# CYGNUS 1021
## Terminal Server
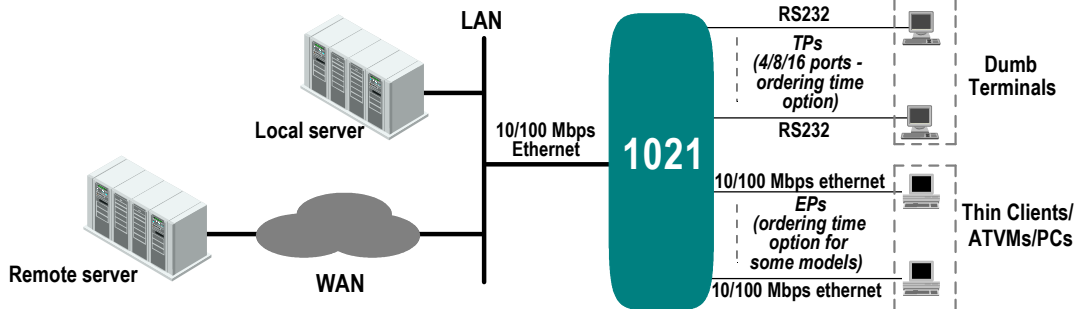
## FEATURES

- Connects RS232 devices (e.g., Dumb Terminals) and (optionally) Ethernet devices (e.g., Thin Clients) to a core TCP/IP network
- Built-in functions to aid in PRS-UTS integration in Railway applications
- Features of asynchronous RS232 Terminal Ports (TPs) include:
    - 4/8/16 port models. 1500V isolation for increased robustness.
    - Connection establishment using TELNET or RLOGIN
    - Ability to have up to 8 simultaneous sessions, and to switch between these sessions without terminating any of them. In Railway ticketing this allows a counter to issue both PRS and UTS tickets.
    - "Implicit" connection facility allows Terminal Ports to be automatically connected to specific applications at power on
    - Separate Answer Back codes for each session enhance security
- Option of 8-port 10/100 Mbps Ethernet Switch on 8/16 port models
- User friendly menu-based supervisory port for easy configuration and quick deployment.
- Diagnostic and monitoring facilities include port level tests, statistics and status reports, and a comprehensive set of indicators.
- Support for centralised management through SNMP/Telnet.

CYGNUS 1021 is a Terminal Server which allows up to 16 RS232 devices to connect to a core TCP/IP network via a 10/100 Mbps Ethernet port. It supports standard protocols such as TELNET, RLOGIN for connection establishment, allows multiple connections to be established simultaneously, and supports Answer Back protection. It is available with 4, 8 or 16 RS232 Ports.

CYGNUS 1021 can also be (optionally) ordered with a built-in 8-port Ethernet Switch in addition to its RS232 ports. It then allows both Ethernet and RS232 devices to connect to the core TCP/IP network. There is no need for a separate Switch to connect Ethernet devices. The number of interconnecting cables, the number of power outlets, etc. is also reduced, simplifying operations. Training requirements and spares inventory are also reduced in this solution - making it very cost-effective.

For Railway ticketing applications CYGNUS 1021 has several features which make it ideal for connecting Dumb Terminals, Thin Clients, chart printers, ATVMs, Touch Screens, RAPID Controllers etc., to PRS/UTS Servers. It also tackles the problem of frequent RS232 port failure, by offering 1500 V AC Isolation protection on RS232 ports. Isolation increases the robustness of RS232 ports against surges caused by induction/coupling from OHT lines, or because of poor earthing, or because of bypassed UPS systems.



## SPECIFICATIONS

### Terminal Ports (TPs)

| | |
|---|---|
| No. of ports | 4, 8 or 16 (ordering time option) |
| Compliance | Async RS232. Speed up to 230.4 kbps |
| Isolation Protection | Up to 1500 V AC on all ports |
| Additional features | ◆ "Implicit" connections between terminals and hosts |
| | ◆ Up to 8 simultaneous sessions per port |
| | ◆ Separate Answer Back codes are programmable on per-session basis on each port |
| | ◆ Facility to send messages to Terminal Ports |
| | ◆ "Local" prompt on Terminal Ports |
| Connector | RJ 45 socket |

### Ethernet Ports

| | |
|---|---|
| No. of ports | ◆ 1 (standard), or |
| | ◆ 8-port Switch in lieu of standard Ethernet Port (ordering time option - only for 8/16 TP models) |
| Compliance/ features | ◆ 10/100 M, IEEE 802.3u, Auto negotiation, Auto MDIX. |
| | ◆ IEEE 802.1Q port based VLAN (only in Switch option) |
| Connector | RJ 45 socket |

### Parallel Printer Port (Ordering time option on 8 and 16 TP models only)

| | |
|---|---|
| No. of ports | 1 |
| Compliance | Centronics, PC compatible, on 25-pin D-type socket |

### Console Port

| | |
|---|---|
| Character format | 9600 bps, 8 bits, no parity |
| Compliance | Asynchronous RS232 on RJ 45 socket |

### Management and Control of the Unit

| | |
|---|---|
| Methods | By supervisory commands and/or via SNMP V1/V2 |
| Supervisory access | Menu based, password protected supervisory function accessed via Console Port or via Telnet over the network |

### Protocol Support

| | |
|---|---|
| TCP/IP protocols | TCP, IP, PPP, UDP, ICMP, IGMP, ARP, DHCP, BOOTP |
| Routing protocols | Static Routing, RIP V1, RIP V2, OSPF |
| WAN protocols | PPP (Sync/async), LCP, IPCP, BCP, HDLC, SLIP, CSLIP |
| Security & others | PAP, CHAP, RADIUS, NAT/NAPT, Telnet, FTP, Network Print Services |
| Bridging | Auto learning, Spanning Tree algorithm based bridge |

### Indicators

| | |
|---|---|
| For each TP | Transmit, Receive |
| For each EP | Link, Activity |

### General

| | |
|---|---|
| Power | 230 VAC +/- 15%; 50Hz +/- 5% |
| Oper. environment | 0-50 deg C, 5-95% RH (non condensing) |
| Size | 19 inch rack mountable, 1 U height |

### Ordering Code: CYGNUS 1021/A/B/C

A: Specify "4TP", "8TP" or "16TP" for 4, 8 or 16 RS232 Terminal Ports.
B: Specify "8EP" for built-in 8 port ethernet switch (8/16 TP models only)
C: Specify "PP" for parallel Printer Port (8/16 TP models only)

*Note: Specifications are subject to change without notice*          *Ref.: 221122*

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