

THE CLAIM

A bus board sold on its own claims *bus board (PWR-BUS-OUT)*, plus PWR-DC12, PWR-A6, VID-REF-IN and VID-REF-PASSTHRU, or CTRL-USB-HOST for a DC rail, ± 6 V outlets, the video reference tree, or the case's USB host it also carries. Built into a case, it is part of the enclosure's claim.

EIS draft, bus board (PWR-BUS-OUT)

EIS draft, bus board (PWR-BUS-OUT, VID-REF-IN, VID-REF-PASSTHRU)

EIS draft, bus board (PWR-BUS-OUT, PWR-DC12-OUT)

WHAT IT PUBLISHES

FIGURE	ID
<i>Max current on +12 V, -12 V, and +5 V</i>	PWR-002
<i>Max current any one header may draw</i>	PWR-002

- ☐ Keep the claim line and these figures in one claim file, `eis-claim.yaml`; *eis claim* checks it.

READ

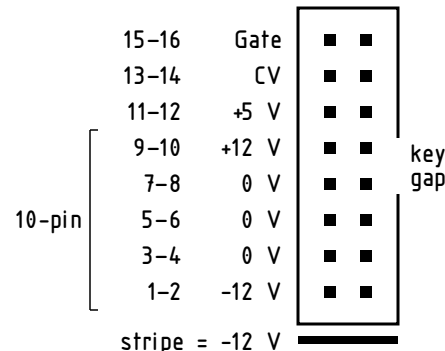
6.1 power, 6.3 0 V, 6.4 the bus, 6.5 bus boards, 6.6 bus CV and gate, 8.1–9.2 assembly. Annex L (row budget).

READING THIS SHEET

- shall □ recommended ○ may

IDs omit the EIS- prefix. Italic lines are informative notes. This reference is informative: the clauses and the register govern.

POWER HEADER · EVERY HEADER



- A 2×5 or 2×8 pin header on a 2.54 mm grid; a cable ends in IDC sockets that mate it. BUS-002
- Pinout: -12 V on 1–2, 0 V on 3–8, +12 V on 9–10; a 16-pin header adds +5 V on 11–12, CV on 13–14, gate on 15–16. BUS-003
- The marked conductor is -12 V and points to the -12 V end. BUS-004
- The board marks the -12 V end of each power header. BUS-019
- A shrouded header, seen from the mating side with -12 V at the bottom, has its key gap on the right; a keyed socket matches it. BUS-005

Community tables with +12 V on 7–8 and +5 V on 15–16 put +12 V on a module's 0 V pins.

WIRING AND CHASSIS GROUND

- Row wiring: 6.3 mm tabs, ring studs, or a clamp block, published; stranded 105 °C 16 AWG (14 above 5 A, 12 above 8 A), crimped; 0 V at least the rail gauge; 14 AWG earth ring on bare metal. PWR-005 PWR-006 PWR-007 PWR-008

RAILS, CAPACITY, LINKS

- Every header gives +12 V and -12 V; +5 V optional. BUS-001
- 6.3 mm quick-connect tabs to the supply and between bus boards (row wiring, 6.1).
- May also carry a DC rail, ± 6 V outlets, or the video reference tree, or host the case's CTRL-USB; claims that feature too. BUS-020
- PWR-DC12 outlets: DC-BAR21 or DC-VH2 only, each protected; a PASSTHRU per module from one VID-REF-IN, one load each. DC-009 DC-012 V75-013 V75-005

Published totals, the 2 A per-header limit, regions, links, ribbons, and the one 0 V are on the capacity card.

