

RS232/RS422/RS485

2 가 가 .

가
가

(80286 16 , 80386, 80486 32
32 64
) HDD, FDD, VIDEO

가
가

1

가

, 가 , () 가
, LAN, RS232 X.25
2 가
RS232 RS232

RS232

NS 16C450 16C550

가

가 가 .

UART(Universal Asynchronous Receiver/ Transmitter)

. UART TTL

TTL

IC LINE DRIVER/RECEIVER

RS232, RS422 RS485 가 .

Specification	RS232C	RS423	RS422	RS485
	Single-Ended	Single-Ended	Differential	Differential
Driver/Receiver	1 Driver 1 Receiver	1 Driver 10 Receivers	1 Driver 10 Receivers	32 Drivers 32 Receivers
	15 m	1.2 km	1.2 km	1.2 km
	20 Kb/s	100 Kb/s	10 Mb/s	10 Mb/s
	Full Duplex	Full Duplex	Full Duplex	Half Duplex
	±25V	±6V	-0.25V to +6V	-7V to +12V
	±15V	±12V	-7V to +7V	-7V to +12V

RS485 RS-232 RS-423(Single-Ended) RS422
가 가
가 .(RS422
2 가) RS232, RS422
RS485 RS422 RS485
Driver Receiver RS485 256

RS232

RS232C EIA(Electronic Industries Association)

(DTE: Data Terminal Equipment)

(DCE: Data Communication

Equipment)

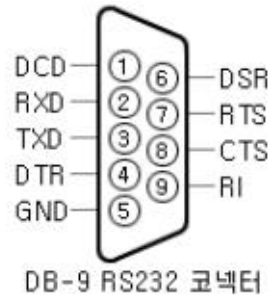
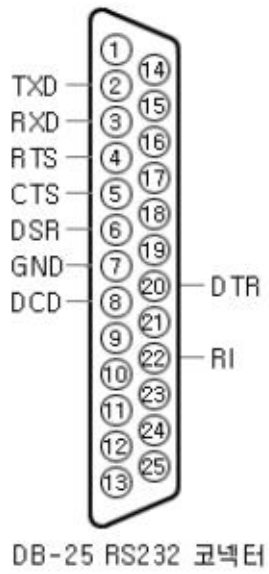
DTE

CCITT(Consultative Committee for International Telegraph and Telephony)

