to 32ms (R6 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 - 260 Vac, 47 - 63 Hz, 1A - 0.5A
- Fuse rating: 2A - type T (e.g. Bussmann S505)

## Physical dimensions

- 440mm (17.4") x 63mm (2.5") x 330mm (13") width / height / depth
- Industrial rack mount: 483mm (19"), 1.5U
- Weight: 5.3 kg



ISDN DSL Status LED	LED Off	LED Flash	LED On
Vega E1	No physical connection	Physical only	Physical + Layer 2

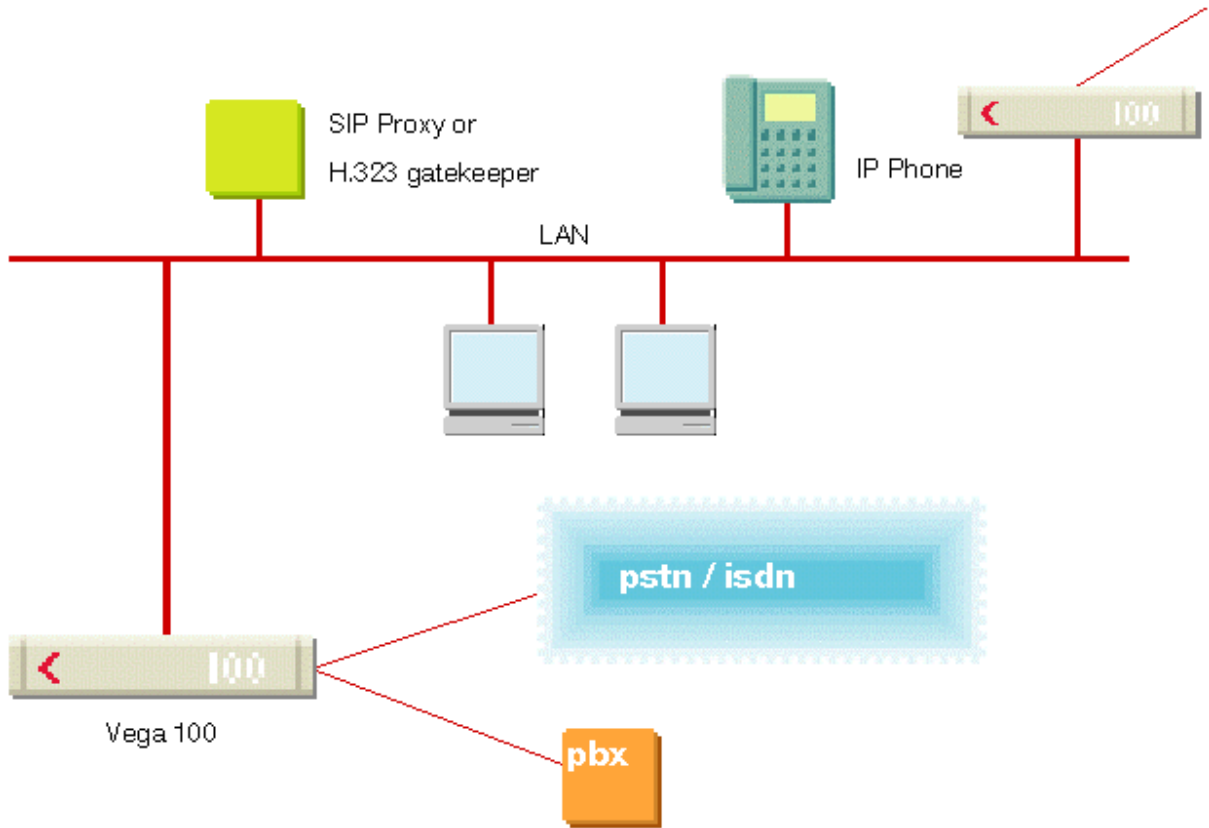


Vega100 E1 10030 / 10060

2 RJ-45 connectors are used; connectors 3 and 4 are reserved for future expansion  
E1 Cables supplied

- Blue booted ISDN cable      – Vega TE → NT
- Red booted ISDN cable      – Vega NT → TE

## Typical configuration



## Approvals

- Approved for European CE Countries
  - ISDN – TBR4 (Euro ISDN)
  - Safety – EN60950, IEC60950
  - EMC – EN55022 class B (CISPR22), EN55024(CISPR24)
- Approved for North America
  - Safety – UL60950
  - EMC – FCC part 15 class B
- Approved for Australia / New Zealand
  - Safety – AS/NZ60950
  - EMC – AS/NZS 3548
  - Telecomms – in progress

## Tech Spec

- E1 DSL Physical

- 120 Ohm connection
- 30 bearer channels - channels 1 to 15 & 17 to 31
- 1 "D" channel (signalling) - channel 16
- 1 framing channel - channel 0
- PCM30 or CRC-4 framing
- HDB3 line encoding
- TE / NT mode soft configurable by DSL

- E1 D-channel Signalling

- PRI Euro-ISDN/CTR4/NET4/DSS1
- PRI QSIG

## Cable pinouts

Cables with RJ48 plugs are used to connect to the Vega 100's ISDN ports. The pinout of the Vega 100 E1/T1 card is hardwired as NT. A (RED) straight through cable is used to connect an NT Vega DSL to a TE far end device. A (BLUE) cross-over cable is used to connect a TE Vega DSL to an NT far end device.

Vega 100 PRI	Far end device		Far end device	
NT (physical)	NT	TE	NT	TE
1 (Tx+)	4 (Rx+)	1 (Rx+)	3 (Rx+)	4 (Rx+)
2 (Tx-)	5 (Rx-)	2 (Rx-)	6 (Rx-)	5 (Rx-)
4 (Rx+)	1 (Tx+)	4 (Tx+)	4 (Tx+)	3 (Tx+)
5 (Rx-)	2 (Tx-)	5 (Tx-)	5 (Tx-)	6 (Tx-)
	VegaStream provided cables (ISO 10173)		ISO 8877	

For Loopback between a Vega NT port and a Vega TE port, use the BLUE cable

Cables with RJ45 sockets are used to connect the Vega to a Ethernet LAN hub. A standard 1:1 cable is required.

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

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

T1/E1 and 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 for TE</b>	Stewart 361010SRX225A255	RJ45 UL approved blue strain relief boot	Stewart <a href="http://www.stewartconnector.com">www.stewartconnector.com</a>
<b>RJ45 boot for NT</b>	Stewart 361010SRX225A257	RJ45 UL approved red 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.