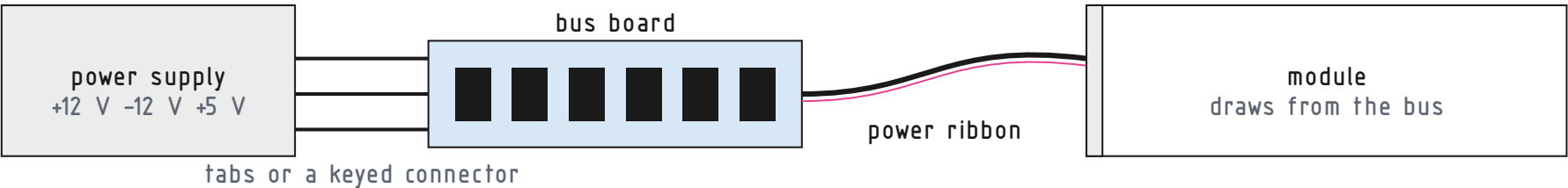
BUS CV AND GATE

BUS NET	LEVEL	Z OUT / IN
BUS-CV	1.00 V/oct pitch CV; ceiling ± 12 V	1 k Ω / 100 k Ω
BUS-GATE	0 / +5 V; high $\geq +3$ V, low $\leq +1$ V at the receiver	1 k Ω / 100 k Ω

INSTALLER · 9.1, 9.2

- Add a module only while, on each rail, the bus board's totals and the supply's rating hold, and each header stays within its limit. ASM-001
- Row wiring the installer adds meets the conductor rules and lands on the published terminal type. ASM-009
- A module that publishes no -12 V figure: plan -12 V at 50 % of +12 V.
- No CV transmitter on a line: leave the oscillators' listen jumpers off.

EIS · From the supply to the module: what each part owes



Power supply

Publishes each rail's rating (PWR-002) and its ripple and noise (SUP-001), below 150 mV (SUP-007).

Survives a short (SUP-004); no reverse swing (SUP-005); overshoot $\leq 10\%$ (SUP-006).

Keyed connector (SUP-002), or terminals marked with their rail (SUP-003).

Bus board

+12 V and -12 V, and optionally +5 V, at every header (BUS-001).

Publishes its rail totals and the limit per header (PWR-002), at most 2 A per rail (BUS-012).

A link joins CV to CV and gate to gate (BUS-014).

Ribbon

At most 400 mm, at least 28 AWG (BUS-015).

Marked conductor on -12 V (BUS-004); keyed (BUS-005).

Module

Draws only ± 12 V, and +5 V if it needs it (BUS-006).

Publishes its maximum current on each rail (PWR-001).

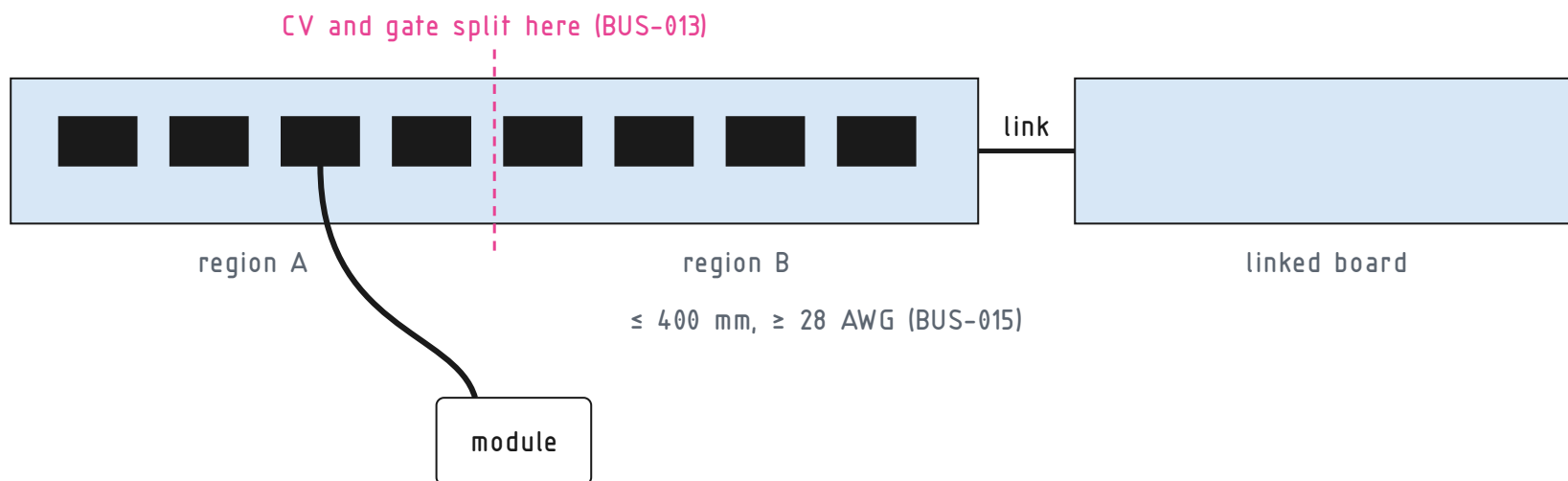
At most 2 A per rail through one header (BUS-008); never feeds a rail (PWR-004).

