Async Sharing Unit

- Shares one asynchronous port with 8, 16, 24 or 32 other ports
- Async RS-232 interface up to 38,400 bps
- Broadcasts from 1 port to many, concentrates many ports to one port
- Use for financial, traffic, SCADA networks
- Control sharing with RTS/CTS
- Combiner mode in lieu of RTS/CTS
- Anti-streaming option

DESCRIPTION

The DCB Async Sharing Unit (ASU) shares a single port with 8, 16, 24 or 32 others. Data received on the network composite is broadcast to all the other ports. The ASU makes it easy to share async polling networks. The ASU can be used with terminal devices, with multipoint modems, point-to-point modems, with DSU's, over ISDN or over frame relay. The ASU is the ideal product for this requirement. It supports async port speeds up to 38.4 kbps.

One method of selecting ports is using terminal RTS/CTS. The ASU constantly scans all ports for Request to Send (RTS). When a terminal asserts RTS, the RTS signal is passed from the port to the network composite. On the network composite, the RTS lead is passed out to the modem. The modem Clear to Send (CTS) response is passed back to the terminal that asserted RTS. The terminal will send data upon receiving CTS. After the terminal completes its transmission and lowers RTS, the scanning resumes. In the RTS/CTS control mode, data from a port is discarded if RTS is not asserted.

The anti-streaming timer option for the ASU blocks transmission from a port if that port holds RTS on for more than 8 seconds. This is useful in systems that experience "hung" ports due to terminal RTS or modem DCD staying on in error. Turning RTS off and back on or a reset of the ASU will reset the anti-streaming timer.

The combiner mode of the ASU is perfect for polled systems that do not have RTS/CTS control. For example, many RTUs used in SCADA and other control system environments are implemented with just three RS232 leads, transmit data, receive data and signal ground. The ASU may be used at the host end of a system, where the multiple ports are connected to line drivers, modems, DSUs, etc, and where the Carrier Detect (DCD) signal is constantly on, rather than switched. In these applications, the ASU combiner mode takes all data from the ports and passes that data to the network composite without RTS/CTS control. RTS is ignored in the combiner mode.

The ASU can be used at the remote locations where the network composite port connects to a modem, ISDN TA or DSU. The ASU can also be used at the host end of a network to share one host port with many modems, ISDN TAs or DSUs.

DCB Async Sharing Unit

SPECIFICATIONS

General
   Rates: Async port to 38.4 kbps (9.6 kbps default)
   Application: Share one port with 8, 16, 24 or 32 other asynchronous ports.
   All ports are async RS-232
   Supports data rates to 38.4 kbps

Indicators (front panel)
   Power, Activity, Line Error, Modem Ready, Port 1 Setup, Loopback
   Activity indicates incoming or outgoing data. Line Error indicates an improper port
     speed. Modem Ready indicates DCD on the Network port.

Controls
   Front panel push button for loopback
   RTS/CTS contention control or combiner mode, anti-streaming option
   Side door accessible firmware cartridge for installing firmware upgrades
   Setup via the "Port One Setup", activated by the front panel push-button, or setup
   via rear panel setup port. Use to define port speeds, anti-streaming, etc.

Physical/Electrical
   Power requirements: 120 VAC, external
   Supply, 220 VAC and DC supplies also available
   60 Hz
   8 and 16 channel units:10 ¼" x 9 ¾" x 2 ¼"
   24 and 32 channel units: 10 ¼" x 9 ¾" x 4 ¼"
One pound plus external power supply

Rear View of Async Sharing Unit

Application:

Remote terminals or modems,
ISDN-TAs or DSUs

Host Computer, modem,
ISDN-TA or DSU

Async Sharing Unit
8 to 32 Ports

Management/Setup
Terminal or PC, used
at installation/setup time