CCITT V.24 DTE DCE

. RS232

RS232



- TXD - Transmit Data

가

가

- RXD - Receive Data

- RTS - Ready To Send

DTE 가

DCE

가

- CTS - Clear To Send

DCE 가

DTE

가

- DTR - Data Terminal Ready

가

가

- DSR - Data Set Ready

가

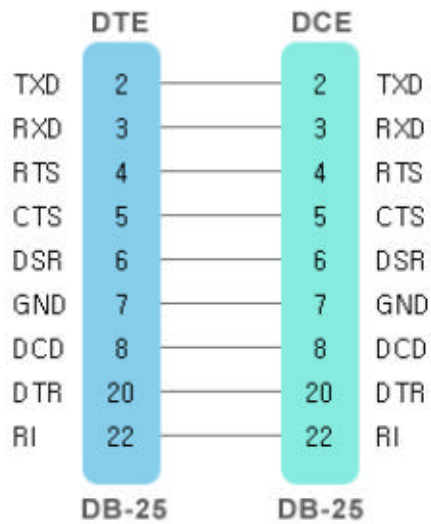
가

- DCD - Data Carrier Detect

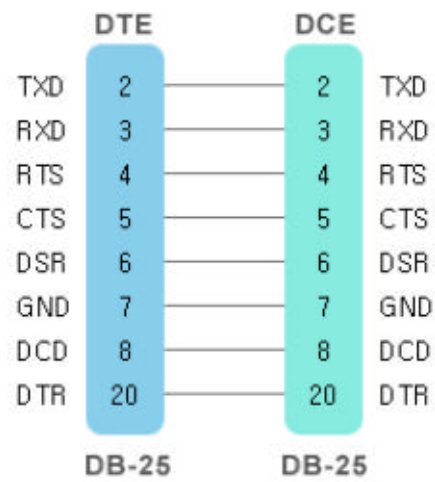
▪ RI - Ring Indicator

가

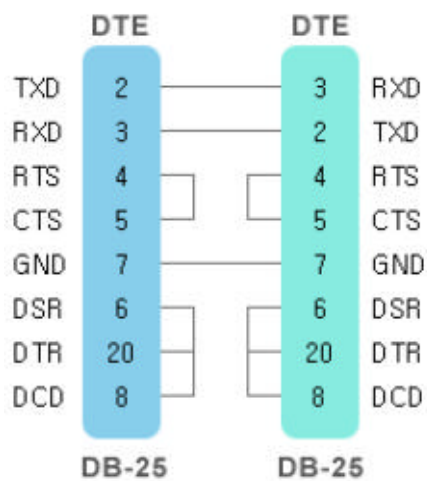
DTE to DCE 9 Wire Cables



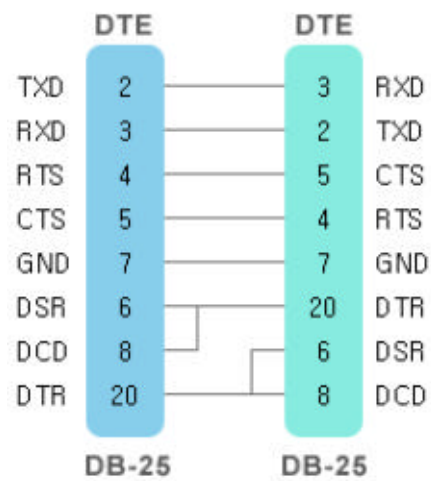
DTE to DCE 8 Wire Cables



DTE to DTE 3 Wire Cables



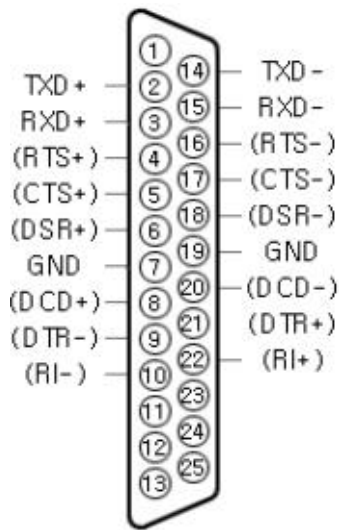
DTE to DTE 7 Wire Cables



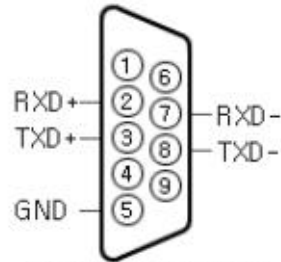
RS422

RS422 EIA

가 RS422 Point To Point Multi-Drop
 가 Point To Point RS232 2
 가 Multi-Drop
 Multi-Drop , RS422