Survives a reversed ribbon (BUS-009).

The installer adds a module only while each rail's sum fits the bus board and the supply (ASM-001).

From the supply to the module: what each part owes (6.4).

EIS · Bus boards: published totals, the per-header limit, regions, and links

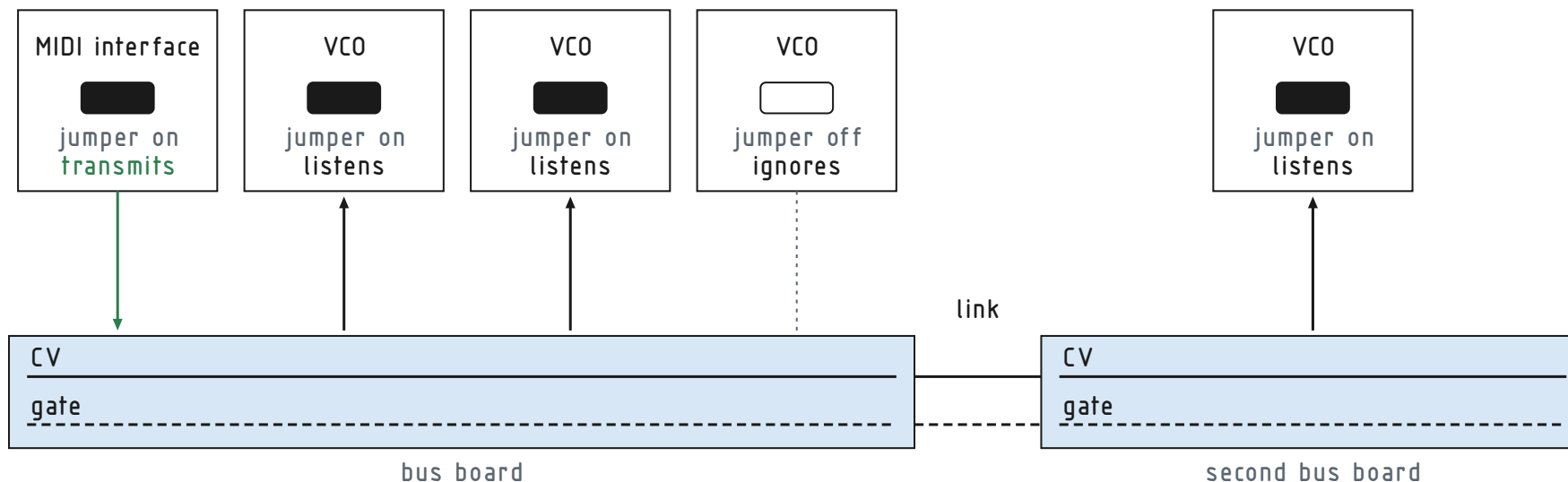


Publishes its maximum current on +12 V, -12 V, and +5 V, in total and per header (PWR-002), never more than 2 A per rail (BUS-012).

A link joins CV to CV and gate to gate (BUS-014); every header's 0 V runs to the supply's 0 V (GND-002).

A bus board: published totals, the per-header limit, regions, and a link (6.5).

