Broadcast & Receive Device

- Supports Polled/Response SCADA Networks

- RS-232 or RS-422

- Up to 24 Channels; Can be Cascaded

- Anti-Streaming Capability on Each Channel

- Hardened Temperature version exceeds NEMA & CALTRANS specs

- LED Indicators for Each Channel's Tx & Rx Status

- Stand Alone or Rackmount

TC8916S Standalone/Wallmount Unit

TC8916R (Housed in TCRM195 19" Rackmount Card Cage)

Designed specifically for SCADA and process control applications with a Star topology, the TC8916 Broadcast & Receive Device broadcasts & receives information from remote devices. Transparent to all data sent in either direction, it is typically used to link SCADA Hosts to remote terminal units (RTUs) via fiber optic or metallic cable.

The host port on the TC8916 receives a broadcast message from the host controller and broadcasts the message out through up to 23 ports at the same time. The broadcast message (sent by SCADA HOST) has embedded identification (ID) numbers for each RTU. Only the RTU that matches this ID number will respond.

An "anti-streaming" capability is provided for each channel to prevent a single node failure from disabling the system. A channel will be disabled if it transmits a Tx data string beyond a set length of time. Once OFF, it will attempt to resume communications after the jam condition ends.

The TC8916 supports date rates up to 120 Kbps for an RS-232 interface and up to 500 Kbps for RS-422. Interfaces can be mixed or matched in increments of four. The TC8916 is available in 8-channel (7 + Host), 16-channel (15 + Host) and 24-channel (23 + Host) versions.

Diagnostic LEDs for Tx and Rx are included for each channel. Additional LEDs are provided for Alarm, Power A, Power B, and Vcc. Connectors are RJ-11 Female. Power is 12VDC@250mA (8-chan version) or 115/230VAC with an external power cube. High-temp and hardened temperature versions are available for harsh environments.

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Applications

The TC8916 is often used in SCADA applications with a Star topology to link a SCADA Host to RTUs. The TC8916's RS-232/RS-422 user ports can be extended with the use of a fiber modem or multiplexer. When the Host Polling Device sends information to the TC8916 via the RS-232/RS-422 Host Port, it will broadcast to each of the RS-232/RS-422 user ports. The addressed remote device(s) will then respond back to the Host Device.
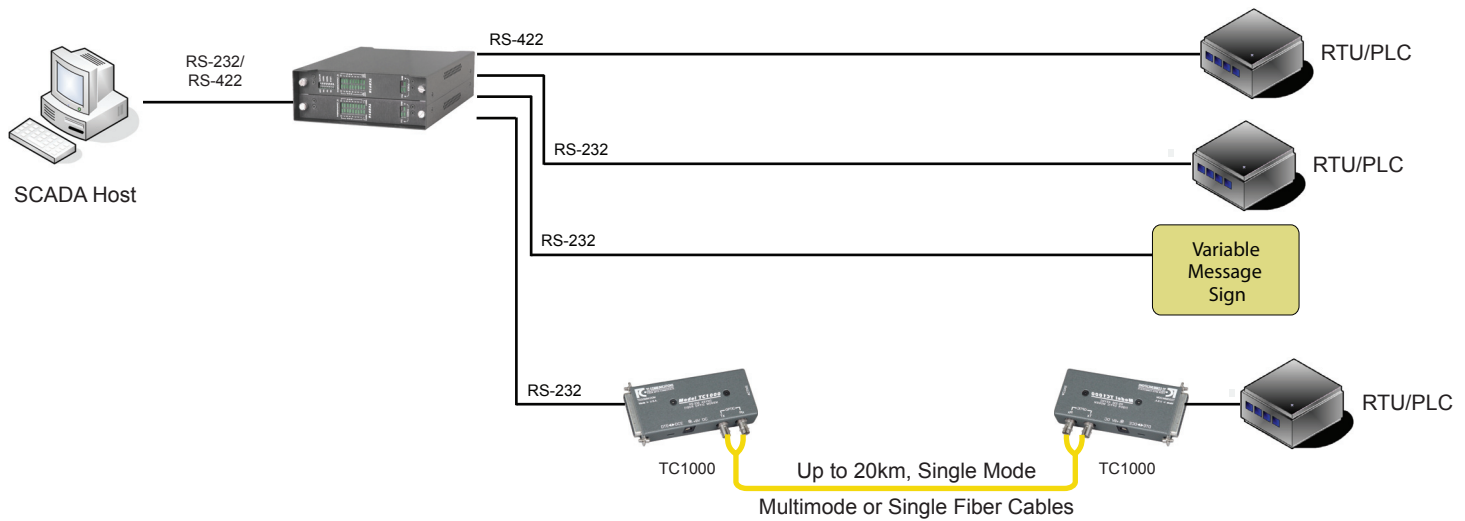
Typical SCADA Application Using TC8916 Broadcast and Receive Device
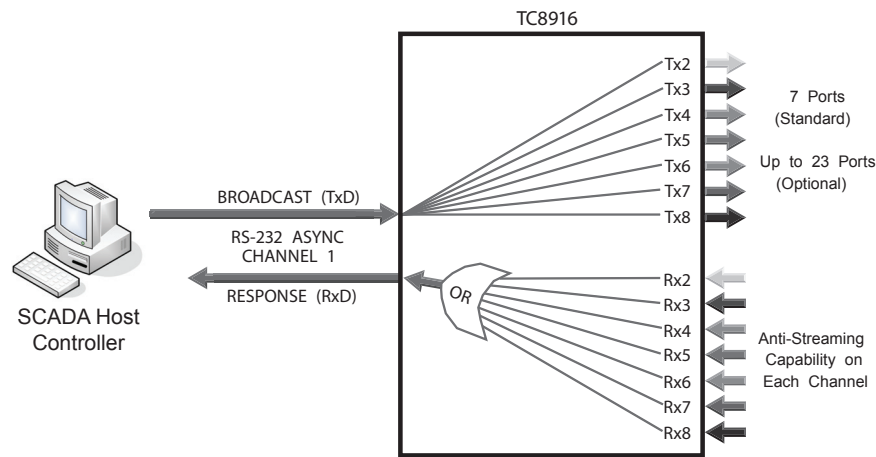
TC8916 Logic Diagram

Data Rates

Async............up to 120 Kbps (RS-232)
..................up to 500 Kbps (RS-422)

Channel Capacity

Standard ....8 (1 Host + 7 Devices)
Optional........16 (1 Host + 15 Devices)
Optional........24 (1 Host + 23 Devices)

Electrical

Connector ....RJ11 Female
Interface ......(DCE) RS-232 or RS-422

System

Bit Error Rate ....1 in 10^9 or better

Visual Indicators

System Status ....Alarm, Power A,
   Power B, Vcc, Timer-1, Timer-2
Channel Status .Host BRD, Host RSP,
   BRD & RSP (for each channel)

Power

Standard ....12VDC @250mA
Optional ....24VDC, -48VDC
   or 115/230VAC w/ ext power cube

Temperature

Operating ....−10°C to 50°C
Hi-Temp (optional).......−20°C to 70°C
Hardened (optional) ....−40°C to 80°C
Storage ....−40°C to 90°C
Humidity ....95% non-condensing

Physical (8-ch Standalone)

Height........................(3.53 cm) 1.39"
Width........................(18.13 cm) 7.14"
Depth........................(24.89 cm) 9.80"
Weight.....................(887 gm) 1.96 lb

Note - Information contained in this data sheet is subject to change without prior notice. 010B

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Certified System ™

ISO 9001
QMI-SAI Global
#1045959

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