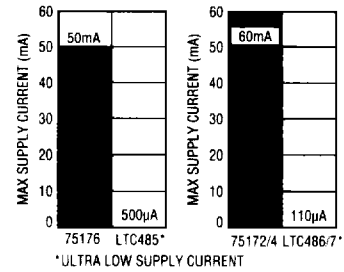


## RS485 Family Features

- Ultralow Power
- CMOS Schottky Process
- Designed for RS485 and RS422 Applications
- Three-State RS485 Outputs When Shut Down
- Power-Up/Down Glitch Free Outputs
- Power-Saving Shutdown Mode (LTC1481, LTC1483, LTC1487)
- Low EMI (LTC1483, LTC1487)
- 10MB Operation (LTC486-489, LTC1485)
- Industry Standard Pinouts
- SO Available
- Input Signal Carrier Detect (LTC1482)
- Fail-Safe Receiver Output (LTC1484)

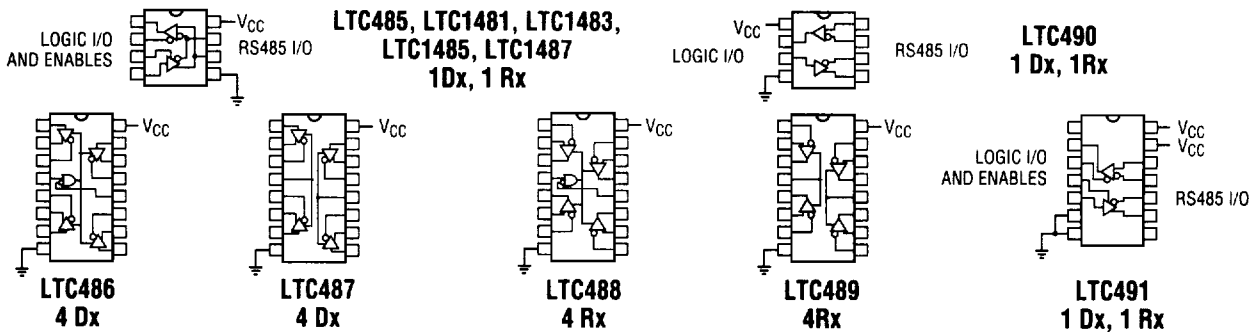
## The LTC RS485 Advantage: Low Power



## RS485/RS422 Interface

DRIVERS	RECEIVERS	SUPPLIES REQUIRED	MAX DATA RATE	MAX SUPPLY CURRENT	SHUTDOWN SUPPLY CURRENT	DRIVERS DISABLE SUPPLY CURRENT	INDUSTRY STANDARD PINOUT	COMMENTS	PART NUMBER
1	1	5V	2.5MB	500µA			75176	Half duplex 2-wire RS485	LTC485
4	0	5V	10MB	150µA			75172	Good For RS449, RS530, V.35 interface	LTC486
4	0	5V	10MB	150µA			75174	Good For RS449, RS530, V.35 interface	LTC487
0	4	5V	10MB	10mA			75173	Good For RS449, RS530, V.35 interface	LTC488
0	4	5V	10MB	10mA			75175	Good For RS449, RS530, V.35 interface	LTC489
1	1	5V	2.5MB	500µA			75179	Full duplex 4-wire RS485	LTC490
1	1	5V	2.5MB	500µA			75ALS180	Full duplex 4-wire RS485	LTC491
1	1	5V	2.5MB	500µA	1µA	120µA	75176	Ultralow power half duplex 2-wire RS485 w/SHDN	LTC1481
1	1	5V	2.5MB	600µA	1µA	250µA	75176	Includes carrier signal detect	LTC1482
1	1	5V	150KB	500µA	1µA	120µA	75176	Low EMI ultralow power 2-wire RS485 w/SHDN	LTC1483
1	1	5V	2.5MB	500µA	1µA	120µA	75176	Receiver outputs a logic high when inputs are open, shorted or terminated with no signal present	LTC1484
1	1	5V	10MB	3.5mA			75ALS176B	High speed/half duplex	LTC1485
1	1	5V	250KB	200µA	1µA	120µA	75176	High input impedance, ultralow power, low EMI 2-wire RS485 w/SHDN	LTC1487

Selection Guides



## Interface Standards

SPECIFICATION	RS232	RS423	RS422	RS485	RS562
Mode of Operation	Single-Ended	Single-Ended	Differential	Differential	Single-Ended
Number of Drivers and Receivers Allowed on One Line	1 Driver, 1 Receiver	1 Driver, 10 Receivers	1 Driver, 10 Receivers	32 Drivers, 32 Receivers	1 Driver, 1 Receiver
Maximum Cable Length	50 feet*	4000 feet	4000 feet	4000 feet	50 feet*
Maximum Data Rate	20kb/s	100kb/s	10Mb/s	10Mb/s	64kb/s
Maximum Voltage Applied to Driver Output	±25V	±6V	-0.25V to 6V	-7V to 12V	±25V
Driver Output Signal	Loaded	±5V	±3.6V	±2V	±1.5V
	Unloaded	±15V	±6V	±5V	±5V
Driver Load	3kΩ to 7kΩ	450Ω (Min)	100Ω	54Ω	3kΩ to 7kΩ
Maximum Driver Output Current (High-Impedance State)	Power ON	—	—	—	60mA
	Power OFF	V <sub>MAX</sub> /300Ω	±100µA	±100µA	V <sub>MAX</sub> /300Ω
Output Slew Rate	30V/µs (Max)	Controls Provided	—	—	30V/µs (Max)
Receiver Input Voltage Range	±15V	±12V	±7V	-7V to 12V	±25V
Receiver Input Sensitivity	±3V	±200mV	±200mV	±200mV	±3V
Receiver Input Resistance	3kΩ to 7kΩ	4kΩ (Min)	4kΩ (Min)	12kΩ (Min)	3kΩ to 7kΩ

\*or 2500pF cable capacitance, as per EIA 232E