EIS · Bus CV and gate: one transmitter, many listeners

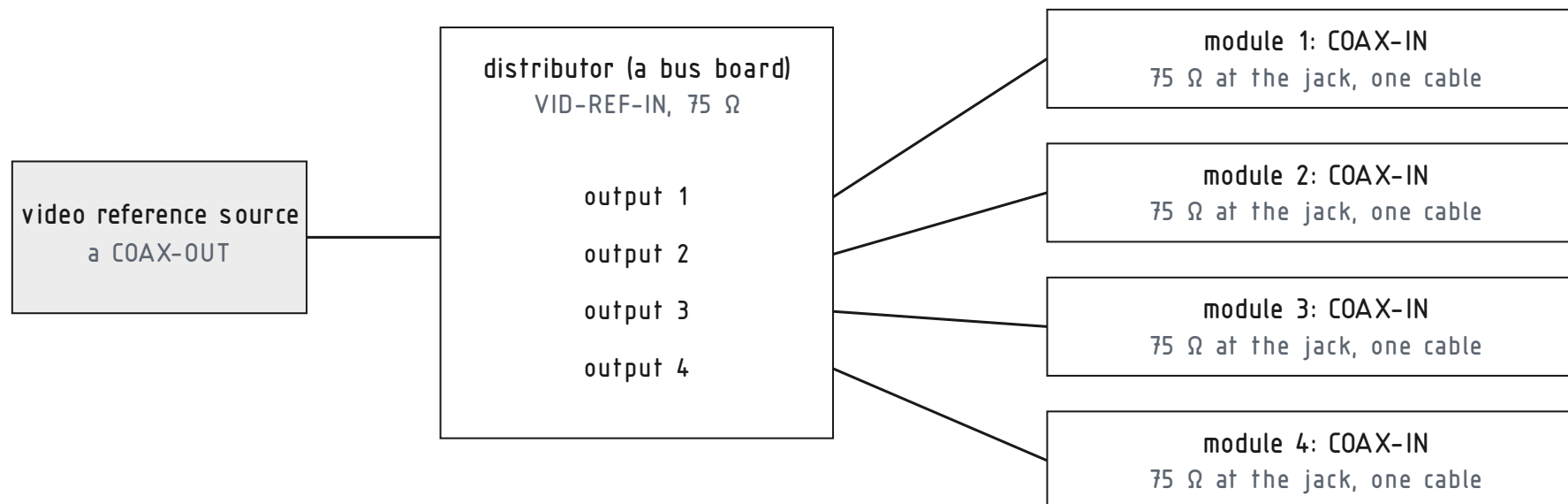


At most one module transmits on each CV line and one on each gate line, across linked bus boards (ASM-002); a link joins CV to CV and gate to gate (BUS-014), so linked boards share one transmitter.

A module listens or transmits only when its jumper or switch says so (BUS-016). Bus CV is 1 V/octave pitch CV (BUS-017); bus gate is 0 / +5 V, high at +3 V or more (BUS-018).

One transmitter and several listeners on linked bus boards (6.6).

EIS · VID-75: one star per video sync source

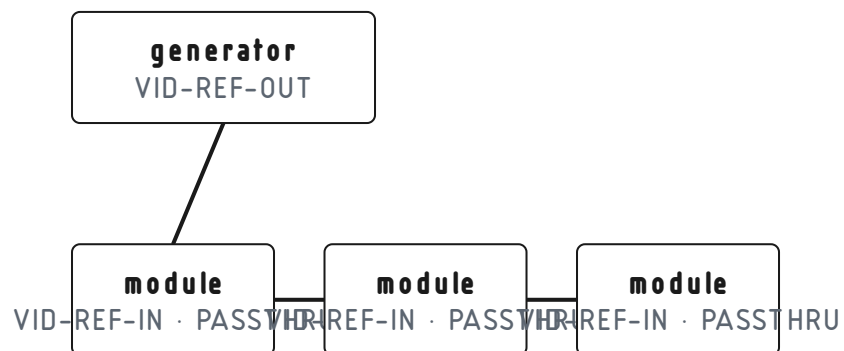


One source, a VID-REF-OUT or an external reference at a distributor's VID-REF-IN, feeds each tree; each VID-REF-PASSTHRU or VID-REF-OUT drives one COAX-IN load. An output is not split passively. Jacks and plugs may be RCA, BNC, or SMA; every cable is 75 Ω coaxial, center to center and shell to shell.

A video reference tree: one source, one cable from each PASSTHRU port to one module's VID-REF-IN (7.4).

