

NueGate NG2140 – Typical Wiring

Wiring

NueGate carries four independent RS-485 trunks. Each trunk is its own segment — wire, terminate and ground each one ground each one separately. The gateway always sits at one physical end of the trunk it serves.

FIGURE 1 · ONE GATEWAY PORT TO ONE PIECE OF EQUIPMENT

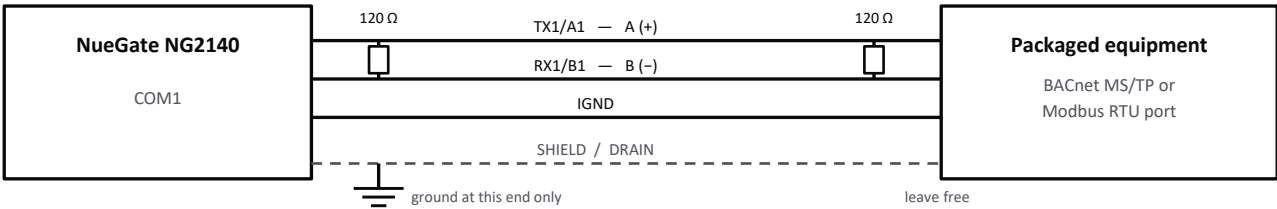
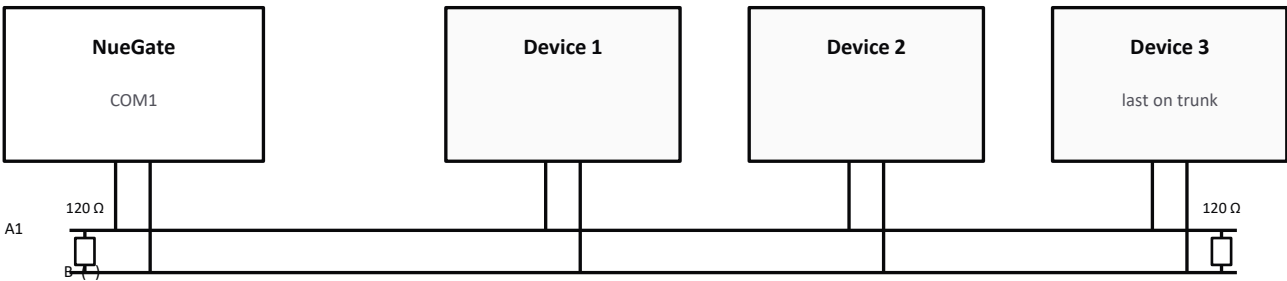


FIGURE 2 · MULTIPLE DEVICES ON ONE TRUNK



Daisy chain only — every device sits in line on one cable. No stars, no T taps, no spurs. The two 120 Ω end-of-line resistors go at the two physical ends of the trunk and nowhere else. Every device on a trunk must run the same baud rate.

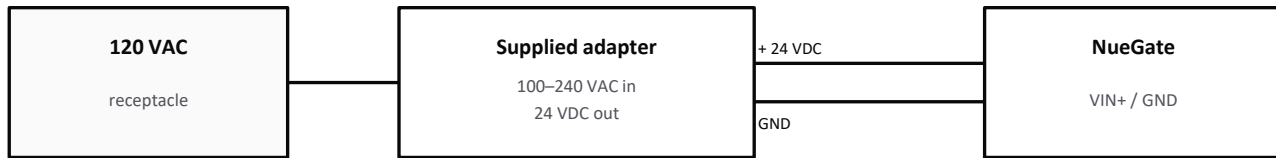
TERMINAL ASSIGNMENT

Two 6-position blocks stacked on the front panel, 3.5 mm pitch. COM1 and COM3 land on the upper block, COM2 and COM4 on the lower. Every port carries its own isolated ground (IGND). All four ports are RS-485 — the TX/RX legend on COM1 and COM3 belongs to the RS-232 variants of this platform.

	UPPER BLOCK			LOWER BLOCK	
	COM1	COM3		COM2	COM4
A (+)	TX1/A1	TX3/A3	A (+)	A2	A4
B (–)	RX1/B1	RX3/B3	B (–)	B2	B4
Ground	IGND	IGND	Ground	IGND	IGND

SEGMENT LIMITS

Cable	22–24 AWG shielded twisted pair, ~ 120 Ω characteristic impedance
Max length	4,000 ft (1,200 m) per segment; repeater beyond
Shield	Continuous, grounded at the gateway end only
Baud	MS/TP 9600 – 76800; Modbus RTU to 115200. One rate per trunk.

FIGURE 3 · POWER — RECEPTACLE (SUPPLIED ADAPTER)


The adapter ships in every box. Nothing else is required at a site with a receptacle in or near the panel.

IN THE FIELD

DO

- Use 22–24 AWG shielded twisted pair rated for RS-485 (Belden 9841, 3106A, 3107A or equal, ~120 Ω).
- Keep A on one wire colour and B on the other for the whole trunk.
- Carry the shield continuously through every device and ground it at the NueGate end only.
- Land a 120 Ω resistor across A and B at each physical end of the trunk.
- Keep comm cable out of conduit shared with line voltage or VFD output leads.

DON'T

- Do not star, T-tap or spur off the trunk.
- Do not terminate at devices in the middle of the run.
- Do not ground the shield at more than one point — it makes a ground loop.
- Do not mix baud rates on one trunk.
- Do not exceed 4,000 ft on a single segment; use a repeater beyond that.

BEFORE YOU LEAVE

- PWR indicator solid, not blinking.
- COM indicator blinking on every trunk you landed.
- NET indicator solid — the gateway reached StatIQ.
- Every device on the trunk shows up in StatIQ.
- Terminal plugs seated and screws tight.
- Shield grounded at one point only — verify with a meter.