

Communication Modem Test Cable

Model Number: THRSLTCA1231

Overview

The Communication Modem Test Cable provides reliable interfacing between system controllers and SC4200 communication modems, supporting power, Ethernet, RS-232, and GPS antenna connections. Built with MIL-grade connectors and shielded PTFE wiring, it ensures stable operation and EMI/EMC protection under rugged conditions.

Proven in the **UXOR project supplied to the Indian Air Force (IAF)**, the cable has demonstrated field-ready durability for communication testing and validation in defense platforms.

Technical Specifications

Parameter	Specification
Function	Communication modem interface and diagnostic testing
Supported Device	SC4200 modem (Power/Ethernet/Serial/GPS interfaces)
Connectors	Switchcraft EN3C6FX / EN3C2F16X (modem end) RJ45 (Ethernet) D-SUB 9-pin (RS-232)
Cable Construction	Shielded PTFE wiring with protective boots
Assembly Features	Epoxy-sealed transitions, stainless steel banding for strain relief
Power Support	DC 9–20 V input (EB version)
Protection Standard	IP65
Operating Temperature	–20°C to +55°C

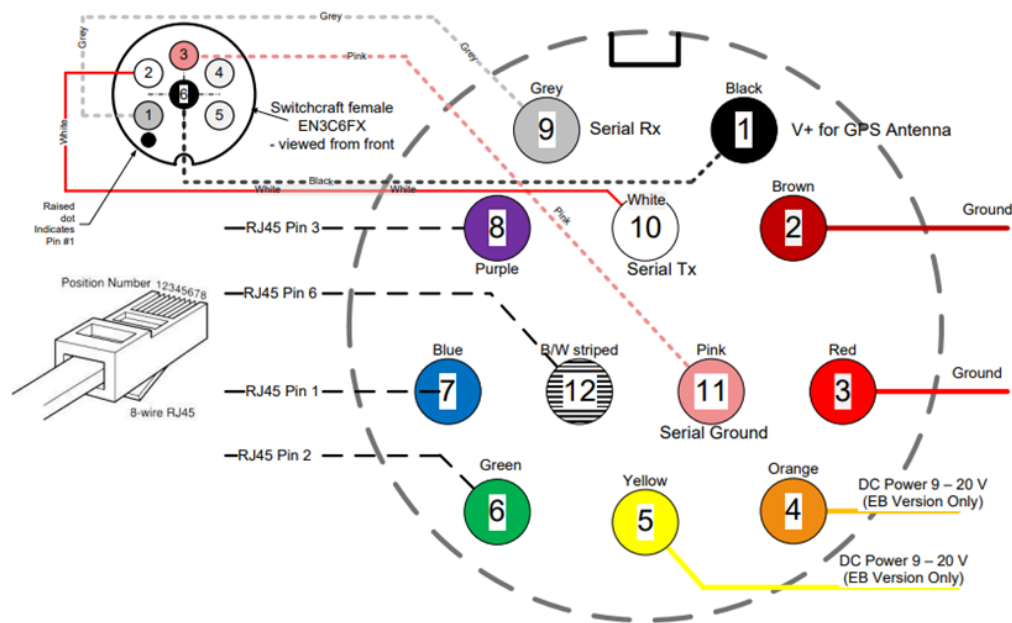
Pin Configuration

Connector Mapping (SC4200 Modem Interface):

Pin	Signal	Wire Color	Notes
1	V+ for GPS Antenna	Black	Power for GPS puck
2	Ground	Brown	–
3	Ground	Red	–
4	DC Power (9–20 V, EB only)	Orange	VCC IN
5	DC Power (9–20 V, EB only)	Yellow	VCC IN
6	100-Base T ETH0 M1N	Green	Ethernet
7	100-Base T ETH0 M1P	Blue	Ethernet
8	100-Base T ETH0 M2P	Purple	Ethernet
9	RS232_RxD	Grey	Serial receive
10	RS232_TxD	White	Serial transmit
11	RS232_GND	Pink	Serial ground
12	100-Base T ETH0 M2N	B/W Striped	Ethernet

Additional Notes (from SC4200 tables):

- Pin 1 also supports 5V OUT for GPS puck (external).
- Pin 2/3 used as GND IN when external power is applied.
- RS-232 mapped to D-SUB (TxD, RxD, GND).
- Ethernet mapped to RJ45 pins 1,2,3,6.



SC4200 Power/Ethernet/Serial Connector Pinout		
Enclosure PWR/COMM (LF10WBRB-12PD)	Signal	Switchcraft Pinout (EN3C2F16X)
1	5V OUT (For External GPS Puck)	NC
2	GND IN (External Power Option Only)	2
3	GND IN (External Power Option Only)	2
4	VCC IN (External Power Option Only)	1
5	VCC IN (External Power Option Only)	1
6	100-Base T ETH0 M2N	NC
7	100-Base T ETH0 M2P	NC
8	100-Base T ETH0 M1P	NC
9	RS232_RXD	NC
10	RS232_TXD	NC
11	RS232_GND	NC
12	100-Base T ETH0 M1N	NC

SC4200 RS-232 and PS/2 (GPS) Pinout			
RS-232	PS/2 (GPS)	Signal	Switchcraft Pinout
3	4	TxD	2
2	5	RxD	1
NC	NC	NC	4
NC	2	5V OUT	6
NC	NC	NC	5
5	1	Ground	3

Key Features

- Provides combined **Power, Ethernet, RS-232, and GPS interface** in one rugged cable.
- MIL-grade Switchcraft connectors ensure field durability.
- Shielded PTFE wiring for EMI/EMC protection.
- Supports DC 9–20 V input for EB versions.
- Proven reliability in UXOR defense communication platforms.

Applications

- Communication modem integration and testing.
- SC4200 modem validation in defense-grade platforms.
- Bench and field diagnostics for communication subsystems.
- **UXOR system communication harness (field-proven in IAF deployment).**

Note

The Communication Modem Test Cable is part of THRSL's standard test cable suite, designed for reliable interfacing of SC4200 modems. Custom harnesses can be developed to support alternate connectors, additional shielding, or extended cable lengths.