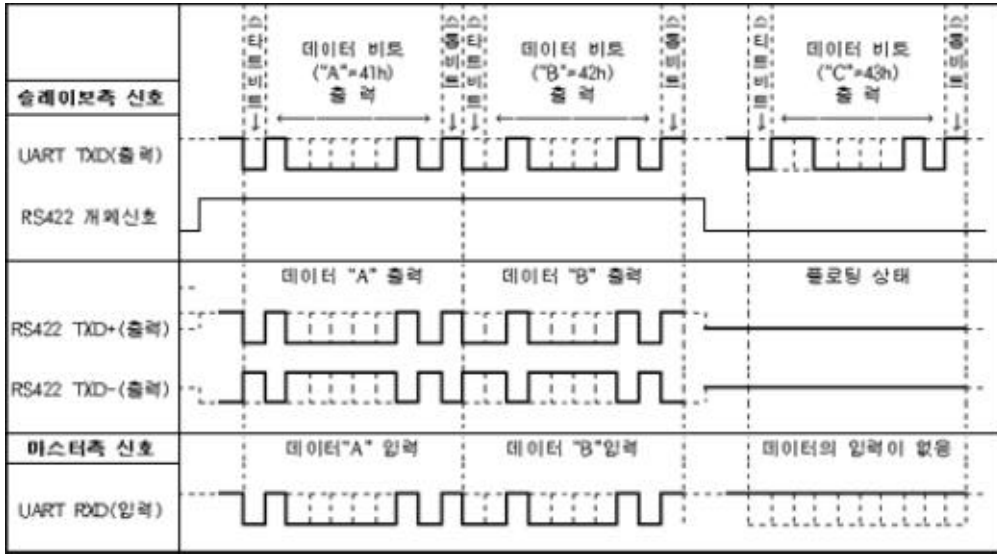
DB-25 RS422 코넥터



DB-9 RS422 코넥터

() MULTI-1
 TXD+,
 TXD-, RXD+ RXD-

RS232 가
 + -
 RS232 TXD
 RS422 TXD+ TXD-



가 (UART TXD)
 .(RS422 (Logic "1" Logic "0"))
 , TXD "A" 가 RS422

Driver Enable to Output High Delay

Time(tZH) Driver Enable to Output Low Delay Time(tZL) RS422

.(Logic "1")

tZH tZL

nS

S/W

RS422

TXD

TXD

.("B" 가 RS422 가

(Logic "0") 가 .)

RS422 가 RS422

TXD+ TXD- 가 ("A", "B") UART RXD 가

가 ("A", "B") RS422 가 TXD+

TXD- (Hi-Z) 가 가 ("C") UART

RXD 가 가

TXD+ TXD- TXD

RS422 RTS DTR

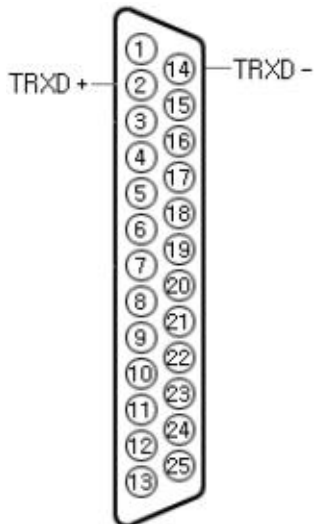
RTS

TXD S/W 가
 TXD 가 H/W 가 S/W (Multi-
 Drop S/W 가)
 MULTI-1 H/W 가 가

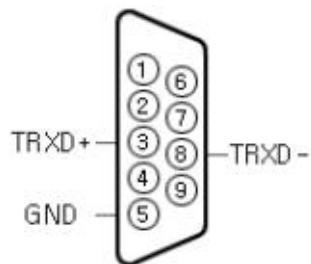
RS485

RS485 EIA

가 RS485 RS232 RS422 Full Duplex 가
 Half Duplex RS422 Multi-Drop
 RS485 TXD (RS485 가
 RXD
 RS485 Echo Non Echo 가 가
 , RS485



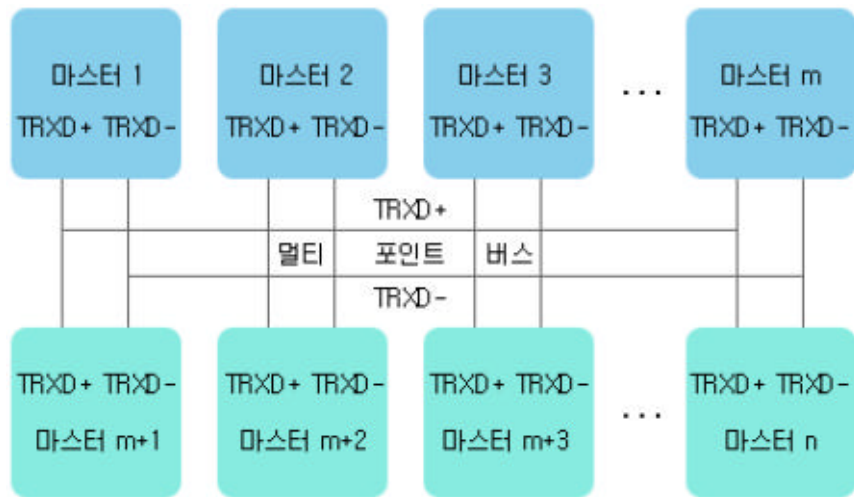
DB-25 RS485 코넥터



DB-9 RS485 코넥터



RS232 가
 + - . UART TXD,
 RXD .



RS485 Echo, Non Echo