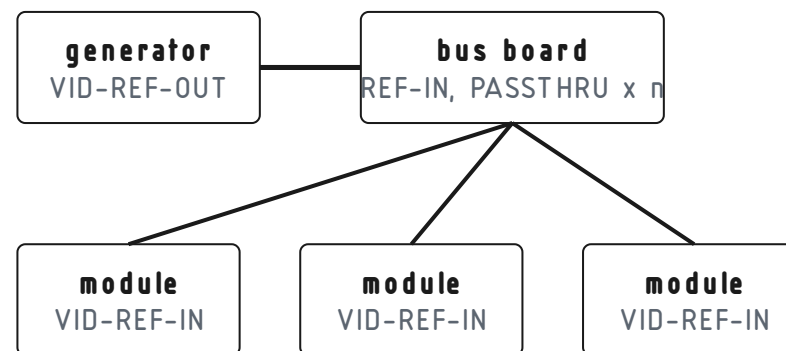
EIS · Video reference in a row: direct links, a PASSTHRU chain, or a star

A link, then a chain of VID-REF-PASSTHRU



one VID-REF-OUT; each PASSTHRU drives the next VID-REF-IN
never a patch jack (SIG-015); a PASSTHRU is not an output (V75-013)

VID-75 star

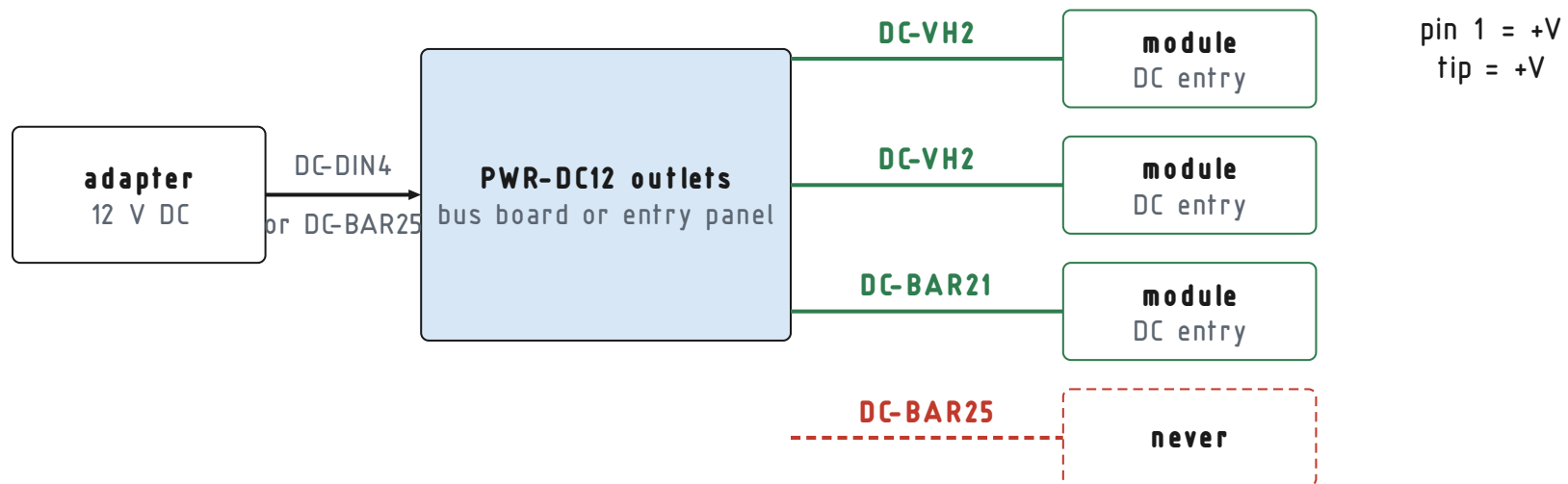


one COAX-IN per output (V75-005)
one source per tree (ASM-007)

The reference is rear coaxial cabling, wired once: a link suits a few modules, a PASSTHRU chain or a LOOP run suits a row that has them, the star suits many locking to one reference, and BNC takes a facility reference. Jack types may be mixed in a tree; a passive split is never used.

Video reference in a row: direct coaxial links, a chain of pass-throughs, or a distribution star (Annex M).

EIS · PWR-DC12 distribution: from the adapter to the modules



A product with PWR-DC12 outlets feeds modules only through DG-BAR21 jacks or DG-VH2 headers, never DG-BAR25 (DG-009); its cables keep +V to +V (DG-010).

DG-BAR25 takes power from an adapter. A DG-BAR25 plug fits a DG-BAR21 entry loosely and is never inserted (ASM-004).

From the adapter to the modules: DG-BAR21 or DG-VH2 outputs, never DG-BAR25 (6.7).